COURSE II
International Environmental Law and Policy
# Course II: International Environmental Law and Policy

## I Overview of International Environmental Law

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>Emergence and Application of International Environmental Law</td>
<td>3</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Fundamental Principles and Application of International Environmental Law</td>
<td>34</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Introduction to Trade and Environment</td>
<td>69</td>
</tr>
</tbody>
</table>

## II Major International Environmental Laws

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 4</td>
<td>Right to Environment as Human Right</td>
<td>142</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>International Humanitarian Law and Environment</td>
<td>163</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Environment and Conflict Management</td>
<td>186</td>
</tr>
<tr>
<td>Chapter 7</td>
<td>United Nations Framework Convention on Climate Change and the Kyoto Protocol</td>
<td>203</td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Treaty on Antarctic and Polar Regions</td>
<td>224</td>
</tr>
<tr>
<td>Chapter 9</td>
<td>UN Convention on the Law of the Sea and the UNEP Regional Seas Programme</td>
<td>237</td>
</tr>
<tr>
<td>Chapter 10</td>
<td>Law on International Water Courses</td>
<td>265</td>
</tr>
</tbody>
</table>
1.1 Introduction

Environmental change and resource scarcity have emerged as existential threats in recent decades. As many environmental problems such as climate change, loss of biodiversity and desertification are global in nature and require co-operation across State borders, international lawyers have attempted to proffer solutions, largely since the early 1970s. The birth and evolution of the specialised field of international environmental law (IEL) is conventionally narrated as progressing through a series of conferences, beginning with the 1972 Stockholm Conference on the Human Environment through to the 1992 Rio Earth Summit and the 2002 Johannesburg Conference, leading up to the most recent Rio+20 Conference on Sustainable Development in June 2012. The embryonic field of IEL has gradually constituted itself through these conferences and many others, as States, non-state actors, scholars, experts and other interested parties gradually build up a body of treaties, legal principles and concepts to guide international action on environmental issues.
One such concept is that of sustainable development, which has been canonical for IEL since the 1992 Rio Summit when the international community expressed a strong consensus in its favour. Sustainable development calls for development that “meets the needs of the present without compromising the ability of future generations to meet their own needs”. It places development policy-making within the context of the absorptive capacity of natural ecosystems and recognises the limits of such systems. It places emphasis on not only inter-generational equity but also intra-generational equity by basing itself on three interdependent pillars: economic, social and environmental sustainability.

The recent Rio+20 Conference provided an opportunity to look back and assess IEL's progress and determine to what extent the world has made the paradigm shift from conventional to sustainable development. Global consciousness and concern for environmental issues has grown in recent decades, as has recognition that economic, social and environmental sustainability are linked. However, many of the problems that IEL aimed to address, such as climate change, biodiversity loss, and desertification, have worsened. Why has IEL failed? Is international law a useful avenue for solving environmental problems? And if so, how? We shall attempt to trace the history of IEL and try to answer these basic questions.

International co-operation in the form of treaties, agreements and resolutions created by intergovernmental organisations as well as national laws and regulations are being used to protect the environment. Since ultimate responsibility for the protection of the environment remains at the national and local level, municipal laws and regulations related to the environment are increasingly being sought after. Treaties govern many aspects of international environmental law. This chapter lists many of the most common multilateral treaties that have led to the emergence and application of IEL.

As discussed in the previous chapters, there is another genre of international environmental agreements called soft law. The Parry and Grant Encyclopaedic Dictionary of International Law defines soft law as “A term used to refer to non-binding instruments or documents which have the appearance of law....While not legally binding, soft law can be politically influential in setting down objectives and aspirations.” Documents constituting soft law can often be located on the websites of individual organisations. Examples of key soft law documents in international environmental law include Agenda 21: Programme of Action for Sustainable Development, the Rio Declaration on Environment and Development, and the Forest Principles.

---

# 1.2 The United Nations Conference on Human Environment, Stockholm, 1972

## Fact Sheet

<table>
<thead>
<tr>
<th>Conference</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Informal name</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Stockholm Conference</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Host Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Governments participating</th>
</tr>
</thead>
<tbody>
<tr>
<td>113 governments and 19 inter-governmental agencies. Soviet Union and its East European allies refused to participate because the conference did not invite the German Democratic Republic, thus avoiding implicit diplomatic recognition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conference Secretary-General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maurice F. Strong</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organisers</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Nations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NGO presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unprecedented NGO participation was recorded for the first time in history with NGOs even involved in the preparation and activities of a UN conference. More than 400 groups were accredited to the meeting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resulting document</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Stockholm Declaration - 26 principles suggesting environmental obligations and duties of States.</td>
</tr>
<tr>
<td>b) Action Plan - There was also a Plan of Action with 109 recommendations.</td>
</tr>
<tr>
<td>c) UNEP establishment - A proposal that the United Nations establish a new environmental agency to guide the world effort, which led to the creation of the United Nations Environment Programme (UNEP).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Follow-up mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Charter of Nature, World Conservation Strategy World Commission on Environmental Development, Earth Summit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Previous conference</th>
</tr>
</thead>
<tbody>
<tr>
<td>First of its kind</td>
</tr>
</tbody>
</table>
Ever since problems of acid rain and their effects were considered at the global level in Europe, the way for a global conference on environment was made clear. It was in 1972 that the United Nations Conference on Human Environment was held in Stockholm, where for the first time it was recognised that certain global environmental concerns needed global solutions.

Growth of modern international environmental law as a separate area of public international law began in the 1970s with the Stockholm Conference on the Environment in 1972. Since then interest has steadily increased and it is one of the fastest growing areas of international law. Current issues of international concern covered by IEL include ozone layer depletion and global warming, desertification, destruction of tropical rain forests, marine plastics pollution from ships, international trade in endangered species (i.e. ivory trade), shipment of hazardous wastes to developing countries, deforestation of Brazil and the Philippines, protection of wetlands, oil spills, transboundary nuclear air pollution (i.e. Chernobyl), dumping of hazardous wastes, groundwater depletion, international trade in pesticides and acid rain. Environmental law is also cutting across other areas of international law, such as commercial/business law, trade and human rights.

Political support for environmental protection was at an all-time high in the early 70s, as States were keen to discuss nearly all issues related to ‘the environment’ such as – cross border pollution caused by acid rain, marine pollution and pollution watercourses etc. However, the developing countries from the G-77 wanted problems of poverty and social justice to be central themes. There were also other cross-sectoral problems like the terms of international trade, development aid and access to technology. A palpable need was also felt to understand the relationship between economic development and environmental protection.

The Stockholm Conference attended by more 114 States produced three major documents:

a) a Declaration on the Human Environment;
b) an Action Plan for the Human Environment;
c) and a Resolution on Institutional and Financial Arrangements.

The Stockholm Conference attempted to highlight problems of environment and proclaim some general principles. It is said that in 1970s, not many developing countries attended the meeting either for lack of resources or more so for lack of awareness of environmental the issues. This situation is fast changing in this millennium. However, it needs to be emphasized that because of such
emergence and application of international environmental law

environmental revolution mobilised by the 1972 conference, a changing attitude towards environmental protection and conservation of resources was highlighted. Environmental conservation was, for the first time taken seriously as it should be, and State of environment was essentially viewed as inimical to the priorities of development, to which the newly independent States attached importance. This was also the time when the plea of the same countries at the United Nations for a new international economic order did not gain much support from the developed world.

The United Nations Conference on Human Environment should nevertheless be seen as an important landmark in the evolution of environmental connection and environmental law, which laid down 27 principles, although some of them do not directly address environmental issues. The Conference proclaimed that man is the only being that has control over the earth’s resources. It highlighted that the human race has made rapid strides by science and technological prowess to transform his environment in many ways. It also lamented that while economic development is extremely important protection of the human environment must not take a back seat.

The Declaration also proclaimed that environmental protection in the developing countries was caused on account of underdevelopment and poverty. It called upon the ‘industrialised countries’ to help developing countries to meet the incremental costs incurred by them in tackling environmental problems. The Principles were adopted as guidance for common conviction of States to protect the earth’s environment. It proclaimed that man required an “environment of quality” to pursue his fundamental rights to freedom, equality and adequate conditions of life.

It noted that man bore a “solemn responsibility” to protect and improve the environment for present and future generations (Principle 1). Principle 2 provides for inter-generational equity wherein ‘the natural resources of the earth’ are to be protected. It also provided that States have 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 limits of national jurisdiction, even while it recognised a sovereign right of States to exploit their own resources pursuant to their own environmental policies (Principle 21). In this connection it enjoined States to “develop further” the international law on liability and compensation for pollution and other environmental damage to areas beyond their jurisdiction caused by activities within their jurisdiction or control. Other principles dealt with conservation of resources, pollution, developmental issues and some non-legal topics.
The Stockholm Declaration was not followed by any globally common strategy of international development or encouragement of development of environmentally friendly technologies for production of resources. In the absence of any such common strategies, the living conditions and economic lot of peoples in developing world had to pursue through the means of technology and resources available to them. This resulted in uneven, uneconomical and environmentally not so friendly development in the developing countries. In this regard, one is reminded of what the Prime Minister of India Smt. Indira Gandhi said at that Conference. She had stated “…. Poverty was the greatest stumbling block to environmental protection”; meaning thereby that unless poverty is tackled head-on the problem of environmental protection cannot be solved.

One of the important fallouts of the Stockholm Conference was the establishment of the United Nations Environmental Programme, headed by the Executive Director to act as a focal point for environmental action and co-ordination within the UN System. With the establishment of the UNEP and the focused work of various international agencies including the World Bank, the growing problems of environment in different sectors, particularly in the developing world began to attract the attention of policy makers, environmental lobbies and States. Initially focus was on weather and climate modification and seabed exploitation, rivers and river basins, enclosed and semi-enclosed seas, transfrontier pollution and ground waters.

In the first decade, UNEP could not make much progress in helping States develop proper environmental law for lack of sufficient resources and constraints faced by developing countries to accelerate their economic development in an environmentally friendly way. The UNEP thereafter developed a more focused programme on development of environmental law through its Montevideo Programme on Development of Environmental Law, 1992 on conclusion of international agreements, development of international principles, guidelines and standards and provision of international assistance for national legislation and administration. In the last several years, a large number of international treaties were concluded under its auspices. Guidelines on different aspects of environment have been produced. Several governments upon request were provided assistance in the drafting of their national environmental legislation and training in implementation of environmental law. In general where the treaties are at a global scale, standards set are general and where they addressed regional or bilateral issues they tend to be more specific and innovative.

One of the seminal issue that emerged from the conference is the recognition for poverty alleviation for protecting the environment. The Indian Prime Minister Mrs. Indira Gandhi in her seminal speech in the conference brought forward the
connection between ecological management and poverty alleviation. It is to be noted that she was the only other speaker in the conference other than the hosting country prime minister.

During this period, mention must also be made of several international conferences on world population (1974), world food (1974), habitat conference (1976), international women’s year conference (1975), desertification conference (1977) and water conference (1977), conference on long-term sustainable development (1982), conference on new and renewable sources of energy (1981), which provided additional fillip in the earlier years to make necessary institutional advances in specific sectors of environment. The adoption in the General Assembly of the 1974 UN Declaration on the Establishment of a New Economic Order, followed by adoption of a Charter of Economic Rights and Duties of States was also an important event in the modern growth of international environmental law. This Declaration gave currency to the right to development, which in turn created the need later to reconcile and synthesise the right of development with the duty to protect environment. This gave birth to the concept of sustainable development, which became the theme of the Rio Conference.

From a legal perspective, the Conference evolved important environmental principles for international environmental regulation and control that highlighted the historical significance and an insight into the relationship between the rich, and the poor countries. Principle 21 of the declaration affirmed the responsibility of States to ensure that the activities within jurisdiction or control did not cause damage to another State or beyond another jurisdiction, for e.g. in area such as the high seas or outer space. Principle 1 linked environmental protection to human rights norms, stating that man has ‘the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears solemn responsibility to protect and improve the environment for present and future generations’.

Moreover, the first environmental mega-conference successfully identified the terms of what is now a continuing global environmental debate. In so doing, it laid down the foundations of the international system of environmental law and defined the parameters of the global debate on the environment and development. For instance, the core principle that a nation State’s sovereignty over the use of its own environmental resources should not impact negatively on other States was negotiated at Stockholm, as were many other principles.

The period from Stockholm till the United Nations Conference on Environment and Development (UNCED), 1992 held in Rio de Janeiro witnessed a steady growth of international activities and also environmental treaties and international
institutions. It is also important to note that one of the natural fallout of the Stockholm conference was the need for an international environmental organisation.

### 1.3 The Brundtland Commission

Much before the Rio conference of 1992, important efforts were made at the international level towards drawing up an action plan for world conservation and sustainable development. The General Assembly in 1982 adopted the World Charter for Nature which although a non-binding instrument was viewed as “an important symbolic expression of an intent among nations to achieve a more harmonious and sustainable relationship between humanity and the rest of the bio-sphere—between mankind and earth”. In 1980 the efforts of International Union for Conservation of Nature (IUCN), UNEP and World Wide Fund for Nature (WWF), UNESCO and FAO prepared a World Conservation Strategy. This Strategy, which is credited with having coined the term ‘sustainable development’ in a major way influenced international legal developments and also emphasized key objectives.

While time and space does not allow us to have a more focused discussion on the Strategy, it is important to know and understand that it recommended: a commitment to principles of sustainable society; a comprehensive system for environmental law its implementation and enforcement; legal and administrative controls for such implementation and development of national and international standards and use of sound, benign environmentally friendly technologies; compensation for damage caused by hazardous substances; liability redress and adoption of international environmental agreements to strengthen the need for environmental protection and sustainable development.

Based on the World Charter of Nature as well as the World Conservation Strategy, a new commission called the World Commission on Environmental Development was established in 1983. This Commission headed by the former Norwegian Prime Minister Gro Harlem Brundtland re-examined issues regarding environment and development as well as proposed new policies and actions towards achievement of sustainable development. The Commission identified a number of priorities areas for legal and institutional change; governance wherein international organisations and regional bodies were called upon to integrate environment into their developmental goals. Besides, reinforcement was sought for environmental protection, strengthening of the UNEP as the principal source of environmental data assessment and reporting. It was also recognised that international law should keep pace with the expanding scale of impacts on the ecological basis of development. The Commission called for international financial institutions such as World Bank, (International Monetary Fund) IMF and other regional development
banks to provide assistance for pollution control. The Commission also established the Commission on Sustainable Development (CSD) which now a regular body.

Our Common Future, also known as the Brundtland Report, from the World Commission on Environmental Development (WCED) was published in 1987. Its targets were multilateralism and interdependence of nations in the search for a sustainable development path. The report sought to recapture the spirit of the Stockholm Conference, which had introduced environmental concerns to the formal political development sphere. Our Common Future placed environmental issues firmly on the political agenda; it aimed to discuss the environment and development as one single issue.

The document was the culmination of a “900 day” international-exercise which catalogued, analysed and synthesised: written submissions and expert testimony from “senior government representatives, scientists and experts, research institutes, industrialists, representatives of non-governmental organisations, and the general public” held at public hearings throughout the world. The Brundtland Commission’s mandate was to:

1) “re-examine the critical issues of environment and development and to formulate innovative, concrete, and realistic action proposals to deal with them;

2) strengthen international co-operation on environment and development and to assess and propose new forms of co-operation that can break out of existing patterns and influence policies and events in the direction of needed change; and

3) raise the level of understanding and commitment to action on the part of individuals, voluntary organisations, businesses, institutes and governments” (1987: 347). “The Commission focused its attention in the areas of population, food security, the loss of species and genetic resources, energy, industry and human settlements – realising that all of these are connected and cannot be treated in isolation one from another.”

The Brundtland Commission Report recognised that human resource development in the form of poverty reduction, gender equity, and wealth redistribution was crucial to formulating strategies for environmental conservation, and it also recognised that environmental-limits to economic growth in industrialised and industrialising societies existed. As such, the Report offered “analysis, the broad remedies, and the recommendations for a sustainable course of development” within such societies. However, the Report was unable to identify the modes of production that are responsible for degradation of the environment, and in the absence of analysing the principles governing market-led economic growth, the
Report postulated that such growth could be reformed and expanded. This lack of analysis resulted in an obfuscated-introduction of the term sustainable development.

An oft-quoted definition of sustainable development is defined in the report as: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

1.4 The United Nations Conference on Environment and Development, 1992

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Informal name</td>
<td>Rio Conference or The Earth Summit 92</td>
</tr>
<tr>
<td>Host Government</td>
<td>Brazil</td>
</tr>
<tr>
<td>Number of Governments participating</td>
<td>172, 108 at level of heads of State or Government</td>
</tr>
<tr>
<td>Conference Secretary-General</td>
<td>Maurice F. Strong, Canada</td>
</tr>
<tr>
<td>Organisers</td>
<td>UNCED secretariat</td>
</tr>
<tr>
<td>Principal themes</td>
<td>Environment and sustainable development</td>
</tr>
<tr>
<td>NGO presence</td>
<td>Some 2,400 representatives of non-governmental organisations (NGOs); 17,000 people attended the parallel NGO Forum</td>
</tr>
<tr>
<td>Resulting document</td>
<td>a) Agenda 21, b) the Rio Declaration on Environment and Development, c) the Statement of Forest Principles, d) the United Nations Framework Convention on Climate Change and e) the United Nations Convention on Biological Diversity</td>
</tr>
<tr>
<td>Follow-up mechanisms</td>
<td>Commission on Sustainable Development; Inter-agency Committee on Sustainable Development; High-level Advisory Board on Sustainable Development</td>
</tr>
<tr>
<td>Previous conference</td>
<td>UN Conference on the Human Environment, Stockholm (1972)</td>
</tr>
</tbody>
</table>
In 1992 the United Nations Conference on Environmental Development (UNCED) was held in Rio De Janeiro, Brazil. The Conference attended by 172 States and thousands of non-governmental organisations adopted 3 non binding instruments:

a) the Rio Declaration on Environment and Development (the Rio Declaration);
b) Agenda 21
c) Forest Principles, which was a Non legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all types of Forests (the UNCED Forestry Principles).

Three binding treaties were also opened for signature -

a) Convention on Biological Diversity,
b) UN Framework Convention on Climate Change,
c) UN Convention to Combat Desertification.

The two texts of Rio Declaration on Environment and Development and the Action Programme known as Agenda 21 were also adopted which are general in scope but have proved to be of important source for the future development of environmental law.

The UNCED was also an occasion to revisit some of the fundamental concerns of environmental protection and economic development. As opposed to the Stockholm Conference, which was based on an ‘ecological approach’, UNCED was basically ‘anthropocentric’ in nature.

The Declaration reaffirmed the principle adopted at the Stockholm Conference and sought to build a “new equitable partnership through the creation of new levels of co-operation among States, key sectors of societies and people”. While recognising the integral and interdependent nature of the Earth as our home the Declaration also aspired to work towards “international agreements which respect the interests of all and protect the integrity of the global environmental and developmental system”.

The Rio Declaration on Environment and Development consisted 27 principles some of which have since played a prominent part in the development of environmental law notably the principle of sustainable development (Principle 4), precautionary principle (Principle 15), the “polluter pays principle” (Principle 16) and the environmental impact assessment (Principle 17). The Declaration is anthropocentric unlike the Stockholm Declaration and the World Charter for Nature. Principle 1 proclaimed that human beings are at the center of concerns for
sustainable development and that they are entitled to a healthy and productive life informally in nature. The Declaration also referred to transboundary effects of activities in Principle 2 similar to Principle 21 of the Stockholm Conference. Principle 3 emphasizes the aspect of inter-generational equity when it states “the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations”.

Principle 10 concerns public participation and Principle 13 once again reiterated the need for States to develop the law of liability. Principles 18 and 19 refer to obligations of States notify others in case of emergencies and with respect to projects, which may affect their environment.

The Rio Conference was the second major milestone in the development of international environmental law after the Stockholm Conference. The significant difference between the two is that at Rio almost all the States of the world as well as non-governmental agencies in great number along with all UN and other international organisations participated in its work. Further, environment was viewed as a common concern of mankind as a whole even if the North-South divide still had its impact on the deliberations. It was important to understand that even the developing countries saw protection of environment as a necessary part of their development as opposed to their earlier fear that such a protection would actually hinder their developmental goals.

The other Principles contained in Rio Declaration could be categorised into three groups. One group related to developmental concerns of developing countries: eradication of poverty (Principle 3), special priority for development of developing countries (Principle 6) and capacity building (Principle 9). These principles were addressed in the form of legal guidelines. A second group of principles addressed the world economic order: common but differentiated responsibilities, including special responsibility of developed countries to protect the global environment (Principle 7); reduction and elimination of unsustainable patterns of production and consumption and promotion of democratic policies (Principle 8); encouragement for a supportive and economic system, that condemned discriminatory trade policy measures or disguised restrictions on international trade as well as unilateral actions (Principle 12); and prevention of re-location and transfer to other States of activities and substances that cause severe environmental degradation or are harmful to human health (Principle 14). These principles are addressed more in the nature of economic policies or guidelines.

In addition to the above two categories, a third category of principles focused on the need of public participation. Principle 10 of the Rio Declaration recognised for
individuals ‘a right to information, participation and remedies in environmental matters’. Principles 20 to 22 stressed the importance of the participation of categories such as women, youth and indigenous peoples. These principles were formulated more as guidelines than legal norms.

Agenda 21 consists of 40 Chapters with 115 specific topics. It is an action programme covering socio-economic dimensions, conservation and resource management, strengthening the role of non-governmental organisations and other social groups such as trade unions, women and youth and measures of implementation. Its chapters deal with different sectors such as atmosphere, biological diversity, the oceans and fresh water resources. The chapter on ‘international legal instruments’ insists on particular aspects of treaty making process through universal participation. States have been called upon to improve the efficacy of international environmental law by integration of environment and development policies in international treaties. Further, Agenda 21 emphasized the need for environmental standard-setting and establishment of procedures and mechanism to promote and review the implementation of treaties, in particular, the establishment of efficient and practical reporting systems.

Agenda 21 also pays particular attention to national legislation. It recognises the importance of laws and regulations suited to country specific conditions and to enable States to implement their obligations resulting from international treaties.

Following the Rio Conference, environment has come to be recognised as important element of all human activities. For example, the 1994 Marrakech Charter that created the World Trade Organisation as well as all the treaties that created regional free trade zones make a mention of ‘environment’ as a specific field for co-operation. Another major global instrument the United Nations Convention on the Law of the Sea devotes special attention to marine environment. During the post Rio phase marine pollution started receiving greater attention. Similarly in 1991, States Parties to the Antarctic Treaty System adopted the Madrid Protocol concerning Environmental Aspects of Antarctica. Likewise, the 1994 UN Convention on Combating Desertification is yet another result of growing concern for environment and development.

Despite an evolving international law of environment setting out in many cases concrete obligations and duties for States, a lot of legal ground still needed to be covered in different sectors of environment. This is particularly so in establishing suitable international and national standards and deciding applicable and pragmatic procedures for implementation and enforcement of such standards. In 1993 UNEP’s Governing Council mandated a position paper to identify the future course of action
following the Rio Conference. Among other things the position paper found that: international environmental law had developed certain characteristics particularly important for achieving sustainable development; International environment law reflected an integrated approach by taking into account social and economic development goals; International environmental law also recognised the disparities in relative development levels of States, allowing for differentiated implementation schedules, financial resources and technology transfers as ways to assist developing countries in meeting their international obligations; and international environmental law also reflected a growing role for non-State actors and recognises the need for all stakeholders to participate in environment and development decisions. More generally, in moving towards sustainable development, international environmental law inspired development of new and innovative concepts, principles and ideas and facilitating enabling mechanisms and procedures in areas such as implementation, compliance, dispute avoidance and dispute settlement. International environmental law is therefore playing an increasingly important role in promoting the integration of environment and development by providing an effective legal and regulatory framework for implementing Agenda 21.

In addition, environmental concerns have begun to impact upon other major sectors of international relations and law. Thus the relationship between trade and environment on the one hand, environment and human rights on the other have become a source of their own development of law involving both principles of content and procedure. With more and more conflicts taking place around the world the need for protecting environment in times of armed conflict and hence the relationship between environment and international humanitarian law had also gained some significance.

Apart from the above, a more effective implementation, compliance and enforcement of international agreements and conventions is recognised as a matter of priority. Dispute resolution and avoidance through formulation of appropriate guidelines, early warning systems and offer of assistance and training by competent international organisations is another area of contemporary focus for the development of environmental law.

Binding treaties of Earth Summit -

A) CBD - The Convention on Biological Diversity (CBD), known informally as the Biodiversity Convention, is an international legally binding treaty. The Convention has three main goals:

1) conservation of biological diversity
2) sustainable use of its components; and
3) fair and equitable sharing of benefits arising from genetic resources.

In other words, its objective is to develop national strategies for the conservation and sustainable use of biological diversity. It is often seen as the key document regarding sustainable development.

The Convention was opened for signature at the Earth Summit in Rio de Janeiro on 5 June 1992 and entered into force on 29 December 1993.

2010 was the International Year of Biodiversity. The Secretariat of the Convention on Biological Diversity is the focal point for the International Year of Biodiversity. At the 2010 10th Conference of Parties (COP) to the Convention on Biological Diversity in October in Nagoya, Japan, the Nagoya Protocol was adopted. On 22 December 2010, the UN declared the period from 2011 to 2020 as the UN-Decade on Biodiversity. They, hence, followed a recommendation of the CBD signatories during COP 10 at Nagoya in October 2010.

The convention recognised for the first time in international law that the conservation of biological diversity is “a common concern of humankind” and is an integral part of the development process. The agreement covers all ecosystems, species and genetic resources. It links traditional conservation efforts to the economic goal of using biological resources sustainably. It sets principles for the fair and equitable sharing of the benefits arising from the use of genetic resources, notably those destined for commercial use. It also covers the rapidly expanding field of biotechnology through its Cartagena Protocol on Biosafety, addressing technology development and transfer, benefit-sharing and biosafety issues. Importantly, the Convention is legally binding; countries that join it (‘Parties’) are obliged to implement its provisions.

The convention reminds decision-makers that natural resources are not infinite and sets out a philosophy of sustainable use. While past conservation efforts were aimed at protecting particular species and habitats, the Convention recognises that ecosystems, species and genes must be used for the benefit of humans. However, this should be done in a way and at a rate that does not lead to the long-term decline of biological diversity.

The convention also offers decision-makers guidance based on the precautionary principle that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimise such a threat. The Convention acknowledges that substantial investments are required to conserve biological
diversity. It argues, however, that conservation will bring us significant environmental, economic and social benefits in return.

Some of the many issues dealt with under the convention include:

♦ Measures and incentives for the conservation and sustainable use of biological diversity.

♦ Regulated access to genetic resources and traditional knowledge, including Prior Informed Consent of the Party providing resources.

♦ Sharing, in a fair and equitable way, the results of research and development and the benefits arising from the commercial and other utilisation of genetic resources with the Contracting Party providing such resources (governments and/or local communities that provided the traditional knowledge or biodiversity resources utilised).

♦ Access to and transfer of technology, including biotechnology, to the governments and/or local communities that provided traditional knowledge and/or biodiversity resources.

♦ Technical and scientific co-operation.

♦ Co-ordination of a global directory of taxonomic expertise (Global Taxonomy Initiative).

♦ Impact assessment.

♦ Education and public awareness.

♦ Provision of financial resources.

♦ National reporting on efforts to implement treaty commitments.

**International bodies established by the CBD**

- **Conference of the Parties**: The convention’s governing body is the COP consisting of all governments (and regional economic integration organisations) that have ratified the treaty. This ultimate authority reviews progress under the Convention, identifies new priorities, and sets work plans for members. The COP can also make amendments to the Convention, create expert advisory bodies, review progress reports by member nations, and collaborate with other international organisations and agreements. The Conference of the Parties uses expertise and support from several other bodies that are established by the Convention. In addition to committees or mechanisms established on an ad hoc basis, two main organs are:
a) **Secretariat:** The CBD Secretariat. Based in Montreal, it operates under the United Nations Environment Programme. Its main functions are to organise meetings, draft documents, assist member governments in the implementation of the programme of work, co-ordinate with other international organisations, and collect and disseminate information.

b) **Subsidiary body for Scientific, Technical and Technological Advice (SBSTTA):** The Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA). The SBSTTA is a committee composed of experts from member governments competent in relevant fields. It plays a key role in making recommendations to the COP on scientific and technical issues.

**Country implementations:** Implementation in various countries is through National Biodiversity Strategies and Action Plans (NBSAP). NBSAPs are the principal instruments for implementing the Convention at the national level (Article 6). The Convention requires countries to prepare a national biodiversity strategy (or equivalent instrument) and to ensure that this strategy is mainstreamed into the planning and activities of all those sectors whose activities can have an impact (positive and negative) on biodiversity. To date [2012-02-01], 173 Parties have developed NBSAPs in line with Article 6.

**Protocols under CBD**

- **The Cartagena Protocol on Biosafety** of the Convention, also known as the Biosafety Protocol, was adopted in January 2000. The Biosafety Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. The Biosafety Protocol makes clear that products from new technologies must be based on the precautionary principle and allow developing nations to balance public health against economic benefits. It will for example let countries ban imports of a genetically modified organism if they feel there is not enough scientific evidence the product is safe and requires exporters to label shipments containing genetically modified commodities such as corn or cotton.

- **Global Strategy for Plant Conservation** was adopted on April 2002, based on the recommendations of the Gran Canaria Declaration Calling for a Global Plant Conservation Strategy, and adopted a 16-point plan aiming to slow the rate of plant extinctions around the world by 2010.

- **Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation to the Convention on Biological Diversity** is a supplementary agreement to the Convention on
Biological Diversity. It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: the fair and equitable sharing of benefits arising out of the utilisation of genetic resources. The Protocol was adopted on 29 October 2010 in Nagoya, Aichi Province, Japan, and will enter into force 90 days after the fiftieth instrument of ratification. Its objective is the fair and equitable sharing of benefits arising from the utilisation of genetic resources, thereby contributing to the conservation and sustainable use of biodiversity. It is intended to create greater legal certainty and transparency for both providers and users of genetic resources by:

♦ Establishing more predictable conditions for access to genetic resources.
♦ Helping to ensure benefit-sharing when genetic resources leave the contracting party providing the genetic resources.
♦ By helping to ensure benefit-sharing, the Nagoya Protocol creates incentives to conserve and sustainably use genetic resources, and therefore enhances the contribution of biodiversity to development and human well-being.

The Nagoya Protocol applies to genetic resources that are covered by the CBD, and to the benefits arising from their utilisation. The Nagoya Protocol also covers traditional knowledge (TK) associated with genetic resources that are covered by the CBD and the benefits arising from its utilisation. Nagoya Protocol sets out core obligations for its contracting Parties to take measures in relation to access to genetic resources, benefit-sharing and compliance.

1) **Access obligations** - these domestic-level access measures are to:

♦ Create legal certainty, clarity and transparency
♦ Provide fair and non-arbitrary rules and procedures
♦ Establish clear rules and procedures for prior informed consent and mutually agreed terms
♦ Provide for issuance of a permit or equivalent when access is granted
♦ Create conditions to promote and encourage research contributing to biodiversity conservation and sustainable use
♦ Pay due regard to cases of present or imminent emergencies that threaten human, animal or plant health
♦ Consider the importance of genetic resources for food and agriculture for food security
2) **Benefit-sharing obligations** - These domestic-level benefit-sharing measures are to provide for the fair and equitable sharing of benefits arising from the utilisation of genetic resources with the contracting party providing genetic resources. Utilisation includes research and development on the genetic or biochemical composition of genetic resources, as well as subsequent applications and commercialisation. Sharing is subject to mutually agreed terms. Benefits may be monetary or non-monetary such as royalties and the sharing of research results.

3) **Compliance obligations** - These specific obligations to support compliance with the domestic legislation or regulatory requirements of the Contracting Party providing genetic resources, and contractual obligations reflected in mutually agreed terms, are a significant innovation of the Nagoya Protocol. Contracting Parties are to:

- Take measures providing that genetic resources utilised within their jurisdiction have been accessed in accordance with prior informed consent, and that mutually agreed terms have been established, as required by another Contracting Party
- Co-operate in cases of alleged violation of another Contracting Party’s requirements
- Encourage contractual provisions on dispute.

**B) UNFCCC** - The United Nations Framework Convention on Climate Change (UNFCCC or FCCC) is an important international environmental treaty negotiated at the UNCED. The objective of the treaty is to “stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”. The treaty itself set no binding limits on greenhouse gas emissions for individual countries and contains no enforcement mechanisms. In that sense, the treaty is considered legally non-binding. Instead, the treaty provides a framework for negotiating specific international treaties (called “protocols”) that may set binding limits on greenhouse gases.

The UNFCCC was opened for signature on 9 May 1992, after an Intergovernmental Negotiating Committee produced the text of the Framework Convention as a report following its meeting in New York from 30 April to 9 May 1992. It entered into force on 21 March 1994. As of May 2011, UNFCCC has 195 Parties.

The Parties to the convention have met annually from 1995 in Conferences of the Parties (COP) to assess progress in dealing with climate change. In 1997, the Kyoto
The 2010 Cancun agreements state that future global warming should be limited to below 2.0°C (3.6°F) relative to the pre-industrial level. The 20th COP will take place in Peru in 2014.

The Framework Convention specifies the aim of developed (Annex-I) Parties stabilising their greenhouse gas emissions (carbon dioxide and other anthropogenic greenhouse gases not regulated under the Montreal Protocol) at 1990 levels, by the year 2000. After the signing of the UNFCCC treaty, Parties to the UNFCCC have met at conferences (“Conferences of the Parties” – COPs) to discuss how to achieve the treaty’s aims. At the 1st Conference of the Parties (COP-1), Parties decided that the aim of Annex-I Parties stabilising their emissions at 1990 levels by the year 2000 was “not adequate”, and further discussions at later conferences lead to the Kyoto Protocol. The Kyoto Protocol sets emissions targets for developed countries which are binding under international law.

The 2010 Cancun agreements (COP 16) include voluntary pledges made by 76 developed and developing countries to control their emissions of greenhouse gases. At the 2012 Doha climate change talks (COP 18), Parties to the UNFCCC agreed to a timetable for a global agreement which will include all countries. The timetable states that a global agreement should be adopted by 2015, and implemented by 2020.

C) UNCCD - The United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UNCCD) is a Convention to combat desertification and mitigate the effects of drought through national action programmes that incorporate long-term strategies supported by international co-operation and partnership arrangements.

The Convention, the only convention stemming from a direct recommendation of the Rio Conference’s Agenda 21, was adopted in Paris, France on 17 June 1994 and entered into force in December 1996. It is the first and only internationally legally binding framework set up to address the problem of desertification. The Convention is based on the principles of participation, partnership and decentralisation—the backbone of Good Governance and Sustainable Development. It has 194 State Parties, making it truly global in reach. In 2013, Canada became the first country to announce its intention to withdraw from the convention. To help publicise the Convention, 2006 was declared “International Year of Deserts and Desertification” but debates have ensued regarding how effective the International Year was in practice.
The UN General Assembly Special Session on Sustainable Development (Earth Summit II), New York, 1997

Soon after Rio, the UN General Assembly requested a formal review of the implementation of Agenda 21. The UN General Assembly Special Session on Sustainable Development (UNGASS) was held in New York five years after Rio. Although its formal task was to review Agenda 21, UNGASS (or ‘Earth Summit II’, as it came to be known) was inevitably portrayed as a litmus test of government’s support for, and record of, implementing sustainable development. The Meeting produced two main outcomes: a six-paragraph ‘statement of commitment’ and a ‘Programme of Action for the Further Implementation of Agenda 21’. The organisers had hoped to keep the Conference agenda narrow and focused, but as soon as the meeting opened the agenda began to broaden, as different groupings pushed their own concerns. In the end, the Meeting struggled even to agree upon a statement on common concerns such as forests, climate change, trade and globalisation. The UNGASS did, however, agree upon a new programme of work for the UNCSD, by setting up local Agenda 21s processes, and paved the way for the ten-year review of Rio+10 in 2002.

1.5 The World Summit for Sustainable Development: Johannesburg, 2002 (Rio+10)

Fact Sheet

| Conference | The World Summit for Sustainable Development: Johannesburg, 26 August to 4 September 2002. |
| Informal name | Rio+10, Earth Summit 2002 |
| Host Government | South Africa |
| Resulting document | a) Johannesburg Declaration, that laid down Johannesburg Plan of Implementation as an action plan. |
| | b) Agreement of 27 August aiming to restore the world's depleted fisheries by 2015, along with other agreements. |
c) Instead of new agreements between governments, which is known as Type I Partnerships (a more classic outcome of international treaties) this summit resulted in around almost 300 “partnership initiatives” known as Type II agreements.

d) These Type II agreements\(^3\) were to be the key means to achieve the Millennium Development Goals. These are kept in a database of UN Partnerships for Sustainable Development.

<table>
<thead>
<tr>
<th>Follow-up mechanisms</th>
<th>Millennium Development Goals follow up initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous conference</td>
<td>Earth Summit 1992</td>
</tr>
</tbody>
</table>

The World Summit for Sustainable Development (WSSD) was the main follow-up to the 1992 Earth Summit. It was expected to be as high profile and significant as Rio, and to provide the opportunity for concrete steps to be taken towards implementing the principles agreed at earlier conferences. The preparations for the WSSD had begun in May 2001, with the first of a series of four global preparatory conferences and a number of regional and national consultation exercises to set the agenda and propose solutions. It was expected to be the first major environment and development conference to have a formally structured official input from a wide range of ‘major groups’ of stakeholders identified at Rio e.g. youth, farmers, businesses, women. It also provided an opportunity for world leaders to recover some of the lost ground in 1997, by ratifying global agreements such as the Kyoto Protocol and the Conventions on Biodiversity and Desertification).

\(^2\) Type I Agreements – These preliminary agreements are created when the parties agree on all the points that require negotiation (including whether to be bound) but they also agree to memorialise their agreement in a more formal document. Such an agreement can be fully binding; it is preliminary only in the sense that the parties plan to more formally set it down in writing. Despite the anticipation of further formalities, a party to this type of preliminary agreement may demand performance of the transaction, even without the more elaborate signed formalisation of their agreement.

\(^3\) Type II Agreements – These type of preliminary agreements are binding on parties only to a certain degree. These agreements result when the parties agree on certain major terms, but leave other terms open for further negotiation. Here the parties make a mutual commitment to negotiate together in good faith in an effort to reach final agreement. In contrast to a Type I preliminary agreement, a Type II agreement does not actually commit the parties to the ultimate contract itself but rather only to the obligation to negotiate the open issues in good faith in an attempt to reach a final contract within the agreed framework. As a result, a party to a Type II preliminary agreement has no right to demand performance of the transaction. Indeed, if a final contract is not agreed upon, the parties generally may abandon the transaction as long as they have made a good-faith effort to close the deal.
Various problems had cropped up in the implementation of Rio Declaration and the action programme Agenda 21. To review these problems and issues connected, the United Nations decided to hold the WSSD at Johannesburg, South Africa from 26 August to 4 September 2002. In the context of the WSSD several themes came into focus: globalisation and sustainable development; eradication of poverty and achieving sustainable livelihoods; changing unsustainable patterns of consumption and production; promoting health through sustainable development; accessing energy and improving energy efficiency; sustainable management of ecosystems and bio-diversity; managing the world’s fresh water resources, near coastal zones, problems of small island States, conservation and management of ocean resources; securing adequate finance and technology transfer; implementing sustainable development initiatives for Africa; and strengthening the system of international governance for sustainable development.

Given that previous international meetings on sustainable development seem to have had little effect on the world’s majority, the Johannesburg Summit was considered by some to appear quite ambitious to say the least and many were skeptical as to whether anything of importance would even come of this summit.

A broader agenda than the Rio Summit in 1992, the summit in Johannesburg also included a huge number of delegates representing nations, business interests and non-profit environmental and development/citizen/social justice groups. Various key issues were addressed, including:

- Poverty
- Water quality and availability
- Cleaner energy
- Health
- Good governance
- Technology
- Production and Consumption
- Oceans and Fisheries
- Tourism

These are just a sample and were all discussed in varying degrees. Other related issues such as globalisation, women’s rights were also discussed.

Some understandably criticised the summit as over-ambitious to try and talk about so many issues. Yet, true or not, it shows that there is at least an apparent growing
recognition that sustainable development (admittedly a somewhat overused word) means a myriad of inter-related issues, not something solely in the realms of environmentalism, but also deep into economics (which governs how resources are used), and a variety of sociopolitical issues.

**Millennium Development Goals (MDGs)**

MDGs are eight international Development Goals that were established following the Millennium Summit of UN in 2000, following the adoption of the United Nations Millennium Declaration. All 189 United Nations member States of that time and at least 23 international organisations committed to help achieve the Millennium Development Goals by 2015, the goals follow:

1) To eradicate extreme poverty and hunger
2) To achieve universal primary education
3) To promote gender equality and empowering women
4) To reduce child mortality rates
5) To improve maternal health
6) To combat HIV/AIDS, malaria and other diseases
7) To ensure environmental sustainability
8) To develop a global partnership for development

Each goal has specific targets and dates for achieving those targets. To accelerate progress, the G8 Finance Ministers agreed in June 2005 to provide enough funds to the World Bank, IMF and the African Development Bank to cancel $40 to $55 billion in debt owed by members of the Heavily Indebted Poor Countries (HIPC) to allow them to redirect resources to programmes for improving health and education and for alleviating poverty.

Criticisms accompanied the MDGs, focusing on lack of analysis and justification behind the chosen objectives, the difficulty or lack of measurements for some goals and uneven progress, among others. Although developed countries’ aid for achieving the MDGs rose during the challenge period, more than half went for debt relief, with much of the remained going towards natural disaster relief and military aid which do not further development.

As of 2013 progress towards the goals was uneven. Some countries achieved many goals, while others were not on track to realise any. A UN conference in September 2010 reviewed progress and concluded with the adoption of a global plan to achieve
the eight goals by their target date. New commitments targeted women’s and children’s health and new initiatives in the worldwide battle against poverty, hunger and disease.

1.6 Conclusion

To sum up many of these mega conferences brought on the agenda of the international community the core issues of environment. It is difficult to state precisely what have been the contributions of these conferences. Some of their important contributions have been: setting global agendas; facilitating ‘joined-up’ thinking; endorsing commonly shared principles; exercising leadership by defining new objectives; building institutional capacities; and making global governance more legitimate in the eyes of governments, business and civil society by promoting social inclusiveness.

The Millennium Development Goals and the Environment endorse some of the above goals and agenda. They speak of the need to: integrate the principles of sustainable development into country policies and programmes; reverse loss of environmental resources; reduce by half the proportion of people without sustainable access to safe drinking water; achieve significant improvement in lives of at least 100 million slum dwellers, by 2020.

The Secretary General’s 2007 Report on the Millenium Development Goals pertaining to environment deals largely on the threat of climate change. While it may be the most important global problematique facing the world today, there are a number of other concerns such as loss of biological diversity, loss of freshwater, desertification, marine pollution etc. that require urgent attention too.

However, it also needs to be understood that States require resources to implement their obligations or commitments agreed at these conferences. This is not to deny the signal contribution of the Rio principles of common but differentiated responsibilities, common concern of humanity from the Law of the Sea Convention and others.

In light of the above discussions on development and application of IEL, it is important to think and reflect on the following questions. How does IEL illustrate the distribution of power within the global political economy? Do environmental problems require both global and local discourses? Is IEL a useful avenue for solving environmental problems? And if so, how? It is important to self analyse these questions because, less developed and developing regions of the world have long been either sceptical or ambivalent about IEL and its usefulness, perceiving IEL as
an attempt to ameliorate Western development mistakes at the expense of non-Western development.

Since independence, postcolonial States have sought development in the Western sense, believing it to be the only path out of mass poverty and humiliating financial dependency. At the same time, Western States gradually realised that their understanding of development was causing grave global environmental harm and was unsustainable. Thus, the two dominant strains of argument in IEL have been affluent Western environmentalists calling for global environmental protection, and advocates from poorer regions prioritising poverty eradication and insisting that rich regions should take responsibility for the environmental problems they caused.

In this chapter, we shall conclude by summarising a few modern day outcomes and shortcomings of IEL scheme in this fast globalising world -

i) Common but differentiated responsibilities
IEL concepts such as sustainable development and the principle of common but differentiated responsibilities for the global environment attempt to address both concerns by insisting that, firstly, environmental and developmental concerns are inextricably intertwined; second, States that cause the most environmental harm should bear the primary responsibility for solutions; and third, richer States should take the lead and bear a greater burden because of their greater economic and technological capacity.

While these concepts clearly articulate what is needed, more developed States have either not formulated, or not adhered to, a concomitant hierarchy of norms and actions. Thus IEL has failed to eradicate the sense of injustice that poorer regions feel and, on a diversity of issues from species conservation to climate change, IEL is characterised by a deepening divide between the poor and the rich.

ii) Disproportionate suffering
Many less developed and developing nations feel that it is deeply unfair that their nation, which has not contributed a lot to escalate the present global environmental problems, should have to concern themselves with disproportionate burden on environmental protection at a time when they are struggling with accessing the basics of survival such as drinkable water, food and shelter. However, in recent years, international law advocates for the poor have increasingly re-engaged with environmental issues because, just as the rich receive a disproportionate benefit from exploiting nature, the poor bear a disproportionate burden of scarcity, pollution and environmental crises such as climate change. Globally, dominant
development patterns coupled with population growth have led to increased resource consumption and pollution and waste, causing both resource scarcity and ecological crises.

The overriding sustainable development challenge in developing nations is poverty eradication, and such States have looked to economic growth for the solution. In the past decade, most Asian and at least six African countries were among the world’s ten fastest growing economies. As the last remaining pockets of many natural resources exist in poorer parts of the world, and as poorer regions are more vulnerable to ecological crises, IEL is an increasingly strategic body from which vulnerable peoples, and the movements, scholars, and States that represent them, can contest, negotiate, and resist international economic and development paradigms. Today, grassroots social movements are increasingly harnessing environmental issues as an opportune means of challenging fundamental assumptions that underpin capitalism and development.

iii) Continued cycle of domination

Just as in the past when developing nation’s rich and diverse natural resources attracted colonial powers, today primary products continue to dominate as such nation’s export sectors. The value added locally remains minimal compared to the financial gains accruing outside the continents. Some resources such as oil and diamonds have also contributed to conflict. For instance, while Africa is well-endowed with fossil fuels, hydropower, uranium, biomass and other renewable energy resources, many Africans do not have access to reliable and affordable energy. Asia shares a similar fate in energy sector. Hunger and malnutrition remain pervasive and the spectre of famine continues to haunt millions on a continent with ample agricultural endowments. This is the result of various factors including the global increase of food prices, developed countries’ agricultural subsidies benefiting their own rich producers, and many years of structural adjustment programmes encouraging developing governments to repay ballooning debts by diverting resources from food production to cash crop exports.

Globally, increasing climate variability, rising costs of fossil fuels, and concerns for future energy and food supplies, has spurred foreign investors and speculators to buy fertile lands. And while foreign acquisition of fertile lands in Asian and African nations is increasing, transparency about the acquisitions is decreasing. Control over land is crucial for smallholder farmers but they remain highly vulnerable to dispossession and exploitation. This applies particularly to women, who constitute a majority of the agricultural workforce in such regions, producing about 80% of the region’s food, yet owning less than 1% of the land on which they work. They, along with children, are the first to suffer the effects of economic downturn, drought, famine and violent conflict.
Africa and Asia’s economic growth pattern does not always bode well for either poverty reduction or environmental protection. The latter has grave consequences for the region’s poor who depend directly on the livelihood support of functioning ecosystems. Environmental degradation causes poverty, hunger, gender inequality, and health problems. The poor also have less capacity to adapt and cope with the increasing onset of ecological crises. Notwithstanding its low greenhouse gas emissions, such countries will be most affected by climate change mainly due to low adaptive capacity in the face of increasing extreme events such as floods and droughts. Persistent loss of biodiversity is also a major problem, caused by expanding agriculture, deforestation, climate change and desertification. Drought and desertification affect 65% of the population and highly variable rainfall results in uneven distribution of water resources. Thus, for a combination of economic, social and environmental reasons, people of such nations have strong incentives to participate in and shape international co-operation on environmental issues.

Moving on to the question of whether international law can overcome past failures and address the urgent needs of those on the frontline of environmental crises? The primary barrier to sustainable development is a dominant development paradigm dependent on an infinite increase in economic growth, consumption, and production. While of Western origin, this paradigm now has almost universal influence. Western understandings of development come from value systems with deep cultural and historical roots and are difficult to change. Transformation requires, first, a better understanding of the problem and, second, viable alternatives.

iv) International law as the problem
On the first point, while international lawyers have focused on disciplinary solutions to environmental challenges, less attention is devoted to uncovering the role of international law in creating unsustainable patterns of behaviour. Environmental issues have been relegated to the specialised field of IEL. However, harmful assumptions about the environment lie at the heart of international law concepts such as sovereignty, development, property and human rights.

For instance, sovereignty assumes certain types of control and productive use of land – a requirement that has had significant consequences for the range of decisions in which postcolonial States engage. International law and its institutions have also played an important part in universalising and normalising an idea of development and political economy wedded to the infinite exploitation of natural resources. Conceptions of property in international law, such as the public-private distinction and the notion of the commons, reflect a particular understanding of nature where selective aspects are commodified. The anthropocentricity of
international law, most easily identifiable in the powerful discourse of human rights, also plays a part in limiting disciplinary responses to ecological crises. Unpacking some of these assumptions may help us think our way out of destructive development patterns.

v) Local solutions
On the second point, the hegemonic nature of the dominant paradigm makes it difficult to imagine alternatives. For inspiration, communities often turn to scientific innovation as well as cultural and historic knowledge, creating hybrid and innovative local sustainable solutions. Indigenous knowledge as yet unobliterated by globalisation has helped many communities survive food, nutrition, healthcare and climatic challenges with little or no support from the outside world. IEL has focused on top-down normative guidelines for States but perhaps it should instead be more receptive to the potential that local sustainable practices have for tackling global problems. The first 40 years of IEL were predominantly shaped by the Western experience of environmentalism. Alongside the re-emergence of the economic and political power of Asia, Africa and Latin America, there is an opportunity for alternative cultures, understandings, and voices to emerge to help creatively articulate what sustainable development is, and provide choices other than the one-sided development trajectories of the past.
### Chapter Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Introduction</td>
<td>34</td>
</tr>
<tr>
<td>2.2</td>
<td>General Principles of International Environmental Law</td>
<td>35</td>
</tr>
<tr>
<td>2.3</td>
<td>General Principles of Diverse Legal Systems</td>
<td>46</td>
</tr>
<tr>
<td>2.4</td>
<td>Linkage of International Environmental Law with other Disciplines of Law</td>
<td>51, 53</td>
</tr>
<tr>
<td>2.5</td>
<td>Application of International Environmental Law</td>
<td>67</td>
</tr>
<tr>
<td>2.6</td>
<td>Conclusion</td>
<td></td>
</tr>
</tbody>
</table>

#### 2.1 Introduction

Environmental Law is a body of law, which is a system of complex and interlocking statutes, common law, treaties, conventions, regulations and policies which seek to protect the natural environment which may be affected, impacted or endangered by human activities. Some environmental laws regulate the quantity and nature of impacts of human activities: for example, setting allowable levels of pollution or requiring permits for potentially harmful activities. Other environmental laws are preventive in nature and seek to assess the possible impacts before the human activities can occur.

Environmental law as a distinct system arose in the 1960s in the major industrial economies. It is fast becoming an important and specialised branch of law. Many of its doctrines are gradually becoming clear. The questions addressed to by environmental law are substantive in nature, whereas, the remedies of these issues are mainly procedural. In recent years, environmental law has become seen as a
critical means of promoting sustainable development. Policy concepts such as the precautionary principle, public participation, environmental justice, and the polluter pays principle have informed many environmental law reforms in this respect. There has been considerable experimentation in the search for more effective methods of environmental control beyond traditional “command-and-control” style regulation. Eco-taxes, tradable emission allowances, voluntary standards such as ISO 14000 and negotiated agreements are some of these innovations.

A study of the fundamental principles of international law would essentially involve looking at the sources of international law which provide the basis of obligation between States. It must be borne in mind that international law has its roots in the practice of States of creating binding rules among themselves. These rules once drawn and a State becomes a Party to a treaty or is bound by customs, the legal effect is the same as being bound under domestic law. According to the Vienna Convention on the Law of Treaties a Party to a treaty cannot cite domestic inadequacies/constraints as a justification of not complying with international obligations. There was a time when certain fringe areas of international law such as international space law, international human rights law, international telecommunications law and environmental laws were not regarded as a part of traditional international law. But today, with more than three thousand multilateral environmental treaties and agreements it cannot be said that ‘environment’ is a field, which remains outside the purview of international law.

IEL has its roots in domestic law, as was observed by Judge Hersch Lauterpacht one of the greatest scholars in the field of international law who stated that “…international laws are nothing but an offshoot of national laws…” (Lauterpacht, H., *Private Law Sources and Analogies of International Law* (New York: Longmans Green and Co. Ltd., 1958).

### 2.2 General Principles of International Environmental Law

A distinction needs to be drawn between the fundamental principles on international law and the principles of IEL. The latter largely evolved as fallout of the Stockholm and Rio Conferences which in some measure codified the principles governing State behaviour. These principles would include: the principle of sovereignty, duty of co-operation, prevention, precautionary approach, polluter pays principle, inter-generational equity, general principles of diverse legal systems, principle of notification and mutual assistance, principle of non-discrimination, principle of public participation, good governance and capacity building.
a) Principle of Sovereignty

The principle of sovereignty is one of the oldest known principles of international law. It is seen that international law recognises “the right of the people and nations to permanent sovereignty over their natural resources and wealth, it must be exercised in the interests of national development and of the well-being of the people of the State concerned (GA Resolution 1803 XVII (1962) and Resolution 3021 (1972). Sovereignty is not a hollow concept. With it comes the demand of developing countries to a right to development as they were deprived or looted of the resources by colonisation. However, this right of permanent sovereignty which is also recognised by a number of other international conventions is qualified in that it should not violate the rights of other States and cause transboundary harm beyond their national jurisdiction as provided in Principles 21 and 2 of the Stockholm and Rio Declarations respectively.

Similarly a general obligation is provided in Article 192 of the UN Convention on the Law of the Sea 1982 wherein “States have the obligation to protect and preserve the marine environment”. Further, Article 193 while reiterating the rights of permanent sovereignty of States over their natural resources also provides that such right must be exercised “….pursuant to the environmental policies and in accordance with their duty to protect and preserve the marine environment.”

While undertaking an obligation to protect and preserve their environment UNCLOS provides States are under a duty to use “the best practicable means at their disposal and in accordance with their capabilities”. This clearly takes into consideration the needs and aspirations of a number of developing countries whose priority is often socio-economic development and are faced with limited resources to invest them on achieving higher and higher international environmental standards often set and urged by the developed States.

Principle of sovereignty assumes importance in the study of environment as the whole universe is integrated. So are rivers, seas, migratory species, fish and global problems such as climate change, ozone depletion and acid rain.

b) Principle of Co-operation

The general principle of co-operation among States is an important principle in respect of prevention of harm to the environment. International law according to Wolfgang Friedman is based on the vertical and horizontal co-operation of rich and poor States. It is only through a law of co-operation can States exist as equal entities because not all have the capacity to sustain their population and resources. The principle of co-operation was emphasized by the Charter of Economic Rights
and Duties of States, the UN Convention on the Law of the Sea and numerous other international and regional conventions. The resolutions of the UN General Assembly and other regional bodies always emphasize the need for co-operation to meet common concerns of mankind.

The greater reliance on the principle of co-operation is significant in that it marks a departure from the classical approach based on principles of coexistence amongst States and emphasizes a more positive or even integrated interaction among them to achieve common ends, while charging them with positive obligations of commission.

Co-operation could involve standard setting and institution-building as well as action undertaken in a spirit of reasonable consideration of each other’s interests towards achievement of common goals. Accordingly, there are several treaties, which incorporate principles of equitable sharing and adopt an integrated approach to the development of shared resources, particularly in the context of a river basin.

The duty to notify which is inherent in the principle of co-operation the potentially affected neighbouring States and to engage in consultations with such States is a specific obligation in the case of a planned activity which has a risk of causing significant transboundary harm. This is borne out by the work of the International Law Commission on the Prevention of Harm from Transboundary Resources and Article 9 of the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses. The potentially affected neighbouring States could include States beyond the immediate borders of the State. Information to be shared could be drawn from readily available sources and the need for undertaking any special study could be related to payments by the requesting State.

The duty to co-operate and engage in consultations and if necessary in the negotiation with the potentially affected State has to be understood as a duty to co-operate in good faith in international law. Solutions to be achieved through such consultations should aim at mutually beneficiary or satisfactory outcomes. The Arbitral Tribunal Award (1957) in the Lake Lannoux case observed that, where different interests of riparian States are involved, “according to the rules of good faith, the upstream State is under the obligation to take into consideration the various interests involved, to seek to give them every satisfaction compatible with the pursuit of its own interests and to show that in this regard it is genuinely concerned to reconcile the interests of the other riparian State with its own. Similarly the Permanent International Court of Justice in the Case concerning the Jurisdiction of the International Commission of the River Oder (PCII, Ser. A 1929) noted that in
the case of a right of a passage in respect of a river the community interest in a navigational river should become the basis for the common legal right....”.

It is also well established that the obligation to negotiate, where it arises, does not include an obligation to reach an agreement. However as the International Court of Justice in the North Sea Continental Shelf Cases (ICJ Reports 1969) pointed out negotiation to be in conformity with the obligation to negotiate should be meaningful, be a genuine endeavour at bargaining, and not a mere affirmation of one’s claims without ever contemplating to meet the adversaries claim. Similarly, the Court also held in the Fisheries Jurisdiction Case (UK v. Iceland, ICJ Reports 1974) that parties should conduct their negotiation on the basis that each must in good faith pay reasonable regard to the legal rights of the other.

c) Duty of Prevention

The concept of prevention is a common obligation found in most national environmental legislations. The duty of prevention involves minimising the environmental damage as a chief objective. It must be remembered that the principle of prevention is not a ‘post facto’ situation wherein liability is involved, as it involves an obligation by a State to prevent damage to the environment within its own jurisdiction and beyond.

The notion of the obligation of prevention has its genesis not in environmental considerations but from the obligation to respect the territorial integrity and political independence of States. As was seen in the Island of Palmas case (Hague Court Reporter, 2nd (Scott), 84, 93 (Permanent Court of Arbitration, 1928), the Tribunal held “States had the duty to protect within their territory the rights of other States, in particular their right to integrity and inviolability in peace and war”. Likewise, a general proscription is evident in Article 2, paragraph 7 of the Charter of the United Nations which declares that “Nothing contained in the present Charter shall authorise the United Nations to intervene in matters which are essentially within the domestic jurisdiction of any State or shall require members to submit such matters to settlement under the present Charter.”

With respect to environmental issues, the most authoritative formulation of this principle can be found in Principle 21 of the Stockholm Declaration that provides “States have, in accordance with the Charter of United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their environmental policies”.

There are two schools on the issue of environmental protection. One, the ‘preventive’ school believes that while it is necessary to set standards of liability, it is more
important to prevent the danger from occurring, especially when dealing with hazardous and ultra-hazardous substances. The other is the ‘mitigative’ school, which finds it more effective to have a curative remedy by means of liability and compensation. This school presumes that States shall undertake activities irrespective of their hazard potential.

The principle of prevention, finds place in a number of multilateral environmental agreements especially the agreements drawn up under the UNEP Regional Seas Programmes that provide for due diligence obligations, to prevent, reduce and control pollution.

The International Law Commission (ILC) has done pioneering work on the duty of prevention in international law wherein the Special Rapporteur on the topic of international liability has produced an entire first report on the Prevention of Transboundary Damage from Hazardous Substances and later three reports on ‘international liability for allocation of loss suffered by victims of pollution hazards’. This entire work was adopted as Draft Articles by the Sixth Committee of the General Assembly.

d) Precautionary Approach

The principle of precaution states that where there are threats of serious or irreversible harm, a lack of full scientific certainty about the causes and effects of environmental harm shall not be used as a reason for postponing measures to prevent environmental degradation. It presupposes that scientific certainty may take too long a time to arrive at a definite understanding of the harmful effects of a hazardous substance. In such cases there should not be any delay in halting the occurrence of harm, which could lead to an irreversible state or damage. Examples could include extinction of species or massive pollution of the oceans which cannot be restored to its previous self.

At a normative level, the Rio Declaration, which identified a number of more specific procedures and principles to promote the goal of sustainable development, refers to principle of precautionary approach. Principle 15 which reads:

“In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

While dealing with hazardous substances, the precautionary principle can play an important role in influencing preventive measures that can save the environment from degradation rather than undertaking mitigative measures after the damage
has occurred. However, as opposed to undertaking preventive measures before the harm is caused, the precautionary approach comes into play only when there is uncertain scientific evidence as regards the effects of an activity. Thus while preventive measures have well-defined substantive obligations, a precautionary approach will largely depend upon a number of procedural obligations that would be necessary to implement an agreement or treaty.

At least three international regimes can be identified where the precautionary rule is incorporated. First, the 1996 Protocol to the London Convention of 1972, which has adopted the precautionary approach and rejected the now obsolete and retrograde understanding of the ‘assimilative capacity’ of the oceans. The 1996 Protocol, which entered into force in 2006, contributes to shifting the burden of proof from the victim to the polluter, where the latter has to come clean and show that the dumped substance is not hazardous. Second, the 1995 Agreement to the United Nations Convention on the Law of the Sea on Straddling Fish Stock and Highly Migratory Fish Stock adopts an ecological approach regulating the allowable catch of straddling (anadromous and catadromous species) and highly migratory fishes. This Convention is based on a precautionary approach that guarantees optimal or sustainable catch in order to protect and conserve the highly endangered fish stocks, which despite co-operation at the international and regional level, are seen to be fast depleting.

And lastly, the precautionary rule has been applied in the international regime on harvesting of whales. The International Whaling Commission established in 1946 led to the International Convention for Regulation of Whaling, which has played a significant role in the conservation of the world’s largest mammals. The Revised Management Procedure adopted by the Whaling Convention ensures that the ‘optimal catch includes whales, which are not endangered, and only those required for scientific experimental purposes. Besides, the Whaling Commission through efforts of non-whaling nations and environmental lobbies succeeded in imposing a self-imposed moratorium on whaling of certain species. The moratorium based on a precautionary approach stands except for internecine violations from States such as Iceland and Norway.

e) Polluter Pays Principle

The principle has its roots in Organisation for Economic Co-operation and Development (OECD) and European Community law. In essence it is a principle of economic policy wherein the person responsible for causing pollution should ultimately be held responsible for bearing the cost of pollution abatement or remedying the harm caused. The principle is a measure devised by the OECD countries as an effective and efficient way of allocating costs of pollution prevention.
and control measures by the public authorities in order to encourage rational management of environmental resources.

At the international level, Principle 16 of the Rio Declaration provides that, “national authorities should endeavour to promote the internalisation of environment costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and environment”.

Principle 16 dealt with costs of pollution and environmental costs, i.e. other cost of pollution abatement, control and reduction measures. Such other costs may involve cost of remedial measures (cleanup operations for example in an oil spill); cost of compensatory measures (compensation to victims of damage); cost of ecological damage (compensation for reduction or damage to the environment in general); and cost of pollution charges (tradable emission charges like those being provided under the Kyoto Protocol on the UN Framework Convention on Climate Change).

Developed countries in their relations inter se apply the polluter pay principle as a principle for economic guidance and not a legal principle. There have also been a number of views expressed during the Rio Conference that the principle should be applied only at the domestic level and should not in any way govern responsibilities between states at the international level. This principle finds place in a number of conventions where essentially issues of liability and fixing of responsibility are involved.

However, many writers question such an understanding as in international law, issues relating to liability and responsibility are not easily translated into the polluter pay principle. It is also felt that, when one considers PPP, it is also important to understand that the principle has to be viewed in a larger context of equity considerations between the developed and the developing world and not amongst a few developed European States.

The principle despite its initial success had its testing time when the Chernobyl nuclear incident took place in 1989 and also the Rhine chloride pollution incident across the whole of Europe in 1976, when a number of States agreed to the apportionment of environmental liability. Another tricky situation which countries can find themselves in is when the polluter pays principle becomes more of a trade related bargaining technique and less of an environmental principle. This can happen when issues such as granting of subsidies, decisions on unfair competitive advantage, come up before trade related dispute settlement bodies such as the GATT or the WTO.
f) Inter-generational Equity

The principle of equity i.e. inter-generational or intra-generational equity, often plays an important role in environmental decision-making. Although equity *per se* is not an accepted general principle of international law, it is seen that a number of environmental treaties such as the United Nations Framework Convention on Climate Change, the Convention on Biological Diversity and the Montreal Protocol on Substances Depleting the Ozone Layer, provide for the principle of equity in ascertaining either the appropriate contribution of emissions or the fair and equitable sharing of benefits arising out of the use of genetic resources. It is also seen that equity is a concept that is often linked to intra-generational and inter-generational rights.

Under common law the principle of equity in the absence of a *stricto sensu* situation of rights and obligations could provide succor to the cause of protection of the environment. Similar situations are envisaged at the international level not for the enjoyment of the rights by the present generation only but also for future generations. The underlying presumption of the principle of inter-generational equity is that human beings living in the natural environment of the planet earth with all other species and living beings hold the earth in trust for future generations. Further, this principle assumes that there are two relationships of man with natural environment. First, is the relationship between human species; and second, is relationship of man with his natural environment. The theory calls for equality among human generations, wherein each generation has a duty to keep the Earth in a robust state, to ensure planetary health for the enjoyment of future generations.

Principle 2 of the Rio Declaration, reads, “the right to development must be fulfilled so as to equitably meet the developmental and environmental needs of the present and future generations”. This principle in essence provides two sets of obligations. First, States have a basic obligation to conserve for the future by means of holding the existing natural resources in trust. Second is the obligation for prevention or abetment of pollution, which would render the natural resources, either depleted or in an extremely degraded State not fit for use or that which would involve a huge financial burden for cleanup operations.

The principle of inter-generational equity is reflected in a number of international conventions which include the United Nations Charter, the International Covenants on Civil and Political Rights, the Convention on the Prevention and Punishment of the Crime of Genocide, the Declaration on the Elimination of Discrimination against Women and the Declaration on the Rights of the Child and the United Nations Framework Convention on Climate Change.
The principle is linked to the established principle/right to development, which has been recognised, by a number of international instruments. To clear some conceptual inconsistencies the Experts Group of the World Commission on Sustainable Development recommended: (a) that present generations should use their resources in such a way that the right to sustainable development of future generations is protected; (b) that long term protection of the environment is guaranteed; (c) that interests of future generations are adequately taken into account while framing policies on development; (d) to avoid disproportionate environmental harm caused by activities of the present generations; and (e) to ensure a non-discriminatory allocation of current environmental benefits.

While the above-mentioned steps are easy to collate, problems should arise in devising an implementation strategy to put into effect the principle of inter-generational equity. According to one view, right of future generations can be used to enhance the legal standing of members of the present generation to bring claims on behalf of the former by relying on substantive provision of environmental treaties where they can be doubts on the implementation of rights creating an obligation enforceable by individuals.

Planetary rights and obligations in each generation are inter-linked in such a way that “generations to which the obligations are held are future generations, while the generations with which rights are linked are past generations. Thus, the rights of the future generations are linked to the obligations of present generation”. (E.B. Weiss, “Our Rights and Obligations to the Future Generation for the Environment”, American Journal of International Law, vol. 84, 1990, pages 198-207).

As opposed to the moral dimension of equity provided by Prof. Weiss, a legal principle is said to have evolved in the view of some authorities. One of the primary documents, a precursor of UNCED was the Report ‘Our Common Future’ by the Brundtland Commission. The Commission is credited with coining the term of sustainable development as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs”. The definition very clearly shows that sustainable development is largely concerned with the responsibility for future generations.

Moreover, Principle 3 of the Rio Declaration qualifies the right of development, as a means of equitably meeting the developmental and environmental needs of future generations. In this regard, the preambular of the United Nations Convention on Climate Change provides for “the protection of the global climate as a common concern of mankind”. Further, the Convention adds, that all Parties… be guided on the “basis of equity in their actions to achieve the objectives of the Convention”.

Some Core Issues Relating to International Environmental Law

Consider for a moment why any law is enacted — domestically or internationally. Some would maintain that it is a moral statement about behaviour that a society cannot tolerate. Some would argue that certain conduct is outlawed to deter that conduct, which is why we also attach a penalty. Some would argue, especially in light of the inefficiencies in enforcement, that laws socialise society’s members to behave in a certain way by defining a code.

What is the purpose of international environmental law — is it a moral statement, a deterrence, or a socialising tool? If it is a moral statement, which many of the framework conventions seem to be, is it merely aspirational? Do we honestly believe that all nations will achieve all the ideals expressed in all the agreements? Or do we, as a global community, simply like to think of ourselves as the kind of people who believe in these things? If it is intended as deterrence, why are there not more international forums for dispute resolution, more international bodies empowered to enforce agreements, more substantive requirements, and more ‘hard law’ self-executing agreements? If there were, would any nation sign them? If it is intended as a socialisation technique, is it working? Are nations more environmentally aware?

If ultimately all international environmental law is unenforceable, what good is it? Does it accomplish anything to find a country out of compliance with a treaty? What about publicity? What if the economic benefits of a project such as the Narmada Valley Project, are believed by government officials to outweigh the negative effects of the publicity?

The practice of relying on domestic implementing legislation to enforce international environmental agreements leave State parties in the position of having different obligations under the same treaty, depending on how their legislative, executive and judicial bodies interpret and implement the treaty. Is this fair? What about the costs and administrative burdens that are associated with creating and enforcing legislation? Does this put richer countries in a better position to comply with treaties?

What is the purpose of the informational roles of international institutions? Will more knowledge about the global environment and our impacts on it lead to better compliance? Or will so many new issues lead to non-compliance due to uncertainty? If it appears to the average citizen that virtually everything she does has a negative environmental impact, will she not cease to try to change any behaviour?
India’s International Obligations

India has obligations under numerous international treaties and agreements that relate to environmental issues. As a contracting party, India must have ratified a treaty, that is, by adopting it as national law before it came into force, or by acceding to it after it has come into force. For a treaty to enter into force, the requisite number of countries must ratify the treaty, which then has the force of international law.

Specific obligations under any treaty vary, depending on the treaty itself. The nature and degree of compliance and implementation depend on a number of factors, among them: (1) the capabilities and staff of an international institution charged with co-ordinating national compliance efforts, if there is one; (2) the willingness of other state parties to enforce or comply with the treaty; (3) the political agenda of the government and popular support; (4) trade and diplomatic pressures brought to bear by other countries; and (5) sometimes, judicial or NGO involvement through court cases and publicity.

India’s Treaty Obligations


### 2.3 General Principles of Diverse Legal Systems

Apart from the general principles of international law seen before and the evolving principles of international environmental law, there are a number of general principles of diverse legal systems which proscribe transboundary harm or had provided value similar to the principle of *sic utero tuo*. These principles have their
roots in private and public law, “which contemplation of the legal experiences of
civilised nations leads one to regards obvious maxims of jurisprudence of a general
and fundamental character”. Such principles include the principle that no one can
be a judge in his own case, that a breach of a legal duty entails the obligation of
restitution, that a person cannot invoke his own wrong as arson for release from a
legal obligation, that the law will not countenance that abuse of a right, that legal
obligations must be fulfilled and rights must be exercised in good faith.

Besides, general principles are derived from the judicial decisions of municipal
courts. Article 38 of the Statute of the ICJ recognises judicial decisions as a subsidiary
means for the determination of the rules of law, which cannot exclude ‘decisions of
municipal courts’ as a valid source of international law.

While it is agreed that many positivists will question this reasoning saying State
consent is needed for international law, it cannot be denied that at the domestic
level municipal courts are the main instruments for the judicial determination of
international law.

It has often been said that English common law has had a very limited influence in
shaping international environmental law. However, there is no denying that Law
of Tort has contributed enormously to the understanding of the more accepted
principles of general principles of law. To put it more specifically, the torts of
nuisance, negligence and trespass and the Rylands rule on strict liability, have in
some ways laid the jurisprudential basis for understanding the whole concept of
‘environmental damage’, which to date remains a controversial and misunderstood
aspect on international environmental law.

The Law of Tort, as is well known in English common law, essentially protected
the interests in lands. Among all torts, the tortious liability arising out of ‘nuisance’
comes closest to environmental protection. In contrast, courts have fought shy to
award damage for acts involving ‘negligence’, as the standards of the test of proof
of special care and also claim to personal injury are of a high order. Trespass, on
the other could have an environmental element involved, as is amounts to an
unjustifiable interference or even negligent entry onto the land.

However, for the purposes of our study the Ryland rule of strict liability laid down
638) interference is of special significance. To recall the words of Justice Blackburn
“We think that the true rule of law is, that the person who for his own purposes
brings on his lands and collects and keeps there anything likely to do mischief if it
escapes, must keep it at his peril, and if he does not do so, is prima facie answerable
for all the damage which is the natural consequence of its escape.”
While these words have proved prophetic, the impact of the Ryland rule on the law of torts in commonwealth countries and other legal systems has been exceptional. Not only has the *Ryland rules* been applied by Indian and other commonwealth country courts, but it has been cited by a number of decisions of international courts and tribunals, too.

The *Ryland rule* was applied in two celebrated cases namely *Read v. Lyons Co. Ltd.* and the *Cambridge Water Company v. Eastern Leather plc.* 1994. In the former case, the Court of Appeal held that for liability to flow – there must be a dangerous thing likely to cause mischief; such a thing must be brought on to land; it must escape; and must cause damage to the non-natural user of the land. In the Cambridge case, although the High Court had dismissed the plaintiff that the Eastern Leather Co. had been polluting the ground water meant for public consumption, the Court of Appeal reversed the decision. It held that the Leather Co. “…interfered in the natural right of the Cambridge Water Co. to extract naturally occurring groundwater and such interference amounted to an actionable claim of nuisance”.

In India to the *Ryland* ratio has been applied by the Supreme Court of India and other High Courts in cases relating to strict liability for hazardous activities.

The *Ryland* rule is extremely important for the study at hand as an analogy can be drawn to management of hazardous wastes. If a State cannot manage the radioactive waste generated from the use of nuclear substances, for whatever purposes they are used, then that State should not be dabbling in an ultra-hazardous activity! It also gives you useful insight in the study of liability, which remains an extremely complex subject under international law.

a) The Principle of Non-discrimination

Reference to this principle has already been made in the context of reviewing the 1997 UN Convention on Non-Navigational Uses of International Watercourses. This was a principle that acquired currency in the context of Europe and recognised by the OECD countries. The principle is designed primarily to deal with environmental problems occurring among neighbouring States. It aims at providing equal treatment for aliens on par with nationals in respect of legal rights and remedies and right of access to judicial and administrative forums they enjoy in their own State. Article 32 of the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses and Article 15 of the Articles on Prevention of Transboundary Harm finalised by the ILC in 2001 provided for this principle. The Commission has recognised that it is a principle of progressive development of the law.
A problem with the application of the principle of non-discrimination is that there often existed drastic differences between the substantive remedies available in each of the neighbouring States. Differences exist for example among the national environmental laws. In some jurisdictions extra-territorial effects of administrative decisions are not justiciable. In some other cases, national law confers jurisdiction on the Courts of the place where the damage occurred. It is, therefore, necessary that in order for the principle of non-discrimination to be universally accepted certain amount of uniformity in national legislations under which the cause of action would arise as well as those governing jurisdiction is necessary. This could only occur with time and with greater and greater economic, social and political integration among the people of the region.

b) The Principle of Public Participation

The principle of non-discrimination is in some loose sense tied to the principle of public participation, which is also a principle stressed in the context of evolving international environmental law. Such participation of the public is essential both in the context of prior authorisation of a hazardous activity and more particularly in the context of preparation and examination of an environment impact assessment. It becomes even more important in providing necessary and possible remedies in case of harm affecting a wide group of people or mass tort claims like in the case of Bhopal Gas tragedy. In situations of transboundary harm, both at the preventive stage where suitable regime for management of the risk involved is designed and in the case of actual harm the need to involve public both within and outside the boundaries of the State in which the risk bearing activity is to be situated is now recommended. Where foreign public is to be allowed participation their views could be organised and presented through the channels of the government of the State of their nationality or even co-ordinated by the State itself before they are presented to the other State. At this stage, if the States themselves were directly involved in designing a suitable legal framework the principle of public participation involving foreign nations would not be that relevant.

Public participation is also regarded as essential for good governance. Principle 10 of the Rio Declaration recommends this. Article 13 of the draft articles of the ILC on Prevention provided for this, again as a measure of progressive development of international law. A number of other recent international instruments dealing with environmental issues have required States provide the public with information and to provide an opportunity to participate in the decision-making processes.

Public includes individuals, interest groups (NGOs) and independent experts. General public, however, is unorganised. Information supplied to the public should
facilitate communication of the proposed policy, plan or programme under consideration. It must, however, be understood that requirements of confidentiality and State security may affect the extent of public participation. It is also understood, public is rarely involved or involved at a minimum level in any effort to determine the scope of a policy, plan or programme.

Public participation in national decision-making through organised or unorganised means including parliamentary representation on vital issues regarding development would enhance legitimacy of and compliance with decisions taken. It is also suggested given the development of human rights law, public participation could also be viewed as a growing right under national as well as international law.

c) Capacity-building

Compliance with international environmental obligations in general and with obligations concerning the prevention of transboundary harm in particular, involves the capacity of a State to develop appropriate standards and to bring more environmentally friendly technologies into the production process as well as the necessary financial, material and human resources to manage the process of development, production and monitoring of activities. There is also a need to ensure that risk-bearing activities are conducted in accordance with applicable standards, rules and regulations and that the jurisdiction of courts may be invoked in respect of violations to seek necessary judicial and other remedies.

Many developing countries are just beginning to appreciate the ills of pollution and unsustainable developmental activities. It has, therefore, been rightly pointed out that compliance with international environmental obligations requires resources, including technology and technical expertise not readily available in developing countries. In this regard, the WCED Report recommends a ‘spirit of global partnership to enable developing countries and countries undergoing economic transition to discharge the duties involved in their own self-interest and in the common interest of all nations’. The issue of supplying additional financial resources and technical know-how has been provided for in a number of international treaties such as UN Convention on the Law of the Sea, the United Nations Framework Convention on Climate Change, Convention on Biological Diversity, UN Convention on Combating Desertification as well as the Vienna Convention/Montreal Protocol on Control of Ozone Depleting Substances.

Transfer of technology and scientific know-how to developing countries, will also give rise to a number of problems governed by law relating to patents and copyrights. Hence, it is admitted that such know-how should be transferred within established legal frameworks and at a fair, reasonable and equitable price. Along
with developed countries, international financial institutions within and outside the United Nations have an important role to play in capacity building of developing countries. It may also be noted that in spite of transfer of technologies and the development of proper legal framework for allocation of goods and cost involved, some issues of legitimacy, fairness and justice still remain unfulfilled.

Other areas of capacity-building which can supplement transfer of technology and financial resources include: remedying weaknesses and efficiencies in legislation, lack of political influence of environmental authorities, lack of public awareness, lack of well-established target groups, deficiency in managerial skills and information bases and underdeveloped educational system which does not cater to the need of highlighting environmental awareness and education. Further steps in this regard could include decentralisation of authority between the Center and federated units; environmental awareness at local authority levels; establishment of Data Centers, consultative bodies, monitoring agencies to improve enforcement and compliance; issuance of licenses, permits and EIA requirements; halting activities which violate environmental regulations; and establishing centers for ensuring preparedness in cases of environmental emergencies. Another area where special attention needs to be provided is training of environmental personnel; providing skills and knowledge on environmental economics and environmental law; and imparting techniques for EIA and environmental auditing and conflict resolution.

Apart from capacity-building measures mentioned above, it is also important that environmental law must be implemented not only by the administrative machinery of a State, but be upheld by the judicial bodies and specialised tribunals when a violation occurs.

### 2.4 Linkage of International Environmental Law with other Disciplines of Law

One of the main characteristics of environmental law is the necessity for an interdisciplinary approach. Nowadays interdisciplinary studies are increasingly necessary in most sciences, where progress can be made only after acquisition and review of essential data coming from other specialties or other field. This is especially true in environmental matters, because of the complexity of the subject. Legislation and the creation of institutions, which are fundamental tasks of law, require knowledge of data which can be furnished only by sciences representing several disciplines, including life and earth sciences, as well as social sciences\(^1\).

---

\(^1\) Introduction to International Environmental Law by Professor Alexander Kiss, Course I, ‘Programme of training for the Application of Environmental Law, UNITAR.
Thus, a chain of biologists, chemists, medical doctors, ecologists, economists, sociologists and lawyers is needed to elaborate and implement environmental norms. The tasks will be to ascertain and further develop the knowledge of environment itself, of its deterioration and of its impact as well as of the possible remedies. The result of scientific investigation must then be integrated into the economic, social and cultural context of a given situation. The final decision is made in the political arena, but without knowing as many possible of the elements of the problem no useful decision can be taken. The best illustration of this process is the discovery by scientists of the depletion of the stratospheric ozone layer. They were the only ones who could state and assess the problem, but the solution, the building up of a regime for protecting the stratospheric ozone molecules needed the co-operation of economists, representatives of the world public opinion and of industry, political decision-makers and, last but not the least, legal experts.

The interdisciplinary character, involving various scientific branches as well as scientific uncertainty, imposes frequent adaptations upon environmental law. Changes are always a problem for law, one of the objectives of which is to ensure stability in human relations. New legal methods and techniques have to be applied in order to keep pace with the general evolution of environmental sciences.

**Actors**

Traditional international law only recognised States as actors in international legal relations. Called subjects of international law, States have the exclusive right to conclude treaties, to send and receive diplomatic representatives, to give their nationality to individuals according to rules which they determine, to protect their nationality abroad, to adhere to international organisations and to assume international responsibility.

After World War II, a debate began over whether individuals and non-state groups could also become subjects of international law. The proliferation of international conventions protecting human rights triggered such debates. According to the present state of international law, individuals are entitled to have rights which can be internationally enforced mostly in the framework of specific treaties guaranteeing their fundamental rights and freedoms and creating specific enforcement mechanisms.

While traditional rules are formally applied in international legal relations, the need to protect the environment posed a challenge to international law, and this has fundamentally changed the system. Most of the major environmental rules were triggered by public awareness which then pressured governments to adopt appropriate measures. For example, the public role has been recognised by a
Fundamental Principles and Application of International Environmental Law

A growing number of international institutions which accept the presence of representatives of certain non-governmental organisations at designated meetings as observers who can report back to their constituency and who can be authorised to take the floor. Particularly important in this regard is Article 19 of the 1994 Convention to Combat Desertification in those countries experiencing serious drought and desertification.

Environmental decisions in the domestic field, as well as at the international level, are not always welcomed by industrialists, farmers, foresters, transporters – and the investors who fund their activities. The beginning of the ecological era was characterised by the strong resistance of groups representing certain economic interests. This was the starting point for a wave of ‘green’ products and advertisements praising the environmental qualities of given products, eventually leading to environmental labelling.

At the end, one can speak, at least in a certain measure, of co-operation between these three groups of society. Of course, given the very nature of the biosphere and of its protection and the web of relationships between populations of the different countries, such co-operation also appears in the international field. The preparation of the treaty system for the protection of the stratospheric ozone layer was the best example in this regard; the whole initiative was strongly backed by public opinion represented by non-governmental organisations. The preparation of the Rio Conference amplified such developments: there was a constant pressure of non-governmental organisations on the negotiators and parallel to the governmental conference a ‘forum’ of NGOs was held with the representatives of 1,400 associations sometimes helping, sometimes criticising but taking a growing part in the international protection of the environment.

2.5 Application of International Environmental Law

Having considered IEL as a part of international law, it is but natural that the sources of IEL would be same as sources of international law. Article 38 of the Statute of the International Court of Justice (ICJ) provides international conventions/treaties, international customs as primary, and general principles recognised by civilised nations, judicial decisions and teaching of publicists as secondary or subsidiary sources of international law. It may be noted that the list of sources is not exhaustive as there are other sources of international law such as the resolutions of international organisations and other texts, which although not treaties play a significant role in the formation and application of international environmental law.
International Treaties

Treaties are as the name suggests “formal sources of international law”. The Vienna Convention on the Law of Treaties defines treaties as “an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation”. They are generally negotiated texts in which States have participated, are in written form and governed by international law. Treaties may also be called conventions, agreements or memorandum of understanding (MoU), but the legal effect of all the three remains the same. Types of treaties include-lawmaking treaties and general treaties. The former create international law because of the large participation of States in their adoption and adherence and their importance in international society. An example of this could be the UN Convention on the Law of the Sea 1982. This Convention is said to have progressively codified the customary law on the subject. It provides for a legal order governing nearly all activities of waters beyond national boundaries i.e. seas and oceans such as maritime zones, uses and delimitation, deep seabed mining, dispute settlement, protection of the marine environment, navigation, passage etc. Other examples could include Article 35(3) of Protocol I to the 1949 Geneva Conventions Relative to Protecting Victims of International Armed Conflicts that prohibits all States in such conflicts from employing means or methods of warfare that may be expected to cause widespread, long term and severe damage to the natural environment. These conventions are largely reflective of general international or customary Law. Similar is the case of UNEP’s Regional Seas Programmes that provide common standards, mechanisms and compliance procedures to keep the seas clean.

As opposed to such law-making treaties, you also have ‘treaty contracts’ i.e. contracts/agreements creating obligation either bilaterally or for a particular purpose.

Bilateral contracts are agreed upon between two States. For examples India has signed and continues to have bilateral agreements in the field of climate change initiatives and CDM projects. Or for that matter India routinely signs agreements to protect natural resources and environment with neighbouring and other countries. These agreements have a fixed objective and are often reviewed after a period of five years.

There are also regional agreements, which bind States from a region; examples being the European Community laws on environment protection. The advantage with regional conventions is that they are reflective of a region’s peculiar needs and suit the common requirements of a region.
Treaties are supposed to be adhered in ‘good faith’ as enunciated by *pacta sunt servanda*, which is a fundamental principle of international law.

**Customs**

Customs are actions of States, which over a period come to be accepted as creating binding legal obligations. Example of customs can be prohibition of the use of force in international relations as provided in Article 2 paragraph 4 of the UN Charter. However, to constitute a custom or a customary obligation two elements must be fulfilled. One, there must be a general consistent State practice; and two; there must be *opinio juris* or an *animus* or ‘mental element’ wherein States undertake obligation not because of a usage but because of a legal obligation. Not only must the acts concerned amount to a certain practice, but they must also be such or be carried out in such a way as to be evidence of a belief that this practice is rendered obligatory by the existence of a rule of law requiring it. The need for such a belief, i.e. the existence of a subjective element, is implicit in the very notion of the *opinio juris* (*North Sea Continental Shelf Cases* ICJ Reports 1969, at p. 73).

It is also seen that customary rules often create obligations binding upon all States, except those States who have persistently objected. This is often called the persistent objector principle. Example could be United States which has persistently objected to the international regime of the seabed. Today, although the deep seabed beyond national jurisdiction is called the ‘common heritage of mankind’ US still objects to that regime.

As opposed to this need of consistent State practice and *opinio juris* there can also occur an emergence of instant international customary law though the adoption of United National General Assembly resolution (Bin Cheng., United Nations Resolutions on Outer Space: ‘Instant’ International Customary Law, *Indian Journal of International Law*, vol.5, 1965, pp.132-152). Instances of such instant customary law are said to have evolved with respect to the adoption of the Declaration on the Peaceful Use of Outer Space and Other Celestial Bodies by the General Assembly in 1963 and the UN Declaration Concerning Co-operation and Friendly Relations among States adopted by the General Assembly in 1970.

**General Principles of Law**

Customary proscriptions to protect the marine environment are found in the general principles of law recognised by civilised nations. Article 38 of the Statute of the International Court of Justice (ICJ) regards this source as a primary source of international law. It is seen, however, seen that ‘general principles’ as a source of international law have been subjected to controversies, wherein writers have questioned the functional role of general principles in international law.
It must, however, be emphasized that notwithstanding these doctrinal inconsistencies general principles of law have assumed a special significance in international environmental law. Besides, dumping involves pollution in a transboundary context, and as general principles of law have a basis in domestic laws, they are better suited to address environmental problems at the domestic, regional and international levels.

Though the study of “the international law of environment” is a recent offshoot of the main body politic of international law proper, rudimentary elements are to be found in the general principles of international law. Pollution, which is fallout of misuse of the use of the freedom of the seas, has been characterised as a disregard of a State’s legitimate rights, bordering on abuse of rights. Based on the principle of “no harm”, customary international law offers a few illustrations, which have upheld the environmental integrity of general principles of law. Article 38 of the Statute of the ICJ, after treaties and international customs provides for general principles of law recognised by civilised nations as a third primary and authoritative source of international law. But such a claim is not without doctrinal controversies, as many commentators have questioned the comparison between general principles of law and customs as sources of international law.

One can, however, not deny that unlike treaties and international customs, which reflect State practice and *opinio juris*, general principles do not need to show such evidence as a proof of binding legal obligation. Another reasoning attributed to the weakness of general principles is that it is an offshoot of municipal law largely governing two or more States on the basis of reciprocity, rather than being covered under international conventions and international custom.

General principles of international law play a facilitative role in strengthening relations among States on the basis of good faith, the principle of respect for other’s right or *sic utere jure tuo ut alienum non laedas*, the prohibition of abuse of rights, principle of good neighbourliness and universal guardian or custodianship.

**Good Faith**

The principle of good faith or *pacta sunt servanda* is the one of the fundamental principles of customary or treaty obligations. States are under an obligation not to do anything that shall destroy the trust on the basis of which the treaty was agreed upon in the first place. It also goes to that international obligations are serious business and a State can ignore its duty to abide by an obligation at its own peril. The ICJ held in the Nuclear Test Cases (1976) that:

“One of the basic principles governing the creation and performance of legal obligations, whatever their source, is the principle of good faith. Trust and
confidence are inherent in international co-operation, in particular in an age when co-operation in many fields is becoming increasingly essential. Just as the very rule of *pacta sunt servanda* in the law of treaties is based on good faith, so also is the binding character of an international obligation assumed by a unilateral declaration. Thus interested States may take cognizance of unilateral declarations and place confidence in them, and are entitled to require that the obligation thus created be respected”.

Likewise, the principle of good faith came under judicial scrutiny in the more recent case of *Gabcikovo-Nagymoros Project* (ICJ Reports 1996) where while highlighting the importance of the principle in international environmental law, the ICJ held that:

“ What is required in the present case by the rule *pacta sunt servanda*, as reflected in Article 26 of the Vienna Convention of 1969 on the Law of Treaties…. ‘Every treaty in force is binding upon the Parties to it and must be performed by them in good faith’…The principle of good faith obliges Parties to apply it in a reasonable way and in such manner that its purpose can be realised”.

*Sic utero jure tuo ut alienam non laedas*

The principle of *sic utere jure tuo ut alienam non laedas* (hereinafter *sic utere tuo*) is a recognised as a fundamental principle of international law governing transboundary harm. In Latin the maxim means, “Use your own property in such a way as not to injure that of other”. The maxim has special relevance in IEL because of regulatory control it has imposed on States to desist from establishing hazardous or polluting factories/units on the border. In the case of the *Trail Smelter Arbitration* (United States and Canada 3 UNRIAA (1938/1941), 1907, at p. 1965) where Canada complained of escape of noxious sulphur gases into its territory, from the United States, the Arbitral Tribunal stated that “No State has a right to use or permit the use of its territory in such a manner as to cause injury by fumes 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”.

The case assumes special significance for a public international law approach to the issue of transboundary harm and the ensuing injury/liability. One of the earliest cases to bring to fore the issue of transboundary harm, it highlighted the characterisation of a legal injury caused by a noxious activity. More importantly, it laid down principles of equity.
Good Neighbourliness

This principle has been recognised as one of the important general principles governing friendly relations among States. The idea of two or more States showing reciprocity by means of peaceful behaviour and mutual inter-dependence is at the core of this principle. In this way the principle is similar to *sic utere tuo*, which calls for ensuring that effects of harmful activities are not transferred to your neighbour. Good neighbourliness apart from preventing the causing of harm also obliges a State to protect its own territory out of self-interest.

Article 74 of the Charter of the United Nations provides that “States… conduct themselves according to … the general principles of good neighbourliness, due account should be taken of the interests and well-being of rest of the world in social, economic and commercial matters”.

The principle of good neighbourliness is applied for the equitable utilisation of watercourses between river basin States. Article 4 of the Helsinki rules provides that:

> “Each Basin State is entitled, within its territory, to a reasonable and equitable share in such uses.” In the, *Lac Lanoux* arbitration, (International Law Reports, 1957, p.119) between France and Spain the Tribunal applied the principle of good neighbourliness for resolving its disputes. The case involved a proposal by France to construct a dam on the River Carol with a view to increase the capacity of the Lake Lanoux for hydroelectric power generation. Spain objected claiming that the construction of the dam would jeopardize its interest in irrigation.

The principle essentially has an interpretative value and has been recognised by scholars as having a fundamental role in international law. On a larger plane especially with respect to global commons or open spaces, *inter se* States can argue for an “ecological good neighbourliness policy” to create *erga omnes* obligations.

Though a right to a clean and healthy environment is guaranteed under all municipal legislation, it was the Declaration of the 1972 that Stockholm Conference that stated “Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of quality which permits life of dignity and well-being…”. Thereafter the Rio Declaration, which was adopted at the United Nations Conference on Environment and Development (UNCED), again reiterated, “Human beings are at the center of concerns for sustainable development. They are entitled to a *healthy and productive life in harmony with nature*”.

Since 1992, the development of international environmental law has undergone a dramatic normative and paradigmatic shift from anthropo-centrism to
environmentalism proper. Every instrument-adopted post-Rio has as emphasis on preservation of the environment, for the sake of environment alone. While such ethical arguments mean little to the larger needs of the developing world, it is true that an inter-temporal value and jurisprudential basis is being offered for protection of the environment for present and future generations.

**Resolutions of International Originations**

A resolution adopted by an international organisation can also be treated a source of law. Resolution of organisations can create obligations on their member States. However, there can be instances where such resolutions are of binding or non-binding character. For example, resolutions of the Security Council are binding on all members of the United Nations in accordance with Article 25 of the United Nations Charter. These are in the nature of hard binding obligations. However, there can also be resolutions, which create soft law and are in the nature of non-binding resolutions. General Assembly resolutions according to some scholars are non-binding resolutions which are largely normative, or in the form of a programme for action or declarations. These normative recommendations largely trigger activity of international originations both at regional and international level. For example, the resolutions of OECD regulate various activities such as management of natural resources coastal zone, waste control of chemicals transboundary pollutions etc.

They are declaratory principles that have contributed a special place in the development of international environmental law. They are different from normative recommendations in that they do not envisage precise action to be undertaken. They proclaim general guidelines which States should follow and may thus exercise a considerable influence on the development of legal rules. Their role can be best explained by the function of law in society.

**Declaratory Principles**

Declaratory principles are a reflection of the influence of economic, social, cultural and political factor effecting the functioning of an organisation. They are indicative of the change in the perceptions of the particular value in international society. Examples could be the United Nations General Assembly adopted the Universal Declaration on Human Right 1948 and the World Charter of Nature 1992.

The field of environmental law during the 1972 Stockholm Declaration was a culmination of international efforts to regulate human environment. The Declaration adopted 26 principles which laid down a political understanding that international efforts were needed to regulate various aspects of environment such as protecting life and dignity of individuals, protecting environment for future
generations and the protection of the oceans. Likewise, the Rio de Janeiro declaration provided three important texts for protection of the environment – the UN Framework Convention on Climate Change and the Convention on Biological Diversity. The third text not adopted as a convention was a declaration whose title reflects the difficulties of reaching agreement. It was called “Non-legally binding authoritative statement of principles for a Global Consensus on the Management, conservation and Sustained Development of all types of Forests”.

**Action Programmes**

Every international conference adopts a programmatic action plan to implement the political declaration in the form of concrete proposals. At the Stockholm Conference a concrete “action plan for human environment” was adopted, whereas the Rio Conference adopted the ‘Agenda 21’ as two programmes involving long term goal for protection and provision of human environment. As opposed to treaties an action plan involves general set of recommendation addressing governance issues and the agenda of some international organisations.

Action programmes may also involve creation of new bodies to over sea environmental governance. The Commission on sustainable (CSD) was created as a follow up to UNCED to review and examine the progress of implementation of Agenda 21 at the nation, regional and international levels. This is an example of an institution created by a non-binding general assemble resolutions reviewing compliance of State to non-binding a REO declarations.

Further CSD has also developed periodic reporting procedures for monitoring compliance of State with international legal obligations. It may be noted that such reporting exercise is largely provided under treaties and not under international organisations.

**Codes of Conduct**

Codes of conduct or guidelines have also been developed in international environment law for enforcement of compliance in a more persuasive way. These Codes of Conduct can be adopted either by State or by international origination when there is no exiting international treaty on this subject. For example, Bonn Guidelines on Access to Genetic Resources and Benefit Sharing and the UNEP Guidelines on EIA, Montreal Guidelines on Land-based Marine Pollution, are all efforts to create a normative framework for enforcing some form of adherence. An increasing number of concepts, principles and norms appear repeatedly in national, regional and global instruments, usually following an initial formulation in a non-binding instrument. Principles such a public participation, prevention, precaution
and polluter pays are examples of principles that have been incorporated into treaties after adding greater specificity.

**Framework Agreement**

Since the 1970s a new technique of law making in the environmental field as developed which includes a framework agreement followed by additional binding protocols. For example, the 1985 Vienna Convention regulating Depletion of the Ozone Layer was followed by the Montreal Protocol on Ozone Depleting Substances 1997. The framework agreement contains a set of general principles and obligations and the additional protocol would contain hard binding obligations. The framework agreement because of its general nature can be easily negotiated and thereby attracts wider adherence. The Protocol as seen in the case of the Montreal Protocol on Ozone Depleting Substances provided for more technical and target oriented binding obligation. Similar is the case of the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol to the UNFCCC, 1997.

**Mechanism of Co-operation**

**Compliance** - Apart from the question of available remedies in case of failure of performance of duties of due diligence, of equal importance is a matter enhancing the culture of compliance and encouraging more voluntary enforcement obligations. On the basis of a number of studies conducted on issues concerning compliance and enforcement of international environmental agreements, the effectiveness of such compliance depends upon a number of factors. These include: the definition of obligations; administrative capacity of a country; endowment of financial and other infrastructural facilities to institute and monitor compliance procedures; economic factors, including per capita gross national product; production techniques; engagement in international trade; sharing of authority among different political units of the country, including delegation and decentralisation of authority and power; role of non-governmental organisations; and the leadership exercised by individuals. However, the more important variables identified are administrative capacity, leadership, non-governmental organisations, knowledge and information.

Suggested strategies for strengthening compliance have been differentiated depending upon the position of the country. In this regard, two dimensions have been considered to be particularly important, namely, intention to comply and the ability to comply. On the basis of matrix there could be six categories: (i) intends to comply and can comply; has not thought through the obligations of compliance, but could comply; does not intend to comply, but could comply; intends to comply but cannot comply; has not thought through the obligations of compliance and could not comply; does not intend to comply and could not comply.
Accordingly, three strategies of compliance have been articulated in respect of international environmental agreements: the sunshine approach incentives to comply, or sanctions. The first two approaches, it has been suggested, are dominant; sanctions are used only as a “last resort”. This is in contrast to the trade field, where sunshine approach coupled with sanctions, prevails.

In the view of another commentator, while efficient reporting mechanisms and procedures under a multilateral convention to promote better knowledge of each State’s practices is without doubt useful, compliance is likely to be more forthcoming from the developing countries “if they are assisted in pursuing alternative technologies and in building up their implementation capacity and the capacity to internalise the new behaviour in their local cultures”. In addition, “implementing international conventions often requires States to build institutions, adopt domestic regulations and develop and implement national environmental plans for sound environmental conditions. Political will to meet these requirements is necessary but not sufficient; Governments must have the necessary means to carry out their obligations”.

The sunshine approach consists of a series of measures that are intended to bring the behaviour of Parties and targeted actors into the open. These include regular national reporting, peer scrutiny of reports, establishment of special secretariats, regional and international bodies, access to information by non-governmental organisations, participation of non-governmental organisations in compliance monitoring of behaviour through national and regional forums, workshops, corporate or private-sector networks or consultants working on site.

**Implementation of International Environmental Law**

International obligations undertaken under international treaties or other sources have to be implemented at the national level. It must be borne in mind that the international community does not have executive powers or police functions at its disposal. For this very reason it becomes important to understand how IEL places responsibilities on States to undertake enforcement measures to comply with international obligations. The situation often becomes complex as a large number of MEAs and the proliferation of mechanisms under them are exclusively designed to apply IEL at the national levels. It shall be the endeavour of this section to look at some of the mechanisms to guarantee adherence to treaties.

One of the best ways to ensure treaty adherence is by negotiating treaties that take care of the needs of a majority of States. An example of this is the special reference to provision of sound environmental technologies and adequate financial resources to enable them to meet the incremental costs incurred in undertaking international
obligations. Just as in domestic law an indigent person cannot avail of judicial remedies, so also poorer and less developed States cannot undertake obligations because of lack of capacities. Many environmental treaties underscore this need and have inbuilt provisions of capacity building. These include the 1989 Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal, the 1997 Montreal Protocol on Ozone Depleting Substances, 1992 the Convention on Biological Diversity and the 1992 United Nations Framework Convention on Climate Change.

Novel means of attracting wider adherence have also been seen by way of a two pronged framework convention-protocol approach. States are first called upon to become parties to a convention that provides for a set of general obligations. Later the Protocol is adopted which provides for binding obligations. A good example is the UNFCCC-Kyoto Protocol. The Convention provides a framework for adopting measures towards reduction of GHG’s, based on the principle of common but differentiated responsibilities and a precautionary action, wherein adverse effects of climate change are addressed as a common concern of mankind. Without permitting reservations, the UNFCCC calls upon States to protect the climate for present and future generations. The UNFCCC also provides for two Annexes-I and II, which contain the names of Country Parties responsible for undertaking GHG reduction measures.

Whereas, the Kyoto Protocol has its chief objective that “…the Parties agree to individually or jointly, ensure that the aggregate anthropogenic (human-based) carbon dioxide equivalent emissions or GHG emissions by Annex-I Parties do not accede their assigned amount, calculated pursuant to their quantified emission limited and reduction commitments in scribed in Annex-I and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5% below 1990 levels in the commitment period 2008 to 2012”. It also provides for two Annexes A and B that provide a list of the GHGs and countries and their quantified limitation reduction commitments.

In order to achieve these reductions Annex-I (industrialised or developed countries), have been provided with ‘flexibility mechanisms’ through which they can meet their Kyoto targets. These include the clean development mechanisms (CDM), joint implementation and emission trading.

MEAs also include provisions relating to mechanisms that provide monitoring, implementation reviews, compliance verification and compliance mechanisms. These measures are often non-coercive and non-contentious, largely put in place with a view to improve the effectiveness of MEAs. The mechanisms also provide
ample opportunity for States to discuss the problems or lack of capacities doing away with a conflict resolution. Some of these mechanisms may include obligations to undertake reporting obligations, verification/measures on non-compliance, fact-finding/ or other remedial measures.

**Reporting**

MEAs in normal course provide for a reporting or national communication to the Secretariat of the treaty on an annual basis. The periodic report submitted by the Party allows for a discussion by other Parties at a Conference or Meeting of Parties who may suggest ways and means to help the Party. For example, the Commission on Sustainable Development examines progress in implementation of Agenda 21 on the basis of periodic reports submitted by Parties. The rigor of reporting obligations it may be stated differs from treaty to treaty largely depending on the objective. The Convention on the International Trade in Endangered Species (CITES) calls upon Parties to report on the “national measures to halt trade in endangered species”. Likewise, the Montreal Convention on Substances Depleting the Ozone Layer requests for measures undertaken to reduce (chlorofluorocarbon) CFC emissions. The contents of these reports is again dependent on the guidelines adopted Parties at their institutional meetings such as the Conference Parties.

The reports submitted by Parties would also be reflective of the actual situation in the country and may often not match the data collated by independent non-governmental organisations or members of the civil society. Therefore it is important to remember that reporting in many instances may prove to be an embarrassment to the State when its failures to comply with international obligations are exposed. There can be a further tricky situation when certain treaties provide for independent review by technical bodies of a State report. Examples could include: the UNESCO Convention on World Cultural Heritage 1972 and the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat, 1971.

As stated earlier the proliferation of reporting obligations directly affects the capacity of developing and less developed who often complain of being overburdened. This may also desist other States who are not Parties to a treaty from joining. It is precisely for these reasons that the Climate Change and Biodiversity Conventions and ‘compliance committees’ of other treaties make provisions for providing technological and financial resources for undertaking reporting obligations.

**Verification/Non-compliance Procedures**

Verification to many sound a very intrusive term conjuring up ideas for checking nuclear stockpiled or other weapons. Such an idea is not entirely misplaced as
verifcation is a central part of the Chemical Weapons Convention which has an Organisation for the Prohibition of Chemical Weapons (OPCW) to monitor States’ production/stockpile of chemical weapons.

Similar to the CWC, stringent monitoring standards are prescribed under the Ramsar Convention, the London Convention 1972 that regulates disposal of wastes at sea and also many regional treaties/ conventions. The Ramsar Convention on Wetlands has a unique monitoring procedure for addressing the problems that may arise in maintaining the ecological character of the designated wetland site of international importance. After seeking the consent of the State concerned the monitoring team comprising one representative from the Secretariat and two international experts may visit the site. Discussions may also be held with local experts and government representatives and later a report is sent to the government with recommended actions.

Similar to this a more stringent monitoring procedure is envisaged under the Berne Convention on the Conservation on European Wildlife and Natural Habitats, 1979. A complaint of non-compliance can be triggered by a local individual, an NGO or a State Party to the Convention. Upon receiving the complaint the Secretariat would refer the same to the relevant Party for details and clarifications. After providing a reasonable time for reply the Secretariat shall decide whether to place the case before the Standing Committee for opening a ‘case-file’ and making recommendations.

Apart from giving monitoring powers to the secretariat servicing the treaty, international law provides many instances where Parties to a convention themselves are provided some amount of monitoring powers. A case in point is the UN Convention on the Law of the Sea 1982. For example, coastal States exercise prescriptive and enforcement jurisdiction over vessel-source pollution that may affect their internal waters and territorial seas. Under the (International Convention on Protection of Marine Pollution) MARPOL 73/78 States exercise port State jurisdiction and can check/certify the seaworthiness of vessels entering their waters. Under Article 218 of UNCLOS 1982 a coastal State can investigate and institute proceedings if it can be proved that the ship discharged oil/other pollutants.

Other conventions such the treaties under the Antarctic regime, especially the 1980 Convention on Conservation of Antarctic Marine Living Resources (CCAMLR) which is not yet in force envisage, monitoring the common resources by designated observers. It is seen that the 1995 Agreement for the Implementation of the UN Convention to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks delegate to regional fishing agreements the monitoring mandate.
Non-compliance procedures in many MEAs provide assistance to defaulting States to fulfill their international obligations. They do no amount to dispute settlement. One of the most effective and novel a procedure is provided by the 1997 Montreal Convention on Substances Depleting the Ozone Layer. For example, if a State cannot meet its commitments under or experiences difficulty in doing so, it cannot report its problems to the Implementation Committee of the Protocol with necessary data. The Implementation Committee after studying the case refers it to the Meeting of Parties which shall make recommendations to assist the Party by means of an indicative list of measures. Such measures in respect of non-compliance may include: collection and reporting data, technology transfer, financing, information transfer and training. Later, if non-compliance continues despite providing assistance, sanctioning measures such as warnings and suspension of the specific rights and privileges of the Protocol can also be recommended.

Similar and very elaborate non-compliance procedures are present in the UN Convention on Climate Change, London Convention 1972 and the NAFTA Environmental Side Agreement 1993.

The purpose of these measures is not take proportional countermeasures or self-help which customary international law does provide, but to enable the defaulting State to come up the level of fulfilling its commitments under various MEAs.

**Inspection Panels**

Inspection or fact-finding as the name suggests are again monitoring mechanisms intended to assess the technical soundness of a project. This is especially true in case of dams which although required for a variety of human needs need to meet core environmental/technological standards. The World Bank established in 1993 the Inspection Panel because of growing concerns about the accountability of it and other international development agencies in supporting hydro-electric projects. For example, in case of the Sardar Sarovar Dam in Gujarat, due to growing opposition from NGOs about the dam and the people it would displace the World Bank visited the site in India in 1985 and 1993.

The Inspection Panel is an independent investigatory body receiving and investigating complaints issuing from those in the territory of a borrower country whose rights have been adversely affected by the Bank’s failure to comply with its own policies and procedures in the design, appraisal and implementation of a Bank’s financed project. In this regard, the panel may investigate complaints upon authorisation by the Bank’s Board of Executive Directors and also assess to what extent the bank has complied with its standards.
Summary

The fundamental principles of IEL have expanded from the traditional ones of State sovereignty and prevention. The reasons for this are clearly the growth of industrialisation and liberalisation. States that used coal and hydel energy are now going for nuclear energy. With growth came the need to regulate transboundary harm with is an essential principle of State responsibility. It is also seen that the principles of common but differentiated responsibility is an integral part of environmental conventions on climate change, ozone depletion biodiversity and desertification. This principle is an attestation to the historical responsibility of developed States to take the lead in environmental protection combined with an obligation to provide benign technologies and financial resources to developing and lesser developed States.

Application of environmental law involves a crucial part of lawmaking of MEAs. The sources of international law play a very important role in the effectuation of IEL obligations. It is also seen that a network of international organisations under lawmaking especially stringent regional standards are involved. This multiplicity of laws has given the need to devise newer methods of enforcement such as reporting, verification, monitoring. While some of these are resisted their utility lies in creating a web of compliance cum assistance to needy States.

From the stage of negotiation of a treaty and its implementation the emphasis is largely on how to improve the effectiveness of treaty compliance. What use can a treaty or customary practice be if a State fails to understand its relevance and is unable to apply despite its adoption? One area where this dichotomy is clearly evident is protocols on liability. For example, despite the adoption of the Protocol of Liability to the Basel Convention on Transboundary Movement of Hazardous Wastes and Substances a largely number of States engaging in this hazardous activity have refused or shown hesitance in ratifying the Protocol. It is in such instances that application of MEAs becomes very important. Compliance mechanisms consisting of reporting, monitoring and verification obligations help States to overcome their inertia and undertake meaningful measures to fulfill their treaty commitments.

2.6 Conclusion

International law includes both the customary rules and usages to which States have given express or tacit assent and the provisions of ratified treaties and conventions. International law is directly and strongly influenced, although not made, by the writings of jurists and publicists, by instructions to diplomatic agents,
by important conventions even when they are not ratified, and by arbitral awards. The decisions of the International Court of Justice (ICJ) and of certain national courts, such as prize courts, are considered by some theorists to be a part of international law. In many modern States, international law is by custom or statute regarded as part of national or municipal law.

Since there is no sovereign super national body to enforce international law, some older theorists have denied that it is true law. Nevertheless, international law is recognised as law in practice, and the sanctions for failing to comply, although often less direct, are similar to those of municipal law; they include the force of public opinion, self-help, intervention by third-party States, the sanctions of international organisations such as the United Nations, and, in the last resort, war.

At the beginning of the ‘ecological era’ and in particular in the 1970’s there was a general trend towards the development of environmental regulations, which were considered as the remedy to pollution and to the depletion of the world’s wild flora and fauna. In 1980’s disillusion concerning the effectiveness of legal rules for the protection of the environment increased, but this did not halt or even slow down the legislative efforts. In the 1990’s with the triumph of the market economy system, many advanced the view that law is not the adequate tool for protecting the environment, whether at an international or a domestic level, because of its ineffectiveness.

Two regional instruments inspired by genuinely ecological perspectives can be seen as precursors to our present environmental concepts. The first, the 1933 London Convention Relative to the Preservation of Fauna and Flora in their Natural State, applicable to Africa then largely colonised. It provided for the creation of national parks and strict protection for some species of wild animals. The second instrument is the 1940 Washington Convention on Nature Protection and Wildlife Preservation in Western Hemisphere; which envisages the establishment of reserves and the protection of wild animals and plants especially migratory birds.
3

Introduction to Trade and Environment

Chapter Contents

<table>
<thead>
<tr>
<th>Chapter No.</th>
<th>Title</th>
<th>Page Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Introduction</td>
<td>69</td>
</tr>
<tr>
<td>3.2</td>
<td>Interplay between Trade and Environmental Issues</td>
<td>72</td>
</tr>
<tr>
<td>3.3</td>
<td>The General Agreement on Tariffs and Trade (GATT), 1947</td>
<td>73</td>
</tr>
<tr>
<td>3.4</td>
<td>World Trade Organisation (WTO)</td>
<td>103</td>
</tr>
<tr>
<td>3.5</td>
<td>WTO and Environment</td>
<td>115</td>
</tr>
<tr>
<td>3.6</td>
<td>Dispute Settlement Understanding in WTO</td>
<td>124</td>
</tr>
<tr>
<td>3.7</td>
<td>Conclusion</td>
<td>141</td>
</tr>
</tbody>
</table>

3.1 Introduction

The natural surroundings in which the human beings live is also the source of their material requirements. The environment includes land, water and air. Tradable today are not only goods but also services. In 1980's and 1990's, concerns about global threats, such as ozone-layer depletion and global warming brought the environmental issues to the fore. Environmental policies, particularly in the Organisation of Economic Co-operation and Development (OECD) countries, had become more comprehensive and stringent in the 1990's. When we think of trade and the environment, it is usually the impact of trade liberalisation on environmental quality and the interactions between economic growth and the environment. However, the linkage between trade and the environment, as it were, had been globally recognised before the end of 1940s.

The concept of free trade allows the markets to allocate resources to their most efficient uses, while concept of environmental protection seeks to manage and maintain the earth's resources efficiently. Conflicts arise where the same resources are subject to both trade efforts to allocate and environmental efforts to manage...
and maintain. This conflict must be reconciled, as both trade and environment are too important to let conflicts persist. Yet many environmentalists still believe that the economic system, including trade, is the enemy and many trade and development experts still believe that the environment is not a fundamental part of the economy. It is necessary to reconcile this conflict by adopting legal measures so as to achieve and ensure sustainable environmental development and long-term economic prosperity.

The economic, legal and institutional links between international trade flows and the environment have captured growing attention over the last two decades, especially in the aftermath of the Uruguay Round of trade negotiations. Most essentially, the link between trade and environment derives from environmental resources (such as air, water, subsoil minerals, energy, forestry and fisheries) providing basic inputs into economic activity, while they also act as a recipient of wastes from such activities. For instance, the quality of environmental resources undergoes changes due to economic activity, as in the case of generation of air pollution or water pollution. Outward-looking trade policies could have significant environmental implications.

Trade expansion or liberalisation has three effects, namely, the scale effect, the structural effect and the product effect. Trade enlarges the scale of economic activity, a factor for environmental change. Hence, the scale effect of trade results from enhanced economic activity, including higher levels of production, resource extraction and transportation. The impact on the environment is typically negative due to the greater pollution generated. In particular, the scale effect is accompanied by an increase in total production and income, and the latter can have a positive impact on the environment through the increased demand for better environmental quality (acting directly through market, as well as through enhanced demand for environmental regulations from the voting population). The composition of exports varies across countries depending upon its natural resource endowments and the stage of technological development or industrialisation, which also has implications for geographical location of pollution. Then, there is the effect of environment policy on trade, comprising the “competitiveness” issue at the micro level and a broader “growth and development” issue at the macro level, both of which arise from environment related process or product standards.

The structural effect of trade is the trade-induced change in the industrial composition and consumption, and depends on the pollution intensity of national output. The effect on the environment is positive if expanding export sectors are less polluting on average than contracting import-competing sectors; and negative if the opposite holds.
Introduction to Trade and Environment

The product effect of trade is positive when trade liberalisation expands the market for goods produced in an environmentally sound manner and/or environmental services like resource saving technology. Negative product effect results when goods directly harmful to the ecosystem are exchanged internationally. The net environmental effect of trade liberalisation is the sum of the scale, structural and product as well as the income effects, and can be either positive or negative depending on the magnitudes of the component effects.

On the legal front, environment and trade are governed by distinct regimes of international law. At times, the provisions of environmental regulation, in particular those embedded in the various multilateral environmental agreements (such as the Montreal Protocol on Ozone Depleting Substances, the Kyoto Protocol, the Convention on Trade in Endangered Species and the Basel Convention on the Transboundary Movements of Hazardous wastes) would interact and may even be in disagreement with the rules and principles of the multilateral trading system established by the World Trade Organisation (WTO) as well as regional agreements. Therefore, in this regard, it is also necessary to study and review the provisions of already adopted trade agreements relevant to environmental concerns, international environmental agreements and Indian and other country laws dealing with friction with those trade provisions. The review of the existing trade agreements and environmental agreements helps in developing an understanding towards environment and trade related issues which in turn reduces or eliminates friction between the two.

A strong interaction in the area of trade and environment promotes a high level of environmental protection and, at the same time, ensures an open, equitable, multilateral trade system. There are three main aspects to the relationship:

♦ The environmental impact of trade and trade policies;
♦ The potential effects of environmental measures on trade flows;
♦ The use of trade measures to achieve environmental policy aims.

Multilateral Environmental Agreements (MEAs) and Trade - Multilateral environmental agreements (MEAs) have evolved over the years as a co-operative means of protecting and conserving environmental resources or controlling for pollution that are transboundary or global in nature. Trade measures have been incorporated in MEAs where uncontrolled trade can potentially lead to environmental damage, for instance, loss of biological diversity for species threatened with extinction as in the Convention on International Trade in Endangered Species, or as a means of enforcing the agreement and prevent free-riding by banning trade with non-parties as in the Montreal Protocol.
The trade measures in MEAs include a wide range of measures including monitoring of through export-import permits and consents; identification label requirements; and export-import bans in specific products and States. While some of the trade measures are outlined within the agreements as specific obligations, other trade measures may be neither specific nor mandatory.

Some MEAs like the Convention of the Conservation of Antarctic Marine Living Resources, the Convention on Biological Diversity, and United Nations Framework Convention on Climatic Changes do not contain any trade-related measures. Other treaties contain obligations for trade measures like export or import certifications (for example, the International Plant Protection Convention). A few agreements like the International Tropical Timber Agreement and the International Convention for the Conservation of Atlantic Tuna have provision for developing trade measures.

### 3.2 Interplay between Trade and Environmental Issues

Initial concerns about the effect that increased trade would have on the environment emerged at the beginning of the 1970s, the same time the environmental movement in the industrialised States begins gaining strength.

At the time, the Organisation for Co-operation and Development (OECD), a multilateral organisation composed of members from the industrialised nations, served as the lead organisation considering the issues. OECD members specific concerns focused on the issue of “competitiveness”, or how the new wave of environmental laws requiring corporations to invest in pollution reduction equipment, might harm their competitive standing in the trade arena.

OECD’s answer to the problem was to issue a set of guidelines, *OECD Guiding Principles Concerning the International Economic Aspects of Environmental Policies* (1972), with the hope that all member States could co-operate and thus alleviate any potential competition problems. Without a doubt, the principle receiving the most attention was the Polluter Pays Principle (PPP), which suggested that the effects of competition could be muted if all member States agreed not to subsidise (reimburse) industries, but instead required them to absorb (pay for) the costs of the soon to be required pollution reduction equipment, with the cost eventually being transferred to the consumer and reflecting a more accurate price of production.

Trade and environment issues started gaining mainstream attention in the beginning of the 1990s, in the wake of the General Agreement on Tariffs and Trade (GATT) Tuna/Dolphin decision (discussed later). In this particular case, the WTO ruled the US policy of banning imports of tuna from States that used purse seine
fishing techniques to catch tuna, and subsequently kill dolphins, violated the terms of GATT. This decision was highly criticised by the environmental community as well as the world at large.

The topic stayed in front of the public throughout the 1990s because in 1998, the WTO again ruled against a US ban on shrimp imports caught without Turtle Excluder Devices (TEDs), equipment developed to help save endangered sea turtles.

These two cases show how process, the issue of how goods are produced, can stir up trade and environmental problems. However, trade and environment issues encompass a much broader and complicated set of issues than merely the issue of process. The competition issues that started in the 1970s still stand high on the environment agenda. Consider the debates surrounding the ratification of the North American Free Trade Agreement (NAFTA), where labour and environmentalists voiced concerns about companies moving their manufacturing operations from the United States to Mexico, the new pollution haven, because of the Mexican government's comparatively minimal environment and labour standards.

The current rules of the game in the international trading arena are also problematic with respect to many international environmental treaties. The Montreal Protocol and Convention on International Trade in Endangered Species, for example, incorporate trade sanctions into their texts as punitive measures for non-complying States. The goal of trade sanction clauses is to provide incentives for States who are Party to these treaties to live up to their treaty obligations.

Environmentalists express concern that years of work negotiating environmental treaties could be disrupted if WTO rules of trade are used to nullify those environmental enforcement measures under the assumptions that they violate free trade principle.

### 3.3 The General Agreement on Tariffs and Trade (GATT), 1947

The General Agreement on Tariffs and Trade (GATT) was first signed in 1947. The GATT was the first global effort to regulate trade between countries. It was negotiated between 23 countries, both developed and developing. In order to understand its relation and relevance to the environment, we need to look at its preamble which sets forth its objectives. The agreement that was multilateral in nature was designed to provide an international forum that encouraged free trade between member States by regulating and reducing tariffs on traded goods and by providing a common mechanism for resolving trade disputes.
According to its preamble, the purpose of the GATT is the “substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis”. GATT was established on a provisional basis after the Second World War in the wake of other new multilateral institutions dedicated to international economic co-operation. This initiative of monetary management for commercial and financial relations among the world’s major industrial nations was known as the Bretton Woods System.

The Bretton Woods system, conceived through the Bretton Woods Conference of 1944, led to the establishment of two institutions, namely the International Bank for Reconstruction and Development (IBRD) and the International Monetary Fund (IMF). The IMF and the IBRD became operational in 1946 after a sufficient number of countries had ratified the agreement. The IBRD is now one of five institutions in the World Bank Group.

Recognising the need for a comparable international institution for trade, the Bretton Woods system later proposed International Trade Organisation (ITO) to complement the IMF and World Bank.

However, ITO failed in 1950 as the U.S. Congress objected to the ITO concept on the ground that it would cede too much sovereignty to an international body. After the failure of ITO, the only document that was left was the parallel negotiations of ITO that had taken the shape of a provisional agreement and was named as the General Agreement on Tariffs and Trade (GATT). Hence, the negotiating countries adopted GATT as a substitute to ITO with the main objective of introducing early tariff cuts.

The GATT was a treaty, not an organisation. It was signed on October 30, 1947 by 23 countries. The tariff concessions came into effect by 30 June 1948 through a “Protocol of Provisional Application”. GATT was aimed at the reduction of barriers to international trade. This was achieved through the reduction of tariff barriers, quantitative restrictions and subsidies on trade through a series of agreements.

Although, in its 47 years, the basic legal text of the GATT remained much as it was in 1948, there were additions in the form of plurilateral voluntary membership, agreements and continual efforts to reduce tariffs. Much of this was achieved through a series of “trade rounds”.

♦ **GATT Rounds**

1) **First Round** - Held in 1947 in Geneva, leading to 45,000 tariff concessions were made affecting over $10 billion in trade which comprised 20% of the total global market at the time.
2) **Second Round** - Held in 1949 in Annecy, France. The main focus of the talks was more tariff reductions, around 5000 in total.

3) **Third Round** - Held in Torquay, England, in 1951. 8,700 tariff concessions were made totalling the remaining amount of tariffs to three-fourths of the tariffs which were in effect in 1948.

4) **Fourth Round** - Held in Geneva in 1955 and lasted until May 1956. $2.5 billion in tariffs were either eliminated or reduced.

5) **Fifth Round also known as the Dillon Round** - Held in Geneva from 1960 to 1962. The talks were named after U.S. Treasury Secretary and former Under Secretary of State, Douglas Dillon, who first proposed the talks. Along with reducing over $4.9 billion in tariffs, it also yielded discussion relating to the creation of the European Economic Community (EEC).

6) **Sixth Round or the Kennedy Round** - Held in Geneva from 1964 until 1967 and was named after the late U.S. President Kennedy in his memory. Concessions were made on $40 billion worth of tariffs.

7) **Seventh Round or the Tokyo Round** - Held in Tokyo, Japan, from 1973 to 1979. It led to the reduction of tariffs and established new regulations aimed at controlling the proliferation of non-tariff barriers and voluntary export restrictions. Concessions were made on $190 billion worth.

8) **Eighth Round or the Uruguay Round** - Uruguay Round began in September 1986 and lasted until April 1993. The Round was the most ambitious round up to that date and was commenced with a view to expand the competence of the GATT to important new areas such as services, capital, intellectual property, textiles and agriculture.

On April 15, 1994 an agreement was signed by ministers from most of the 123 participating governments at a meeting in Marrakesh, Morocco. This agreement, popularly known as the Marrakesh Agreement, was a part of the negotiations of the Uruguay Round. The agreement led to the establishment of the World Trade Organisation (WTO).

In the Uruguay Round, the GATT was transformed into WTO. The Marrakesh Agreement establishing the WTO was entered into force on January 1, 1995. This transformation of GATT to WTO is widely regarded as the most profound institutional reform of the world trading system since the GATT's establishment.
Uruguay Round: Final Decisions

The WTO's agreements are often called the Final Act of the 1986-1994 Uruguay Round of trade negotiations. “The Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations”, signed by ministers in Marrakesh on 15 April 1994 is 550 pages long and contains legal texts which spell out the results of the negotiations since the Round was launched in Punta del Este, Uruguay, in September 1986. In addition to the texts of the agreements, the Final Act also contains texts of Ministerial Decisions and Declarations which further clarify certain provisions of some of the agreements.

The Final Act covers all the negotiating areas cited in the Punta del Este Declaration with two important exceptions. The first is the results of the “market access negotiations” in which individual countries have made binding commitments to reduce or eliminate specific tariffs and non-tariff barriers to merchandise trade. These concessions are recorded in national schedules that form an integral part of the Final Act. The second is the “initial commitments” on liberalisation of trade in services. These commitments on liberalisation are also recorded in national schedules. The summary of the agreements is as follows:

♦ Agreement Establishing the World Trade Organisation

The agreement establishing the World Trade Organisation (WTO) calls for a single institutional framework encompassing the GATT, as modified by the Uruguay Round, all agreements and arrangements concluded under its auspices and the complete results of the Uruguay Round. Its structure is headed by a Ministerial Conference meeting at least once every two years. A General Council oversees the operation of the agreement and ministerial decisions on a regular basis. This General Council acts as a Dispute Settlement Body and a Trade Policy Review Mechanism, which concern themselves with the full range of trade issues covered by the WTO, and has also established subsidiary bodies such as a Goods Council, a Services Council and a TRIPs Council. The WTO framework ensures a “single undertaking approach” to the results of the Uruguay Round — thus, membership in the WTO entails accepting all the results of the Round without exception.

♦ General Agreement on Tariffs and Trade, 1994

Texts on the interpretation of the following GATT articles are included in the Final Act:

Article II — Schedules of Concessions. Agreement to record in national schedules “other duties or charges” levied in addition to the recorded tariff and to bind them at the levels prevailing at the date established in the Uruguay Round Protocol.
Understanding on the Interpretation of Article XVII — State-trading Enterprises. Agreement increasing surveillance of their activities through stronger notification and review procedures.

♦  Understanding on the Interpretation of Articles XII and XVIII:B

Balance-of-payments provisions. Agreement that Contracting Parties imposing restrictions for balance-of-payments purposes should do so in the least trade-disruptive manner and should favour price-based measures, like import surcharges and import deposits, rather than quantitative restrictions. Agreement also on procedures for consultations by the GATT Balance-of-Payments Committee as well as for notification of BOP measures.

Understanding on the Interpretation of Article XXIV — Customs Unions and Free-Trade Areas. Agreement clarifying and reinforcing the criteria and procedures for the review of new or enlarged customs unions or free-trade areas and for the evaluation of their effects on third parties. The agreement also clarifies the procedure to be followed for achieving any necessary compensatory adjustment in the event of Contracting Parties forming a customs union seeking to increase a bound tariff. The obligations of Contracting Parties in regard to measures taken by regional or local governments or authorities within their territories are also clarified.

Understanding on the Interpretation of Article XXV — Waivers. Agreement of new procedures for the granting of waivers from GATT disciplines, to specify termination dates for any waivers to be granted in the future, and to fix expiry dates for existing waivers. The main provisions concerning the granting of waivers are, however, contained in the Agreement on the WTO.

Understanding on the Interpretation of Article XXVIII — Modification of GATT Schedules. Agreement on new procedures for the negotiation of compensation when tariff bindings are modified or withdrawn, including the creation of a new negotiating right for the country for which the product in question accounts for the highest proportion of its exports. This is intended to increase the ability of smaller and developing countries to participate in negotiations.

Understanding on the Interpretation of Article XXXV — Non-application of the General Agreement. Agreement to allow a Contracting Party or a newly acceding country to invoke GATT’s non-application provisions vis-à-vis the other Party after having entered into tariff negotiations with each other. The WTO Agreement foresees that any invocation of the non-application provisions under that Agreement must extend to all the multilateral agreements.
♦ Uruguay Round Protocol GATT, 1994

The results of the market access negotiations in which participants have made commitments to eliminate or reduce tariff rates and non-tariff measures applicable to trade in goods are recorded in national schedules of concessions annexed to the Uruguay Round Protocol that forms an integral part of the Final Act.

The Protocol has five appendices: Appendix I Section A: Agricultural Products — Tariff concessions on a Most-Favoured Nation basis; Appendix I Section B: Agricultural Products — Tariff Quotas; Appendix II: Tariff Concessions on a Most-Favoured Nation Basis on Other Products; Appendix III: Preferential Tariff — Part II of Schedules (if applicable); Appendix IV: Concessions on Non-Tariff Measures — Part III of Schedules; Appendix V: Agriculture Products: Commitments Limiting Subsidisation — Part IV of Schedules, Section I: Domestic Support: Total AMS Commitments, Section II: Export Subsidies: Budgetary Outlay and Quantity, Reduction Commitments Section III: Commitments Limiting the Scope of Export Subsidies.

The schedule annexed to the Protocol relating to a Member shall become a Schedule to the GATT 1994 relating to that Member on the day on which the Agreement Establishing the WTO enters into force for that Member.

For non-agricultural products the tariff reduction agreed upon by each Member shall be implemented in five equal rate reductions, except as may be otherwise specified in a Member’s Schedule. The first such reduction shall be made effective on the date of entry into force of the Agreement Establishing the WTO. Each successive reduction shall be made effective on 1 January of each of the following years, and the final rate shall become effective no later than the date four years after the date of entry into force of the Agreement Establishing the WTO. However, participants may implement reduction in fewer stages or at earlier dates than those indicated in the Protocol, if they so wish.

For agricultural products, as defined in Article 2 of the Agreement on Agriculture, the staging of reductions shall be implemented as specified in the relevant parts of the schedules. Details are given in the section of this paper concerning the Agricultural Agreement.

A related Decision on Measures in Favour of Least-Developed Countries establishes, among other things, that these countries will not be required to undertake any commitments and concessions which are inconsistent with their individual development, financial and trade needs. Alongside other more specific provisions for flexible and favourable treatment, it also allows for the completion of their

♦ Agreement on Agriculture

The negotiations have resulted in four main portions of the Agreement; the Agreement on Agriculture itself; the concessions and commitments Members are to undertake on market access, domestic support and export subsidies; the Agreement on Sanitary and Phytosanitary Measures; and the Ministerial Decision concerning Least-Developed and Net Food-Importing Developing countries.

Overall, the results of the negotiations provide a framework for the long-term reform of agricultural trade and domestic policies over the years to come. It makes a decisive move towards the objective of increased market orientation in agricultural trade. The rules governing agricultural trade are strengthened which will lead to improved predictability and stability for importing and exporting countries alike.

The agricultural package also addresses many other issues of vital economic and political importance to many Members. These include provisions that encourage the use of less trade-distorting domestic support policies to maintain the rural economy, that allow actions to be taken to ease any adjustment burden, and also the introduction of tightly prescribed provisions that allow some flexibility in the implementation of commitments. Specific concerns of developing countries have been addressed including the concerns of net-food importing countries and least-developed countries.

The agricultural package provides for commitments in the area of market access, domestic support and export competition. The text of the Agricultural Agreement is mirrored in the GATT Schedules of legal commitments relating to individual countries (see above).

In the area of market access, non-tariff border measures are replaced by tariffs that provide substantially the same level of protection. Tariffs resulting from this “tariffication” process, as well as other tariffs on agricultural products, are to be reduced by an average 36% in the case of developed countries and 24% in the case of developing countries, with minimum reductions for each tariff line being required. Reductions are to be undertaken over six years in the case of developed countries and over ten years in the case of developing countries. Least-developed countries are not required to reduce their tariffs.

The tariffication package also provides for the maintenance of current access opportunities and the establishment of minimum access tariff quotas (at reduced-
tariff rates) where current access is less than 3% of domestic consumption. These minimum access tariff quotas are to be expanded to 5% over the implementation period. In the case of “tariffied” products “special safeguard” provisions will allow additional duties to be applied in case shipments at prices denominated in domestic currencies below a certain reference level or in case of a surge of imports. The trigger in the safeguard for import surges depends on the “import penetration” currently existing in the market, i.e. where imports currently make up a large proportion of consumption, the import surge required to trigger the special safeguard action is lower.

Domestic support measures that have, at most, a minimal impact on trade (“green box” policies) are excluded from reduction commitments. Such policies include general government services, for example, in the areas of research, disease control, infrastructure and food security. It also includes direct payments to producers, for example, certain forms of “decoupled” (from production) income support, structural adjustment assistance, direct payments under environmental programmes and under regional assistance programmes.

In addition to the green box policies, other policies need not be included in the Total Aggregate Measurement of Support (Total AMS) reduction commitments. These policies are direct payments under production-limiting programmes, certain government assistance measures to encourage agricultural and rural development in developing countries and other support which makes up only a low proportion (5% in the case of developed countries and 10% in the case of developing countries) of the value of production of individual products or, in the case of non-product-specific support, the value of total agricultural production.

The Total AMS covers all support provided on either a product-specific or non-product-specific basis that does not qualify for exemption and is to be reduced by 20% (13.3% for developing countries with no reduction for least-developed countries) during the implementation period.

Members are required to reduce the value of mainly direct export subsidies to a level 36% below the 1986-90 base period level over the six-year implementation period, and the quantity of subsidised exports by 21% over the same period. In the case of developing countries, the reductions are two-thirds those of developed countries over a ten-year period (with no reductions applying to the least-developed countries) and subject to certain conditions, there are no commitments on subsidies to reduce the costs of marketing exports of agricultural products or internal transport and freight charges on export shipments. Where subsidised exports have increased since the 1986-90 base period, 1991-92 may be used, in certain
circumstances, as the beginning point of reductions although the end-point remains that based on the 1986-90 base period level. The Agreement on Agriculture provides for some limited flexibility between years in terms of export subsidy reduction commitments and contains provisions aimed at preventing the circumvention of the export subsidy commitments and sets out criteria for food aid donations and the use of export credits.

“Peace” provisions within the agreement include: an understanding that certain actions available under the Subsidies Agreement will not be applied with respect to green box policies and domestic support and export subsidies maintained in conformity with commitments; an understanding that “due restraint” will be used in the application of countervailing duty rights under the General Agreement; and setting out limits in terms of the applicability of nullification or impairment actions. These peace provisions will apply for a period of 9 years.

The agreement sets up a committee that will monitor the implementation of commitments, and also monitor the follow-up to the Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries.

The package is conceived as part of a continuing process with the long-term objective of securing substantial progressive reductions in support and protection. In this light, it calls for further negotiations in the fifth year of implementation which, along with an assessment of the first five years, would take into account non-trade concerns, special and differential treatment for developing countries, the objective to establish a fair and market-oriented agricultural trading system and other concerns and objectives noted in the preamble to the agreement.

♦ **Agreement on Sanitary and Phytosanitary Measures**

This agreement concerns the application of sanitary and phytosanitary measures — in other words food safety and animal and plant health regulations. The agreement recognises that governments have the right to take sanitary and phytosanitary measures but that they should be applied only to the extent necessary to protect human, animal or plant life or health and should not arbitrarily or unjustifiably discriminate between Members where identical or similar conditions prevail.

In order to harmonise sanitary and phytosanitary measures on as wide a basis as possible, Members are encouraged to base their measures on international standards, guidelines and recommendations where they exist. However, Members may maintain or introduce measures which result in higher standards if there is
scientific justification or as a consequence of consistent risk decisions based on an appropriate risk assessment. The Agreement spells out procedures and criteria for the assessment of risk and the determination of appropriate levels of sanitary or phytosanitary protection.

It is expected that Members would accept the sanitary and phytosanitary measures of others as equivalent if the exporting country demonstrates to the importing country that its measures achieve the importing country’s appropriate level of health protection. The agreement includes provisions on control, inspection and approval procedures.

♦ **Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries**

It is recognised that during the reform programme least-developed and net food-importing developing countries may experience negative effects with respect to supplies of food imports on reasonable terms and conditions. Therefore, a special Decision sets out objectives with regard to the provision of food aid, the provision of basic foodstuffs in full grant form and aid for agricultural development. It also refers to the possibility of assistance from the International Monetary Fund and the World Bank with respect to the short-term financing of commercial food imports. The Committee of Agriculture, set up under the Agreement on Agriculture, monitors the follow-up to the Decision.

♦ **Agreement on Textiles and Clothing**

The object of this negotiation has been to secure the eventual integration of the textiles and clothing sector — where much of the trade is currently subject to bilateral quotas negotiated under the Multifibre Arrangement (MFA) — into the GATT on the basis of strengthened GATT rules and disciplines.

Integration of the sector into the GATT would take place as follows: first, on 1 January 1995; each Party would integrate into the GATT products from the specific list in the Agreement which accounted for not less than 16% of its total volume of imports in 1990. Integration means that trade in these products will be governed by the general rules of GATT.

At the beginning of Phase 2, on 1 January 1998, products which accounted for not less than 17% of 1990 imports would be integrated. On 1 January 2002, products which accounted for not less than 18% of 1990 imports would be integrated. All remaining products would be integrated at the end of the transition period on 1 January 2005. At each of the first three stages, products should be chosen from
of the following categories: tops and yarns, fabrics, made-up textile products and clothing.

All MFA restrictions in place on 31 December 1994 would be carried over into the new agreement and maintained until such time as the restrictions are removed or the products integrated into GATT. For products remaining under restraint, at whatever stage, the agreement lays down a formula for increasing the existing growth rates. Thus, during Stage 1, and for each restriction previously under MFA bilateral agreements in force for 1994, annual growth should be not less than 16% higher than the growth rate established for the previous MFA restriction. For Stage 2 (1998 to 2001 inclusive), annual growth rates should be 25% higher than the Stage 1 rates. For Stage 3 (2002 to 2004 inclusive), annual growth rates should be 27% higher than the Stage 2 rates.

While the agreement focuses largely on the phasing-out of MFA restrictions, it also recognises that some members maintain non-MFA restrictions not justified under a GATT provision. These would also be brought into conformity with GATT within one year of the entry into force of the Agreement or phased out progressively during a period not exceeding the duration of the Agreement (that is, by 2005).

It also contains a specific transitional safeguard mechanism which could be applied to products not yet integrated into the GATT at any stage. Action under the safeguard mechanism could be taken against individual exporting countries if it were demonstrated by the importing country that overall imports of a product were entering the country in such increased quantities as to cause serious damage — or to threaten it — to the relevant domestic industry, and that there was a sharp and substantial increase of imports from the individual country concerned. Action under the safeguard mechanism could be taken either by mutual agreement, following consultations, or unilaterally but subject to review by the Textiles Monitoring Body. If taken, the level of restraints should be fixed at a level not lower than the actual level of exports or imports from the country concerned during the twelve-month period ending two months before the month in which a request for consultation was made. Safeguard restraints could remain in place for up to three years without extension or until the product is removed from the scope of the agreement (that is, integrated into the GATT), whichever comes first.

The agreement includes provisions to cope with possible circumvention of commitments through transshipment, re-routing, false declaration concerning country or place of origin and falsification of official documents.

The agreement also stipulates that, as part of the integration process, all members shall take such actions in the area of textiles and clothing as may be necessary to
abide by GATT rules and disciplines so as to improve market access, ensure the application of policies relating to fair and equitable trading conditions, and avoid discrimination against imports when taking measures for general trade policy reasons.

In the context of a major review of the operation of the agreement to be conducted by the Council for Trade in Goods before the end of each stage of the integration process, the Council for Trade in Goods shall by consensus take such decisions as it deems appropriate to ensure that the balance of rights and obligations in this agreement is not upset. Moreover, the Dispute Settlement Body may authorise adjustments to the annual growth of quotas for the stage subsequent to the review with respect to Members it has found not to be complying with their obligations under this agreement.

A Textiles Monitoring Body (TMB) oversees the implementation of commitments and to prepare reports for the major reviews mentioned above. The agreement also has provisions for special treatment to certain categories of countries — for example, those which have not been MFA members since 1986, new entrants, small suppliers, and least-developed countries.

♦ Agreement on Technical Barriers to Trade

This agreement will extend and clarify the Agreement on Technical Barriers to Trade reached in the Tokyo Round. It seeks to ensure that technical negotiations and standards, as well as testing and certification procedures, do not create unnecessary obstacles to trade. However, it recognises that countries have the right to establish protection, at levels they consider appropriate, for example for human, animal or plant life or health or the environment, and should not be prevented from taking measures necessary to ensure those levels of protection are met. The agreement therefore encourages countries to use international standards where these are appropriate, but it does not require them to change their levels of protection as a result of standardisation.

Innovative features of the revised agreement are that it covers processing and production methods related to the characteristics of the product itself. The coverage of conformity assessment procedures is enlarged and the disciplines made more precise. Notification provisions applying to local government and non-governmental bodies are elaborated in more detail than in the Tokyo Round agreement. A Code of Good Practice for the Preparation, Adoption and Application of Standards by standardising bodies, which is open to acceptance by private sector bodies as well as the public sector, is included as an annex to the agreement.
Introduction to Trade and Environment

♦ Agreement on Trade Related Aspects of Investment Measures

The agreement recognises that certain investment measures restrict and distort trade. It provides that no contracting party shall apply any TRIM inconsistent with Articles III (national treatment) and XI (prohibition of quantitative restrictions) of the GATT. To this end, an illustrative list of TRIMs agreed to be inconsistent with these articles is appended to the agreement. The list includes measures which require particular levels of local procurement by an enterprise (“local content requirements”) or which restrict the volume or value of imports such an enterprise can purchase or use to an amount related to the level of products it exports (“trade balancing requirements”).

The agreement requires mandatory notification of all non-conforming TRIMs and their elimination within two years for developed countries, within five years for developing countries and within seven years for least-developed countries. It establishes a Committee on TRIMs which will, among other things, monitor the implementation of these commitments. The agreement also provides for consideration, at a later date, of whether it should be complemented with provisions on investment and competition policy more broadly.

♦ Agreement on Implementation of Article VI (Anti-dumping)

Article VI of the GATT provides for the right of contracting parties to apply anti-dumping measures, i.e. measures against imports of a product at an export price below its “normal value” (usually the price of the product in the domestic market of the exporting country) if such dumped imports cause injury to a domestic industry in the territory of the importing Contracting Party. More detailed rules governing the application of such measures are currently provided in an Anti-dumping Agreement concluded at the end of the Tokyo Round. Negotiations in the Uruguay Round have resulted in a revision of this Agreement which addresses many areas in which the current Agreement lacks precision and detail.

In particular, the revised Agreement provides for greater clarity and more detailed rules in relation to the method of determining that a product is dumped, the criteria to be taken into account in a determination that dumped imports cause injury to a domestic industry, the procedures to be followed in initiating and conducting anti-dumping investigations, and the implementation and duration of anti-dumping measures. In addition, the new agreement clarifies the role of dispute settlement panels in disputes relating to anti-dumping actions taken by domestic authorities.

On the methodology for determining that a product is exported at a dumped price, the new Agreement adds relatively specific provisions on such issues as criteria
for allocating costs when the export price is compared with a “constructed” normal value and rules to ensure that a fair comparison is made between the export price and the normal value of a product so as not to arbitrarily create or inflate margins of dumping.

The agreement strengthens the requirement for the importing country to establish a clear causal relationship between dumped imports and injury to the domestic industry. The examination of the dumped imports on the industry concerned must include an evaluation of all relevant economic factors bearing on the State of the industry concerned. The agreement confirms the existing interpretation of the term “domestic industry”. Subject to a few exceptions, “domestic industry” refers to the domestic producers as a whole of the like products or to those of them whose collective output of the products constitutes a major proportion of the total domestic production of those products.

Clear-cut procedures have been established on how anti-dumping cases are to be initiated and how such investigations are to be conducted. Conditions for ensuring that all interested Parties are given an opportunity to present evidence are set out. Provisions on the application of provisional measures, the use of price undertakings in anti-dumping cases, and on the duration of anti-dumping measures have been strengthened. Thus, a significant improvement over the existing Agreement consists of the addition of a new provision under which anti-dumping measures shall expire five years after the date of imposition, unless a determination is made that, in the event of termination of the measures, dumping and injury would be likely to continue or recur.

A new provision requires the immediate termination of an anti-dumping investigation in cases where the authorities determine that the margin of dumping is de minimis (which is defined as less than 2%, expressed as a percentage of the export price of the product) or that the volume of dumped imports is negligible (generally when the volume of dumped imports from an individual country accounts for less than 3% of the imports of the product in question into the importing country).

The agreement calls for prompt and detailed notification of all preliminary or final anti-dumping actions to a Committee on Anti-dumping Practices. The agreement will afford Parties the opportunity of consulting on any matter relating to the operation of the agreement or the furtherance of its objectives, and to request the establishment of panels to examine disputes.
♦ Agreement on Implementation of Article VII (Customs Valuation)
The Decision on Customs Valuation would give customs administrations the right to request further information of importers where they have reason to doubt the accuracy of the declared value of imported goods. If the administration maintains a reasonable doubt, despite any additional information, it may be deemed that the customs value of the imported goods cannot be determined on the basis of the declared value, and customs would need to establish the value taking into account the provisions of the Agreement. In addition, two accompanying texts further clarify certain of the Agreement's provisions relevant to developing countries and relating to minimum values and importations by sole agents, sole distributors and sole concessionaires.

♦ Agreement on Preshipment Inspection
Preshipment inspection (PSI) is the practice of employing specialised private companies to check shipment details — essentially price, quantity, quality — of goods ordered overseas. Used by governments of developing countries, the purpose is to safeguard national financial interests (prevention of capital flight and commercial fraud as well as customs duty evasion, for instance) and to compensate for inadequacies in administrative infrastructures.

The agreement recognises that GATT principles and obligations apply to the activities of preshipment inspection agencies mandated by governments. The obligations placed on PSI-user governments include non-discrimination, transparency, protection of confidential business information, avoidance of unreasonable delay, the use of specific guidelines for conducting price verification and the avoidance of conflicts of interest by the PSI agencies.

The obligations of exporting contracting parties towards PSI users include non-discrimination in the application of domestic laws and regulations, prompt publication of such laws and regulations and the provision of technical assistance where requested.

The agreement establishes an independent review procedure — administered jointly by an organisation representing PSI agencies and an organisation representing exporters — to resolve disputes between an exporter and a PSI agency.

♦ Agreement on Rules of Origin
The agreement aims at long-term harmonisation of rules of origin, other than rules of origin relating to the granting of tariff preferences, and to ensure that such rules do not themselves create unnecessary obstacles to trade.
The agreement sets up a harmonisation programme, to be initiated as soon as possible after the completion of the Uruguay Round and to be completed within three years of initiation. It would be based upon a set of principles, including making rules of origin objective, understandable and predictable. The work would be conducted by a Committee on Rules of Origin (CRO) in the WTO and a technical committee (TCRO) under the auspices of the Customs Co-operation Council in Brussels.

Much work was done in the CRO and the TCRO and substantial progress has been achieved in the three years foreseen in the Agreement for the completion of the work. However, due to the complexity of the issues the HWP could not be finalised within the foreseen deadline. The CRO continued its work in 2000. In December 2000, the General Council Special Session agreed to set, as the new deadline for completion of the remainder of the work, the Fourth Session of the Ministerial Conference, or at the latest the end of 2001. The negotiating texts are contained in documents G/RO/41 and G/RO/45.

Until the completion of the harmonisation programme, Contracting Parties would be expected to ensure that their rules of origin are transparent; that they do not have restricting, distorting or disruptive effects on international trade; that they are administered in a consistent, uniform, impartial and reasonable manner, and that they are based on a positive standard (in other words, they should state what does confer origin rather than what does not).

An annex to the agreement sets out a “common declaration” with respect to the operation of rules of origin on goods which qualify for preferential treatment.

♦ Agreement on Import Licensing Procedures

The revised agreement strengthens the disciplines on the users of import licensing systems — which, in any event, are much less widely used now than in the past — and increases transparency and predictability. For example, the agreement requires parties to publish sufficient information for traders to know the basis on which licences are granted. It contains strengthened rules for the notification of the institution of import licensing procedures or changes therein. It also offers guidance on the assessment of applications.

With respect to automatic licensing procedures, the revised agreement sets out criteria under which they are assumed not to have trade restrictive effects. With respect to non-automatic licensing procedures, their administrative burden for importers and exporters should be limited to what is absolutely necessary to administer the measures to which they apply. The revised agreement also sets a maximum of 60 days for applications to be considered.
Introduction to Trade and Environment

♦ Agreement on Subsidies and Countervailing Measures

The Agreement on Subsidies and Countervailing Measures is intended to build on the Agreement on Interpretation and Application of Articles VI, XVI and XXIII which was negotiated in the Tokyo Round.

Unlike its predecessor, the agreement contains a definition of subsidy and introduces the concept of a “specific” subsidy — for the most part, a subsidy available only to an enterprise or industry or group of enterprises or industries within the jurisdiction of the authority granting the subsidy. Only specific subsidies would be subject to the disciplines set out in the agreement.

The agreement establishes three categories of subsidies. First, it deems the following subsidies to be “prohibited”: those contingent, in law or in fact, whether solely or as one of several other conditions, upon export performance; and those contingent, whether solely or as one of several other conditions, upon the use of domestic over imported goods. Prohibited subsidies are subject to new dispute settlement procedures. The main features include an expedited timetable for action by the Dispute Settlement body, and if it is found that the subsidy is indeed prohibited, it must be immediately withdrawn. If this is not done within the specified time period, the complaining member is authorised to take countermeasures. (See the section on “Dispute Settlement” for details on the procedures).

The second category is “actionable” subsidies. The agreement stipulates that no member should cause, through the use of subsidies, adverse effects to the interests of other signatories, i.e. injury to domestic industry of another signatory, nullification or impairment of benefits accruing directly or indirectly to other signatories under the General Agreement (in particular the benefits of bound tariff concessions), and serious prejudice to the interests of another member. “Serious prejudice” shall be presumed to exist for certain subsidies including when the total ad valorem subsidisation of a product exceeds 5%. In such a situation, the burden of proof is on the subsidising member to show that the subsidies in question do not cause serious prejudice to the complaining member. Members affected by actionable subsidies may refer the matter to the Dispute Settlement body. In the event that it is determined that such adverse effects exist, the subsidising member must withdraw the subsidy or remove the adverse effects.

The third category involves non-actionable subsidies, which could either be non-specific subsidies, or specific subsidies involving assistance to industrial research and pre-competitive development activity, assistance to disadvantaged regions, or certain type of assistance for adapting existing facilities to new environmental requirements imposed by law and/or regulations. Where another member believes
that an otherwise non-actionable subsidy is resulting in serious adverse effects to a domestic industry, it may seek a determination and recommendation on the matter.

One part of the agreement concerns the use of countervailing measures on subsidised imported goods. It sets out disciplines on the initiation of countervailing cases, investigations by national authorities and rules of evidence to ensure that all interested Parties can present information and argument. Certain disciplines on the calculation of the amount of a subsidy are outlined as is the basis for the determination of injury to the domestic industry. The agreement would require that all relevant economic factors be taken into account in assessing the state of the industry and that a causal link be established between the subsidised imports and the alleged injury. Countervailing investigations shall be terminated immediately in cases where the amount of a subsidy is de minimis (the subsidy is less than 1% ad valorem) or where the volume of subsidised imports, actual or potential, or the injury is negligible. Except under exceptional circumstances, investigations shall be concluded within one year after their initiation and in no case more than 18 months. All countervailing duties have to be terminated within 5 years of their imposition unless the authorities determine on the basis of a review that the expiry of the duty would be likely to lead to continuation or recurrence of subsidisation and injury.

The agreement recognises that subsidies may play an important role in economic development programmes of developing countries, and in the transformation of centrally-planned economies to market economies. Least-developed countries and developing countries that have less than $1,000 per capita GNP are thus exempted from disciplines on prohibited export subsidies, and have a time-bound exemption from other prohibited subsidies. For other developing countries, the export subsidy prohibition would take effect 8 years after the entry into force of the agreement establishing the WTO, and they have a time-bound (though fewer years than for poorer developing countries) exemption from the other prohibited subsidies. Countervailing investigation of a product originating from a developing-country member would be terminated if the overall level of subsidies does not exceed 2% (and from certain developing countries 3%) of the value of the product, or if the volume of the subsidised imports represents less than 4% of the total imports for the like product in the importing signatory. For countries in the process of transformation from a centrally-planned into a market economy, prohibited subsidies shall be phased out within a period of seven years from the date of entry into force of the agreement.

In anticipation of the negotiation of special rules in the civil aircraft sector, under the subsidies agreement, civil aircraft products are not subject to the presumption
that *ad valorem* subsidisation in excess of 5% causes serious prejudice to the interests of other Members. In addition, the Agreement provides that where repayment of financing in the civil aircraft sector is dependent on the level of sales of a product and sales fall below expectations, this does not in itself give rise to such presumption of serious prejudice.

♦ Agreement on Safeguards

Article XIX of the General Agreement allows a GATT member to take a “safeguard” action to protect a specific domestic industry from an unforeseen increase of imports of any product which is causing, or which is likely to cause, serious injury to the industry.

The agreement breaks major ground in establishing a prohibition against so-called “grey area” measures, and in setting a “sunset clause” on all safeguard actions. The agreement stipulates that a member shall not seek, take or maintain any voluntary export restraints, orderly marketing arrangements or any other similar measures on the export or the import side. Any such measure in effect at the time of entry into force of the agreement would be brought into conformity with this agreement, or would have to be phased out within four years after the entry into force of the agreement establishing the WTO. An exception could be made for one specific measure for each importing member, subject to mutual agreement with the directly concerned member, where the phase-out date would be 31 December 1999.

All existing safeguard measures taken under Article XIX of the General Agreement 1947 shall be terminated not later than eight years after the date on which they were first applied or five years after the date of entry into force of the agreement establishing the WTO, whichever comes later.

The agreement sets out requirements for safeguard investigation which include public notice for hearings and other appropriate means for interested Parties to present evidence, including on whether a measure would be in the public interest. In the event of critical circumstances, a provisional safeguard measure may be imposed based upon a preliminary determination of serious injury. The duration of such a provisional measure would not exceed 200 days.

The agreement sets out the criteria for “serious injury” and the factors which must be considered in determining the impact of imports. The safeguard measure should be applied only to the extent necessary to prevent or remedy serious injury and to facilitate adjustment. Where quantitative restrictions are imposed, they normally should not reduce the quantities of imports below the annual average for the last
International Environmental Law and Policy

three representative years for which statistics are available, unless clear justification is given that a different level is necessary to prevent or remedy serious injury.

In principle, safeguard measures have to be applied irrespective of source. In cases in which a quota is allocated among supplying countries, the member applying restrictions may seek agreement with others. Members having a substantial interest in supplying the product concerned. Normally, allocation of shares would be on the basis of proportion of total quantity or value of the imported product over a previous representative period. However, it would be possible for the importing country to depart from this approach if it could demonstrate, in consultations under the auspices of the Safeguards Committee, that imports from certain Contracting Parties had increased disproportionately in relation to the total increase and that such a departure would be justified and equitable to all suppliers. The duration of the safeguard measure in this case cannot exceed four years.

The agreement lays down time limits for all safeguard measures. Generally, the duration of a measure should not exceed four years though this could be extended up to a maximum of eight years, subject to confirmation of continued necessity by the competent national authorities and if there is evidence that the industry is adjusting. Any measure imposed for a period greater than one year should be progressively liberalised during its lifetime. No safeguard measure could be applied again to a product that had been subject to such action for a period equal to the duration of the previous measure, subject to a non-application period of at least two years. A safeguard measure with a duration of 180 days or less may be applied again to the import of a product if at least one year had elapsed since the date of introduction of the measure on that product, and if such a measure had not been applied on the same product more than twice in the five-year period immediately preceding the date of introduction of the measure.

The agreement envisages consultations on compensation for safeguard measures. Where consultations are not successful, the affected members may withdraw equivalent concessions or other obligations under GATT 1994. However, such action is not allowed for the first three years of the safeguard measure if it conforms to the provisions of the agreement, and is taken as a result of an absolute increase in imports.

Safeguard measures would not be applicable to a product from a developing country member, if the share of the developing country member in the imports of the product concerned does not exceed 3% and that developing country members with less than 3% import share collectively account for no more than 9% of total imports of the product concerned. A developing country member has the right to extend the
period of application of a safeguard measure for a period of up to two years beyond the normal maximum. It can also apply a safeguard measure again to a product that had been subject to such an action after a period equal to half of the duration of the previous measure, subject to a non-application period of at least two years.

The agreement would establish a Safeguards Committee which would oversee the operation of its provisions and, in particular, be responsible for surveillance of its commitments.

♦ General Agreement on Trade in Services (GATS)

The Services Agreement which forms part of the Final Act rests on three pillars. The first is a Framework Agreement containing basic obligations which apply to all member countries. The second concerns national schedules of commitments containing specific further national commitments which will be the subject of a continuing process of liberalisation. The third is a number of annexes addressing the special situations of individual services sectors.

Part I of the basic agreement defines its scope — specifically, services supplied from the territory of one Party to the territory of another; services supplied in the territory of one Party to the consumers of any other (for example, tourism); services provided through the presence of service providing entities of one Party in the territory of any other (for example, banking); and services provided by nationals of one Party in the territory of any other (for example, construction projects or consultancies).

Part II sets out general obligations and disciplines. A basic most-favoured-nation (m.f.n.) obligation states that each Party “shall accord immediately and unconditionally to services and service providers of any other Party, treatment no less favourable than that it accords to like services and service providers of any other country”. However, it is recognised that m.f.n. treatment may not be possible for every service activity and, therefore, it is envisaged that Parties may indicate specific m.f.n. exemptions. Conditions for such exemptions are included as an annex and provide for reviews after five years and a normal limitation of 10 years on their duration.

Transparency requirements include publication of all relevant laws and regulations. Provisions to facilitate the increased participation of developing countries in world services trade envisage negotiated commitments on access to technology, improvements in access to distribution channels and information networks and the liberalisation of market access in sectors and modes of supply of export interest. The provisions covering economic integration are analogous to those in Article
XXIV of GATT, requiring arrangements to have “substantial sectoral coverage” and to “provide for the absence or elimination of substantially all discrimination” between the Parties.

Since domestic regulations, not border measures, provide the most significant influence on services trade, provisions spell out that all such measures of general application should be administered in a reasonable, objective and impartial manner. There would be a requirement that Parties establish the means for prompt reviews of administrative decisions relating to the supply of services.

The agreement contains obligations with respect to recognition requirements (educational background, for instance) for the purpose of securing authorisations, licenses or certification in the services area. It encourages recognition requirements achieved through harmonisation and internationally-agreed criteria. Further provisions state that Parties are required to ensure that monopolies and exclusive service providers do not abuse their positions. Restrictive business practices should be subject to consultations between Parties with a view to their elimination.

While Parties are normally obliged not to restrict international transfers and payments for current transactions relating to commitments under the agreement, there are provisions allowing limited restrictions in the event of balance-of-payments difficulties. However, where such restrictions are imposed they would be subject to conditions; including that they are non-discriminatory, that they avoid unnecessary commercial damage to other Parties and that they are of a temporary nature.

The agreement contains both general exceptions and security exceptions provisions which are similar to Articles XX and XXI of the GATT. It also envisages negotiations with a view to the development of disciplines on trade-distorting subsidies in the services area.

Part III contains provisions on market access and national treatment which would not be general obligations but would be commitments made in national schedules. Thus, in the case of market access, each Party “shall accord services and service providers of other Parties treatment no less favourable than that provided for under the terms, limitations and conditions agreed and specified in its schedule”. The intention of the market-access provision is to progressively eliminate the following types of measures: limitations on numbers of service providers, on the total value of service transactions or on the total number of service operations or people employed. Equally, restrictions on the kind of legal entity or joint venture through
which a service is provided or any foreign capital limitations relating to maximum levels of foreign participation are to be progressively eliminated.

The national-treatment provision contains the obligation to treat foreign service suppliers and domestic service suppliers in the same manner. However, it does provide the possibility of different treatment being accorded the service providers of other Parties to that accorded to domestic service providers. However, in such cases the conditions of competition should not, as a result, be modified in favour of the domestic service providers.

Part IV of the agreement establishes the basis for progressive liberalisation in the services area through successive rounds of negotiations and the development of national schedules. It also permits, after a period of three years, Parties to withdraw or modify commitments made in their schedules. Where commitments are modified or withdrawn, negotiations should be undertaken with interested Parties to agree on compensatory adjustments. Where agreement cannot be reached, compensation would be decided by arbitration.

Part V of the agreement contains institutional provisions, including consultation and dispute settlement and the establishment of a Council on Services. The responsibilities of the Council are set out in a Ministerial Decision.

The first of the annexes to the agreement concerns the movement of labour. It permits Parties to negotiate specific commitments applying to the movement of people providing services under the agreement. It requires that people covered by a specific commitment shall be allowed to provide the service in accordance with the terms of the commitment. Nevertheless, the agreement would not apply to measures affecting employment, citizenship, residence or employment on a permanent basis. The annex on financial services (largely banking and insurance) lays down the right of Parties, notwithstanding other provisions, to take prudential measures, including for the protection of investors, deposit holders and policy holders, and to ensure the integrity and stability of the financial system. However, a further understanding on financial services would allow those participants who choose to do so to undertake commitments on financial services through a different method. With respect to market access, the understanding contains more detailed obligations on, among other things, monopoly rights, cross-border trade (certain insurance and reinsurance policy writing as well as financial data processing and transfer), the right to establish or expand a commercial presence, and the temporary entry of personnel. The provisions on national treatment refer explicitly to access to payments and clearing systems operated by public entities and to official funding and refinancing facilities. They also relate to membership of, or participation in, self-regulatory bodies, securities or futures exchanges and clearing agencies.
The annex on telecommunications relates to measures which affect access to and use of public telecommunications services and networks. In particular, it requires that such access be accorded to another Party, on reasonable and non-discriminatory terms, to permit the supply of a service included in its schedule. Conditions attached to the use of public networks should be no more than is necessary to safeguard the public service responsibilities of their operators, to protect the technical integrity of the network and to ensure that foreign service suppliers do not supply services unless permitted to do so through a specific commitment. The annex also encourages technical co-operation to assist developing countries in the strengthening of their own domestic telecommunications sectors. The annex on air-transport services excludes from the agreement’s coverage traffic rights (largely bilateral air-service agreements conferring landing rights) and directly related activities which might affect the negotiation of traffic rights. Nevertheless, the annex, in its current form, also states that the agreement should apply to aircraft repair and maintenance services, the marketing of air-transport services and computer-reservation services. The operation of the annex would be reviewed at least every five years.

In the final days of the services negotiations, three Decisions were taken — on Financial Services, Professional Services and the Movement of Natural Persons. The Decision on Financial Services confirmed that commitments in this sector would be implemented on an MFN basis, and permits Members to revise and finalise their schedules of commitments and their MFN exemptions six months after the entry into force of the Agreement. Contrary to some media reports, the audio-visual and maritime sectors have not been removed from the scope of the GATS.

♦ Agreement on Trade Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods

The agreement recognises that widely varying standards in the protection and enforcement of intellectual property rights and the lack of a multilateral framework of principles, rules and disciplines dealing with international trade in counterfeit goods have been a growing source of tension in international economic relations. Rules and disciplines were needed to cope with these tensions. To that end, the agreement addresses the applicability of basic GATT principles and those of relevant international intellectual property agreements; the provision of adequate intellectual property rights; the provision of effective enforcement measures for those rights; multilateral dispute settlement; and transitional arrangements.

Part I of the agreement sets out general provisions and basic principles, notably a national-treatment commitment under which the nationals of other Parties must be given treatment no less favourable than that accorded to a Party’s own nationals.
with regard to the protection of intellectual property. It also contains a most-favoured-nation clause, a novelty in an international intellectual property agreement, under which any advantage a Party gives to the nationals of another country must be extended immediately and unconditionally to the nationals of all other Parties, even if such treatment is more favourable than that which it gives to its own nationals.

Part II addresses each intellectual property right in succession. With respect to copyright, Parties are required to comply with the substantive provisions of the Berne Convention for the protection of literary and artistic works, in its latest version (Paris 1971), though they will not be obliged to protect moral rights as stipulated in Article 6bis of that Convention. It ensures that computer programmes will be protected as literary works under the Berne Convention and lays down on what basis data bases should be protected by copyright. Important additions to existing international rules in the area of copyright and related rights are the provisions on rental rights. The draft requires authors of computer programmes and producers of sound recordings to be given the right to authorise or prohibit the commercial rental of their works to the public. A similar exclusive right applies to films where commercial rental has led to widespread copying which is materially impairing the right of reproduction. The draft also requires performers to be given protection from unauthorised recording and broadcast of live performances (bootlegging). The protection for performers and producers of sound recordings would be for no less than 50 years. Broadcasting organisations would have control over the use that can be made of broadcast signals without their authorisation. This right would last for at least 20 years.

With respect to trademarks and service marks, the agreement defines what types of signs must be eligible for protection as a trademark or service mark and what the minimum rights conferred on their owners must be. Marks that have become well-known in a particular country shall enjoy additional protection. In addition, the agreement lays down a number of obligations with regard to the use of trademarks and service marks, their term of protection, and their licensing or assignment. For example, requirements that foreign marks be used in conjunction with local marks would, as a general rule, be prohibited.

In respect of geographical indications, the agreement lays down that all Parties must provide means to prevent the use of any indication which misleads the consumer as to the origin of goods, and any use which would constitute an act of unfair competition. A higher level of protection is provided for geographical indications for wines and spirits, which are protected even where there is no danger of the public's being misled as to the true origin. Exceptions are allowed for names
that have already become generic terms, but any country using such an exception must be willing to negotiate with a view to protecting the geographical indications in question. Furthermore, provision is made for further negotiations to establish a multilateral system of notification and registration of geographical indications for wines.

Industrial designs are also protected under the agreement for a period of 10 years. Owners of protected designs would be able to prevent the manufacture, sale or importation of articles bearing or embodying a design which is a copy of the protected design.

As regards patents, there is a general obligation to comply with the substantive provisions of the Paris Convention (1967). In addition, the agreement requires that 20-year patent protection be available for all inventions, whether of products or processes, in almost all fields of technology. Inventions may be excluded from patentability if their commercial exploitation is prohibited for reasons of public order or morality; otherwise, the permitted exclusions are for diagnostic, therapeutic and surgical methods, and for plants and (other than micro-organisms) animals and essentially biological processes for the production of plants or animals (other than microbiological processes). Plant varieties, however, must be protectable either by patents or by a *sui generis* system (such as the breeder’s rights provided in a UPOV Convention). Detailed conditions are laid down for compulsory licensing or governmental use of patents without the authorisation of the patent owner. Rights conferred in respect of patents for processes must extend to the products directly obtained by the process; under certain conditions alleged infringers may be ordered by a court to prove that they have not used the patented process.

With respect to the protection of layout designs of integrated circuits, the agreement requires parties to provide protection on the basis of the Washington Treaty on Intellectual Property in Respect of Integrated Circuits which was opened for signature in May 1989, but with a number of additions: protection must be available for a minimum period of 10 years; the rights must extend to articles incorporating infringing layout designs; innocent infringers must be allowed to use or sell stock in hand or ordered before learning of the infringement against a suitable royalty; and compulsory licensing and government use is only allowed under a number of strict conditions.

Trade secrets and know-how which have commercial value must be protected against breach of confidence and other acts contrary to honest commercial practices. Test data submitted to governments in order to obtain marketing approval for pharmaceutical or agricultural chemicals must also be protected against unfair commercial use.
The final section in this part of the agreement concerns anti-competitive practices in contractual licences. It provides for consultations between governments where there is reason to believe that licensing practices or conditions pertaining to intellectual property rights constitute an abuse of these rights and have an adverse effect on competition. Remedies against such abuses must be consistent with the other provisions of the agreement.

Part III of the agreement sets out the obligations of member governments to provide procedures and remedies under their domestic law to ensure that intellectual property rights can be effectively enforced, by foreign right holders as well as by their own nationals. Procedures should permit effective action against infringement of intellectual property rights but should be fair and equitable, not unnecessarily complicated or costly, and should not entail unreasonable time-limits or unwarranted delays. They should allow for judicial review of final administrative decisions. There is no obligation to put in place a judicial system distinct from that for the enforcement of laws in general, nor to give priority to the enforcement of intellectual property rights in the allocation of resources or staff.

The civil and administrative procedures and remedies spelled out in the text include provisions on evidence of proof, injunctions, damages and other remedies which would include the right of judicial authorities to order the disposal or destruction of infringing goods. Judicial authorities must also have the authority to order prompt and effective provisional measures, in particular where any delay is likely to cause irreparable harm to the right holder, or where evidence is likely to be destroyed. Further provisions relate to measures to be taken at the border for the suspension by customs authorities of release, into domestic circulation, of counterfeit and pirated goods. Finally, Parties should provide for criminal procedures and penalties at least in cases of willful trademark counterfeiting or copyright piracy on a commercial scale. Remedies should include imprisonment and fines sufficient to act as a deterrent.

The agreement would establish a Council for Trade-Related Aspects of Intellectual Property Rights to monitor the operation of the agreement and governments’ compliance with it. Dispute settlement would take place under the integrated GATT dispute-settlement procedures as revised in the Uruguay Round.

With respect to the implementation of the agreement, it envisages a one-year transition period for developed countries to bring their legislation and practices into conformity. Developing countries and countries in the process of transformation from a centrally-planned into a market economy would have a five-year transition period, and least-developed countries 11 years. Developing countries which do
not at present provide product patent protection in an area of technology would have up to 10 years to introduce such protection. However, in the case of pharmaceutical and agricultural chemical products, they must accept the filing of patent applications from the beginning of the transitional period. Though the patent need not be granted until the end of this period, the novelty of the invention is preserved as of the date of filing the application. If authorisation for the marketing of the relevant pharmaceutical or agricultural chemical is obtained during the transitional period, the developing country concerned must offer an exclusive marketing right for the product for five years, or until a product patent is granted, whichever is shorter.

Subject to certain exceptions, the general rule is that the obligations in the agreement would apply to existing intellectual property rights as well as to new ones.

Understanding on Rules and Procedures Governing the Settlement of Disputes

The dispute settlement system of the GATT is generally considered to be one of the cornerstones of the multilateral trade order. The system has already been strengthened and streamlined as a result of reforms agreed following the Mid-Term Review Ministerial Meeting held in Montreal in December 1988. Disputes currently being dealt with by the Council are subject to these new rules, which include greater automaticity in decisions on the establishment, terms of reference and composition of panels, such that these decisions are no longer dependent upon the consent of the Parties to a dispute. The Uruguay Round Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU) will further strengthen the existing system significantly, extending the greater automaticity agreed in the Mid-Term Review to the adoption of the panels’ and a new Appellate Body’s findings. Moreover, the DSU will establish an integrated system permitting WTO Members to base their claims on any of the multilateral trade agreements included in the Annexes to the Agreement establishing the WTO. For this purpose, a Dispute Settlement Body (DSB) will exercise the authority of the General Council and the Councils and committees of the covered agreements.

The DSU emphasizes the importance of consultations in securing dispute resolution, requiring a Member to enter into consultations within 30 days of a request for consultations from another Member. If after 60 days from the request for consultations there is no settlement, the complaining Party may request the establishment of a panel. Where consultations are denied, the complaining Party may move directly to request a panel. The Parties may voluntarily agree to follow alternative means of dispute settlement, including good offices, conciliation, mediation and arbitration.
Where a dispute is not settled through consultations, the DSU requires the establishment of a panel, at the latest, at the meeting of the DSB following that at which a request is made, unless the DSB decides by consensus against establishment. The DSU also sets out specific rules and deadlines for deciding the terms of reference and composition of panels. Standard terms of reference will apply unless the Parties agree to special terms within 20 days of the panel’s establishment. And where the Parties do not agree on the composition of the panel within the same 20 days, this can be decided by the Director-General. Panels normally consist of three persons of appropriate background and experience from countries not party to the dispute. The Secretariat will maintain a list of experts satisfying the criteria.

Panel procedures are set out in detail in the DSU. It is envisaged that a panel will normally complete its work within six months or, in cases of urgency, within three months. Panel reports may be considered by the DSB for adoption 20 days after they are issued to Members. Within 60 days of their issuance, they will be adopted, unless the DSB decides by consensus not to adopt the report or one of the Parties notifies the DSB of its intention to appeal.

The concept of appellate review is an important new feature of the DSU. An Appellate Body will be established, composed of seven members, three of whom will serve on any one case. An appeal will be limited to issues of law covered in the panel report and legal interpretations developed by the panel. Appellate proceedings shall not exceed 60 days from the date a Party formally notifies its decision to appeal. The resulting report shall be adopted by the DSB and unconditionally accepted by the Parties within 30 days following its issuance to Members, unless the DSB decides by consensus against its adoption.

Once the panel report or the Appellate Body report is adopted, the Party concerned will have to notify its intentions with respect to implementation of adopted recommendations. If it is impracticable to comply immediately, the Party concerned shall be given a reasonable period of time, the latter to be decided either by agreement of the Parties and approval by the DSB within 45 days of adoption of the report or through arbitration within 90 days of adoption. In any event, the DSB will keep the implementation under regular surveillance until the issue is resolved.

Further provisions set out rules for compensation or the suspension of concessions in the event of non-implementation. Within a specified time-frame, Parties can enter into negotiations to agree on mutually acceptable compensation. Where this has not been agreed, a Party to the dispute may request authorisation of the DSB to suspend concessions or other obligations to the other Party concerned. The DSB will grant such authorisation within 30 days of the expiry of the agreed time-frame.
for implementation. Disagreements over the proposed level of suspension may be referred to arbitration. In principle, concessions should be suspended in the same sector as that in issue in the panel case. If this is not practicable or effective, the suspension can be made in a different sector of the same agreement. In turn, if this is not effective or practicable and if the circumstances are serious enough, the suspension of concessions may be made under another agreement.

One of the central provisions of the DSU reaffirms that Members shall not themselves make determinations of violations or suspend concessions, but shall make use of the dispute settlement rules and procedures of the DSU.

The DSU contains a number of provisions taking into account the specific interests of the developing and the least-developed countries. It also provides some special rules for the resolution of disputes which do not involve a violation of obligations under a covered agreement but where a Member believes nevertheless that benefits are being nullified or impaired. Special decisions to be adopted by Ministers in 1994 foresee that the Montreal Dispute Settlement Rules which would otherwise have expired at the time of the April 1994 meeting are extended until the entry into force of the WTO. Another decision foresees that the new rules and procedures will be reviewed within four years after the entry into force of the WTO.

♦ **Trade Policy Review Mechanism**

An agreement confirms the Trade Policy Review Mechanism, introduced at the time of the Mid-term Review, and encourages greater transparency in national trade policy-making. A further Ministerial decision reforms the notification requirements and procedures generally.

♦ **Decision on achieving greater Coherence in Global Economic Policy-making**

This will set out concepts and proposals with respect to achieving greater coherence in global economic policy-making. Among other things, the text notes that greater exchange rate stability based on more orderly underlying economic and financial conditions should contribute to “the expansion of trade, sustainable growth and development, and the timely correction of external imbalances”. It recognises that while difficulties whose origins lie outside the trade field cannot be redressed through measures taken in the trade field alone, there are nevertheless interlinkages between the different aspects of economic policy. Therefore, WTO is called upon to develop its co-operation with the international organisations responsible for monetary and financial matters. In particular, the Director-General of WTO is called upon to review, with his opposite numbers in the World Bank and the International Monetary Fund, the implications of WTO’s future responsibilities for its co-operation with the Bretton Woods institutions.
Government Procurement

The Final Act contains an agreement related to accession procedures to the Government Procurement Agreement which is designed to facilitate the membership of developing countries. It envisages consultations between the existing members and applicant governments. These would be followed by the establishment of accession working parties to examine the offers made by applicant countries (in other words, the public entities whose procurement will be opened up to international competition) as well as the export opportunities for the applicant country in the markets of existing signatories.

This agreement should be distinguished from the new Agreement on Government Procurement.

### 3.4 World Trade Organisation

During the ambitious Uruguay Round, GATT was updated to include new obligations upon its signatories. One of the most significant changes was the creation of the WTO. Out of the total members of GATT, 75 existing members and the members of the EEC became the founding members of the WTO. The WTO became functional on January 1, 1995. The other 52 GATT members rejoined the WTO in the following two years. Since the founding of the WTO, 21 new non-GATT members have joined and 29 are currently negotiating membership.

WTO is an international organisation established with the objective of improving the welfare of the peoples of the member countries. The Secretariat is located in Geneva, Switzerland, headed by a Director-General. Currently the Director-General of WTO is Mr. Pascal Lamy. As on October 2007, there were a total of 151 member countries in the WTO.

The functions of WTO are:

- Administering WTO trade agreements
- Forum for trade negotiations
- Handling trade disputes
- Monitoring national trade policies
- Technical assistance and training for developing countries
- Co-operation with other international organisations

Until the establishment of the WTO, GATT functioned *de facto* as an organisation, conducting rounds of talks addressing various trade issues and resolving
international trade disputes. While GATT was a set of rules agreed upon by nations, the WTO is an institutional body. The WTO expanded its scope from traded goods to trade within the service sector and IPRs. WTO agreements are generally multilateral in nature. However, during several rounds of GATT negotiations, particularly the Tokyo Round, plurilateral agreements created selective trading and caused fragmentation among members. Hence, plurilateral agreements also exist and are recognised in the WTO system of agreements.

Though GATT has been replaced by WTO, the General Agreement still exists as WTO’s umbrella treaty as trade in goods. At the same time, WTO has a much broader scope than GATT. As mentioned earlier, whereas GATT regulated trade in merchandise goods, the WTO also covers trade in services, such as telecommunications and banking, and other issues such as intellectual property rights.

The WTO is the only international agency overseeing the rules of international trade. It polices free trade agreements, settles trade disputes between governments and organises trade negotiations. Its decisions are absolute and every member must abide by its rulings. So, when any two members are in dispute over any trade related aspect it is the WTO which acts as judge. WTO members are empowered by the organisation to enforce its decisions by imposing trade sanctions against countries that have breached the rules.

**WTO’s Institutional Structure** - The highest body of the WTO is the Ministerial Conference. This meets every two years and, among other things, elects the organisation’s Director-General as well as oversees the work of the General Council. It is also for providing the platform for ‘Trade Rounds’ and for negotiating global trade deals aimed at reducing barriers to free trade.

- Ministerial conferences

1) **First ministerial conference** - Held in Singapore in 1996 between 9 to 13 December. Disagreements between largely developed and developing economies emerged during this conference over four issues initiated by this conference, which led to them being collectively referred to as the Singapore Issues.

---

1. The “Singapore issues” refers to four working groups set up during the First Ministerial Conference wherein, there groups are tasked with these issues: transparency in government procurement, trade facilitation (customs issues), trade and investment, and trade and competition. These issues were pushed at successive Ministerials by the European Union, Japan and Korea, and opposed by many developing countries. The United States was lukewarm about the inclusion of these issues, indicating that it could accept some or all of them at various times, but preferring to focus on market access.
2) **Second ministerial conference** - Held in Geneva, Switzerland in 1998 between 18 to 20 May.


5) **Fifth ministerial conference** - Held in Cancun, Mexico in 2003 between 10 to 14 September. It aimed at forging agreement on the Doha round. An alliance of 22 southern nations led by India, China and Brazil. Known as G20 resisted demands from the north for agreements on the Singapore Issues and called for an end to agricultural subsidies within the European Union and the U.S. The talks broke down without progress.

6) **Sixth ministerial conference** - Held in Hong Kong from December 13 to 18, 2005. It was considered vital if the four-year-old DDA negotiations were to move forward sufficiently to conclude the round in 2006. In this meeting, countries agreed to phase out all their agricultural export subsidies by the end of 2013, and terminate any cotton export subsidies by the end of 2006. Further concessions to developing countries included an agreement to introduce duty free, tariff free access for goods from the Least Developed Countries, following the Everything But Arms initiative of the European Union, but with up to 3% of tariff lines exempted. Other major issues were left for further negotiation to be completed by the end of 2006.

7) **Seventh ministerial conference** - Held in Geneva from November 30 to December 02, 2009. The general theme for discussion was “The WTO, the Multilateral Trading System and the Current Global Economic Environment”.

8) **Eighth ministerial conference** - The Eighth Ministerial Conference was held in Geneva, Switzerland, from 15 to 17 December 2011. In parallel to the Plenary Session, where Ministers made prepared statements, three Working Sessions took place with the following themes: “Importance of the Multilateral Trading System and the WTO”, “Trade and Development” and “Doha Development Round was a huge failure due to disagreements between developed and developing countries. Intended as the launch of a new round of trade negotiations that would have been called “The Millennial Round”, the negotiations were marred by poor organisation and controversial management of large street protests. Developing countries felt that they have been excluded from talks as the United States and the European Union attempted to cement their own mutual deal on agriculture. The negotiations collapsed and were reconvened at Doha in November 2001.
Agenda”. The Conference approved the accessions of Russia, Samoa and Montenegro. In the final session, Ministers adopted a number of decisions and the Chair made a concluding statement.

9) Ninth ministerial conference - To be held in Bali, Indonesia from December 03 to 06, 2013.

The daily work of the ministerial conference is handled by the General Council. The General Council which assumes the second level in WTO’s formal structure is made up of ambassadors from member States who also serve on various subsidiary and specialist committees. Among these are the Dispute Settlement Panels which rule on individual country-against-country trade disputes and the Trade Policy Review Body that undertakes trade policy reviews of Members.

Apart from the General Council, there are three Councils for Trade that work under the General Council. These three Councils are -

i) The Council for Trade in Goods


iii) The Council for Trade in Services

Each council works in different fields. Apart from these three councils, six other bodies report to the General Council reporting on issues such as trade and development, the environment, regional trading arrangements and administrative issues. There are also a number of subsidiary bodies functioning under each of the three Councils.

Certain other committees are also present in the institutional structure of WTO, like the Committee on Trade and Environment (CTE), Committee on Trade and Development, Committee for developing countries, Committee on Regional Trade Agreements, etc.

The Doha Round and Beyond - The Doha Round was launched by the WTO at the Fourth Ministerial Conference in Doha, Qatar in November 2001. The Doha round was to be an ambitious effort to make globalisation more inclusive and help the world’s poor, particularly by slashing barriers and subsidies in farming. The initial agenda comprised both further trade liberalisation and new rule-making, underpinned by commitments to strengthen substantial assistance to developing countries.

The Doha Round began with a ministerial-level meeting in Doha, Qatar in 2001. Subsequent ministerial meetings took place in Cancun, Mexico (2003), and Hong

The most recent round of negotiations on July 23-29 2008, broke down after failing to reach a compromise on agricultural import rules. Major negotiations are not expected to resume until 2009.

After the failure of the Washington Conference, trade ministers agreed to undertake a new round of multilateral trade negotiations at Doha. However, the Doha Round too, collapsed in 2006 as any productive agreements were not finalised. The Fifth Ministerial Conference in Cancun in 2003 and the Sixth Ministerial Conference in Hong Kong from December 13 to 18, 2005 were also a part of the Doha Round itself. On July 24, 2006, the WTO's Director General formally suspended the negotiations.

Even so, the Doha Round of negotiations provided a mandate on a range of subjects and work areas. In Doha, Ministers also approved a linked decision on implementation. They addressed the problems that developing countries face in implementing the current WTO agreements. The original mandate was later on refined at the work at the Fifth and Sixth Ministerial Conferences.

The ministers passed various declarations in this round which is commonly known as the Doha Development Round.

1) Doha Development Agenda (DDA) - In the Doha Round, first main declaration passed was known as the Doha Development Agenda (DDA). The text of the document was adopted on November 14, 2001.

DDA folded the on-going negotiations in agriculture and services into a broader agenda. In addition, the Doha agenda included the topic of industrial tariffs, topics of interest to developing countries, changes to WTO rules, and other provisions.

The negotiations on trade and the environment are part of the DDA. They were included with the objective is to enhance the mutual support of trade and environmental policies.

The negotiations focus on three main themes:

♦ the relationship between the WTO and MEAs
♦ the collaboration between WTO and MEA secretariats
♦ the elimination of tariffs and non-tariff barriers on environmental goods and services
II) Doha Declaration - The second Document adopted in the Doha Round was the Doha Declaration. There are 21 subjects listed in the Doha Declaration. Most of these involve negotiations; other work includes actions under “implementation”, analysis and monitoring. The subjects are as follows:

1) Implementation related issues
2) Agriculture
3) Services
4) Market access for non-agricultural products
5) Trade-related aspects of intellectual property rights (TRIPS)
6) Relationship between trade and investment
7) Interaction between trade and competition policy
8) Transparency in government procurement
9) Trade facilitation
10) Anti-dumping and subsidies
11) Regional trade agreements
12) Dispute settlement understanding
13) Trade and environment
14) Electronic commerce
15) Small economies
16) Trade, debt and finance
17) Trade and technology transfer
18) Technical co-operation and capacity building
19) Least-developed countries
20) Special and differential treatment
21) Organisation and management of the work programme

The subject of agriculture was most significant in the Doha talks. The Doha Ministerial Declaration mandate for agriculture called for comprehensive negotiations aimed at substantial improvements in market access; reductions of, with a view to phasing out, all forms of export subsidies; and substantial reductions in trade-distorting domestic support. These topics — domestic support, export
subsidies, and market access — have become the three pillars of the agricultural negotiations.

The Declaration also provided that special and differential treatment for developing countries would be an integral part of all elements of the negotiations. The Declaration took note of non-trade concerns reflected in negotiating proposals of various member countries and confirmed that they would be taken into account in the negotiations. March 31, 2003 was set as the deadline for reaching agreement on “modalities” (targets, formulas, timetables, etc.) for achieving the mandated objectives, but that deadline was missed. During the rest of 2003, negotiations on modalities continued in preparation for the fifth WTO Ministerial Conference held in Cancun, Mexico September 10-14, 2003.

The Doha declaration pledged to enable developing countries to ‘secure a share in the growth of world trade commensurate with the needs of their economic development’ through two key routes:

♦ Improving market access to Northern markets for developing countries by reducing import tariffs that prevent increase prices and distort competitiveness.

♦ Phasing out domestic and export subsidies, that enable the over-production of goods at very low prices, often leading to the dumping of these goods at prices that are cheaper than those of locally produced goods.

III) Doha Implementation Decision - No area of WTO work received more attention or generated more controversy in the two years before the Fourth Ministerial Conference in Doha, Qatar, than the issue of “implementation”, specially the developing countries’ problems in implementing the WTO Agreements.

Hence in the Doha Round, an additional document called Doha Implementation Decision was also adopted. The decision, combined with paragraph 12 of Doha Declaration, provided a two-track solution to the problem of implementation in the following manner:

♦ More than 40 items under 12 headings were settled at or before the Doha conference, for immediate delivery.

♦ The vast majority of the remaining items are immediately the subject of negotiations.

IV) The Declaration on TRIPS Agreement and Public Health - Another document that was adopted was the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement and Public Health. It sought to alleviate
developing country dissatisfaction with aspects of the TRIPS regime. It delayed
the implementation of patent system provisions for pharmaceutical products for
least developed countries until 2016. The declaration committed member states to
interpret and implement the agreement to support public health and to promote
access to medicines for all. The Declaration recognised certain “flexibilities” in the
TRIPS agreement to allow each member to grant compulsory licenses for
pharmaceuticals and to determine what constitutes a national emergency, expressly
including public health emergencies such as HIV/AIDS, malaria and tuberculosis
or other epidemics.

V) Other Ministerial Documents - Other Ministerial Declarations and Decisions
adopted, apart from the ones mentioned above were the Subsidies - Procedure for
extensions under Article 27.4 (of Subsidies and countervailing measures agreement)
for certain developing country members, Decision on waiver of EU-ACP Partnership
Agreement as well as the Decision on EU transitional regime for banana imports.

Collapse of the Doha talks

The Doha failure was not just a sudden one. The history of the Doha round has
been filled with double-talk, with rich countries often demanding poor countries
concede ground in unfair ways, with poor countries occasionally taking a strong
stance against these demands, and the EU and US in particular driving for more
open markets in poorer countries, sometimes even blaming the poorer countries
for failed talks, or calling deals criticised as bad for the poor, as good for the poor\(^3\).

The Doha “Development” Round, as it has been known, was nicknamed that way
to show that this round of trade negotiations were to favour developing countries’
ability to develop and prosper from global trade, while acknowledging the unequal
nature of global trade, dominated by industrialised countries, at the direct expense
of the developing world.

All Doha Round talks are overseen by the Trade Negotiations Committee (TNC),
whose chair is WTO’s Director General, which is currently Pascal Lamy. The
negotiations are being held in five working groups and in other, existing bodies in
the WTO. Selected topics under negotiation are clubed in five groups: market access,
development issues, WTO rules, trade facilitation and other issues.

The Doha round was set to be concluded in four years in December 2005 after two
more ministerial conferences had produced a final draft declaration.

\(^3\) Shah, Anup (2006), *WTO Doha Development Trade Round Collapse*, Global Issues; Social, Political,
Economic and Environmental Issues That Affect Us All.
Introduction to Trade and Environment

♦ Cancún, 2003
The 5th WTO Ministerial Conference in Cancun, Mexico was held in mid-September, 2003. The talks intended to forge concrete agreement on the Doha round objectives, collapsed after four days during which the members could not agree on a framework to continue negotiations. Low key talks continued since the ministerial meeting in Doha but progress was almost non-existent.

Issues similar to those raised in Doha were raised again, with the accompanying controversies. The talks again collapsed because developed countries did not wish to finish discussion on issues raised in previous meetings. Instead, they wanted to talk about new issues. Whereas, the developing nations wanted to continue the talks on the long lingering issues. They wanted to finish discussion on the previous issues because it impacts them the most. While the talks failed, it was the first time the developing world took a united stance against the developed countries.

♦ Geneva, 2004
The aftermath of Cancun was one of standstill and stocktaking. Negotiations were suspended for the remainder of 2003. In the months leading up to the talks in Geneva, the EU accepted the elimination of agricultural export subsidies “by date certain”. The Singapore issues were moved off the Doha agenda. Compromise was also achieved over the negotiation of the Singapore issues as the EU and others decided. Developing countries too played an active part in negotiations this year, first by India and Brazil negotiating directly with the developed countries on agriculture, and second by working toward acceptance of trade facilitation as a subject for negotiation.

After intense negotiations in late July 2004, WTO members reached what has become known as the Framework Agreement, which provides broad guidelines for completing the Doha round negotiations. The agreement contains a 4-page declaration, with four Annexes (A-D) covering agriculture, non-agricultural market access, services, and trade facilitation, respectively. In addition, the agreement acknowledges the activities of other negotiating groups (such as those on rules, dispute settlement and intellectual property) and exhorts them to fulfill their Doha round negotiating objectives. The agreement also abandoned the January 1, 2005 deadline for the negotiations and set December 2005 as the date for the 6th Ministerial to be held in Hong Kong.

♦ Paris, 2005
Paris talks were hanging over a few issues: France protested moves to cut subsidies to farmers, while the U.S., Australia, the EU, Brazil and India could not mutually
agree on issues relating to chicken, beef and rice. Most of the sticking points were small technical issues, making trade negotiators fear that agreement on large politically risky issues will be substantially harder.

♦ **Hong Kong, 2005**

The Hong Kong Convention Center was the site of the sixth WTO Ministerial Conference that took place from December 13 to 18, 2005. This meeting, one of the most important in the world, was to discuss a number of trade-related issues, key for developing and developed nations, alike. This meeting continued from the earlier “Doha round” where it was recognised that the global trading system was unequal and unfair for most of the world and so the meetings should place development at the fore. Thus this meeting is being billed as a “Development Round”. However, the concerns as per previous years continued to include the lack of transparency and democracy in the decision-making processes, and the alleged power that the developed nations have over the developing and least developed distorting trade in their favour. The previous Ministerial meeting collapsed as the developing world took a strong stance and stood up to the rich nations. Yet, once again, the same kinds of issues resurfaced in this fresh round of talks.

♦ **Geneva, 2006**

The July 2006 talks in Geneva failed to reach an agreement about reducing farming subsidies and lowering import taxes, and continuation of the negotiations will take months to resume.

♦ **Potsdam, 2007**

In June 2007, negotiations within the Doha round broke down at a conference in Potsdam, as a major impasse occurred between the US, the EU, India and Brazil. The main disagreement was over opening up agricultural and industrial markets in various countries and also how to cut rich nation farm subsidies.

♦ **Geneva, 2008**

On July 21, 2008, negotiations started again at the WTO’s HQ in Geneva on the Doha round but stalled after nine days of negotiations over the refusal to compromise over the special safeguard mechanism. Negotiations had continued since the last conference in June 2007. Around 40 ministers attended the negotiations, which were only expected to last five days but instead lasted nine days. India’s Commerce Minister, Mr. Kamal Nath, was absent from the first few days of the conference due to a vote of confidence being conducted in India’s
Parliament. On the second day of the conference, US Trade Representative Susan Schwab announced that the U.S. would cap its farm subsidies at $15 billion a year, from $18.2 billion in 2006. However, the proposal was on the condition that countries such as India and Brazil drop their objections to various aspects of the round.

However, the negotiations collapsed on July 29, 2008, over issues of agricultural trade between the United States, India and China. Talks fell apart after an agricultural safeguard measure for developing countries to raise tariffs in cases of import surges. There were disagreements on issues including special protection for Chinese and Indian farmers and African and Caribbean banana imports to the EU. Mr. Kamal Nath, India’s Commerce Minister said “I’m not risking the livelihood of millions of farmers. The most important thing was the livelihood security, the vulnerability of poor farmers, which could not be traded off against the commercial interests of the developed countries.” India’s position has been supported by over 100 different developing countries representing a billion subsistence farmers.

In particular, there was insoluble disagreement between India and the United States over special safeguard mechanism (SSM), a measure designed to protect poor farmers by allowing countries to impose a special tariff on certain agricultural goods in the event of an import surge or price fall. However, the United States, China and India could not agree on the threshold that would allow the mechanism to be used, with the United States arguing that the threshold had been set too low. India has insisted that developing countries must be able to protect their agricultural sector against sudden surges of subsidised imports from the US and EU. Nevertheless, India’s Commerce Minister, Kamal Nath, on this issue, said “I would only urge the Director-General [of the WTO] to treat this [failure of talks] as a pause, not a breakdown, to keep on the table what is there”.

**Basic Issues related to the Doha talks**

Agriculture has become the linchpin of the agenda for both developing and developed countries. Three other issues have been important. The first pertains to compulsory licensing of medicines and patent protection. A second deals with a review of provisions giving special and differential treatment to developing countries; a third addresses problems that developing countries are having in implementing current trade obligations.

♦ **Agriculture**

Agriculture has become the most important and controversial issue. The first proposal in Qatar, in 2001, called for the end agreement to commit to substantial improvements in market access; reductions (and ultimate elimination) of all forms of export subsidies; and substantial reductions in trade-distorting support.
The United States is being asked by the European Union (EU) and the developing countries, led by Brazil and India, to make a more generous offer for reducing trade-distorting domestic support for agriculture. The United States is insisting that the EU and the developing countries agree to make more substantial reductions in tariffs and to limit the number of import-sensitive and special products that would be exempt from cuts. Import-sensitive products are of most concern to developed countries like the European Union, while developing countries are concerned with special products — those exempt from both tariff cuts and subsidy reductions because of development, food security, or livelihood considerations. Brazil has emphasized reductions in trade-distorting domestic subsidies, especially by the United States, while India has insisted on a large number of special products that would not be exposed to wider market opening. In the latest round of talks held in Geneva, the issue basically revolved around the SSM (special safeguard mechanism) for developing countries to raise tariffs in cases of import surges.

♦ **Intellectual Property related issues**

The IP issues under consideration are:

1) Establishment of an international register of wines and spirits GI (geographical indications), product names associated with places and characteristics (“GI Register”)

2) Possibility of extending higher level GI protection (TRIPS Article 23) to products other than wines and spirits (“GI extension”)

3) Proposed amendment to the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) that would bring it in line with obligations under the UN Convention on Biological Diversity (CBD), adding a requirement for disclosure of origin in patent applications and possibly ensuring benefit-sharing with communities to deter biopiracy (“CBD amendment”). The issue also involves the balance of interests between the pharmaceutical companies in developed countries that held patents on medicines and the public health needs in developing countries.

♦ **Special and differential treatment**

In the Doha Ministerial Declaration, the trade ministers reaffirmed special and differential (S&D) treatment for developing countries and agreed that all S&D treatment provisions “...be reviewed with a view to strengthening them and making them more precise, effective and operational”.

The negotiations have been split along a developing-country/developed-country divide. Developing countries wanted to negotiate on changes to S&D provisions,
keep proposals together in the Committee on Trade and Development, and set shorter deadlines. Developed countries wanted to study S&I provisions, send some proposals to negotiating groups, and leave deadlines open. Developing countries claimed that the developed countries were not negotiating in good faith, while developed countries argued that the developing countries were unreasonable in their proposals.

Implementation issues
Before the Doha Ministerial, WTO Members resolved a small number of implementation issues. At the Doha meeting, the Ministerial Declaration directed a two-path approach for the large number of remaining issues:

a) where a specific negotiating mandate is provided, the relevant implementation issues will be addressed under that mandate; and

b) the other outstanding implementation issues will be addressed as a matter of priority by the relevant WTO bodies. Outstanding implementation issues are found in the area of market access, investment measures, safeguards, rules of origin, and subsidies and countervailing measures, among others.

3.5 WTO and Environment
Though the GATT did not expressly provide for environment related issues pertaining to trade in detail, but environment issues were addressed to in Article XX (b) and (g) as part of general exceptions. The issue of trade and environment was not in the agenda of the Uruguay Round of Multilateral Trade Negotiations. However, the Preamble of the Agreement establishing the WTO mentions the goal of “optimal use of the world’s resources in accordance with the objective of sustainable development”. The WTO has no specific agreement dealing with the environment. Nevertheless a number of WTO agreements include provisions dealing with environmental concerns. The Agreement on Technical Barriers to Trade (TBT Agreement) and the Agreement on Sanitary and Phyto-sanitary Measures (SPS Agreement) address environment related issues.

After the conclusion of the Uruguay Round in 1994, a Committee on Trade and Environment (CTE) was established in the WTO. The broad mandate of the CTE was to promote an understanding of the relationship between trade measures and environmental measures for achieving sustainable development and to make recommendations on the need for modifications of the provisions of the multilateral trading system to ensure compatibility with an open, equitable and non-discriminatory trading system.
In keeping with the above mandate, the CTE developed a Comprehensive Work Programme, which covers the items as below:

♦ **Item 1:** The relationship between the provisions of the multilateral trading system and trade measures for environmental purposes, including those pursuant to Multilateral Environmental Agreements (MEAs).

♦ **Item 2:** The relationship between environmental policies relevant to trade and environmental measures with significant trade effects and the provisions of the multilateral trading system.

♦ **Item 3:** The relationship between the provisions of the multilateral trading system and charges and taxes for environmental purposes and the relationship between the provisions of the multilateral trading system and requirements for environmental purposes relating to products, including standards and technical regulations, packaging, labelling and recycling.

♦ **Item 4:** The provisions of the multilateral trading system with respect to the transparency of trade measures used for environmental purposes and environmental measures and requirements which have significant trade effects.

♦ **Item 5:** The relationship between the dispute settlement mechanisms in the multilateral trading system and those found in Multilateral Environment Agreements.

♦ **Item 6:** The effect of environmental measures on market access, especially in relation to developing countries, in particular to the least-developed among them, and environmental benefits of removing trade restrictions and distortions.

♦ **Item 7:** Issue of export of domestically prohibited goods (DPGs).

♦ **Item 8:** The relevant provisions of the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS).

♦ **Item 9:** The work programme envisaged in the decision on Trade in Services and the Environment.

♦ **Item 10:** Inputs to the relevant bodies in respect of appropriate arrangements for relations with intergovernmental and non-governmental organisations referred to in Article V of the WTO Agreement.

**A) The Agreement on Technical Barriers to Trade (TBT Agreement)**

The Agreement on Technical Barriers on Trade also known as the TBT Agreement is an international treaty of the WTO. The object of the TBT Agreement is “to ensure
that technical negotiations and standards, as well as testing and certification procedures, do not create unnecessary obstacles to trade”.

Though the concept of a TBT Agreement was conceived during the course of Tokyo Round, it was formally negotiated during the Uruguay Round of the GATT and entered into force with the establishment of the WTO at the beginning of 1995.

Till the adoption of the SPS Agreement, the TBT Agreement was the only agreement dealing with product standards. Therefore the agreement clarifies that it deals with all the products including the agricultural products, but the provisions do not apply to sanitary and phytosanitary measures as defined in the SPS Agreement (Article 1.5).

B) The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)

The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) is an international treaty of WTO. It was also negotiated during the Uruguay Round and entered into force with the establishment of the WTO at the beginning of 1995.

Under the SPS agreement, the WTO sets constraints on member-states’ policies relating to food safety (bacterial contaminants, pesticides, inspection and labelling) as well as animal and plant health (phytosanitary) about imported pests and diseases.

The two main objectives of the SPS Agreement are:

1) To protect and improve human health, animal health and the phytosanitary situation of all member countries

2) To protect members from arbitrary or unjustifiable discrimination due to different sanitary and phytosanitary standards

C) Committee on Trade and Environment (CTE)

The WTO forerunner, the GATT had constituted as far back as in 1971 a group on ‘Environmental measures and international trade’. The preamble to the WTO Agreement also has a direct reference to the goal of sustainable development explicitly stating the need to protect and preserve the environment.

During the Fifth Ministerial Conference of the World Trade Organisation at Cancun, Mexico, the issues discussed by the 148 countries included trade and environment. This was due to the resurgence of interest in environmental standards and trade.
The WTO formalised the issues by setting up a Committee on Trade and Environmental (CTE). The CTE established a relationship between environmental standards and sanitary and phytosanitary measures by the adoption of the Agreement on the application of sanitary and phytosanitary measures (SPS Agreement) and agreed, in principle, to negotiations without violating relationships among WTO rules, specific trade obligations of multilateral environmental agreements and rights of any WTO member that is not a party to the Measures of Environmental Agreement (MEA).

Work on trade and environment at the WTO takes place in the CTE which is responsible for covering the intersection of the environment services, goods and intellectual property. Paragraph 31 of the Doha Ministerial Declaration instructed the CTE to focus particular attention on market access for developing nations, intellectual property and labelling. The WTO allows exceptions from its rules for environmental concerns provided that these policies are implemented without discrimination and must not be a disguised restriction on international trade.

WTO decisions on trade and the environment have the potential to come into conflict with non-WTO international environmental agreements or multilateral environmental agreements (MEAs), even though so far no action affecting trade and taken under an international environmental agreement has been challenged in the GATT-WTO system. The CTE believes that work through these MEAs can be a more effective way of dealing with environmental issues than the WTO dispute settlement mechanism. However, disagreements may arise between WTO members who are not all party to the same MEA.

During the negotiations on trade the consensus was that environmental standards should not obstruct flow of regular exchange of information between the MEA and WTO committees, and negotiations should lead to reduction or elimination of tariff and non-tariff barriers to environmental goods and services.

The Marrakesh agreement establishing the WTO and its decisions on trade and environment mandated a work programme covering items of interest to developing and developed countries such as:

1) The relationship between the provision of the multilateral trading system and trade measures for environmental purposes, including those pursuant to MEAs;

2) Eco-labelling, particularly the issue of whether national laws could fairly require the labelling of en-embodied process and production methods, that is, aspects of goods or services not identifiable in the final product;
3) The effects of environmental measures on market access, particularly for developing countries as a whole and Least Developed Countries especially; and

4) Environmental benefits of removing trade restrictions and distortions. In more liberalised economies with high environmental standards, industries think that governments of poor countries lower their standards to keep the cost of production low and attract foreign investment and jobs from rich countries.

♦ CTE and the Regulation of Environment

The first step for regulation of environment is the classification and identification of environmental issues. Submitting a memorandum to the WTO, the Negotiating Group on Market Access and the Committee on Trade and Environment suggested that the WTO prepare a list of environmental goods subject to negotiations. The WTO has explicitly taken an integrated view that an open, equitable and non-discriminatory multilateral trading system can help achieve ecologically sustainable development and advance members’ national and international efforts to better protect and conserve environmental resources. Developing countries, particularly agriculture exporters, have drawn attention to the environmental benefits of trade liberalisation and tighter WTO disciplines.

They argue that further liberalisation of farm trade will reduce the environmental impact of agriculture by increasing resource allocation efficiency. For instance, the removal of agricultural input subsidies should lead to a substantial reduction in the use of marginal agricultural land, which is only productive with high fertilizer, water and other inputs.

Trade is a powerful engine of economic growth and that economic growth is vital to creating conditions that favour advancing environmental protection, improving social conditions or sustaining ethical values. By opening markets, particularly to exports from developing countries and by keeping markets open through clear and enforceable rules, the global trading system is a natural ally of sustainable development.

Carbon Trading

The carbon dioxide in the atmosphere is one of a number of gases that help to keep the earth warm. Without those temperatures could be up to 30 degrees lower and the earth would not support life. In the last 40 years in particular one has witnessed a radical increase in the carbon emissions and this has increased the warming effect on the planet, through the trapping of solar heat in the earth’s atmosphere.
Burning of fossil fuels is a major source of industrial greenhouse gas emissions, especially for power, cement, steel, textile, fertilizer and many other industries which rely on fossil fuels (coal, electricity derived from coal, natural gas and oil). The major greenhouse gases emitted by these industries are Carbon dioxide, methane, nitrous oxide, Hydroflurocarbons (HFCs), etc. It is a scientific fact that there exists a relationship between emissions and climate change. However, principal area of disagreement between scientists is on the pace that this change in climate will accelerate. Some climatologists predict an increase in several degrees of the average global temperature which will have an enormous affect upon fragile ecosystems and potentially on low lying areas such as the Maldives, where any ocean level rise associated with the melting of polar ice caps could be catastrophic. Others suggest that the process will be more gradual and that our ability to control emissions will head off a catastrophe.

Carbon Trading is a market based mechanism for helping mitigate the increase of CO$_2$ in the atmosphere. Carbon trading markets are developed that bring buyers and sellers of carbon credits together with standardised rules of trade.

Carbon credits are a key component of national and international emissions trading schemes that have been implemented to mitigate global warming. They provide a way to reduce greenhouse effect emissions on an industrial scale by capping total annual emissions and letting the market assign a monetary value to any shortfall through trading. Credits can be exchanged between businesses or bought and sold in international markets at the prevailing market price. Credits can be used to finance carbon reduction schemes between trading partners and around the world.

Any entity, typically a business, that emits CO$_2$ to the atmosphere may have an interest or may be required by law to balance their emissions through mechanism of Carbon sequestration. These businesses may include power generating facilities or many kinds of manufacturers.

There are also many companies that sell carbon credits to commercial and individual customers who are interested in lowering their carbon footprint on a voluntary basis. These purchasers buy the credits from an investment fund or a carbon development company that has aggregated the credits from individual projects. The quality of the credits is based in part on the validation process and sophistication of the fund or development company that acted as the sponsor to the carbon project.
The ethics of carbon trading

There is a belief that carbon trading offers a golden opportunity for developing countries like India to get foreign funds. However, is it ethical for richer countries to continue to contribute more than their share of global carbon emissions by buying ‘cheaper’ emission reduction opportunities in poorer countries?

The problem of climate change caused by the increasing concentration of greenhouse gases in the atmosphere needs concerted action by all countries of the world. The impact of one ton of carbon dioxide emissions is the same irrespective of whether the emission occurs in New York, Beijing, Mumbai or Latur. This implies that in order to reduce the total annual global carbon dioxide emissions to a fixed target, it is necessary to decide a basis for national or regional emissions.

The global community led by the Intergovernmental Panel on Climate Change agreed upon the Kyoto Protocol in 1997 (ratified in 2005) where Annex-I countries (38 industrialised/developed countries) agreed to reduce their GHG (Greenhouse Gases) emissions by 2008-2012 to an average of about 5% below their 1990 levels.

The Kyoto targets range from +10% (Iceland) to –8% (EU). The developing countries were exempt from targets at Kyoto. This indicates differentiated responsibility. However, the basis for targets seems to be emissions in a predefined base year. This implies that countries that have higher emissions due to higher per capita energy use would be entitled to higher targets.

A logical basis for deciding emission quotas could be on a per capita basis. However, this basis is not agreed upon by the global community. Even the country averages hide significant intra-country variations.

A recent study by Greenpeace India computed the carbon dioxide emissions of different income classes in India and showed that the high income households (>Rs. 360,000/ year income) have average emissions around the world average while low income households (< Rs. 36,000/ year income) have emissions of about 20% of this value.

The Kyoto protocol permits meeting the national targets partially by trading emission allowances and carbon project credits through the emission trading system, joint implementation, and the clean development mechanism (CDM). This has resulted in the emergence of a carbon trading market.

The logic is that there are projects available in developing countries to mitigate carbon dioxide emissions — e.g., afforestation, energy efficiency and renewables — that can supply cheaper emission reduction credits. This implies that developed countries can continue to have higher emissions (than their emission quotas or rights) as long as they can buy these rights by funding equivalent emission reduction projects in developing countries.

Hence the problem can be ‘neatly’ (“efficiently”) solved by the market without undue difficulty. No structural adjustments or lifestyle changes are required in the developed countries. This would also benefit the developing countries as there would be significant fund transfers for the carbon credits.

What is the problem with this ‘win-win’ market solution? We are looking at the carbon reduction market as a great opportunity. Is this ensuring a fair price? Is it ethical? Are nations avoiding their responsibility to reduce carbon emissions to sustainable levels by using their ability to buy out emission rights?

At present, the volumes of certified emission reductions of carbon dioxide (CERs) recorded annually by the UNFCCC (UN agency regulating the emission reduction) are 174 million tones. The price for CERs is kept quite low (less than $20 per CER).

Suppose there were no global carbon market and each country had to balance its own carbon budget. Simulations done by European researchers indicate that if the countries had to meet their Kyoto targets, the economic cost incurred by the US would be $32 billion, by the EU would be $14 billion and for Japan it would be about $6 billion. This would indicate costs of reduction ranging from $41 to $55 per tonne of CO₂. This is more than double the existing price of the CERs.

The targets set at Kyoto are a start but unlikely to help achieve the stabilisation scenario of carbon dioxide. Reductions of 40% or more would be required by the Annex-I countries. Hence even the supply/demand equilibrium for carbon reductions in the global market is skewed since a much lower demand is initially mandated resulting in the developed countries benefiting from a carbon price that is lower than its fair value. The questions of ethics and equity are difficult issues to address.

The climate change negotiation is now about getting the two largest ‘future’ emitters India and China on board. India, a country hosting 17% of the world population has contributed only 2.4% to the total accumulated emissions since 1750.

The annual per capita energy consumption in the country is very low (0.53 tones of oil equivalent per person), whereas the average per capita electricity consumption
in India is about 450 kWh per year — less than 1/5th of the world average and 1/30th of the US average. The economy is growing at the rate of 8%-10% in the past few years and the energy demand is on the rise.

To meet the developmental needs and to satisfy the aspirations of the people to achieve better living conditions, the energy consumption is expected to rise throughout the next decade or two. A significant part of the growth in the energy sector will be met through the coal reserves in the country. So, the carbon emission from India is likely to show a sharper rise than the historical trend, unless zero-emission coal plants become a reality in the near future.

At present, India is actively participating in CDM activity (~ 300 projects with 28 million CERs registered per year). Most of these projects allow the industrialised countries to pick up the low hanging fruits at the cheapest price. How can we ensure that substantial part of the Kyoto reduction targets are met through mitigation measures within Annex-I countries themselves?

Unless that happens, stabilisation to any undisruptive GHG concentration level seems to be impossible. We should get fair compensation for the carbon credits to help in our development goals, especially when we are compromising our future emission rights by selling the carbon credits. It is high time industrialised countries looked beyond purchase of cheap emission credits through CDM.

Providing access to cleaner technologies (unconditional technology transfer) and ensuring a fair carbon price may help address the equity issues.

♦ Kyoto Protocol

The limits on greenhouse-gas emissions were set by the Kyoto Protocol. The Kyoto Protocol is an agreement made under the United Nations Framework Convention on Climate Change (UNFCCC). The Protocol was an international agreement between more than 170 countries, and the market mechanisms were agreed through the subsequent Marrakesh Accords.

Nations that have contributed the most to global warming have tended to benefit directly in terms of greater business profits and higher standards of living, while they have not been held proportionately accountable for the damages caused by their emissions. The negative effects of climate change will be felt all over the world, and actually the consequences are expected to be most severe in least-developed nations which have produced few emissions.

The Kyoto Protocol sets limits on total emissions by the world’s major economies, a prescribed number of “emission units”. Individual industrialised countries have mandatory emissions targets they must meet.
The Protocol allows countries that have emissions units to spare (emissions permitted to them but not “used”) to sell this excess capacity to countries that are over their targets. It is believed that this so-called “carbon market” is both flexible and realistic. Countries not meeting their commitments will be able to “buy” compliance, but the price may be steep. The higher the cost, the more pressure they will feel to use energy more efficiently and to research and promote the development of alternative sources of energy that have low or no emissions.

The details of a global stock market where such a trading could be held were not specified in the Protocol. These rules were among the workaday specifics included in the 2001 “Marrakesh Accords”.

A country’s actual emissions have to be monitored and guaranteed to be what they are reported to be; and precise records have to be kept of the trades carried out. Accordingly, “registries” are being set up, along with “accounting procedures”, an “international transactions log” and “expert review teams” to police compliance.

The Protocol agreed ‘caps’ or quotas on the maximum amount of GHG for developed and developing countries, listed in its Annex-I. In turn these countries set quotas on the emissions of installations run by local business and other organisations, generically termed ‘operators’. Countries manage this through their own national ‘registries’, which are required to be validated and monitored for compliance by the UNFCCC. Each operator has an allowance of credits, where each unit gives the owner the right to emit one metric tonne of carbon dioxide or other equivalent GHG. Operators that have not used up their quotas can sell their unused allowances as carbon credits, while businesses that are about to exceed their quotas can buy the extra allowances as credits, privately or on the open market. As demand for energy grows over time, the total emissions must still stay within the cap, but it allows industry some flexibility and predictability in its planning to accommodate this.

3.6 Dispute Settlement Understanding in WTO

In 1994, the WTO members agreed on the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU) annexed to the “Final Act” signed in Marrakesh in 1994. Dispute settlement is regarded by the WTO as the central pillar of the multilateral trading system, and as a “unique contribution to the stability of the global economy”. WTO members have agreed that, if they believe fellow-members are violating trade rules, they will use the multilateral system of settling disputes instead of taking action unilaterally.
Dispute Settlement panels and subsidiary Appellate Body under the Dispute Settlement Body (DSB) resolve the disputes and the Appellate Body to deal with appeals. The DSB functions under the General Council. Like the General Council, the DSB is composed of representatives of all WTO Members. The DSB is responsible for administering the dispute settlement and for overseeing the entire dispute settlement process.

If a member State considers that a measure adopted by another member State has deprived it of a benefit accruing to it under one of the covered agreements, it may call for consultations with the other member State. If consultations fail to resolve the dispute within 60 days after receipt of the request for consultations, the complainant State may request the establishment of a panel. It is not possible for the respondent State to prevent or delay the establishment of a panel, unless the DSB by consensus decides otherwise. The panel, normally consisting of three members appointed ad hoc by the Secretariat, sits to receive written and oral submissions of the Parties, on the basis of which it is expected to make findings and conclusions for presentation to the DSB.

The proceedings are confidential, and even when private Parties are directly concerned, they are not permitted to attend or make submissions separate from those of the State in question.

The panel’s report is provided to the Parties. After two weeks it is circulated to all the members of the WTO. The report must be adopted at a meeting of the DSB within 60 days of its circulation, unless the DSB by consensus decides not to adopt the report or a Party to the dispute gives notice of its intention to appeal.

Appeal is allowed only on the issues of law. An appeal may be made to the Appellate Body. The report of the Appellate Body is to be adopted by the DSB unless the DSB decides by consensus within 30 days of its circulation not to adopt the report.

Within thirty days of the adoption of the report, the member concerned is to inform the DSB of its intentions; if the member explains that it is impracticable to comply immediately with the recommendations and rulings, it is to have a “reasonable period of time” in which to comply. If no agreement is reached about the reasonable period for compliance, that issue is to be the subject of binding arbitration. If there is a disagreement as to the satisfactory nature of the measures adopted by the respondent State to comply with the report, that disagreement is to be decided by a panel, if possible the same panel that heard the original dispute, but apparently without the possibility of appeal from its decision.
If all else fails, two more possibilities are set out. They are -

♦ If a member fails within the “reasonable period” to carry out the recommendations and rulings, it may negotiate with the complaining State for a mutually acceptable compensation.

♦ If no agreement on compensation is reached within twenty days of the expiry of the “reasonable period”, the prevailing State may request authorisation from the DSB to suspend application to the member concerned of concessions or other obligations under the covered agreements. The DSB shall grant the authorisation within thirty days of the expiry of the reasonable period, unless it decides by consensus to reject the request.

It is very essential to give special attention to the problems and interest of the developing countries. If one Party to a dispute is a developing country, that Party is entitled to have at least one panelist who comes from a developing country. Further, if a complaint is brought against a developing country, the time for consultations (before a panel is convened) may be expended, and if the dispute goes to a panel, the deadlines for the developing country to make its submissions may be relaxed. Formal complaints against least developed countries are discouraged, and if consultations fail, the Director-General and the Chairman of the DSB stand ready to offer their good offices before a formal request for a panel is made.

The Dispute Settlement Undertaking provides that “particular attention” is to be paid to the interests of the developing countries, and that the report of panels shall “explicitly indicate” how account has been taken of the “differential and more favourable treatment” provisions of the agreement under which the complaint is brought.

Environment Related Disputes

1) Tuna Dolhin Cases (I and II)

Often regarded as emblematic of the trade-environment debate, the two GATT Tuna-Dolphin Disputes (1991 Tuna-Dolphin I and 1994 Tuna-Dolphin II) were the first to test the legitimacy of using environmentally-unfavourable foreign process and production methods (PPMs) as justification for trade restrictions. The disputes came at a time when trade and environment issues were lurking in the wings of the GATT. Tuna-Dolphin I revolved around a US primary embargo on Mexican tuna caught using purse-seine nets that incidentally trapped a high number of dolphins, while Tuna-Dolphin II centered on a secondary US embargo against countries who re-exported tuna from nations under the US primary embargo.
In great part due to the impact of the Tuna-Dolphin cases, the GATT Working Group on Environmental Measures and International Trade, dormant since its inception in 1971, was reactivated a few months after the first Tuna-Dolphin decision in 1992. Due to the partisan nature of the issues involved in the cases, a three-way divergence of views that fell within either the “environment”, “development” or “trade” approaches, has developed that characterised analysis of the disputes.

The 1991 and 1994 GATT Tuna-dolphin Cases

Facts, Process and Interventions

Pursuant to the Marine Mammal Protection Act (MMPA), in 1990 the United States imposed an embargo on yellowfin tuna from Mexico because the Mexican manner of harvesting yellowfin tuna resulted in incidental loss of dolphin above the standards set in the MMPA. In May 1991, again pursuant to the MMPA, an embargo was placed on yellowfin tuna from those “intermediary nations” which could not certify that the tuna they were exporting to the United States had been captured in accordance with U.S. standards on dolphin mortality. The intention of the intermediary nation provision was to prevent the tuna-harvesting-States from evading the U.S. dolphin standards by trans-shipping yellowfin tuna through a second State. France and Italy, amongst others, were subject to the May 1991 yellowfin tuna embargo. Following litigation in the United States, the intermediary nation tuna embargo was extended in January 1992 to include, amongst other States, Spain and the United Kingdom.

Specifically regarding the Mexican situation several facts need to be noted: Mexican fishers were attempting to comply with the requirements of the MMPA; the fishing activities were taking place in either international or Mexican waters (non-U.S. waters); there were no facts to suggest that the dolphin were “American”; dolphin is not an endangered species; and the Mexican fishers were not breaching Mexican law or any international agreement concerning either dolphin protection or tuna harvesting.

Mexico, a member of GATT since 1986, complained that the U.S. embargoes of yellowfin tuna were inconsistent with Article XI(1) of the GATT. Under the dispute settlement regime of the GATT, no State can be forced to have its trade measures subjected to third party scrutiny, although where serious disputes arise the panel process, a quasi-adjudicative procedure, is almost always accepted by the

---

disputants. The United States accepted that a GATT dispute settlement panel was the appropriate way to deal with the Mexican complaint.

In addition to the United States and Mexico, eleven countries made representations to the 1991 GATT Panel. None of the eleven, which included Australia, Canada, the European Community, Norway and Japan, supported the U.S. position. In the end the U.S.-Mexico Tuna-Dolphin Panel also did not accept the U.S. position, finding that the U.S. embargoes under the MMPA on Mexican yellowfin tuna and on yellowfin tuna from intermediary States were GATT illegal.

The position at that time was that the decisions of GATT dispute settlement panels do not become legally binding on disputants until the panel reports are adopted by the GATT Council. Adoption of the U.S.-Mexico Tuna-Dolphin Panel was not actively pursued by Mexico because of the impending conclusion with the United States of the North America Free Trade Agreement (NAFTA) and the political outcry in the United States against the decision of the 1991 GATT Panel. The United States attempted to overcome the decision of the GATT Panel through revisions to regulations of the Inter-American Tropical Tuna Commission (IATTC) to reduce or eliminate dolphin mortality and revisions to the MMPA effectuated by the International Dolphin Conservation Act of 1992.

When it became clear that Mexico was not going to press for adoption by the GATT Council of the U.S.-Mexico Tuna-Dolphin Panel, the European Community commenced the formal GATT dispute settlement process which ultimately led to the 1994 U.S.-E.E.C. Tuna-Dolphin Panel report. The European Community was particularly concerned about the U.S. tuna embargo imposed against intermediary States, but the entire issue of embargoes on yellowfin tuna triggered by non-compliance with dolphin mortality standards imposed under the MMPA was revisited. None of the six intervening States in the 1994 U.S.-E.E.C. Tuna-Dolphin Panel, Australia, Canada, Japan, New Zealand, Thailand or Venezuela, supported the position of the United States. The 1994 GATT Panel was the equivalent of an appeal of the 1991 GATT Panel report. The appeal was upheld — the 1994 GATT Panel concluded that the MMPA embargoes were inconsistent with U.S. GATT obligations.

The Panel Decisions

Both the 1991 and 1994 GATT Panels took the view that Article XI(1) was applicable to the U.S. tuna embargoes, and therefore, the core of both the GATT Panel decisions was the application of Article XX(b) and (g), the exceptions to Article XI(1).
Introduction to Trade and Environment

The U.S.-Mexico Tuna-dolphin Panel

The U.S.-Mexico Tuna-Dolphin Panel took the view that for a trade embargo to fit the health exception, Article XX(b), or the scarce resource exception, Article XX(g), the health or resource interest being protected had to be in the country taking the measure. In the case of Article XX(b), the Panel took the view that the original drafters of the exception were only concerned with the “life or health of humans, animals or plants within the jurisdiction of the importing country”. Regarding Article XX(g), the Panel felt that the provision was aimed at protection of scarce natural resources within a country’s jurisdiction and thus, the provision did not justify measures designed to regulate natural resource activities outside a country’s jurisdiction.

The principal reasoning of the 1991 GATT Panel is conveniently condensed in two virtually identical paragraphs, one dealing with Article XX(b), the other Article XX(g): The Panel considered that if the broad interpretation of Article XX(b) suggested by the United States were accepted allowing trade embargoes to protect health and resources outside the jurisdiction of the United States, each Contracting Party could unilaterally determine the life or health policies from which other Contracting Parties could not deviate without jeopardizing their rights under the General Agreement. The General Agreement would then no longer constitute a multilateral framework for trade among all Contracting Parties but would provide legal security only in respect of trade between a limited number of Contracting Parties with identical internal regulations.

The 1991 Panel stated that pursuant to the GATT “a Contracting Party may not restrict imports of a product merely because it originates in a country with environmental policies different from its own”. It is this statement that was seen by environmentalists as one of the biggest problems with the 1991 GATT Panel report. However, even the normally environmentally-sensitive Nordic countries indicated that a country is not free “to require that imported products [be] produced as cleanly abroad as at home.” Any other conclusion reached by the GATT Panel would allow certain countries to dictate to others what internal standards must exist and enforce their views with trade sanctions, and this would clearly be an invasion of a foreign country’s sovereignty. Moreover, as the Panel observed, any other conclusion would permit trade only between countries with identical regulations, and this would amount to a dismantling of the GATT.

The U.S.-E.E.C. Tuna-dolphin Panel

The restriction read into Article XX(b) and (g) by the 1991 U.S.-Mexico Tuna-Dolphin Panel that the living resource or health being protected had to be in the country
employing the embargo was forcibly argued by the European Community before the 1994 GATT Panel as the proper interpretation of Article XX(b) and (g). The *U.S.-E.E.C. Tuna- Dolphin Panel*, however, did not accept the principal rational of the 1991 GATT Panel decision. The 1994 GATT Panel took the view that the wording of Article XX(b) and (g) did not specifically restrict their application to situations where the living resources or environment had to be in the territory of the State employing the embargo.

Despite the easy application and convenient logic of the location restriction for Article XX(b) and (g), the 1994 GATT Panel was correct to reject it as a limitation. The essence of the complaint about the U.S. embargo was not that the dolphin standards for tuna capture applied in non-American waters, but that the embargo imposed U.S. dolphin mortality standards on non-Americans harvesting tuna in non-American waters. As the 1994 GATT Panel made clear, GATT rules do not prevent American laws from applying to Americans harvesting living resources in non-American waters, which might be the case if resource location were the principal criteria. Having rejected that a location limitation was part of Article XX(b) and (g), the 1994 GATT Panel turned to a detailed examination of the two provisions.

Respecting Article XX(g), the GATT Panel examined whether both the purpose and effect of the tuna embargo were to ensure the effectiveness of restrictions imposed by the United States on its own fishers regarding dolphin conservation. Article XX(g) creates an exception to Article XI(1) if the embargo is tied to the effectiveness of domestic restrictions. The 1994 GATT Panel concluded that the tuna embargo “could not, by itself, further the United States conservation objectives”, rather the only way the tuna embargo would be effective in protecting dolphin was if affected foreign States altered their laws and practices. The Panel concluded that the tuna embargoes “were taken so as to force other countries to change their policies with respect to persons or things within their own jurisdiction”. While Article XX(g) did not provide a clear answer whether such a measure fit within its wording, the GATT Panel concluded:

“That measures taken so as to force other countries to change their policies, and that were effective only if such changes occurred, could not be primarily aimed either at the conservation of an exhaustible natural resource, or at rendering effective restrictions on domestic production or consumption, in the meaning of Article XX(g).”

Respecting Article XX(b), the 1994 GATT Panel examined whether the tuna embargo was “necessary”, in that there was no reasonable alternative for the protection of
dolphins. As in the examination of the application of Article XX(g), the GATT Panel took the view that the U.S. tuna embargo would achieve its desired conservation effect only if the foreign State altered its laws and practices and that the goal of the U.S. embargo was to “force” such changes.

“The Panel concluded that measures taken so as to force other countries to change their policies, and that were effective only if such changes occurred, could not be considered ‘necessary’ for the protection of animal life and health in the sense of Article XX(b).”

The 1994 U.S.-E.E.C. Tuna-Dolphin Panel concluded, therefore, that neither Article XX(b) nor (g) were available to protect the U.S. tuna embargoes and thus the tuna embargoes employed under the MMPA to conserve dolphin were inconsistent with Article XI(1). The 1994 GATT Panel report was presented to the GATT Council in the summer of 1994. A decision on adoption of the U.S.-E.E.C. Tuna-Dolphin Panel was deferred.

2) Shrimp Turtle Case

Facts of the Case

The WTO Shrimp-Turtle dispute is arguably the most important environment-related case to come before the trade body tribunal. The dispute centers on a 1989 US law (Section 609 of the Endangered Species Act) that required the US government to certify that all shrimp imported to the country are caught with that reduce the number of turtles caught in shrimp nets and protect sea turtles from incidental drowning in shrimp trawling nets. In other words, shrimp of only those countries that use turtle-friendly technology is allowed unrestricted entry into the US.

The US-imposed trade embargo was expanded in May 1996 to include all shrimp-exporting countries. The US imposed a ban on the importation of shrimp and shrimp products from India, Malaysia, Pakistan and Thailand, under Section 609 of US Law. However, an exception was allowed under this law. It allowed the importation of shrimp (in cases where turtles were killed) provided the concerned country had a programme aimed at conserving turtles or controlling the incidental deaths of turtles whilst catching shrimp, similar to the one the US had. Further, those countries that did not have a programme aimed at conserving or controlling turtle deaths were allowed to export shrimp to the US provided they used turtle excluding devices (TED) similar to ones used in the US. India, Pakistan, Malaysia and Thailand neither used TEDs nor had a programme aimed at conserving or controlling the deaths of turtles.

India, Pakistan, Malaysia and Thailand lodged complaints at the WTO in early 1997, claiming that Section 609 violated a number of WTO rules. On January 9, 1997, Malaysia and Thailand requested the formation of a panel. On January 30, 1997, Pakistan made a similar request. A panel was established on February 25, 1997. On the same day, India too made a request for the establishment of a panel on the same matter, and another panel was established. On April 15, 1997, the two panels were merged to form a single panel.

On April 6, 1998, a dispute settlement panel ruled against the shrimp embargo, arguing that it represented the kind of unilateral measure that ‘insofar as [it] could jeopardize the multilateral trading system, could not be covered by Article XX.’ The panel’s report was circulated on May 15, 1998. The panel found that the US ban on shrimp was in violation of its obligations under Article XI.1 and Article XX of GATT.

The US appealed against this ruling of the dispute settlement panel to the Appellate Body. US challenged certain provisions of the law, as interpreted by the panel, before the appellate body (AB). The AB circulated its report on October 12, 1998. It reversed the findings of the panel that the US measure was not within the scope of measures permitted under Article XX of GATT 1994. However, it concluded that the US measure, although qualifying for provisional justification under Article XX (g), failed to meet all the requirements of Article XX.

On November 6, 1998, the disputes settlement body (DSB) adopted the AB report and the panel report, as modified by the AB report.

Ruling of the dispute settlement panel

The panel held that the ban imposed by the US on the import of shrimp from these four countries was in violation of Article XI of GATT. Article XI prohibits countries from maintaining quantitative restrictions (QR) on imports. Article XI.1 states that countries cannot impose any prohibitions or restrictions on imports coming from other countries, either in the form of quotas or import/export licenses. The only form of restriction that a country can employ is the imposition of tariffs. In other words, countries are not allowed to impose non-tariff barriers except in certain cases such as critical shortages of foodstuff, the application of food standards, or to safeguard any balance of payment problems, etc.

In this case, the panel found that the ban imposed by the US on shrimp was like a quantitative restriction and hence conflicted with its obligations under Article XI.

---

7 GATT Article XX allows WTO-inconsistent measures to be followed for environmental and health reasons.
Introduction to Trade and Environment

of GATT. This ruling was not contentious and was not even challenged by the US. However the panel’s other ruling, where it said that the US measure was not stified under Article XX of GATT, created a stir.

The panel said that the ban imposed by the US on the import of shrimp and shrimp products did not come under Article XX of GATT. Before we understand the panel’s ruling it is important to understand what Article XX of GATT says. Article XX of GATT gives the ‘general exceptions’ whereby countries can restrict the importation of a particular product into their territories based on certain non-trade concerns like protection of public morals or protection of the life and health of humans, animals and plants. However, this restriction will only be valid provided the following conditions are satisfied:

♦ The restrictions are not applied in any manner which would arbitrarily or unjustifiably discriminate between countries that have the same conditions.
♦ The restrictions are not disguised restrictions on international trade. In other words, such restrictions should not be used as protectionist measures in the name of safeguarding public morals or the life and health of humans, animals or plants, etc.

These conditions are referred to as the chapeau of Article XX.

The US argued that its measure to impose a ban on the import of shrimp and shrimp products from these four countries was justified under Article XX (g), which allows a ban on imported products related to the conservation of exhaustible natural resources — which is one of the non-trade concerns given in Article XX of GATT. The panel disagreed. But it is important to note that the disagreement was not based on the issue of whether banning the import of shrimp to save turtles from being killed was a measure justifiable under Article XX (g). Rather, it was based on whether or not use of a unilateral measure to restrict imports was the right approach.

The panel argued that the chapeau of Article XX of GATT allowed countries to derogate from the GATT provisions provided they do not undermine the multilateral trading regime. Further, according to the panel, if countries started using unilateral measures or policies to restrict or condition market access for a given product, GATT and WTO agreements could no longer serve as a multilateral framework for trade among members, as there would be no security or predictability. The panel, it seems, thought that the US ban on shrimp in the name of protecting turtles was a unilateral environmental policy that it wanted to impose on other countries. This, according to the panel, could give rise to a precedent where other countries will also start using unilateral policies to restrict market access to countries.
Hence, the panel found that the US measure to ban the importation of shrimp and shrimp products violated Article XX of GATT and was therefore illegal. The US challenged this finding and so the matter came to the AB.

**Ruling of the appellate body (at the time of appeal by US)**

The panel's finding, that imposing such unilateral measures to restrict importation was illegal, received flak from many quarters. The principal reason was that the case represented a conflict between trade and the environment. Since the panel had decided in favour of trade, the environmental lobby was up in arms against the ruling.

The panel in this case relied on the jurisprudence that emerged out of the tuna-dolphin dispute in GATT, days before the WTO came into existence. According to this jurisprudence, any conflict between a trade and non-trade issue should be resolved in favour of the former.

However, in this case, the Appellate Body (AB) reversed the findings of the panel. The body said that use of unilateral measures could not be considered to be per se inconsistent with the principles of the multilateral trading regime. The AB not only overturned the panel's decision in this case, it also rejected the jurisprudence that had developed out of the tuna-dolphin dispute.

However this does not mean that the AB found the US ban on shrimp vis-à-vis the four countries legal. The reason for finding the move illegal, given by the AB, was different from the panel's reasoning. The AB said that the panel had adopted a flawed methodology to determine whether the US measure was in violation of Article XX. According to the AB, there are two parts to assessing the validity of a measure vis-à-vis Article XX. The first part is the measure itself. In other words, it first needs to be determined whether the measure adopted by a country falls under any one of the paragraphs given in parts (a) to (j) of Article XX.

Once it has been determined that the particular measure falls under one of these items, the second part is to see whether or not it has been applied in accordance with the *chapeau* of Article XX. In other words, according to the panel, the *chapeau* of Article XX only offers guidance regarding the manner in which a particular measure can be applied. The basic purpose is to see that the conditions given in the *chapeau* of Article XX are honoured while applying a respective measure. According to the AB, while assessing a measure on the touchstone of Article XX, first it needs to be determined whether the measure falls under any of the exceptions given in Articles XX (a) to (j). If the measure does not fall under any of these exceptions then the enquiry will stop and the measure will be considered a violation of Article XX.
However if the measure falls under any of these exceptions, the next step is to find out whether they are applied in a manner that does not arbitrarily or unjustifiably discriminate between countries where the same conditions prevail, or do not constitute disguised restrictions to international trade (that is, they are not protectionist measures). The panel did not follow this sequence. It tried doing the second step first and hence its methodology was incorrect.

**Completing the legal analysis**

The AB, after clarifying the legal position regarding how to implement Article XX, applied the law to the facts. It first tried to find out whether the ban imposed by the US on shrimp imports from the four countries fell under one of the exceptions (Article XX (a) to Article XX (j)) of Article XX.

The US had invoked Article XX (g) to justify the ban imposed on shrimp imports. Article XX (g) allows countries to take measures ‘relating to conservation of exhaustible natural resources’. Hence, in this case, the AB needed to find out whether imposing a ban on the import of shrimp because shrimp could be caught only by killing turtles (in countries that did not follow turtle harvesting techniques or did not use TED) fell under ‘conservation of exhaustible natural resources’. In other words, was the measure aimed at conserving sea turtles a measure that falls under ‘conservation of exhaustible natural resources’?

The AB held that this particular measure of the US did fall under Article XX (g). It is interesting to see how the AB reached this conclusion.

India, Pakistan and Thailand argued that reasonable interpretation of the term ‘exhaustible’ was that it refers to ‘finite resources such as minerals, rather than biological or renewable resources’. Malaysia argued that sea turtles could only be considered under Article XX (b) (adopting measures aimed at protecting the life and health of humans, animals and plants), since XX (g) was meant only for ‘non-living exhaustible natural resources’.

The AB rejected these arguments. It argued that Article XX (g) was not limited to the conservation of ‘mineral’ or ‘non-living’ natural resources. Living resources too are finite and hence exhaustible. The AB emphasized the principle of sustainable development given in the preamble of the WTO and argued that both living and non-living things could be exhaustible natural resources. Further, the AB held that sea turtles were included in Appendix-I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which lists all species that are threatened with extinction and affected by trade.
Hence, the AB reached the conclusion that sea turtles fall under the category of ‘exhaustible natural resources’ and since the US ban on shrimp imports was a measure related to conserving sea turtles, it qualified as an exception under Article XX (g).

After having determined that the ban on shrimp products fell under one of the exceptions of Article XX, the AB went on to find out whether this exception was in accordance with the *chapeau* (the two conditions given above) of Article XX.

The AB argued that the conditions given in the *chapeau* of Article XX were meant to ensure that the exceptions given in Article XX were not misused or abused for protectionist purposes. Here, the AB found that application of the US measure was in violation of the conditions given in the *chapeau*, that is, it constituted ‘unjustifiable discrimination’ and ‘arbitrary discrimination’ for three reasons.

First, US conservation of sea turtles required all countries to adopt a similar regulatory scheme to conserve sea turtles as adopted by the US. The AB held that the US could not impose a condition on all member countries of the WTO for similar regulatory programmes to those that it followed without taking into consideration the different conditions that may prevail in different countries.

Second, the AB struck down the US’s policy of not allowing shrimp imports from countries that, although they had used TED technology comparable in effectiveness to that of the US, had caught the shrimp from waters that were not certified by the US. This policy of the US conveyed that the principal reason behind banning shrimp imports was not the conservation of sea turtles but to impose a similar regulatory mechanism in countries with different conditions.

Third, the AB held that the US measure constituted ‘unjustifiable discrimination’ because it did not negotiate with the four complaining countries, whereas it did negotiate with countries of the Western Hemisphere for the protection and conservation of sea turtles.

**Implementation of the decision**

On January 27, 2000, the US stated that it had implemented the rulings of the AB. It had issued fresh guidelines for implementing its shrimp-turtle law. It introduced greater flexibility in assessing the turtle-harvesting programmes of other countries, keeping in mind the different conditions.

3) Gasoline Case

The Gasoline case is one of the first WTO cases, brought by Venezuela and later Brazil against the US. On 23 January 1995, only days after the WTO and its new
dispute settlement procedure came into being, Venezuela complained to the Dispute Settlement Body that the United States was applying rules that discriminated against gasoline imports. Venezuela formally requested consultations with the United States, as required under WTO dispute settlement process.

The case arose because the United States applied stricter rules on the chemical characteristics of imported gasoline than it did for domestically refined gasoline.

**Basic issue of the dispute**

Following a 1990 amendment to the Clean Air Act, the US Environmental Protection Agency (EPA) promulgated the Gasoline Rule on the composition and emissions effects of gasoline, in order to reduce air pollution in the US. From 1 January 1995 (coincidently the date when the WTO came into being), the Gasoline Rule permitted only gasoline of a specified cleanliness ("reformulated gasoline") to be sold to consumers in the most polluted areas of the country. In the rest of the country, only gasoline no dirtier than that sold in the base year of 1990 ("conventional gasoline") could be sold.

The Gasoline Rule applied to all US refiners, blenders and importers of gasoline. It required any domestic refiner which was in operation for at least 6 months in 1990, to establish an individual refinery baseline, which represented the quality of gasoline produced by that refiner in 1990.

The Environmental Protection Agency also established a statutory baseline, intended to reflect average US 1990 gasoline quality. The statutory baseline was assigned to those refiners who were not in operation for at least six months in 1990, and to importers and blenders of gasoline. Compliance with the baselines was measured on an average annual basis. The regulation required the cleanliness of gasoline sold in America's most polluted cities to improve by 15% over 1990 levels, and all gasoline sold elsewhere in the U.S. to preserve at least 1990 levels.

The Venezuelan Government took its case to the WTO claiming that the U.S. foreign standard pertaining to reformulated gasoline rules put Venezuelan domestic refiners at an unfair disadvantage since US gasoline companies did not have to meet the same standards. It was alleged that this violated the "national treatment" principle\(^8\) and could not be justified under exceptions to normal WTO rules for health and environmental conservation measures\(^9\). The case did not challenge a country's right to set environmental standards. The central question was about discrimination – whether the US measure discriminated against imported gasoline and in favour of domestic refineries.

---

\(^8\) Article III- GATT  
\(^9\) Article XX - GATT
Just over a year later (on 29 January 1996) the dispute panel completed its final report. (By then, Brazil had joined the case, lodging its own complaint in April 1996. The same panel considered both complaints.) The dispute panel agreed with Venezuela and Brazil. The US was found to be violating WTO rules because it discriminated against the gasoline imports.

The United States appealed. In the appeal on the Panel’s findings on Article XX(g), the Appellate Body found that though the baseline establishment rules contained in the Gasoline Rule fell within the terms of Article XX(g), but failed to meet the requirements of the "chapeau" (introductory paragraph) of Article XX. The Appellate Body completed its report, and the Dispute Settlement Body adopted the report on 20 May 1996, one year and four months after the complaint was first lodged. The appeal report upheld the panel’s conclusions (although it made some changes to the panel’s legal interpretation). In the reformulated gasoline ruling (by appellate body), it was held that the US had every right to adopt the highest possible standard to protect its air quality. The WTO’s Appellate Body also confirmed that WTO members may enact any environmental protection legislation they choose so long as it does not discriminate against foreign imports. However, since the US laws requires its own domestic gas producers to follow less stringent standards than those imposed on imported gasoline (in this case from Venezuela and Brazil), the Appellate Body ruled against US as it was held that the US had applied its gasoline standard in a discriminatory manner.

The United States and Venezuela then took six and a half months to agree on what the United States should do. The agreed period for implementing the solution was 15 months from the date the appeal was concluded (20 May 1996 to 20 August 1997). The Dispute Settlement Body monitored progress — the United States submitted “status reports” on 9 January and 13 February 1997, for example. The United States agreed with Venezuela that it would amend its regulation within 15 months, and on 26 August 1997 it reported to the Dispute Settlement Body that a new regulation had been signed on 19 August.

4) Asbestos Case

In this case the Complainant was Canada and the Respondent was the European Communities. The Third Parties of the case were Brazil, Zimbabwe and United States.

On 28 May 1998, Canada requested consultations with the EC in respect of measures imposed by France, in particular Decree of 24 December 1996, with respect to the prohibition of asbestos and products containing asbestos, including a ban on imports of such goods. Canada initiated a challenge in the WTO dispute settlement body
(DSB) against France’s decree banning asbestos from its markets. Canada argued that the French Decree was against Canadian production and export of asbestos and therefore violated the WTO’s trade liberalisation rules. In this dispute the European Communities represented France\textsuperscript{10} represented the culmination of a longstanding effort by Canada to maintain its asbestos mining industry in the face of growing global regulation.

The basic issues was that adoption of a total ban on asbestos use by France and the EC threatens not just Canada’s entry into these markets, but also, and perhaps more importantly, Canada’s ability to export asbestos to developing countries that might follow the lead of their more industrialised peers. Canada alleged that these measures violate Articles 2, 3 and 5 of the SPS Agreement, Article 2 of the TBT Agreement, and Articles III, XI and XIII of GATT 1994. Canada also alleged nullification and impairment of benefits accruing to it under the various agreements cited.

On 8 October 1998, Canada requested the establishment of a panel. At its meetings on 21 October 1998, the DSB deferred the establishment of a panel. Further to a second request to establish a panel by Canada, the DSB established a panel at its meeting on 25 November 1998. The US reserved its third-party rights. The report of the panel was circulated to Members on 18 September 2000. The Panel found that:

\begin{itemize}
  \item the “prohibition” part of the Decree of 24 December 1996 does not fall within the scope of the TBT Agreement;
  \item the part of the Decree relating to “exceptions” does fall within the scope of the TBT Agreement. However, as Canada had not made any claim concerning the compatibility with the TBT Agreement of the part of the Decree relating to exceptions, the Panel refrained from reaching any conclusion with regard to the latter;
  \item chrysotile asbestos fibres as such and fibres that can be substituted for them as such are like products within the meaning of Article III:4 of the GATT 1994;
  \item the asbestos-cement products and the fibro-cement products for which sufficient information had been submitted to the Panel are like products within the meaning of Article III:4 of the GATT 1994;
  \item with respect to the products found to be like, the Decree violates Article III:4 of the GATT 1994;
\end{itemize}

\textsuperscript{10} The European Communities represent individual Member States in WTO disputes because they have exclusive jurisdiction in international trade relations.
insofar as it introduces a treatment of these products that is discriminatory under Article III:4, the Decree is justified as such and in its implementation by the provisions of paragraph (b) and the introductory clause of Article XX of the GATT 1994;

Canada has not established that it suffered non-violation nullification or impairment of a benefit within the meaning of Article XXIII:1(b) of the GATT 1994.

On 23 October 2000, Canada notified the Dispute Settlement Body of its decision to appeal certain issues of law covered in the Panel Report and legal interpretations developed by the Panel.

The Appellate Body circulated its report on 12 March 2001. The Appellate Body:

♦ ruled that the French Decree, prohibiting asbestos and asbestos-containing products had not been shown to be inconsistent with the European Communities’ obligations under the WTO agreements;

♦ reversed the Panel’s finding that the TBT Agreement does not apply to the prohibitions in the measure concerning asbestos and asbestos-containing products and found that the TBT Agreement applies to the measure viewed as an integrated whole. The Appellate Body concluded that it was unable to examine Canada’s claims that the measure was inconsistent with the TBT Agreement;

♦ reversed the Panel’s findings with respect to “like products”, under Article III:4 of the GATT 1994. The Appellate Body ruled, in particular, that the Panel erred in excluding the health risks associated with asbestos from its examination of “likeness”.

♦ reversed the Panel’s conclusion that the measure is inconsistent with Article III:4 of the GATT 1994. The Appellate Body itself examined Canada’s claims under Article III:4 of the GATT 1994 and ruled that Canada has not satisfied its burden of proving the existence of “like products” under that provision; and

♦ upheld the Panel’s conclusion, under Article XX(b) of the GATT 1994, that the French Decree is “necessary to protect human … life or health”.

In this appeal, the Appellate Body adopted an additional procedure “for the purposes of this appeal only” to deal with *amicus curiae* submissions. The Appellate Body received, and refused, 17 applications to file such a submission. The Appellate Body also refused to accept 14 unsolicited submissions from non-governmental organisations that were not submitted under the additional procedure. At its meeting of 5 April 2001, the DSB adopted the Appellate Body report and the panel report, as modified by the Appellate Body report.
3.7 Conclusion

Even though in theory the WTO decision making process operates on consensus, in reality, WTO negotiations proceed not by consensus of all members, but by a process of informal negotiations between small groups of countries. This is because the relative market size is the primary source of bargaining power. It is believed that there are advantages to such a system as it encourages efforts to find the most widely acceptable decision. However, the disadvantages are many and include large time requirements and many rounds of negotiation to develop a consensus decision, and the tendency for final agreements to use ambiguous language on contentious points that makes future interpretation of treaties difficult.

Such negotiations are often called “Green Room” negotiations or “Mini-Ministerials”. These processes have been regularly criticised by many of the WTO’s developing country members which are often totally excluded from the negotiations.

The WTO has been the focal point of criticism from people who are worried about the effects of free trade and economic globalisation. Opposition to the WTO centers on four main points:

- WTO is too powerful, in that it can in effect compel sovereign States to change laws and regulations by declaring these to be in violation of free trade rules.
- WTO is run by the rich for the rich and does not give significant weight to the problems of developing countries. For example, rich countries have not fully opened their markets to products from poor countries.
- WTO is indifferent to the impact of free trade on workers’ rights, child labour, the environment and health.
- WTO lacks democratic accountability, in that its hearings on trade disputes are closed to the public and the media.

On the other hand, supporters of the WTO argue that it is democratic, in that its rules were written by its member States, many of whom are democracies, who also select its leadership. They also argue that, by expanding world trade, the WTO in fact helps to raise living standards around the world.
Chapter Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Introduction</td>
<td>142</td>
</tr>
<tr>
<td>4.2 Environmental Protection and Human Rights</td>
<td>145</td>
</tr>
<tr>
<td>4.3 Environmental Rights in International Law</td>
<td>150</td>
</tr>
<tr>
<td>4.4 Right to Environment as a Human Rights in India</td>
<td>156</td>
</tr>
<tr>
<td>4.5 Right to Development under International Law</td>
<td>158</td>
</tr>
<tr>
<td>4.6 Conclusion</td>
<td>162</td>
</tr>
</tbody>
</table>

4.1 Introduction

The relationship that exists between environmental degradation and the violation of basic human rights, have been the focus of recent debates in national and international human rights and environmental fora. Perspectives of human rights to cases of environmental disruption, like the Bhopal and Chernobyl disasters, has become more acknowledged over the years depicting the fact that human rights and the environment are so inherently interlinked that a clean and healthy environment could be termed a basic human right. Let us not forget that degraded environmental conditions contribute to a large extent, to the spread of communicable diseases. In developing countries, most of the population lack basic health care services, almost a third of these people have no access to safe water supply. The exhaustion of natural resources leads to unemployment and forced migration and this would in turn affect the enjoyment and exercise of basic human rights. Other common concerns relating to conservation of natural resources and protecting human dignity are *inter alia* pollution of rivers, construction of dams and barrages without proper environment impact assessment, lack of access to drinking water free from toxin or other contaminants, increased use of pesticides, degradation of marine and coastal resources, dumping of land based solid waste...
into the sea, inland mining, poor land use practices, over fishing, destructive fishing techniques, shrimp cultivation, loss of coastal habitats and deforestation, land based pollution etc have their immediate affects on livelihood and human security thus affecting the basic human rights of peoples. As it is clear to us, poverty situations and human rights abuses are further worsened by environmental degradation. As a result of such environmental destructive actions there is a realisation in the last few decades the link between human rights and environment leading to an emergence of manifestation that a clean and healthy environment is essential to the realisation of fundamental human rights such as the right to life, personal integrity, family life, health and development.

Many international treaties and local laws and regulations world over on environmental protection have been introduced in the second half of the 20th century. The 1972 Stockholm Declaration proclaimed that man’s natural and man made environment are essential to his well-being and to the enjoyment of basic human rights – even the right to life itself. In 1986, the United Nations General Assembly recognised the relationship between the quality of human environment and the enjoyment of basic human rights [UNGA resolution 2398 (XXII) 1986]. The 1992 Rio Declaration emphasized sustainable development and environmental protection. Moreover, Agenda 21 called for the fulfillment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future.

The right to a safe environment can be sculpted to fit the general idea of human rights by conceiving it as primarily imposing responsibilities on governments and international organisations. It calls on them to regulate the activities of both governmental and non-governmental agents to ensure that environmental safety is maintained. The basis for justification of this right is that environmental problems pose serious threats to fundamental human interests, values, or norms in the society. Therefore governments must appropriately be endowed with the responsibility of protecting people against these threats. Information access as key to promote good governance and environmental rights has been the key feature in most of the multilateral environmental agreements.

**Concept of Human Rights: An Overview** - Human rights are international norms that help to protect all people everywhere from severe political, legal and social abuses dealing mainly with how people should be treated by their governments and institutions. Human rights protect people against familiar abuses of people’s dignity and fundamental interests. These rights exist in morality and in law at the national and international levels. It is the responsibility of the State or governments to ensure enforcement of human rights and to call for compliance of other States
actors and individuals with the same. Some examples: right to a fair trial when charged with a crime, right to engage in political activity, right to freedom of religion etc.

The Universal Declaration of Human Rights (1948) sets out a list of over two dozen specific human rights that countries should respect and protect. After the creation of the Universal Declaration, efforts were made to create treaties that would make the rights in the Universal Declaration into norms of international law. And it was decided to create two separate treaties. Drafts of the two International Covenants were submitted to the General Assembly for approval in 1953, but approval was much delayed. Almost twenty years after the Universal Declaration, the United Nations General Assembly finally approved the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights both in 1966. The Civil and Political Covenant contains most of the civil and political rights found in the Universal Declaration. The Social Covenant contains the economic and social rights found in the second half of the Universal Declaration. These treaties embodying Universal Declaration rights received enough State Parties to become operative in 1976 and have now become the most important UN human rights treaties.

These specific rights of the Universal Declaration of Human Rights can be divided into six or more families: security rights that protect people against crimes such as murder, massacre, torture and rape; due process rights that protect against abuses of the legal system such as imprisonment without trial, secret trials, and excessive punishments; liberty rights that protect freedoms in areas such as belief, expression, association, assembly, and movement; political rights that protect the liberty to participate in politics through actions such as communicating, assembling, protesting, voting, and serving in public office; equality rights that guarantee equal citizenship, equality before the law, and non-discrimination; and social (or “welfare”) rights that require provision of education to all children and protections against severe poverty and starvation. Another family that might be included is group rights. The Universal Declaration does not include group rights, but subsequent treaties do. Group rights include protections of ethnic groups against genocide and the ownership by countries of their national territories and resources. The other important development in the evolution of group rights is environmental rights the justification for this right must show that environmental problems pose serious threats to fundamental human interests, values, or norms; that governments may protect.
4.2 Environmental Protection and Human Rights

As it develops, international environmental law raises many issues already familiar to international human rights lawyers. In the environmental context, questions related to the existence and application of minimum international standards and the proper role of individuals and other non-governmental organisations in the international legal process have raised analogous issues to those arising in international human rights law. The international legal issues are closely related, as is now reflected in the developing activities of human rights bodies. Allegations of civil rights breaches continue to abound in the environmental discussion and debate and of environmental campaigners; restrictions on the right of association and assembly; the mistreatment of ‘whistleblowers’; press censorship; and restrictions on rights of access to environmental information.

In 1968, the UN General Assembly first recognised the relationship between the quality of the human environment and the enjoyment of basic rights. The 1972 Stockholm declaration proclaimed that, man’s natural and man made environment ‘are essential to his well-being and to the enjoyment of basic human rights – even the right to life itself and declared in Principle I that:

*Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.*

The international community has not, however, defined in practical terms the threshold below which the level of environmental quality must fall before a breach of a person’s human rights will have occurred. Nevertheless, some non-binding and widely accepted declarations supporting the individual’s right to a clean environment have been adopted. Although the 1982 World Charter for Nature does not expressly provide for the individual’s right to a clean environment, it was one of the first instruments to recognise the right of individuals to participate in decision-making and have access to means of redress when their environment has suffered damage or degradation. The 1989 Declaration of the Hague on the Environment recognised; the fundamental duty to preserve the ecosystem and the right to live in dignity in a viable global environment, and the consequent duty of the community of nations vis-à-vis present and future generations to do all that can be done to preserve the quality of the environment. The UN General Assembly has declared that ‘all individuals are entitled to live in an environment adequate for their health and well-being’; and the UN Commission on Human Rights has affirmed the relationship between the preservation of the environment...
and the promotion of human rights. More specifically, the Sub-Commission on Prevention of Discrimination and Protection of Minorities has considered the relationship between human rights and the movement and dumping of toxic and dangerous products and wastes, supported further study, and considered the relationship between human rights in the context of chemical weapons. The Sub-Commission has also received reports on ‘Human Rights and the Environment’ which analyse many of the key concepts and provide information on decisions of international bodies. More specifically, the UN Commission on Human Rights has declared that the movement and dumping of toxic and dangerous products endanger basic human rights such as ‘the right to the highest standard of health, including its environmental aspects’. Efforts to further develop language on environmental rights continue under the auspices of several international institutions including the Council of Europe and the UN Economic Commission for Europe. Other efforts include the IUCN’s draft International Covenant on Environment and Development prepared by the IUCN’s Commission on Environmental Law.

Many States have adopted national measures linking the environment and individual rights. The constitution of about 100 States now expressly recognises the right to clean environment. These constitutional provisions vary in their approach: they provide for a State duty to protect and preserve the environment; or declare that the duty to be the responsibility of the State and citizens; or declare that the duty is imposed only upon citizens; or declare that the individuals right together with the individual or collective duty of citizens to safeguard the environment; or provide for a combination of various State and citizen duties together with an individual right.

What are the practical consequences of recognising the link between international human rights law and the protection of the environment? The question may be addressed in the context of the distinction which has been drawn in international human rights law between economic and social rights, and civil and political rights. The nature and extent of economic and social rights determines the substantive rights to which individuals are entitled, including in particular the level below which environmental standards (for example, in relation to pollution) must not fall if they are to be lawful. Civil and political rights which are also substantive in nature and sometimes referred to as ‘due process’ rights, determines procedural and institutional rights (such as the right to information or access to judicial or administrative remedies). International environmental law has progressed considerably in building upon existing civil and political rights and developing important new obligations, most notably in the 1998 Aarhus Convention which
Right to Environment as Human Right

provides for rights of access to information, to participation in decision indicate that international courts and tribunals are increasingly willing to find violations of substantive environmental rights.

It is pertinent to learn about the relationship between human rights law and environmental law while discussing about the two fields of law. Both the fields have some common objectives in terms of social, cultural ethos and values that have enabled linkages between the two fields. Interestingly human rights law and environmental law’s common values are rooted within the ‘collective consciousness’ of the society that has opened up new vistas for renewed environmental awareness. The other notable development is that both the fields of law have become internationalised and institutionalised within the system of United Nations and the civil society as well. The international community has assumed the commitment to observe the realisation of human rights and respect for the environment. On the other hand, the phenomena brought on by environmental degradation transcends national and political boundaries and is of critical importance to the preservation of world peace and security. In view of the foregoing, it can be stated that the law of human rights and environmental law have universalised their object of protection making a transition from human centric nature of protection that further resulted in a wider concept of protection, namely, ‘Human Security’. Linkages between human rights and protection of environment had been long recognised since Stockholm and Rio Declarations leading to emergence of this link in many international and regional treaties. Before we discuss the synergy or emergence of human rights provision in environment treaties and vice versa, it is relevant to illustrate the interrelationship between environment quality and human rights basing on issues relating to scope of right to water as human right; indigenous peoples right to conservation and protection of environment.

♦ Right to water as human right

Water, a limited natural resource and a public good fundamental for life and health, is required for a range of different purposes, besides personal and domestic uses, to realise many of the human rights enshrined in the International Covenant on Economic, Social and Cultural Rights (ICESCR). Water is essential for securing livelihoods (right to gain a living by work) and to produce food (right to adequate food) and ensure environmental hygiene (right to health) enjoying certain cultural practices (right to take part in cultural life). Therefore, human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realisation of other human rights. Over a billion persons lack access to a basic water supply, while several do not have access to adequate sanitation, which is the primary cause of water contamination and diseases linked to water. The continuing
contamination, depletion and unequal distribution of water is exacerbating existing poverty. Environmental hygiene, as an aspect of the right to health under Article 12(2)(b) of the ICESCR, encompasses taking steps on a non-discriminatory basis to prevent threats to health from unsafe and toxic water conditions. The right to water, like any human right, imposes three types of obligations on States parties: obligations to respect, obligations to protect and obligations to fulfill. It should also be seen in conjunction with other rights enshrined in the International Bill of Human Rights, foremost amongst them the right to life and human dignity.

The right to water has been recognised in a wide range of international documents, including treaties, declarations and other standards. For instance, Article 14(2) of the Convention on the Elimination of All Forms of Discrimination Against Women (1979) stipulates that States Parties shall ensure to women the right to “enjoy adequate living conditions, particularly in relation to … water supply”. Article 24(2) of the Convention on the Rights of the Child (1989) requires States Parties to combat disease and malnutrition “through the provision of adequate nutritious foods and clean drinking-water”. Around the world there is a need to provide water security, which means ensuring that freshwater, coastal and related ecosystems are protected and improved; that sustainable development and political stability are promoted, that every person has access to enough safe water at an affordable cost to lead a healthy and productive life and that the vulnerable are protected from the risks of water-related hazards.

Therefore, governments should ensure that natural water resources are protected from contamination by harmful substances and pathogenic microbes. Likewise, States parties should monitor and combat situations where aquatic ecosystems serve as a habitat for vectors of diseases and pose a risk to human living environments.

♦ Indigenous Peoples’ right to conservation and protection of environment

As we all know the link between global environmental change and the rights of indigenous populations’ results from the close relationship between indigenous peoples’ cultural and economic situations and their environmental settings. The Universal Declaration of Human Rights (1948) and International Covenant on Civil and Political Rights (1966) have specific significance for indigenous peoples. The Universal Declaration provides a common standard for the human rights of all peoples and all nations, and proclaims the importance of traditional, political and civil rights, as well as basic economic social and cultural rights. The Covenant spells out civil and political rights and guiding principles based on the Universal Declaration.
The 1957 International Labour Organisation (ILO) Convention No. 107, Protection and Integration of Indigenous and Other Tribal and Semi-Tribal Populations in Independent Countries, addresses the right of indigenous peoples to pursue material well-being and spiritual development, and was a first international instrument in specific support of indigenous peoples. Largely because of its view that indigenous peoples should be integrated into the larger society, a view that subsequently came to be seen by many as inappropriate, Convention No. 107 was followed in 1989 by ILO Convention 169, Convention Concerning Indigenous and Tribal Peoples in Independent Countries. Convention No. 169 presents the fundamental concept that the way of life of indigenous and tribal peoples should and will survive, as well as the view that indigenous and tribal peoples and their traditional organisations should be closely involved in the planning and implementation of development projects that affect them. As the most comprehensive and most current international legal instrument to address issues vital to indigenous and tribal peoples, Convention No. 169 includes articles that deal with consultation and participation, social security and health, human development, and the environment. To date, Convention No. 169 has been ratified by only a few countries, and so far by none in the Asian and Pacific Region.

This sensitive relationship was well recognised in Agenda 21, which specifies that “in view of the interrelationship between the natural environment and its sustainable development and the cultural, social, economic and physical well-being of indigenous people, national and international efforts to implement environmentally sound and sustainable development should recognise, accommodate, promote and strengthen the role of indigenous people and their communities”. The 1992 Convention on Biodiversity calls on Contracting Parties to respect traditional indigenous knowledge with regard to the preservation of biodiversity and its sustainable use. The Vienna Declaration and Programme of Action emerging from the 1993 World Conference on Human Rights recognises the dignity and unique cultural contributions of indigenous peoples, and strongly reaffirms the commitment of the international community to the economic, social, and cultural well-being of indigenous peoples and their enjoyment of the fruits of sustainable development.

Rights as the bases of the right of indigenous people to full enjoyment of human rights and fundamental freedoms. The General Assembly recognises that indigenous people contribute to the diversity and richness of civilisations and cultures, which constitute the common heritage of mankind.

The Declaration addresses both individual and collective rights, cultural rights and identity, right to education, employment, health, language etc. 144 States voted in favour of the Declaration. Some of the countries which voted in favour of the Declaration were India, Indonesia, Japan, Malaysia, Netherlands, Switzerland etc. Those who voted against were Australia, Canada, New Zealand and the Russian Federation.

The Declaration states that indigenous people have the right to maintain and strengthen their distinct political, legal, economic, social and cultural institutions and to participate in the political, economic, social and cultural life of the State. Also the Declaration sets forth responsibilities for States in terms of taking effective and appropriate measures to ensure continuing improvement of their economic and social conditions, with special emphasis on vulnerable groups like women, children, elders and persons with disabilities. States shall also give legal recognition and protection to lands, territories and resources traditionally owned or used otherwise by indigenous people.

4.3 Environmental Rights in International Law

Principle 1 of the Stockholm Declaration established a foundation for linking human rights and environmental protection, declaring that man has a fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being. It also announced the responsibility of each person to protect and improve the environment for present and future generations. Resolution 45/94 the UN General Assembly stated that all individuals are entitled to live in an environment adequate for their health and well-being and called for enhanced efforts towards ensuring a better and healthier environment. The 1992 Conference of Rio de Janeiro on Environment and Development formulated the link between human rights and environmental protection largely in procedural terms. Principle 10 of the Rio Declaration on Environment and Development proclaims as follows:

*Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities.*
in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Rights to information, participation and remedies in respect to environmental conditions thus formed the focus of the Rio Declaration. In addition to Principle 10, the Declaration includes provisions on the participation of different components of the population: women (Principle 20), youth (Principle 21), and indigenous peoples and local communities (Principle 22). Public participation also is emphasized in Agenda 21. The Preamble to Chapter 23 states:

One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups, and organisations to participate in environmental impact assessment procedures and to know about and participate in decisions, particularly those that potentially affect the communities in which they live and work. Individuals, groups and organisations should have access to information relevant to environment and development held by national authorities, including information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection measures.

Chapter 23 proclaims that individuals, groups and organisations should have access to information relevant to the environment and development, held by national authorities, including information on products and activities that have or are likely to have a significant impact on the environment, and information on environmental protection matters. Agenda 21 also calls on governments and legislators to establish judicial and administrative procedures for legal redress and remedy for actions affecting the environment that may be unlawful or infringe on rights under the law, and to provide access to individuals, groups and organisations with a recognised legal interest. Section III of Chapter 23 identifies major groups whose participation is needed: women, youth, indigenous and local populations, non-governmental organisations, local authorities, workers, business and industry, scientists, and farmers. Agenda 21 also calls for public participation in environmental impact assessment procedures and in decisions, particularly those that potentially affect the communities in which individuals and identified groups live and work. It also encourages governments to create policies that facilitate a direct exchange of information between the government and the public in environmental issues, suggesting the EIA process as a potential mechanism for participation.
Ever since preparations started for the Rio Conference, global and regional treaties adopted in the fields of human rights and environmental protection have included provisions specific to the rights contained in Principle 10. Generally, global and regional environmental treaties since 1991 contain at least some reference to public information, access or remedies.

The following sections refer to the relevant human rights provisions in multilateral environmental treaties adopted since the Rio Conference began in 1991.

**Treaty Provisions**

**Global environmental treaties**

1) An obligation to inform is foreseen by Annex -II to the *Protocol on Environmental Protection on the Conservation of Antarctic Fauna and Flora* (Madrid, 1991). According to Article 5, the Parties shall prepare and make available information setting forth and providing lists of Specially Protected Species and relevant protected Areas to all those persons present or intending to enter the Antarctic Treaty area with a view to ensuring that such persons understand and observe the provisions of the Annex. A parallel provision is inserted in Annex-V of the Protocol, on Area Protection and Management, according to which, each Party shall make available information setting forth, *inter alia*, the location of protected areas and of historic monuments and sites, as well as the management plans, with a view to ensuring that all persons visiting or proposing to visit Antarctica understand and observe the provisions of the Annex.

2) The *Framework Convention on Climate Change* (June 4, 1992), Article 4(1)(i) obliges Parties to promote public awareness and to “encourage the widest participation in this process including that of non-governmental organisations”. Article 6, provides that its Parties “shall promote and facilitate at the national and, as appropriate, sub-regional and regional levels, and in accordance with national laws and regulations, and within their respective capacities” public access to information and public participation.

3) *Protocol to amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage* and the *Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage* (London, November 27, 1992) extend the provisions of the 1969 conventions that aim to provide remedies for those who suffer harm from oil pollution damage.

4) The *Convention on Biological Diversity* refers in its preamble to the general lack of information and knowledge regarding biological diversity and affirms the
need for the full participation of women at all levels of policy-making and implementation. Article 13 calls for education to promote and encourage understanding of the importance of conservation of biological diversity. Article 14 provides that each contracting party, as far as possible and as appropriate, shall introduce appropriate environmental impact assessment procedures and where appropriate allow for public participation in such procedures. The Convention allows for public participation in environmental impact assessment procedures in Article 14(1)(a) and calls for the participation of indigenous and local peoples in decisions about sharing their knowledge, innovations and practices concerning conservation and sustainable use of biological diversity. (Art. 8(j)).

5) *International Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa* (Paris, June 17, 1994) contains numerous provisions on environmental rights, including in the Preamble, Article 10(2)(e), 13(1)(b), 14(2)(19) and 25. The Convention goes furthest among recent treaties in calling for public participation, embedding the issue throughout the agreement. Article 3(a) and (c) begin by recognising that there is a need to associate civil society with the actions of the State. The treaty calls for an integrated commitment of all actors: national governments, scientific institutions, local communities and authorities, and non-governmental organisations, as well as international partners, both bilateral and multilateral.

6) The *IAEA Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management* is based to a large extent on the principles contained in the IAEA document “The Principles of Radioactive Waste Management.” The Preamble of the treaty recognises the importance of informing the public on issues regarding the safety of spent fuel and radioactive waste management. This view is reinforced in Articles 6 and 13, on the citing of proposed facilities; they require each State Party to take the appropriate steps to ensure that procedures are established and implemented to make information available to members of the public on the safety of any proposed spent fuel management facility or radioactive waste management facility.

8) Article 32 of the UN Convention on the Law of the Non-navigational Uses of International Watercourses (New York, May 21, 1997) concerns freedom from discrimination in respect to remedies. It says that watercourse States shall not discriminate on the basis of nationality or residence or place when the injury occurred, in granting to persons who suffered or are under a serious threat of suffering significant transboundary harm, in accordance with their legal system, access to judicial or other procedures, or a right to claim compensation or other relief in respect of significant harm caused by such activities carried on in their territory.

9) On September 12, 1997, a Joint Protocol to amend the Vienna Convention on Civil Liability for Nuclear Damage (21 May 1963) and the Paris Convention on Third Party Liability in the Field of Nuclear Energy (29 July 1960) as amended, updated the provisions imposing civil liability on owners or operators of nuclear facilities and providing remedies for those injured as a result of nuclear incidents.

10) Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (September 10, 1998). Article 15(2) requires each State Party to ensure, “to the extent practicable” that the public has “appropriate” access to information on chemical handling and accident management and on alternatives that are safer for human health or the environment than the chemicals listed in Annex-III to the Convention.

11) Cartagena Protocol on Biosafety to the Convention on Biological Diversity (Montreal, January 29, 2000), Article 23 concerns public awareness and participation, requiring the Parties to facilitate awareness, education and participation concerning the safe transfer, handling and use of living modified organisms in relation to the conservation and sustainable use of biological diversity, taking into account risks to human health. Access to information on imported LMOs should be insured and the public consulted in the decision-making process regarding such organisms, with the results of such decisions made available to the public. Further, each Party shall endeavour to inform its public about the means of public access to the Biosafety Clearing-House created by the Convention.

12) Article 10(1) of the Convention on Persistent Organic Pollutants (Stockholm, May 22, 2001) aims at “protecting human health and the environment from persistent organic pollutants”. The treaty provides that each Party shall, within its capabilities, promote and facilitate provision to the public of all available information on persistent organic pollutants and ensure that the public has access to public information and that the information is kept up-to-date (Art.10 (1)(b) and (2)). Educational and public awareness programmes are to be
developed especially for women, children and the least educated. Parties are to make accessible to the public on a timely and regular basis the results of their research, development and monitoring activities pertaining to persistent organic pollutants (Art. 11). Parties that exchange information pursuant to the Convention shall protect any confidential information, but information on health and safety of humans and the environment shall not be regarded as confidential (Art. 9 (5)).

**Global human rights treaties**

1) *The Convention on the Rights of the Child* (New York, November 20, 1989) refers to aspects of environmental protection in respect to the child’s right to health. Article 24 provides that States Parties shall take appropriate measures to combat disease and malnutrition “through the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution”. (Art. 24(2)(c)). Information and education is to be provided to all segments of society on hygiene and environmental sanitation. (Art. 24(2)(e)).

2) *ILO Convention No. 169 concerning Indigenous and Tribal Peoples in Independent Countries* (Geneva, June 27, 1989) contains numerous references to the lands, resources, and environment of indigenous peoples. Article 2 provides that actions respecting indigenous peoples shall be developed with the participation of the peoples concerned. Special measures are to be adopted for safeguarding the environment of such peoples consistent with their freely-expressed wishes (Art. 4). States Parties must consult indigenous peoples (Art. 6) and provide for their participation in formulating national and regional development plans that may affect them (Art. 7). Environmental impact assessment must be done of planned development activities with the co-operation of the peoples concerned (Art. 7(3)) and “Governments shall take measures, in co-operation with the peoples concerned, to protect and preserve the environment of the territories they inhabit.” (Art. 7(4)). Rights to remedies are provided in Article 12. Part II of the Convention addresses land issues, including the rights of the peoples concerned to the natural resources pertaining to their lands. The rights include “the right to participate in the use, management and conservation of these resources.” (Art. 15). Article 30 requires the governments to make known to the peoples concerned their rights and duties.

**Regional human rights treaties**

1) *The African Charter on Human and Peoples’ Rights*, (Banjul June 26, 1991) contains several provisions related to environmental rights. Article 21 provides that
“All peoples shall freely dispose of their wealth and natural resources and adds that this right shall be exercised in the exclusive interest of the people.” Article 24, which could be seen to complement or perhaps conflict with Article 21, states that “All peoples shall have the right to a general satisfactory environment favourable to their development.” Article 7 provides that “every individual shall have the right to have his cause heard”.

2) Article 11 of the Additional Protocol to the American Convention on Human Rights in the area of Economic, Social and Cultural Rights (San Salvador, November 17, 1988), is entitled: “Right to a healthy environment.” It proclaims:

♦ Everyone shall have the right to live in a healthy environment and to have access to basic public services.
♦ The States Parties shall promote the protection, preservation and improvement of the environment.

3) The European Convention on the Exercise of Children’s Rights (Strasbourg, January 25, 1996) aims at ensuring access to information and participation of children in decisions relevant to them, as well as appropriate remedies.

4.4 Right to Environment as a Human Rights in India

A broad recognition of the linkage between human rights and the environment since United Nations Conference on Environment and Development has come through the development of Principle 10 of the Rio Declaration on Environment and Development. States and international organisations are increasingly recognising the rights of access to information, public participation, and access to justice. A notable example of such progress was the entry into force of the 1998 Aarhus Convention. Respect for human rights is broadly accepted as a necessary condition for environmental protection and sustainable development. The fact that effective enjoyment of human rights protection, and that human rights and the environment are interdependent and inter-related is now broadly reflected in national and international practices. In relation to substantive matters, a growing body of case law from many national jurisdictions is clarifying the linkages between human rights and the environment, in particular by: 1) recognising the right to a healthy environment as a fundamental human right; 2) allowing litigation based on this right, and facilitating its enforceability in domestic law by liberalising provisions on standing; 3) acknowledging that other human rights recognised in domestic legal systems can be violated as a result of environmental degradation. The important role that the judiciary (national and international) can play in this regard cannot be overlooked.
Therefore a rights-based approach can enhance the impact of policies and programmes at the national and international levels on this matter. It is important that Government and civil society groups associated with the protection and promotion of human rights and the environment should be more proactive in facilitating protection of environment and individuals. There is need for further developments in this respect, including through the adoption of new international legal instruments (at regional levels or, some suggest, the global level) to provide effectively for rights of access to information, public participation in decision-making and access to justice.

The Constitution (Forty Second Amendment) Act 1976 explicitly incorporated environmental protection and improvement as part of State policy through the insertion of Article 48A of the Constitution of India. Article 51A (g) imposed a similar responsibility on every citizen “to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for all living creatures”. The Indian Supreme Court has made a significant contribution in attempting to define right to environment. When a claim is brought under a particular article of the Constitution, this allows an adjudicating body such as the Supreme Court to find a breach of this article, without the need for a definition of an environmental right as such. All that the Court needs to do is what it must in any event do; namely, define the Constitutional right before it. Accordingly, the Court prepared to find a risk to life, or damage to health, on the facts before it, would set a standard of environmental quality in defining the right litigated. This is well illustrated by the cases that have come before the Supreme Court, in particular in relation to the broad meaning given to the Right to Life under Article 21 of the Constitution. The right to life has been used in a diversified manner in India. It includes, *inter alia*, the right to survive as a species, quality of life, the right to live with dignity and the right to livelihood. Article 21 of the Indian Constitution states: ‘No person shall be deprived of his life or personal liberty except according to procedures established by law.’ The Supreme Court expanded this right in two ways. *Firstly*, any law affecting personal liberty should be reasonable, fair and just. *Secondly*, the Court recognised several unarticulated liberties that were implied by Article 21. It is by this second method that the Supreme Court interpreted the right to life and personal liberty to include the right to the environment.

*Rural Litigation and Entitlement Kendra v. State of U.P* (1985) was one of the earliest cases where the Supreme Court dealt with issues relating to environment and ecological balance. The expanded concept of the right to life under the Indian Constitution was further elaborated on in *Francis Coralie Mullin v. Union Territory of Delhi* (1981) where the Supreme Court set out a list of positive obligations on the
State, as part of its duty correlative to the right to life. In this case the Court adopted an expanded understanding of human rights. It is only through such an understanding that claims involving the environment can be accommodated within the broad rubric of human rights. The link between environmental quality and the right to life was further addressed by the Supreme Court in the *Charan Lal Sahu v. Union of India* (1990). Similarly, in *Subash Kumar v. State of Bihar* (1991), the Court observed that ‘right to life guaranteed by Article 21 includes the right of enjoyment of pollution-free water and air for full enjoyment of life’. Through this case, the Court recognised the right to a wholesome environment as part of the fundamental right to life. This case also indicated that the municipalities and a large number of other concerned governmental agencies could no longer rest content with unimplemented measures for the abatement and prevention of pollution. They may be compelled to take positive measures to improve the environment. The Supreme Court has used the right to life as a basis for emphasizing the need to take drastic steps to combat air and water pollution. It has directed the closure or relocation of industries and ordered that evacuated land be used for the needs of the community. The courts have taken a serious view of unscientific and uncontrolled quarrying and mining, issued orders for the maintenance of ecology around coastal areas, shifting of hazardous and heavy industries and in restraining tanneries from discharging effluents.

Another expansion of the right to life is the right to livelihood (Article 41), which is a directive principle of State policy. This extension can check government actions in relation to an environmental impact that has threatened to dislocate the poor and disrupt their lifestyles. A strong connection between the right to livelihood and the right to life in the context of environmental rights has thus been established over the years. Especially in the context of the rights of indigenous people being evicted by development projects, the Court has been guided by the positive obligations contained in Article 48A and 51A(g), and has ordered adequate compensation and rehabilitation of the evictees.

Matters involving the degradation of the environment have often come to the Court in the form of petitions filed in the public interest. This mode of litigation has gained momentum and has facilitated espousal of the claims of those who would have otherwise gone unrepresented.

### 4.5 Right to Development under International Law

In March 1887, the World Commission on Environment and Development, popularly known as the Brundtland Commission, focused on the critical relationship between development and environment:
The ability to choose policy paths that are sustainable requires that the ecological dimensions of policy be considered at the same time as the economic, trade, energy, agricultural, industrial, and other dimensions - on the same agendas and in the same national and international institutions. That is the chief institutional challenge of the 1990s.

The global concern with the malfunctioning of the international economy– with its manifest inability to meet the expectations of developed and developing countries, it manifest failures to generate the desired levels of global growth or to meet the basic needs of the greater majority of the world’s people – had led in the seventies to the search for a (New International Economic Order) NIEO. The quest for order connotes a search for principles and norms which would mould policies and strategies of States as well as of international organisations, in particular international financial institutions. But instead of yielding consensus on such a framework, the proposals for an NIEO were perceived unsympathetically by the developed States as an unacceptable threat to their interests. This resulted in adversarial discussions, and ultimately to a stalemate in international organisations. The concerns, however, which have led to the proposals for the NIEO, have been expressed in fresh attempts to focus on the imperatives of development on a global scale.

This elucidation of the concept of development in the UNHRD, for instance, focused on ‘the human person’ as the central subject of development and sought to find the basis of an international obligation on the part of States and of the international community to promote development by relying on the respect for the basic human rights of all person, which had been given universal recognition. Not only did it seek to find a new basis for founding responsibility of States and international community to promote development, it also identified important elements which must be embraced by the concept of ‘development’ – such elements as: equality of opportunity for all in their access to basic resources, education, health services, food, housing, employment and the fair distribution of income, ensuring an active role for women in the development process, and adoption of economic and social reforms to remove social injustices. Another important component is for State to ‘encourage popular participation in all spheres as an important factor in development’.

The Report of the World Commission on Environment and Development published in March 1987 focused on the critical link between development and environment:

Ecology and economy are becoming even more inter-woven-locally regionally, nationally and globally-into a seamless net of causes and effects...
Impoverishing the local resource base can impoverish wider areas. Deforestation by highland framers causes flooding on lowland farms; factory pollution robs local fishermen of their catch. Such local cycles now operate nationally and regionally. Dryland deforestation sends environmental refugees in their millions across national borders. Deforestation in Latin America and Asia in causing more floods in downhill, downstream nations. Acid precipitation and nuclear fall-out spread across the borders of Europe. Similar phenomena are emerging on a global scale and loss of ozone. Internationally traded hazardous chemicals entering goods are themselves internationally traded.

Over the past few decades, life threatening environmental concerns has surfaced in the developing world.... Yet these developing countries must operate in a world in which the resources gap between most developing and industrialised world dominates in the rulemaking of some key international bodies, and in which the industrialised world has already used much of the planet's ecological capital. This inequality is the planet’s main ‘environmental’ problem; it is also its main ‘development’ problem.

– New framework to tackle chronic problems

The Brundtland report addresses the chronic problems of hunger, malnutrition, illiteracy and other incidents of poverty in the developing world and identifies the deficiencies both in economic system and the ecological system which obstructs development: deteriorating terms of trade, trade barriers, mounting debt burdens, high risk technologies which accelerate the consumption of finite resources and cause pollution environmental degradation.

The need for a new framework in which to promote global development and protect the global environment is underlined and the concept of ‘sustainable development’ is put forward as an overriding global objective to be secured by the universal acceptance of new principles and rules.

Thus ‘sustainable development’ is defined as development that ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’. Key elements implicit in the concept are spelt out thus:

♦ The concept of sustainable development does imply limits – not absolute limits but limitations imposed by the present state of technology and social organisations and environmental resources and the ability of the biosphere to absorb the effect of human activities;

♦ Sustainable development requires meeting the basic needs of all and extending to all the opportunity to fulfill their aspirations for a better life... a world in which poverty is endemic will always be prone to ecological and other catastrophes;
Meeting essential needs requires not only a new era of economic growth for nations in which the majority are poor, but those poor get their full share of the resources required to attain the growth;

Such equity would be aided by political systems that secure effective citizen participation in decision-making and by greater democracy in international decision-making;

Sustainable development requires that those who are effluent adopt lifestyles within the planet’s ecological means—in their use of energy, for example, further rapidly growing population can increase the pressure on resources;

Sustainable development is not a fixed state of harmony but rather a process of change in which the exploitation of resources, the divesting of investments, the orientation of technological development and institutional change are made consistent with future as well as present needs.

A critique of the Brundtland report suggests that the principles urged by it need to be supplemented by other principles, in order to achieve sustainable development. Thus the following additional principles have been urged in the study entitled Beyond Brundtland:

- the principle of the cultural and social integrity of development; quoting a statement from Lloyd Timberlake, it would mean that ‘development must grow from within, and not be slapped on from the outside’;
- the ecological principle; development must be compatible with and restore diversity and rely on sustainable forms of resources use;
- the solidarity principle: development must provide the basic necessities of life and secure living conditions for all people, promote equity and avoid unequal exchange;
- the emancipation principle: development must foster self-reliance, local control over resource empowerment and participation by the underprivileged and marginalised, and opportunity for action people can feel is fulfilling;

This concept this encapsulates many of the principles and normative prescriptions which had earlier been put forward in the NIEO proposals, and which are spelt out in the UNHRD. Thus, human persons as the center of development are recognised whose needs, present and future, are made the central concern of development—since the needs envisaged are human needs. Global disparities call for application of equitable principles to ensure meeting the ‘basic needs of all’. A global strategy for promoting growth is urged which will adopt an integrated
approach recognising the linkages between natural resources, financial resources, technology and the operation of institutions at the national and international level. Such a strategy calls for institutional and legal change.

Related Legal Documents

♦ 1977 United Nations Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD)
♦ Additional Protocol I to the 1949 Geneva Conventions Relating to the Victims of Armed Conflict
♦ Rome Statute of the International Criminal Court

4.6 Conclusion

Over the past decade, environmental considerations have been integrated into human rights discourse and, to a lesser extent, into the definition and application of international humanitarian rules governing methods and means of armed conflict. In relation to human rights, notwithstanding the fact that most human rights treaties do not expressly refer to environmental considerations, practice under those conventions recognises that a failure to adequately protect the environment may give rise to individual human rights, particularly in relation to rights associated with the enjoyment of a person’s home and property. Equally, practice recognises that the collective interests of a community in taking steps to protect the environment may justify reasonable interference with property or other rights. In both aspects, the principal need is to ensure that a balance is found between individual and collective rights. In these very recent past, human rights procedures may also have begun to define the content of participatory rights in the environmental domain: the non-compliance mechanism established under the 1998 Aarhus Convention represents an innovative step.

In relation to armed conflict, it is ironic that proceedings before the ICJ concerning the legality of the use of nuclear weapons catalysed an important debate on the relationship between methods and means of warfare and the protection of the environment. The Court’s advisory opinion has recognised, for the first time, the existence of norms of international environmental law as custom, and that they are applicable equally in times of armed conflict.
5

International Humanitarian Law and Environment

Chapter Contents | Page Nos.
--- | ---
5.1 Introduction | 163
5.2 Scope and Meaning of International Humanitarian Law | 164
5.3 International Humanitarian Law and Environment | 168
5.4 Provisions Relating to Environmental Protection in International Humanitarian Law | 178
5.5 Environmental Impact Assessment of Armed Conflicts | 183
5.6 Conclusion | 185

5.1 Introduction

Rio Declaration on Environment and Development, 1992 provides that

“Warfare is internally destructive of sustainable development. States, therefore, shall respect international law providing protection for the environment in terms of armed conflict and cooperate in its further development as necessary.”

There is obvious evidence that modern warfare or warfare in general involves conflicts not only between the warring Parties or combatant, but also between man and nature. Environmental destruction has become an inevitable result of modern warfare and military tactics. Animal and plant species become extinct, forests become deserts, fertile farmland becomes a minefield, water becomes contaminated and native vegetation disappears. The nuclear, chemical and biological weapons that emerges during the late 20th century present threats to life itself and can hasten host of environmental disasters, such as deforestation and erosion, global warming, desertification, or holes in the ozone layer. The devastating effects of military weapons on the environment is reflected throughout the history of the 20th century, in World War I, World War II, the Korean and Vietnam wars, the Cambodian civil war, Gulf Wars I and II, the Afghan Civil War, and the Kosovo Conflict. The United
International Environmental Law and Policy

Nations Environment Programme (UNEP) has conducted over twenty post-conflict assessments since 1999 in order to determine the environmental impacts of war. The result of these findings is the obvious destruction of environment during war and the exploitation and illegal trade of natural resources in the aftermath of prolonged armed conflicts. A significant example of using the environment as a weapon in armed conflict occurred in the Gulf War in 1990-91, when Iraqi President Saddam Hussein ordered his troops to invade Kuwait. The Iraqi armed forces deliberately released crude oil into the Gulf, and set fire to Kuwaiti oil fields. For this very reason, Gulf War was called or termed an “eco-war”. When a conflict occurs the immediate responsibility would be to save lives and minimise suffering, in a way the focus is on human centric needs. Although one might argue that priority should be given to protection of individuals, but environmental concerns cannot be ignored or overlooked during conflict situations. As we all know, in many parts of the developing countries and elsewhere people depend on natural resources for their livelihood. Therefore a degraded environment affects peoples’ livelihood as well, which might lead to further instability and human crises.

In view of the foregoing, one can say that law of environmental protection and International Humanitarian Law (IHL) are closely related topics of growing concern to the international community. Their close relationship and common rational basis creates a need to use environmental principles and experiences in interpreting the environmental aspects of the International Humanitarian Law that relate to environmental damage during war and prohibit the manipulation of the environment for hostile purposes.

5.2 Scope and Meaning of International Humanitarian Law

In the course of this lecture there is continuous reference to conflicts or armed conflicts in general. It is important for us to understand the meaning of the term ‘armed conflict’ before embarking on the nature and scope of International Humanitarian Law. No specific definition can be attributed to conflicts as they occur due to variety of socio, economic and political reasons. In general terms, an armed conflict can be defined as any disagreement involving the use of weapons between two or more Nations. An international war crimes tribunal in an important case, The Prosecutor v. Dusko Tadic (1995) defined armed conflict as follows:  

*An armed conflict exists whenever there is a resort to armed force between States or protracted armed violence between governmental authorities and organised armed groups or between such groups within a State.*
Discussions about armed conflicts largely focus on moralistic or pragmatic reasons. For instance F.L. Grieves, an international theorist, in his seminal work, “Conflict and Order: An Introduction to International Relation”, identifies four characteristics of the nature of conflict: “First, human conflict is a fact of modern social life and is likely to remain so for the indefinite future. Second, the abolition of war is a dream. Third, theories of Armageddon are likely to be not only empty but even dangerous, and fourth, wars may be inevitable but nuclear war is unthinkable.” To put it simply, when humanity ceases to exist and people and Nations get mired in political ideologies that itself might lead to genesis of disagreements between and amongst Nations.

International humanitarian law is a set of rules which seek, for humanitarian reasons, to limit the effects of armed conflict. It protects persons who are not or are no longer participating in the hostilities and restricts the means and methods of warfare. IHL applies only to armed conflict and does not cover or address internal tensions, disturbances or sporadic violence. International humanitarian law is also known as the law of war or the law of armed conflict does not regulate whether a State may actually use force; this is governed by an important, but distinct, part of international law set out in the United Nations Charter. It is part of international law, which is the body of rules governing relations between States. International law is contained in agreements between States, in treaties or conventions and in customary rules, which consist of State practice considered by them as legally binding, and in general principles. The principal documents of international humanitarian law are the four Geneva Conventions of 1949 and their Additional Protocols of 1977.

The first Geneva Convention of 1949 protects wounded and sick soldiers on land during war. This Convention represents the fourth updated version of the Geneva Convention on the wounded and sick following those adopted in 1864, 1906 and 1929. It contains 64 articles. These provide protection for the wounded and sick, but also for medical and religious personnel, medical units and medical transports. The Convention also recognises the distinctive emblems.

The second Geneva Convention protects wounded, sick and shipwrecked soldiers at sea during war. This Convention replaced Hague Convention of 1907 for the Adaptation to Maritime Warfare of the Principles of the Geneva Convention. It closely follows the provisions of the first Geneva Convention in structure and content. It has 63 articles specifically applicable to war at sea and also protects hospital ships.
The third Geneva Convention applies to prisoners of war. This Convention replaced the Prisoners of War Convention of 1929. It contains 143 articles whereas the 1929 Convention had only 97. The categories of persons entitled to prisoner of war status were broadened in accordance with Conventions I and II. The conditions and places of captivity were more precisely defined, particularly with regard to the labour of prisoners of war, their financial resources, the relief they receive, and the judicial proceedings instituted against them. The Convention establishes the principle that prisoners of war shall be released and repatriated without delay after the cessation of active hostilities. The Convention has five annexes containing various model regulations and identity and other cards.

The fourth Geneva Convention applies to protection of civilians, included occupied territories. The Geneva Conventions, which were adopted before 1949 were concerned with combatants only, not with civilians. The events of World War II showed the disastrous consequences of the absence of a convention for the protection of civilians in wartime. The Convention adopted in 1949 takes account of the experiences of World War II. It is composed of 159 articles. It contains a short section concerning the general protection of populations against certain consequences of war, without addressing the conduct of hostilities, as such, which was later examined in the Additional Protocols of 1977. The bulk of the Convention deals with the status and treatment of protected persons, distinguishing between the situation of foreigners on the territory of one of the Parties to the conflict and that of civilians in occupied territory. It spells out the obligations of the Occupying Power vis-à-vis the civilian population and contains detailed provisions on humanitarian relief for populations in occupied territory. It also contains a specific regime for the treatment of civilian internees. It has three annexes containing a model agreement on hospital and safety zones, model regulations on humanitarian relief and model cards.

The Conventions define fundamental rights for combatants removed from the fighting due to injury, illness, or capture and for civilians. The 1977 Additional Protocols, which supplement the Geneva Conventions, further expand those rights. In the two decades that followed the adoption of the Geneva Conventions, the world witnessed an increase in the number of non-international armed conflicts and wars of national liberation. In response, two Protocols Additional to the four 1949 Geneva Conventions were adopted in 1977. They strengthen the protection of victims of international (Protocol I) and non-international (Protocol II) armed conflicts and place limits on the way wars are fought. Protocol II was the first-ever international treaty devoted exclusively to situations of non-international armed conflicts. Implementation of international humanitarian law concerns two situations
International Humanitarian Law and Environment

*viz* International armed conflicts that involve at least two countries and armed conflicts that take place in one country (such as those between a government and rebel forces).

Today, all nations have ratified the Geneva Conventions, thus recognising a legal obligation to uphold them in the midst of war. Nations that ratify these humanitarian treaties are required to enact domestic laws to provide legal sanctions against violators. While the world community can apply few legal sanctions against Nations that violate the law, there are numerous practical reasons for them to respect IHL. They are enumerated below:

- The humane treatment of individuals by one side often dictates treatment by the other
- The impact of world opinion
- The safeguarding of a civilisation and its economic resources
- The use of IHL as a means to facilitate the resolution of conflicts and return to a state of peace

Legal action against violators can take place before an international tribunal, such as occurred following World War II, and after the conflicts in Former Yugoslavia and Rwanda. In addition, trials of a soldier or civilian by his or her country’s authorities may be conducted by a military or civilian court under the authority of that nation’s legal code.

The most effective means of securing compliance with these humanitarian rules is through widespread public education in peacetime. In ratifying the Geneva Conventions, Nations agree to educate their military and the public. The more knowledgeable members of the armed forces and the general public are about the law, the more likely it is to be obeyed. The rules of IHL for the protection of the environment aim not to prevent damage altogether, but rather to limit it to a level deemed tolerable.

**Basic Tenets of International Humanitarian Law**

- Combatants who are out of the fight and those not taking part in hostilities are entitled to respect for their lives and physical and moral integrity. They are to be protected and treated humanely, without adverse discrimination.
- It is forbidden to kill or injure an enemy who surrenders or who is out of the fight.
The wounded and sick are to be collected and cared for by the Party that has them in its power. Medical personnel, establishments, transports and materials are to be protected. The protective emblems must be respected.

The lives, dignity, personal rights and religious convictions of captured combatants and civilian internees must be respected, which includes their protection against violence and reprisals. They have the right to correspond with their families and to receive humanitarian assistance.

Those protected by the law are entitled to fundamental judicial guarantees.

No one is to be subjected to physical or mental torture, corporal punishment, or cruel and degrading treatment.

Civilians are not to be the objects of attack.

Although IHL focuses on the treatment of civilians and prisoners of war and the use of weapons of mass destruction, it does not neglect environment protection completely. But, protecting people's lives only and leaving them in a polluted environment, as a result of armed conflict, is not adequate. While armed conflict may directly kill civilians, a polluted environment will directly harm civilians and indirectly kill them. Humanitarian organisations that strive hard to prevent human causalities during armed conflicts, of late have also identified that environmental protection to achieve real humanitarian protection. This protection could reduce or limit damage to the environment. For example, during the Iraqi Freedom military operation in 2003, a water production factory was targeted in Baghdad, causing severe water supply shortages to the residents over there. These shortages can cause contagious sickness, as a direct result of uncleanliness. The International Committee of the Red Cross (ICRC) personnel in co-operation with Iraqi engineers succeeded in repairing damaged engines enabling them to produce 50% of the water supplies needed by the civilians.

5.3 International Humanitarian Law and Environment

Specific rules of international humanitarian law contained in Additional Protocol I confer protection to the environment by prohibiting widespread, long-term and severe damage to the natural environment. In addition, other rules and principles ensure protection of the environment, though without mentioning it specifically. This is particularly the case with general customary principles, such as the principle of distinction and that of proportionality.

When the Rome Conference adopted the Statute of the International Criminal Court (ICC) in July 1998, it included as a war crime the causation of “widespread, long-
term and severe damage to the natural environment”. Such “greening” of international humanitarian law promises heightened sensitivity to the environmental consequences of warfare. The ICC Statute provision, however, is but the most recent example of a growing environmental consciousness vis-à-vis military operations that first began to surface over two decades ago. There is no doubt, however that willful and wanton destruction of the environment or causing widespread, long-term and severe damage to the environment is serious violations. This is supported by the inclusion of these violations of humanitarian law in the list of war crimes over which the International Criminal Court as jurisdiction.

♦ War Crimes

Over the past century, the international community has shown considerable concern for the humanitarian consequence of war. Examples of this concern include the adoption of the four 1949 Geneva Conventions on the law of war, public condemnation of the use of landmines, and the creation of non-partisan international criminal tribunals in the former Yugoslavia and Rwanda. Negotiations have established a permanent International Criminal Court, principally designed to adjudicate genocide and crimes against humanity. The international community has been more hesitant in accounting for the environmental consequences of war. This reluctance exists notwithstanding the severity of military damage to the environment, often intentionally inflicted. Modification and desecration of the natural environment is seen by many as a strategic mechanism to safeguard State sovereignty. In large part, such activity remains permissible because there is no definitive or readily enforceable code of conduct governing what warring Parties can and cannot do to the environment. All the international community has been able to negotiate are scattered collateral references in a variety of treaties and conventions. At most, these references provide some definitional parameters as to what constitutes unacceptable treatment of the environment in times of war.

The concept of war crimes is a concept of customary international law. It requires States to try and punish members of their own armed forces who commit such crimes, as well as anyone else who commits such crimes on national territory or on territory under national control. In addition, international law established universal jurisdiction to try war criminals, in the sense that States even have the ordinary jurisdiction to try war criminals with whom they do not have the ordinary jurisdictional connections mentioned above – although they have no obligation to do so.

All of the war crimes defined are solely for international armed conflict and that is a serious gap. The only war crime defined for non-international armed conflict
that could be potentially relevant is the “destruction of the property of an adversary unless such destruction be imperatively demanded by the necessities of the conflict”.

In combination with the substantive humanitarian law rules that protect the environment, such as rules on targeting and the more specific prohibition against widespread, long-term, and severe damage to the natural environment, humanitarian law offers more specific prohibition against causing widespread, long-term, and severe damage to the natural environment, humanitarian law offers some reasonable prospects for determining responsibilities, assessing damages and awarding compensation.

♦ Armed Conflicts and Environment

The international community has many instruments that make reference to armed conflict and the environment, including Protocol I Additional to the Geneva Conventions which prohibits the use of methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment. The Protocol also requires that care be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population. It also prohibits attacks against the natural environment by way of reprisals.

In addition to the Protocol just mentioned, States – at the recently held World Summit on Sustainable Development – reaffirmed their commitment to the Rio Declaration, which recognises that warfare is inherently destructive of sustainable development. Principle 24 continues that

“States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.”

Damage to the natural environment from armed conflict can undermine the natural resource base on which millions of people depend for their livelihood. Armed conflict is always a tragic failure. Although in some extreme circumstances it takes force to move through to a new stage of co-operation and progress, the human and ecological price that is paid for modern warfare is colossal, and the debt it leaves behind takes years or decades to pay off. While it is difficult in the current atmosphere of crisis to stand back and put the situation in its broader perspective, which is nevertheless what we must do.
Environmental protection is heralded as a laudable goal by a broad variety of international agreements. Only a small subset of these demonstrates any consensus on what constitutes acceptable or unacceptable use of the environment as a tool of war. It is only recently that the international community has made tentative inroads into contemplating the prosecution of those who engage in unacceptable use of the environment during wartime. In this latter regard, the Rome Statute of the International Criminal Court is important. Under the Rome Statute, intentional infliction of harm to the environment may constitute a “war crime”. However, Article 8, which defines “war crimes”, limits the jurisdiction of the International Criminal Court to “war crimes in a particular when committed as a part of a plan or policy or as part of a large-scale commission of such crimes”. To this end, there is an immediate question whether isolated incidents will even fall within the purview of the Court. A more important limitation however is the fact that prohibiting harm to the natural environment is only explicitly mentioned once in the entire Rome Statute. In this regard, Article 8(2)(b)(iv) prohibits “[i]ntentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.

The negotiation history of Article 8(2)(b)(iv) merits a brief review. The draft version of the Rome Statute – which served as the basis for the final negotiations – listed three other options along with the language that, was eventually adopted in Article 8(2)(b)(iv). As adopted, Article 8(2)(b)(iv) triggers numerous interpretive concerns. By way of overview, there are three principal components to the language. Of Article 8(2)(b)(iv): (1) the actual physical act – or actus reus – which consists of inflicting “widespread, long-term and severe damage” to the natural environment; (2) the mental element – or mens rea – namely, that the infliction of this harm must be done intentionally and with knowledge that the attack will create such damage; and (3) a justification element, which allows “military advantage” to operate as a defence a criminal wrongdoing even if both the physical and mental elements are found.

A successful prosecution under the Rome Statute will, first and foremost, have to show that the accused launched an attack which caused “widespread, long-term and severe damage to the natural environment”. Of great importance is that all three elements must be proven conjunctively. The language of “widespread, long-term and severe” is derived from other international agreements relating to the use of the environment in times of war, for example Article I of the 1977 United Nations Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD) and the 1977 Additional
Protocol I to the 1949 Geneva Conventions (Protocol I). Given its derivation, it may be that the Rome Statute does not advance environmental concerns beyond the progress made in these prior documents. In fact, by providing that all three elements conjunctively must be shown to exist, this language regresses from the wording to the ENMOD Convention, which bases responsibility disjunctively on proof of any one of these characteristics. The meaning of “widespread”, “long-term” and “severe” is not so clear in the Rome Statute. Some interpretive guidance can be provided by the work of the Geneva Conference of the Committee on Disarmament (CCD) Understanding regarding the application of these terms in the ENMOD Convention also does not define its terms. The CCD Understanding provides as follows: “widespread”: encompassing an area on the scale of several hundred square kilometers; “long-term”: lasting for a period of months, or approximately a season; “severe”: involving serious or significant disruption or harm to human life, natural and economic resources or other assets.

Criminal behaviour is evaluated not only on the actual physical act, but also on the mindset of the criminal when that act was committed. In the case of Article 8(2)(b)(iv), criminal sanctions will not only fall upon the most invidious offender: the individual who knows that his or her behaviour will cause widespread, long-term and severe damage to the environment and notwithstanding proof of this knowledge, still commits the act with the full intention of causing such damage. Proof that someone did not know that the act would lead to “widespread, long-term, and severe” damage would, under the present wording, be sufficient to absolve that individual. In this respect, the language of Article (8)(b)(iv) is very narrow, declining to extend liability for negligently or carelessly inflicting environmental damage. Greater detail as to the intentions of the negotiating Parties emerges from footnotes in the Draft Rome Statute. These footnotes reinforce the conclusion that a significant mental element generally is required to establish culpability. The negotiators “accept that it will be necessary to insert a provision... which sets out the elements of knowledge and intent”, which must be found to have existed for an accused to be convicted of a war crime. An accused’s actions are to be evaluated in light of the “relevant circumstances of, and information available to, the accused at the time”. Given this defence, it will be important to educate military and political officials in both developing and developed nations as to the environmentally harmful effects of certain types of warfare, and to disseminate technologies to avoid reliance on such strategies in the first place. In this regard, the work of International Committee of Red Cross (ICRC) can play pivotal role. The ICRC has published a document entitled “Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict”, which is “[i]ntended as a tool to facilitate the instruction and training of
Under the Rome Statute, even if there is intentional, widespread, long-term and severe damage to the natural environment, liability will be found only if this damage is “clearly excessive in relation to the concrete and direct overall military advantage anticipated”. This limitation on culpability traces its roots to the doctrine of “military necessity”, a long-standing customary principle which has, in the past, often been used to mitigate or eliminate responsibility for grievous breaches of “humanitarian standards”. In short, “military necessity” is “[a] subjective doctrine which ‘authorises’ military action when such action is necessary for the overall resolution of a conflict, particularly when the continued existence of the acting State would otherwise be in jeopardy”. In other words, “[w]hen the existence...of a State stands in unavoidable conflict with such State’s treaty obligations, the latter must give way, for the self-preservation and development... of the nation are the primary duties of State.”

Equally important, the environmental war crimes provisions of the Rome Statute do not apply to intercine, as opposed to inter-state, conflicts. Article 8(2)(c) and (e), which lists the types of war crimes punishable within internal armed conflicts, omitted “widespread, long-term and severe harm to the environment” from the list, though the Draft Statute included proposed language that would have paralleled Article 8(2)(b)(iv). Basic principles of treaty interpretation provide that this omission is deliberate and evinces a desire not to punish environmental desecration when committed in an internal conflict. Further limitations on the application of the entire Rome Statute to internal conflicts are found in Article 8(2) (f), which provides that it:

“applies to armed conflicts not of an international character and this does not apply to situations of internal disturbances and tensions, such as riots, isolated and sporadic acts of violence or other acts of a similar nature. It applies to armed conflicts that place in the territory of a State when there is protracted armed conflict between governmental authorities and organised armed groups or between such groups.”

In sum, nations appear even less willing to support objective standards of criminal behaviour in internal than in international conflicts this is a major limitations. Recent events in Rwanda and the former Yugoslavia underscore that the environment will suffer even in the event of a civil war. Insurgency and counter-insurgency guerrilla civil wars have a particularly devastating effect on local environments. Insurgents often use tropical forests as home bases and hiding grounds; counter
insurgency forces often respond by slashing and burning forests and by polluting rivers, viewing both as legitimate theatres of operations. Given the current dearth of standards in this area, the development of international law applicable to internal conflicts should be a top priority for policymakers.

The 1949 Geneva Convention IV, Article 53, states that “any destruction by the occupying power of real or personal property belonging individually or collectively to private persons, or to the State, or to other public authorities...is prohibited, except when such destruction is rendered absolutely necessary by military operations”. As with the Hague Regulations, this provision is limited by the military necessity defence and is inapplicable to the global commons. Additionally, this provision requires the destruction to occur within a nation that is actually occupied by another; indiscriminate aerial bombing in which enemy forces are not occupying the other nation’s territory would fall outside its scope.

Resolution 687 of the UN Security Council, adopted in the aftermath of the 1990-91 Gulf War, made Iraq accountable for “any direct loss, damage, including environmental damage and the depletion of natural resources... as a result of Iraq’s unlawful invasion and occupation of Kuwait”. This is an important precedent upon which to ground civil liability for environmental destruction. The creation of the United Nations Compensation Commission to value damages and assess liability is also an important step in implementing responsibility for environmental wrongdoing during wartime.

In sum, these fragments, together with the express pronouncements in the Rome Statute, provide some definitional guidelines as to the permissible use of the environment during wartime. Unfortunately, they create a “...current international legal framework [that] is vague and unenforceable in environmental matters”. The background to and the language of the Rome Statute reveal stagnation in the drive to sanction the use of the environment as a tool of war. Consideration should be given to developing ways of going beyond this language.

♦ The Crime of Ecocide

Some commentators have suggested making it a crime recklessly or intentionally to harm the environment, both within and outside the context of war. This crime, labelled “genocide” or “ecocide” – the environmental counterpart of genocide – would be enshrined in a single international convention. The legal theory of ecocide is as follows: significantly harming the natural environment constitutes a breach of a duty of care, and this consists, at least, in tortuous or delictual conduct and, when undertaken with willfulness, recklessness, or negligence, ought to constitute a crime. Defining the crime to encompass negligent or ‘willfully blind conduct is
particularly important; as we have seen, proof of intentionality can be difficult to establish. In this regard, lessons can be learned from the domestic context. We ought to reevaluate merit of collapsing environmental wrongdoing within a criminal context such as the ICC, which is primarily geared to prosecute violators of humanitarian law on a strict intentionality basis. Pressing policy considerations of preserving the integrity of the environment for future generations argue in favour of attaching liability for environmental infractions at a lower standard. As a result, it would be important for the effectiveness of any ecocide provision to capture not only the *mens rea* standard of criminal law, but also negligence, reasonable foreseeability, willful blindness, carelessness, and objective certainty standards, many of which animate tort law and civil liability.

It is also important to ground the *actus reus* not in the existence of “widespread, long-term and severe” damage, but simple in the existence if damage *per se*. The extent of damage, together with the pervasiveness of the mental element, would only inform sentencing principles. If enforcement authorities are given sufficient discretion in terms of sentencing, then a broader liability provision can not only be effective, but also respect shared notions of fundamental justice.

The jurisdiction of an international ecocide tribunal would be based on the transboundary nature of environmental destruction, together with its cumulative and pernicious effects on the global commons. However, any international tribunal ought to be guided by the principles of complementarities in its relationships with national courts. In negotiating jurisdiction, it is important for an Ecocide Convention to apply equally to natural persons, legal persons and public authorities as well as States. State responsibility is particularly crucial in order for civil damages and restitution to be viable remedies. Although there may be nascent international consensus that State responsibility for destruction of the environment is *ius cogens*, it is unclear whether the international community would be prepared to criminalise such destructive behaviour, when undertaken in the context of armed conflict, beyond the contours suggested by the Rome Statute. What is clear, however, is that by failing to try to do so, the international community is shirking responsibility for one of the principal factors threatening the integrity of the plane for future generations. Although the concept of ecocide may sound utopian within the context of the present framework of reference, this framework needs to be challenged. After all, the notion of what is politically realistic is, and has always been, essentially elastic.

Collapsing environmental crimes within the permanent International Criminal Court might not be the most effective ways to prosecute such crimes. One overarching problem is that the International Criminal Court is principally designed
to punish and deter genocide and crimes against humanity *per se*. Environmental
offences are basically ancillary offences, and might get lost in the shuffle. An
eexample of this is in Rwanda, where the environmental destruction of the
internecine conflict – which has been ongoing since 1994 – is significant. The
Rwandan civil war gas saw two national parks landmined, endangered species
poached, agricultural lands rendered barren to coerce migration of persecuted
peoples, and systematic resettlement exhausting moderate lands – specifically in
eastern Congo – of their agricultural capacities.

♦ **International Environmental Law during an Armed Conflict**

War and other military activities can have a detrimental impact on the environment.
The protection of environment during times of war and military activities is
addressed partially by international environmental law and partially by
international law. Further sources are also found in areas of law such as the human
rights law, the laws of war, the law of armed conflict, the local laws of each affected
country and so on.

The National laws dealing with environmental degradation caused by military
activities during peacetime are also not very strong. Many countries regard military
activities as sacrosanct, permitting environmental destruction in the name of country
protection. However, some countries do take their environmental responsibilities
more seriously in relation to military activities and it is perhaps from these national
experiences in controlling excesses that future international controls may be better
modelled and implemented.

The first issue which arises concerns the applicability of the various rules of
international environmental law to military activities, including preparatory
activities. The general rules of public international law provide little guidance as
to the legal validity and consequences of those treaties following the outbreak of
military hostilities. The validity and effect of a particular treaty during war and/or
armed conflict will often turn on the terms of the treaty itself. The general
instruments of international environmental law and policy also fail to provide any
guidance on this question. The 1972 Stockholm Declaration focuses exclusively on
nuclear weapons. Principle 26 provides that:

*Man and his environment must be spared the effects of nuclear weapons and all
other means of mass destruction. States must strive to reach prompt agreement, in
the relevant international organs, on the elimination and complete destruction of
such weapons.*
The 1982 World Charter for Nature adopts a more general approach, stating the ‘general principle’ that ‘[n]ature shall be secured against degradation caused by warfare or other hostile activities’, and declaring that ‘military activities damaging to nature shall be avoided’. The wording of the 1992 Rio Declaration gets closer to the point but is still ambiguous, stating in Principle 24 that:

Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in time of armed conflict and co-operate in its further development, as necessary.

Although not legally binding, the wording of Principle 24 could either be interpreted as requiring States to respect those rules of international law which provides protection for the environment in times of armed conflict, or as requiring States to respect international law by protecting the environment in times of armed conflict.

Most environmental treaties are silent on the issue of their applicability following the outbreak of military hostilities. Some, including those on civil liability for damage, include provisions excluding their applicability when damage occurs as a result of war and armed conflict. Others include provisions allowing for total or partial suspension at the instigation of one of the Parties, while yet others require the consequences of hostilities to influence decision-making in the application of the treaty by its institutions. Some treaties do not apply to military activities even during peacetime operations, while others are specifically applicable to certain activities which may be associated with hostilities. Finally, the terms and overall purpose of some treaties make it abundantly clear that they are designed to ensure environmental protection at all times. The 1997 Watercourses Convention adopts a different approach, making a renvoi (meaning – ‘send back’ or ‘to return unopened’) to international humanitarian law: its Article 29 provides that: ‘International watercourses and related installations, facilities and other works shall enjoy the protection accorded by the principles and rules of international law applicable in international and non-international armed conflict and shall not be used in violation of those principles and rules.’

♦ Specific Rules regarding Environmental Protection during Armed Conflict

The first treaty to establish rules specifically protecting the environment from the consequences of military activities was the 1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (1977 ENMOD Convention). It prohibits Parties from engaging in ‘military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury’ to any other Party. The Convention defines ‘environmental modification techniques’ as ‘any..."
technique for changing – through the deliberate manipulation of natural processes– the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space.’

Several months after the ENMOD Convention was concluded, the 1977 Additional Protocol I to the 1949 Geneva Conventions Relating to the Victims of Armed Conflict was adopted. The 1977 Additional Protocol I contains two explicit obligations designed to protect the environment which, given the large number of parties and vies expressed by States, may now reflect a rule of customary international law. Under Article 35, it is ‘prohibited to employ methods and means of warfare which is intended, or may be expected, to cause widespread, long-term ad severe damage to the natural environment’. Article 55, entitled ‘Protection of natural environment’, provides that:

Care shall be taken in warfare to protect the natural environment against widespread, long term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.

The Protocol also prohibits attacks against the natural environment by way of reprisals. In its Advisory Opinion on nuclear weapons, the ICJ noted that these provisions of Additional Protocol I provide additional protection for the environment, and impose ‘powerful constraints for all the States having subscribed to these provisions’. The implication that the ‘powerful constraints of the Protocol did not – at least in 1996 – reflect customary law, may no longer hold true with the adoption of the 1998 Statute of the International Criminal Court and France’s accession, on 11 April 2001, to the Protocol’.

5.4 Provisions Relating to Environmental Protection in International Humanitarian Law

It is well-known that incidental to negative effects of armed conflicts are destruction of environment. The law of environmental protection has developed primarily in the twentieth century, whereas the international law of war or armed conflict has evolved over many centuries. But it has only recently developed characteristics similar to the law of environmental protection. Today, the laws of war contain a number of limitations on environmentally disruptive activities during hostilities. There exists an environmental ethic in both the regimes of law which is indicative of a common philosophy or common value system shared by them. Attacking environment as a means of waging war is not a novel concept. There are a number
of wars in which attempts have been made to annihilate the enemy by assaulting the environment. Environment represents the hope and future of every society. Destroying the environment means destroying the society itself.

Today’s wars are deadlier wars. Brutal disregard for humanitarian norms and for the Geneva Conventions’ rules of warfare now extends to environment which is attacked during conflicts. Therefore, the issue of destruction of the environment is one of the most disturbing aspects of armed conflicts today. Greater environmental destruction in modern warfare and the development of the technological capacity for greater destruction of the environment in the modern age are the two dangerous trends. Therefore, the need to understand the international laws that govern the means and methods of warfare is greater than ever. In 1992, the United Nations General Assembly held an important discussion on the protection of environment during armed conflicts and adopted a Resolution (47/37) that urged Member States to take all measures to ensure compliance with existing international law on the protection of environment during armed conflicts. It also recommended that into their military manuals and ensure that they are disseminated. Consequent to this, the International Committee of the Red Cross (ICRC) issued a set of guidelines in 1994 that summarised the existing applicable international rules for protecting the environment during armed conflicts.

The environment protection provisions in the framework of the International Humanitarian Law might be divided into general provisions and specific provisions.

A) General Provisions

The general provisions identified in IHL instruments can be read broadly to include both humanitarian protection and environment protection. The objective of these provisions is to limit the ability of Parties to armed conflict to choose such means and methods of warfare that might affect the environment.

1) The Choice of Methods or Means of Warfare or Injuring the Enemy is not Unlimited

The Charter of the United Nations prohibits war and most armed conflicts. But use of force is justified if used in self-defense in accordance with the UN Charter. When war occurs, combatants should seek specifically to neutralise the other Party’s armed forces, and not to cause unnecessary harm to civilian population or the natural environment. Therefore, it is implied that environmental warfare should be prohibited completely. Historically, the limit on Parties to armed conflicts’ choice of methods of warfare was set forth in the Declaration of St.Petersburg of 1868. The Declaration condemns the use of arms that exceed the goal of war that is to weaken
the military forces of the enemy. This limit might be extended to protect the environment, since the use of weapons that would affect the environment is also likely to aggravate sufferings of individuals.

2) **Principle of Discrimination**

The term ‘discriminate’ is purely a military term, according to which combatants must always distinguish between civilians and civilian objects on the one hand, and combatants and military targets on the other. For example, schools, hospitals, worship places etc should be excluded from military operations. If this principle is violated, it not only affects civilians and civilians’ installations but would also affect environment and natural resources.

3) **Principle of Proportionality**

To be lawful, weapons and strategy or tactics must be proportional to their military objective. Disproportionate weaponry and tactics are excessive, and as such illegal. The principle of proportionality places limits on Parties to armed conflicts in choosing methods and tactics of warfare. This principle requires weighing the balance between a valid military target and environmental effects. Before destroying a natural resource site by military activity, the military authority should balance the expected environmental harm vis-à-vis the military benefits expected to be gained. If the harm is excessive in relation to the concrete and direct military advantage anticipated, it is considered a war crime. For instance, destroying a protected area of endangered species may be judged a war crime, if that destruction outweighs any military benefit.

4) **Principle of Humanity**

This principle, otherwise called “Martens clause’ stems from the premise to preserve – even in armed conflict – a certain minimum of human dignity. Acts not expressively forbidden are therefore still subject to a test of basic humanity. This principle played a major role in the Nuremberg Trials during the Second World War period. The principle of humanity states that a soldier’s aim is to disable other combatants in order to reach a defined military objective. Indiscriminate attacks and attacks against civilians or civilian targets are strictly prohibited. Also important, according to this principle is the need to avert chemical and biological warfare. The use of such methods and tactics of warfare will certainly affect the environment.

B) **Specific Provisions**

As it is impossible to cover all the relevant legal instruments here, the focus would be limited to important provisions.
The importance of the general principles stated in the 1868 St. Petersburg Declaration has already been mentioned. The Hague Convention respecting the Laws and Customs of War on Land (Convention No. IV of 1907) reaffirms and expands on those principles. Its annexed Regulations contain a provision, namely, Article 23 para. 1(g), that states that it is forbidden “to destroy or seize the enemy’s property, unless such destruction or seizure be imperatively demanded by the necessities of war”, is one of the earliest provisions for the protection of the environment in armed conflict.

Several treaties that limit or prohibit the use of certain means of warfare also contribute to the protection of the environment in armed conflict. They are the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases and of Bacteriological Methods of Warfare, adopted in Geneva, 1925 and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, 1972. It means military use of biological organisms or their toxic products to cause death, disability or damage to man, his domestic animals or crops. The Geneva Gas Protocol of 1925 prevents the use of bacteriological methods of warfare. The 1972 Bacteriological Convention supplemented by a Final Declaration adopted in 1986, makes possession and use of bacteriological weapons illegal. The 1972 Convention has been further expanded by the new Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and Their Destruction, 1993. The 1981 Convention on Inhumane Weapons also prohibits the use of toxic weapons and chemical weapons. But there is, as yet, no customary international law against biological weapons. If this form of warfare were used on a major scale in war, the environmental damage would be extensive. As with chemical weapons, the effect of biological weapons is indiscriminate.


The Environmental Modification Convention prevents environmental modification techniques of waging war. Article I enjoins State Parties not to engage in military or any other hostile use of environmental modification techniques, having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party. Environmental modification includes deliberate manipulation of natural process – the dynamics, composition or structure of the earth including its biota, lithosphere, hydrosphere and atmosphere or outer space.
The most potential environmental modification technique that human ingenuity has devised is the nuclear weapon. By seeding cumulus clouds with silver and lead iodides, the U.S. tried to manipulate rainfall for military purposes. It is uncertain whether these efforts to manipulate the environment were effective. Nevertheless, it has been concluded that extensive and successful cloud seeding can result in flooding and erosion, disruption of wildlife and plant life and the presence of silver and iodide in the food chain.

In the absence of an Environmental Modification Convention, environmental modification as a means of warfare would be permissible if military necessity existed. This Convention however, takes away this justification for the State Parties to it in relation to each other.

Specific rules of international humanitarian law contained in Additional Protocol I to the 1949 Geneva Conventions confer protection to the environment by prohibiting widespread, long-term and severe damage to the natural environment. In addition, other rules and principles ensure protection of the environment, though without mentioning it specifically. This is particularly the case with general customary principles, such as the principle of distinction and that of proportionality.

Article 35 (3) and Article 55 of Protocol I are perhaps the most important environmental protection aspects of the laws of war and require significant consideration of the environmental impact of military weapons and methods during hostilities. The causing of widespread, long-term, severe damage by belligerents would be defensible under the doctrine of military necessity. But the military necessity would have to be something similar to self-defense. Mere denial of ground cover to the enemy is not a military necessity. In cases of mass destruction, the question to be examined is: whether military necessity could be a defense to the destruction caused? In the absence of a “defense of military necessity”, Protocol I would hold a belligerent criminally liable for causing extensive damage.

It is a basic rule that objects indispensable to the survival of civilian population should be protected at all times both during peace and war. Article 54, Protocol I, describe typical indispensable objects for the survival of the civilian population. Two things must be considered to comply with this Article, when planning military operations. Firstly: Toxic pollution of the food chain, as the effects of discharges of hazardous wastes into the ecosystem is now well-known. Therefore, care must be taken to prevent pollution of the sources of food of the local population. For example, in the realm of naval warfare, this might require careful target selection so as to ensure that the cargo of a vessel does not pollute the waters in which it sinks (particularly bulk oil carriers). Secondly: Aquifers: They are underground natural
water bearing rock structures extremely important to the environment. They provide drinking water used in private and commercial wells, irrigation water for agricultural purposes etc. Aquifers are vulnerable to depletion by excessive human demands and contamination by hazardous substances through soil percolation. Once contaminated, underground water sources are difficult to clean. Thus, law of armed conflict needs to consider the impact of military operations on aquifers as they are indispensable objects to the survival of the civilian population.

Thus it can be said that the international law of armed conflict has aspects which reflect its concern for environmental protection. For example, Article 55 of the Protocol I limits widespread long-term and severe damage to the environment. The primary purpose of this limitation is to protect the environment and its secondary purpose is to limit the destruction caused by war. Secondly, the laws of war use environmental protection law to strengthen the pre-existing limitations on armed conflicts. For example, Article 56 of Protocol I prohibits destruction of works and installations containing dangerous forces. This limitation serves the primary purpose of reducing losses caused by war and, its secondary purpose is to benefit the environment.

5.5 Environmental Impact Assessment of Armed Conflicts

It is important to conduct an assessment of the impact of armed conflicts on environment for minimising damage to environment and natural resources during armed conflicts. It should be an obligation to conduct an advance assessment of the impact of military action on the environment. Given the extensive and in some cases irreversible consequences of such action, it is crucial to adopt preventive measures, and for that the first step is for everyone involved to assess the environmental impact of every planned military undertaking. More often information concerning the environmental impact of armed conflict has been supplied by humanitarian organisations on the basis of their wide-ranging experience of post-conflict reconstruction all over the world. It is imperative to tackle the problem of environmental impact in the pre-conflict or planning phase. So the principle of prevention is should be clearly adopted by Parties to conflicts and it should also become part of the military manuals. Let us not forget that the war preparation phase already has a detrimental impact on the ground in the form of a more intensive use of natural resources resulting from military manoeuvres (deforestation and the building of dams, encampments and infrastructure such as roads and runways, bridges and water supply and waste water disposal systems).
All this leads to productive zones being abandoned by the local population as they are occupied by the armed forces, leading to a deterioration of farmland, local enterprises, services and the environment in general. It has to be realised that the greater the damage and the more it hampers the stabilisation process, the higher the price to be paid for the reconstruction process.

A 2009 report by the UN’s Environmental Programme UNEP, titled “From Conflict to Peacebuilding – the Role of Natural Resources and the Environment” discusses the linkages between armed conflict, peace building and the environment. The UNEP’s report is interesting in that it addresses an extremely important issue. At the same time, it holds some valuable recommendations although some are more realistic and relevant than others. The main task for environmental considerations in times of armed conflict is exactly in these situations. When hostilities have ceased, there is a strong need to secure relative normality as quickly as possible in terms of providing basic resources for civilian populations, facilitating a stable agricultural and economic infrastructure by securing the delivery of clean water and other resources etc all in order to secure the return to normality and alleviate the suffering of civilians. In this light, the Report deserves credit for addressing the link between peace building and the environment.

The Report makes a number of recommendations. Firstly, the Report recommends that the UN system needs to improve its capacity to deliver early warning and early action in countries that are vulnerable to conflicts over natural resources. Secondly, the Report recommends that oversight and protection of natural resources during armed conflicts is improved. Thus, the Report, inter alia, calls for new legal instruments protecting natural resources during armed conflicts. More interestingly, the Report calls for the taking into account of sharing of natural resources in the deal-making of peace agreements and indeed in the peacekeeping process. Moreover, the Report recommends that the UN’s peacekeeping operations become better at taking the environment and natural resources into account. The Report notes that often it is not until many years into an intervention that the issue of natural resource management receives attention. This is arguably the most important recommendation of the Report. Although it might seem rather obvious, it is paramount that the peacekeeping missions in place in various countries are aware and equipped to deal with the specific environmental conditions in each country. At the same time, it would appear that this recommendation would not be all that difficult to implement within the existing UN peacekeeping organisation. Finally, the Report recommends that the international community ought to help national authorities in post-conflict countries with better administrating extraction processes.
In all of this the media have a crucial part to play, in that they are the ones to convey the message about environmental devastation. Public opinion can in turn bring pressure to bear on the Parties to armed conflict; this is what happened with the Vietnam war, as a result of the media images of ravaged areas broadcast all over the world which showed to one and all the pointless cruelty of certain actions. Public disapproval eventually swayed the political decision-makers who ended up bowing to the pressure of public opinion. Such an outcome is scarcely possible where the reporting is done by embedded journalists.

5.6 Conclusion

Environmental warfare has been used throughout the history. However, the trend over the years has been the tendency to cause greater destruction to the environment than ever before. Munitions have been used against larger and ill-defeated target areas, resulting in high levels of environmental damage. It is because of this environmentally destructive trend in modern warfare and the development of technology capable of even greater destruction that the law of armed conflict has adopted environmental protection principles. Today, under customary as well as conventional international law of warfare the importance of preserving environment has finally been recognised. Consequently, the selection of military weapons, methods and objects of attack should also be based on ecological considerations, e.g., impact on nature, destruction of natural balance, and introduction of irreversible processes.
6

Environment and Conflict Management

Chapter Contents Page Nos.
6.1 Introduction 186
6.2 Nature and Scope of Environmental Conflicts 187
6.3 India and Transboundary Water Conflicts 196
6.4 Conclusion 202

6.1 Introduction

Since World War II, there has been a steady expansion of multilateral negotiations/conference diplomacy within international relations. Except for the management of relations between neighbouring States and the strategic relationship between the two superpowers during the Cold War, multilateral negotiations become the dominating feature in the international arena. Dispute settlement provisions are not unique to Multilateral Environmental Agreements (MEAs) — they have long been an essential element of international Agreements, because they provide the procedures by which disagreements among the Parties regarding the agreement can be resolved.

Dispute settlement provisions are included in a growing number of MEAs (most of the major global MEAs have dispute resolution mechanisms). Despite the number of available procedures, in practice States have shown reluctance to submit to the formal dispute settlement. In part, this is due to the fact that most of these provisions are not compulsory. Thus, in order for an aggrieved Party to avail itself of the mechanism, the other Party must consent to using the mechanism. Generally speaking, MEAs tend to focus on mechanisms that promote compliance, rather than on formal dispute settlement procedures. In more than a decade, the provisions for an arbitral tribunal under the CBD have never been invoked formally — and this is not unique for MEAs.

-186-
Population explosion and technological advancement led to exploitation of precious natural resources. It created preconditions for mass extinction and global catastrophe. Environmental problems have no longer remained domestic but having become transnational in nature. These problems now demand the collective attention of everyone and of all Nations. So in order to facilitate collective action to mitigate global environmental problems, it is important to overcome religious, cultural disparities or barriers, so as to work together to solve common problems. To do so, we need to create better ways of communicating across borders and improved techniques for collaboratively negotiating our differences, engaging in open and honest dialogue, and resolving environmental disputes equitably without warfare or propaganda. In this genre mediation and alternative dispute resolution (ADR) techniques encourage fair, respectful, participatory, and democratic ways of communicating, solving problems, negotiating collaboratively, engaging in constructive dialogues, and resolving conflicts internationally based on consensus. Without these methods we will be unable to sustainably solve our problems or survive, and for these reasons, it is critical that the world’s nations adopt mediation, ADR and any other techniques for resolving environmental conflicts.

6.2 Nature and Scope of Environmental Conflicts

According to Article 33(1) of the UN Charter:

“The parties to any dispute, the continuance of which is likely to endanger the maintenance of international peace and security shall, first of all, seek a solution by negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.”

Clearly, this provision applies to environmental disputes. The list proposed includes almost all the means of peaceful settlement of interstate disputes, well established in international law.

♦ **Negotiation** means proposals made by one or the other of the Parties to a dispute and the reaction to the other Party, including counterproposals, in order to reach an agreement. Negotiations should be conducted in good faith, the Parties must carefully examine the proposals of their partners and try to make progress towards an agreement. Unilateral acts which could comprise the result of the negotiation should be avoided.

♦ **Good offices**, which are no listed in Article 33(1), consist in the intervention of a third Party trying to persuade the Parties to a dispute to meet and find pacific means of settlement.
Enquiry is the establishment of the facts of a determined case by an independent body.

Mediation consists in bringing the Parties to a dispute together and submitting to them concrete proposals for the settlement of the dispute.

Conciliation is a combination of enquiry and mediation; a third Party first established the facts of the case and then makes proposals for the settlement.

Arbitration is the settlement of a dispute by a third Party – a single person, an existing body or a commission specially created – whose decision is accepted in advance by the Parties to the dispute.

In all these cases all the Parties to the dispute must agree on a procedure and on the choice of the third Party who will be charged with the enquiry, mediation, conciliation or arbitration.

The two remaining means of settlement, judicial settlement and resort to regional agencies or arrangements, are different, since the bodies which play the role of third Parties pre-exist and have established procedures which must be followed. Regional agencies or arrangements mostly have a potential character which may influence the terms of the settlement. Judicial settlement generally means a decision by the International Court of Justice, the main judicial organ of the UN, the statute of which is annexed to the UN Charter (Article 92). This body consists of 15 independent judges. Its jurisdiction must be explicitly accepted by States which equally accepted the Court's jurisdiction, or by a special agreement for a determined case. Decisions of the Court are always obligatory and must be executed. Although the decision of the Court has no binding force except between the Parties and in respect of that particular case, its scientific and moral authority is such that rules states by the Court in its decision are generally considered to express customary international law.

Settlement Authorities

One of the fundamentals of international environmental law is the 1941 arbitral award in the Train Smelter Case. During the following long period, no international jurisdiction or arbitration tribunal decided environmental issues on the merits of the case, inspite of the fact that many treaties related to environmental protection explicitly state that disputes arising from the application or interpretation of their clauses should be referred either to the International Court of Justice or to arbitration. Practically all the recent major treaties adopted in this field include such provisions. Agenda 21 also encourages recourse to the ICJ which has formed a special Chamber in order to be prepared to deal with any environmental case.
Recent developments have improved the situation. In an advisory opinion of 1996 on the Legality of the Threat or Use of Nuclear Weapons, the ICJ recognised the importance of environmental protection and confirmed Principle 21 of the Stockholm Declaration. In addition, the 1997 judgment in the case of the Gabčíkovo-Nagymaros Project insists on the need to take environmental norms into account even for the application and interpretation of former treaties.

The fact that until now international jurisdictions were not used for the settlement of environmental disputes can be explained in different ways. One explication is that in many international environmental treaties provisions related to dispute settlement also include the resort to organisms created by individual environmental treaties, such as a conference of the Parties or an implementation committee, for questions which the implementation or the interpretation of the treaty concerned can raise. Another possible explication is that States obviously prefer to give priority to the compensation of victims of transfrontier pollution or other harmful environmental effects, rather than getting involved in international negotiations or dispute settlement procedures. The increasingly accepted solution is to transfer concrete problems from the interstate level to the interpersonal level. When a transnational element is present in a case which could create jurisdictional or interstate problems – e.g. transfrontier pollution harms private property in the neighbouring State – the polluter and the victim are directed to bring the case before the domestic authorities which are competent according to the rules of international private law. Also, States have sought to overcome the difficulties by prior agreement, in concluding treaties or adopting other international texts, to resolve at least some of the problems in three fields where the effects of environmental harm may be the most serious: the production of nuclear energy, the transportation of oil or other hazardous substances by sea and oil pollution caused by seabed activities.

The 1960 Paris Convention on Third Party Liability in the field of Nuclear Energy, drafted for members of OECD, and the 1963 Vienna Convention on Civil Liability, open to all UN member States, contain regulations concerning the compensation of victims of nuclear activities.

Marine population by oil or by hazardous substances, in particular compensation for environmental injury that may be caused by it, is regulated by an entire system based on the 1969 International Convention on Civil Liability for Oil Pollution Damage as modified several times.

Several common traits are found in these agreements:

♦ Identification of the polluter is assured through a presumption which channels responsibility. Thus in case of damage, the responsibility automatically is
imputed to the exploiter of the hazardous installation or the ship owner, whether they are at fault or not.

♦ The solution of the problem of liability is facilitated by imposing strict liability or damage, which means that no fault is required to decide that the person designated is liable. However, a certain number of escape clauses corresponding e.g. to fraudulent conduct of the victim, war, natural catastrophe, exist to avoid such liability.

♦ Jurisdictional competence is determined in designating the proper forum, in some cases that of the plaintiff, in other cases that of the polluter or in permitting the victim the free choice of a tribunal.

♦ The execution of judgments rendered is assured in foreign countries.

Such solutions can help prevent international disputes.

a) Law of the Sea Tribunal

With the entry into force of the UN Convention on the Law of the Sea (UNCLOS) in 1994, the Law of the Sea Tribunal was established. The Tribunal may hear any dispute concerning the application or interpretation of UNCLOS, except as otherwise provided in the Convention. Its jurisdiction also extends to disputes concerning the interpretation or application of other agreements related to the purposes of UNCLOS that are submitted to the Tribunal in accordance with the other agreements. In deciding cases, the Tribunal applies the United Nations Convention on the Law of the Sea and other rules of international law not incompatible with the Convention. The Tribunal is competent for disputes arising between the following entities:

♦ States Parties;

♦ State enterprises, natural persons, or legal or judicial persons that are sponsored by States Parties and carrying out activities in the “Area” (namely, the seabed, ocean floor, and subsoil thereof lying beyond the limits of national jurisdiction); and

♦ the “Authority” (which is the organisation through which States organise and control activities in the Area) or the “Enterprise” (which is the organ of the Authority that carries out activities in the Area as well as the transporting, processing, and marketing of minerals recovered from the Area).

Alongside the Seabed Dispute Chamber, which has jurisdiction in disputes regarding activities in the Area, the Tribunal may form such chambers, composed
of three or more of its elected members, as it considers necessary for dealing with particular categories of disputes.

b) *The International Court of Environmental Arbitration and Conciliation (ICEAC)*

It facilitates the settlement of environmental disputes submitted by States, natural persons, or legal persons through conciliation and arbitration. It was established in 1994 in Mexico by 28 lawyers from 22 different States.

Upon request, the Court may give Consultative Opinions relating to disputes and other issues of environmental law. Consultative Opinions may be:

♦ Preventive, to ascertain whether a proposed action is compatible with environmental law;

♦ Confirmatory, to confirm that an action has been carried out in compliance with environmental law; or

♦ Denunciatory, to enquire whether an action by another person complies with environmental law, and if not to make that information available to the international community.

For example, in 2003, the Court issued a Consultative Opinion on the Compatibility between Certain Provisions of the Convention on Biological Diversity and the Agreement on Trade Related Aspects of Intellectual Property Rights as to the Protection of Traditional Knowledge. Other Consultative Opinions relate to “Regulation of Fishing Methods and Gear”, “Protection of the Meridian Frog”, and the transportation and disposal of waste and dangerous substances in Sonora, Mexico.

In resolving disputes and in issuing Consultative Opinions, the Court invokes and applies a range of bodies of law, including:

♦ international treaties and applicable private contracts;

♦ general rules and principles of international environmental law;

♦ relevant national law, in accordance with generally accepted rules of private international law; and

♦ any other principles, rules, or standards that the Court deems relevant, including equity.
c) **International Court of Justice**

The ICJ is the primary judicial organ of the United Nations. Pursuant to provisions in various international agreements (including the Statute of the ICJ, the organic document establishing the ICJ), the ICJ is charged with resolving various disputes between States. States can recognise compulsory jurisdiction of the Court; in doing so, many States exempt certain classes of cases from compulsory jurisdiction. This partial exemption is controversial but has been upheld. The ICJ can also issue non-binding Advisory Opinions at the request of UN bodies.

There are 15 Members of the Court, who are elected by the UN Member States and other States Parties to the Statute of the ICJ. In some instances, Judges Ad Hoc may sit on an ICJ panel to hear and decide a case. Pursuant to Article 38 of the ICJ Statute, the Court may consider a variety of legal sources in deciding cases:

- international conventions, whether general or particular, establishing rules expressly recognised by the contesting States;
- international custom, as evidence of a general practice accepted as law;
- the general principles of law recognised by civilised nations;
- subject to the provisions of Article 59, 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.

The ICJ differs from many other international tribunals in that:

- ICJ judges must be continuously at the disposal of the Court and cannot sit on other tribunals;
- the ICJ is permanent in its constitution and its established rules; and
- Parties do not have to pay fees or administrative costs, which are covered by the UN.

Recognising the rapid growth of international environmental law and the growing number of international cases that touched on environmental matters, the ICJ established a specialised Chamber for Environmental Matters in July 1993. The Chamber consists of a panel of seven ICJ judges. The Chamber is empowered to hear environmental cases only with the consent of the Parties to the case. As a practical matter, though, the ICJ’s environmental cases generally proceed through the standard ICJ process, and have yet to take advantage of the specialised Chamber.
d) **Permanent Court of Arbitration of Arbitration**

Established in 1899, the Permanent Court of Arbitration (PCA) resolves disputes among States, private Parties, and intergovernmental organisations through arbitration, conciliation and fact finding. It claims to be “the first global mechanism for the settlement of inter-state disputes”.

Each Party to the PCA can appoint up to four arbitrators (“Members of the Court”) to a standing roster. When there is a dispute for the PCA to resolve, each Party appoints two arbitrators from this roster, and the four arbitrators (two from each Party) select an umpire.

The International Bureau is the PCA’s Secretariat. It assists Parties in selecting arbitrators, and performs other legal and administrative functions. English and French are the official working languages of the PCA, although the Parties can agree to conduct proceedings in any language.

The PCA has adopted guidelines and model clauses for traditional dispute settlement in environmental treaties. These generally rely upon and build upon precedents, since existing approaches have been tested and are more likely to be adopted. In 2001, the PCA Administrative Council adopted Optional Rules for Arbitration of Disputes Relating to the Environment and/or Natural Resources. The Environmental Conciliation Rules, adopted in 2002, complement the earlier rules on arbitration. These Rules were developed by the International Bureau and a working group and drafting committee of experts in environmental law and arbitration.

The PCA also provides guidance on drafting environment-related dispute settlement clauses. For example, in 2003 the UNECE approved reference to the PCA Environmental Arbitration Rules in its draft “Legally Binding Instrument on Civil Liability under the 1992 Watercourses and TEIA Conventions”. The PCA has also collaborated with the CBD, the Bio safety Protocol, and UNFCCC COPs.

The PCA convenes seminars on international law and publishes the papers in independent volumes. These have included International Investments and Protection of the Environment: The Role of Dispute Resolution Mechanisms (2001) and Resolution of International Water Disputes (2003).

**Key features of the Environmental Arbitration Rules are:**

♦ availability for use by any combination and number of parties: States, intergovernmental organisations, non-governmental organisations, multinational corporations, and other private entities where all Parties can
agree to use them. This was seen as necessary because disputes concerning the
environment often involve multiple Parties of mixed origin (governmental/
non-governmental and even commercial). Special attention was given to
ensuring harmony with existing environmentally related agreements so that
references to these procedures could be inserted in such agreements seeking
to adopt arbitration rules.

♦ Provisional measures of protection and security focused on mitigating or
preventing serious harm to the environment.

♦ a roster of government nominated arbitrators, experienced in natural resources
and environmental law, who can make themselves immediately available to
the parties. That panel is nominated by the Member States and the Secretary-
General as the case may be.

♦ a roster of government nominated experts in environmental science available
to assist either the Parties or the tribunal. That panel would be nominated by
Member States and the Secretary-General so that Parties would have immediate
access to expert advice.

♦ confidentiality procedures designed to protect information impacting national
security, and for commercial Parties, intellectual property, trade secrets, and
other proprietary information, and where the Parties so agree, allowing for a
“confidentiality advisor” to view information and report on it, but not reveal
it in detail to the party from whom it did not originate nor to the tribunal.

♦ reduced time-periods as compared to intended to permit a speedy and dynamic
response to the issues presented to the tribunal.

Taken together then, the Environmental Arbitration and Conciliation Rules are a
concrete response to the calls issued in Rio Principle 26, asking States to find means
to “…resolve all their environmental disputes peacefully…”, and Rio Principle 10
by providing access to justice to “all concerned citizens”. It is now hoped that
States will consider adoption of references to these Rules in multilateral
environmental agreements as the procedures for arbitration. Indeed, the PCA has
been involved in the negotiations of multilateral environmental agreements which
foresee, but have not yet adopted such arbitration or conciliation procedures, such
as the United Nations Framework Convention on Climate Change. Further, these
Rules will prove useful in future liability regimes, such as the one being
contemplated under the United Nations Cartagena Protocol on Biosafety. The
United Nations Economic Commission for Europe has convened a working group
to draft a Civil Liability Protocol to the 1992 Watercourses and 1997 Transboundary
Effects of Industrial Accidents Conventions, and that working group has adopted
a reference for private-private arbitration of claims arising under that Protocol using the PCA Environmental Rules. Parties negotiating Bilateral Investment Treaties, Production Sharing Contracts, Emissions Trading Contracts, Bilateral and Regional Environmental Agreements, Liability Conventions, and any agreement relating to natural resources and environment should consider a reference to these Rules.

e) Strategic Use of International and Domestic Dispute Resolution Mechanisms in the Danube Delta Case

In 2003, The Government of Ukraine approved a project to dig a deep-water navigation channel through Ukraine’s portion of the Danube Delta Bilateral Biosphere Reserve. Ecopravo-Lviv (EPL), a Ukrainian public interest environmental law NGO, challenged this decision on both environmental and procedural grounds (including a lack of public participation in the EIA process). In addition to seeking remedies in national courts (see case study under Guideline 41(i) ), EPL filed complaints with a variety of relevant international bodies in late 2003 and early 2004. These include:

♦ The Compliance Committee of the [Aarhus Convention] (on access to information, public participation in decision-making and access to justice in environmental matters). Romania also subsequently filed a complaint with the Compliance Committee;

♦ The Implementation Committee of the Espoo Convention (on EIA in a transboundary context). [The Implementation Committee refused, by a vote of 4-3 in 2004, to consider the complaint.] Romania subsequently filed a complaint with the Implementation Committee;

♦ A Letter of Emergency Notification filed with the Executive Secretary of the Convention on the Conservation of Migratory Species;

♦ An Emergency Complaint filed with the Permanent Secretariat of the International Commission for the Protection of the Danube River; and

♦ A Letter of Notification filed with the Secretariat of the African-Eurasian Waterbird Agreement (AEWA).

In addition EPL has raised the issue with the Ramsar Convention and the UNESCO Man and Biosphere Programme, and both institutions have expressed concern about the channel.

This strategy of seeking relief through multiple domestic courts and international dispute resolution mechanisms can be resource intensive. Also non-state actors
that seek recourse from an international mechanism may — but not necessarily — be required to exhaust domestic remedies first. Exhaustion of remedies depends on the terms of the particular MEA or institution, and there often are exceptions for specific instances (e.g., emergency or futility).

A 2001 UNEP study on “Dispute Avoidance and Dispute Settlement in International Law” highlighted methods for resolving potential disputes regarding MEAs. The study emphasized the need to address potential disputes at the earliest possible stage in order to avoid disputes, as well as utilising informal, non-confrontational approaches to address disagreements and disputes. Ideally, dispute settlement provisions of an MEA will simply be there as a “safety net”, to be employed only when measures to promote compliance and avoid disputes have not been effective. Dispute settlement provisions typically call for less confrontational measures, such as good offices and conciliation, to be attempted first. If these are unsuccessful, more formal measures such as arbitration or other judicial arrangements may be employed.

Increasingly, dispute settlement bodies accept complaints by NGOs and private individuals against States, as well as interventions (including amicus curiae or “friend of the court” briefs) by NGOs in disputes between States. These bodies include, for example, the World Trade Organisation (amicus briefs), the Inter-American Court for the Protection and Promotion of Human Rights (complaints in environmental cases), and the International Court of Justice (amicus briefs).

### 6.3 India and Transboundary Water Conflicts

We are living in an era of industrialisation and rampant urbanisation. One of the pitfalls of this process is exploitation of natural resources leading to resource scarcity and environmental degradation. These events in turn contribute to environmental conflicts that may turn violent on some occasions. Such environmental conflicts could be categorised as conflicts over water and mineral resources, including oil and diamonds and struggle for land and territorial rights. Most importantly, during the second half of the 20th century, focus on depleted and unsustainable uses of natural resources gained momentum with changing socio-economic and political developments. These involve issues associated with the natural environment and how humans will or will not be allowed to interact with it. Therefore it is important to understand and explore the values of interrelationship between humans, their habitats and natural environment. Axiomatic to this relationship is the debate concerns the extent to which environmental abundance or scarcity contributes to underlying causes of conflict. Throughout history, countries have battled over
natural resources. Between 1950 and 1976, fishing rights contributed to disputes between England and Iceland in three Cod Wars, although the disputes were ultimately settled through diplomatic means. One natural resource that will be a likely source of major conflict is water as many of the world's major rivers and underground aquifers cross national boundaries. So far, even in politically tense areas of the world such as the Middle East, neighbouring countries have generally succeeded in maintaining agreements for the sharing water supplies. However, a number of violent conflicts have erupted, in part, over the abundance of resources. In several African nations, lucrative mineral resources – oil, diamonds, and other strategically important minerals – have fueled ongoing conflict. Sierra Leone, Congo, Liberia, and Angola have all experienced horrific civil wars in recent decades, and a major factor in those wars has been over diamonds. All four countries have been devastated by warfare due primarily to predatory governing elites using their control over the resources to enrich themselves and outfit armies used to maintain their command.

**India and Transboundary Water Conflicts**

It is estimated that by 2025, over half of the world's inhabitants will be directly affected by water scarcity. Most of them will live in either China or India. Conflict over water can be considered at two levels. First, there is the possibility of internal political conflict due to the inability of governments to provide sufficient water to various dependants. Second, there is the possibility of international or inter-regional conflict over transboundary water supplies. The implicit understanding is that countries or regions that already face internal unrest are particularly vulnerable to resource conflicts. The 2006 UN report, “From water wars to bridges of co-operation: Exploring the peace-building potential of a shared resource”, details just a small number of these instances.

**India-China Water Conflict**

China has access to about 7% of the world's water resources, but is home to around 20% of the global population, while India possesses around 4% of water resources with only a slightly smaller populace. Both countries, along with eight other Asian nations and 47% of the world's people, are heavily dependent on the Tibetan Plateau for water. Research indicates that in the near future, India and China will most likely find themselves confronted by just such high levels of water stress. Six major Asian river basins begin in the Tibetan Plateau – the Indus (India, Pakistan); the Ganges (Nepal, India, Bangladesh); the Brahmaputra (India, Bangladesh); the Salween (China, Burma, Thailand); the Mekong (China, Laos, Thailand, Cambodia, Vietnam); and the Yangtze (China). Over 45,000 glaciers seasonally drain into these
rivers, but experts warn that due to global warming they are shrinking at twice the rate of other glaciers worldwide. This factor, combined with increasing water consumption, desertification, rapid industrialisation and pollution, mean that demand for the pristine and previously plentiful water of the Tibetan Plateau is increasing. Yet, it is also drying up. Trans-boundary water supply is developing into a major, if largely unremarked upon as yet, politico-security issue for Asia’s two giants. The Chinese Ministry of Water Resources’ 2005 report, “Tibet’s Water Will Save China”, underscores the strategic importance of Tibet vis-à-vis water. It discusses the controversial South-North Water Transfer Project, which entails three man-made rivers channelling water from the Plateau to China’s arid north. This scheme will divert water from the Yarlung Tsangpo, Dadu and Jinsha rivers, which rise in the Plateau, and carry it to the Yellow River (Huang He) to provide water for human consumption, farming and industry. Three diversion routes are involved in the project but it is the diversion of the Yarlung Tsangpo that is the most controversial and technologically challenging of the three routes. The river flows eastwards through southern Tibet before making a spectacular U-turn at its easternmost point, called the Shuomatan Point or the “Great Bend”, just prior to entering India. Here it is joined by two other major rivers and from this point of confluence it is known as the Brahmaputra. It is also here that China plans to divert water. This diversion will mean that the amount of water in the Brahmaputra will fall significantly, affecting India’s northeast and Bangladesh. It will also severely affect agriculture and fishing due to an increase in water salinity and silting downstream. India and China have no water-sharing treaty and although they had agreed to set up a joint expert-level mechanism on interstate river waters.

**India-Pakistan Water Conflict**

South Asia is a region with heavy dependence on its rivers to meet its need for fresh water. The primary issue that could trigger a regional crisis could be over the Indus River that flows into Pakistan from India. Both countries have systematically brought up the dispute regarding the flow of the Indus River and its tributaries in their bilateral relations. The Indus River water dispute originates from the provision of the Indus Water Treaty (IWT), which came into force in 1960. The purpose of the IWT is to end issues regarding the Indus River within a framework of an institutional mechanism. Pakistan further claims that India is diverting its waters and the construction of hydroelectric dams by India is reducing the flow of water to Pakistan. Pakistan has been objecting to India’s Kishenganga power project; it claims that this project will divert the waters of the Ganga and will also lead to a 27% shortage in water in Pakistan.
India-Bangladesh Water Conflict

Similarly India and Bangladesh have disputes over the sharing of the Ganges River and Bangladesh argues that it does not get a fair share of the Ganga waters or its territory gets flooded during the monsoons because of the release of the excess waters by India. The Tipaimukh Multipurpose Hydroelectric Dam Project which was commissioned by India in the year 2006, has been in the news recently as concerns have been raised by the Bangladesh government as well as civil society and environmental groups both in India and Bangladesh, over the impact of the dam on the region. The dam project had been on the drawing board for a long time until the project was awarded to North Eastern Electric Power Corporation (NEEPCO) in 2003, only to be replaced by the State-owned National Hydro-electric Power Corporation (NHPC) in July 2009 due to the concerns of the Manipur State government over NEEPCO. The Tipaimukh Dam is located near the confluence of the Barak and the Tuivai rivers in the Tipaimukh sub-division of the Churachandpur district of Manipur. This area is close to the Manipur-Mizoram-Assam border, and therefore the project involves the three States in Northeast India. The Barak river which flows downstream to meet the Surma river system in Bangladesh, is considered to be the lifeline of the Sylhet region in Bangladesh. There have been intense debates in Bangladesh among civil society groups, environmental groups, human rights organisations and media over the implications of the Tipaimukh Dam on the share of water coming from upper-riparian India. The water sharing of transboundary rivers between India and Bangladesh had an unpleasant past with the Farakka dispute over sharing of waters of the Ganges which is still under negotiation. The Water Resources Minister of Bangladesh in 2009 emphasized the need to have negotiations on the concerns and issues raised between both countries. Bangladesh has urged India to conduct a joint study of the implications that the Tipaimukh Dam would have on the region and the future flow of water in the concerned river system, which directly affects Bangladesh, being the lower-riparian country.

India-Nepal Water Conflict

India and Nepal disagree over the agreements on the Mahakali and the Kosi Rivers. Nepal complains that these are unjust and do not perpetrate an equal sharing of waters between the countries. One of the major problems relating to sharing of waters among the South Asian countries has been the construction of large hydro-electric projects which divert shared river waters between countries. In this regard for resolving or managing these conflicts, it has been suggested that South Asian Association for Regional Cooperation (SAARC) should encourage joint water management solutions like for example hydro-electric projects and energy exchanges between the countries.
Let us briefly analyse the other cases of environmental and resource conflicts.

**Antarctica**

Systematic exploration and territorial claims on Antarctica extend back to the turn of the century. After World War II these claims expanded and threatened to militarise the continent. Meteorology, oceanography, glaciology and other kinds of environmental research in or near Antarctica figured prominently in the 1957-58. The 1959 Antarctic Treaty, negotiated with U.S. and USSR leadership, calls for the continued absence of military activities and the suspension of all territorial claims. For Antarctica, scientific co-operation appears to have eased the way for political co-operation.

**Atmospheric Testing**

Atmospheric testing of nuclear weapons was a highly visible form of threat behaviour during the Cold War. Many reinforcing events in the mid-1950s led to concern about radioactive fallout from the testing. The public most feared the health effects of fallout; radioactive elements were, for example, measurable in milk. The test ban soon became a cause of the nuclear disarmament movement. The succession of large nuclear yield tests that began in the late 1940s and ended, for the most part, in the early 1960s injected much \( \text{NO}_2 \) into the stratosphere. The oxides of nitrogen are mainly produced in the fireball, with heating and cooling of the captured air. The largest annual yield of nuclear tests occurred in 1962, 108 megatons, including two explosions of 30 megatons. The largest yield was an explosion in 1961 of 58 megatons. About three-fourths of total yield in the peak years around 1960 exploded in the atmosphere. The bulk of these detonations was in the upper troposphere and stratosphere, but Starfish detonated a yield of 1.4 megatons in the thermosphere at an altitude of 400 km. Altitude matters greatly for \( \text{NO}_2 \) production calculations. \( \text{NO}_2 \) absorbs solar radiation, and its enhanced presence in the stratosphere for a period of two decades could have reduced the sunlight reaching the surface by a few percent. Climatologists, in fact, observed a temporary cooling trend in the Northern hemisphere, where nearly all atomic tests occurred.

Part of the task of making nuclear bombs is performing the calculations of atmospheric effects, so several environmental scientists worrying about the climatic and other effects on both sides had ample access to high-level officials in government and the military. This access, and related trust, probably helped expedite the 1963 Limited Test Ban.
Acid Deposition

From the late 1960s, the Scandinavian countries began claiming that the acidity of their rain was increasing and that it was caused by European, especially English, emissions upwind. The acidity allegedly damaged Scandinavian lakes and woods. Beginning in 1972, the Organisation for Economic Co-operation and Development (OECD) conducted a study of long-range transport of air pollutants to assess such claims. Similar conflicts and joint study efforts arose between the United States and Canada in the late 1970s, and peaked, with harsh words but no violence, in the early 1980s.

Climate Change

Global warming induced by greenhouse gases emitted by human activities could cause conflicts in at least two ways. Erratic, unfavourable weather and climate could raise pressures for migration, certainly an irritant for some receiving States. In recent years such environmental migrants, have numbered around 10 million annually. The bulk have been concentrated in a few countries, such as Afghanistan, Ethiopia and Burundi. Political threats to well-being, violence, and economic suffering as well as droughts and floods produce refugees. Studies attribute rather few refugees directly and solely to environmental disasters and shortages of resources.

The second way climatic change could cause conflict is through inequitable or apparently inequitable means to reduce carbon emissions, especially from coal and oil. Conflict might arise between the rich, developed countries of the so-called North and those of the poorer South. The South wants to increase its use of carbon and continue exporting it, while the North is ambivalent about curbing its appetite. The idea of “joint implementation”, basically financial transfers from the North to the South (and the former Soviet Union) for emission reduction in the South that might also lower globally the cost of emission restraints, developed under the auspices of the Intergovernmental Panel on Climatic Change (IPCC), a body of several thousand technical experts. The idea has now moved into the political and diplomatic arena.

The IPCC originated in volunteer efforts under the auspices of the scientist-controlled Scientific Committee on Problems of the Environment (SCOPE) of the non-governmental International Council of Scientific Unions (ICSU) to provide international equivalents of U.S. National Research Council studies on global warming.
6.4 Conclusion

With human population increasing and natural resources dwindling, conflicts over environmental issues continue to rise in frequency and intensity. With growing emphasis on environmental issues of international concern, there is need for building consensus among competing stakeholders and interests. Political commitment to tenets of democracy and good governance are crucial for sustainable management of natural resources. A conflict impact assessment in exploration of natural resources is important is often an important starting point. Countries should include the basic development co-operation policy for achieving coherence and to de-escalate the violence over natural resources. Crisis prevention and conflict management are relevant not only to government bodies but also to private actors. Groups in civil society originating from conflict areas are of prime importance because they are very familiar with regional conditions, they are often well accepted and they are able to ensure long-term involvement. Non-governmental organisations (NGOs) operating at international level are also important actors. Growing attention is being paid to the importance of local and international private enterprises for conflict situations.
7

United Nations Framework Convention on Climate Change and the Kyoto Protocol

Chapter Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Introduction</td>
<td>203</td>
</tr>
<tr>
<td>7.2 UN Framework Convention on Climate Change, 1992</td>
<td>204</td>
</tr>
<tr>
<td>7.3 The 1997 Kyoto Protocol</td>
<td>209</td>
</tr>
<tr>
<td>7.4 IEL Instruments to Tackle Ozone Depletion</td>
<td>218</td>
</tr>
<tr>
<td>7.5 Conclusion</td>
<td>222</td>
</tr>
</tbody>
</table>

7.1 Introduction

Awareness about the climate, its development and changes differs in different communities. It has presumably, always been high among the more intelligent members of primitive societies living in vulnerable regions. To establish a history of the changes in climate is not easy because of the difficulties in obtaining truly representative measurements. Climate change has been universally recognised as a global problem. While, historically, the preponderance of greenhouse gas emissions have been in developed countries, emissions will increase rapidly with expected and needed economic growth in developing countries. The principal reason for lack of progress is that in developing countries, climate change is not an important focus of economic or development policy and only recently has it been considered among national environmental policy objectives. Climate change remains too marginal compared to the pressing issues of food security, poverty, natural resource management, energy needs and access, or urban land use to capture the attention of leading actors. Various parties to the United Nations Framework Convention on Climate Change (UNFCCC) 1992, as well as independent scientific
analysis, have reiterated that strong and inclusive global co-operation that integrates sustainable development and climate change policy objectives will be needed to address these global environmental issues.

Current international climate change policies have been uniquely driven by global environmental policy concerns, and very little attention has been given to local development and the environmental impacts of specific policies. However, from the local perspective, ancillary benefits of climate change policies, such as increased energy efficiency and the health impacts of local air pollution, may be significant and may therefore be very important in promoting local action.

The earth’s climate is determined in large part by the presence in the atmosphere of naturally occurring greenhouse gases, including in particular water-vapour, carbon dioxide (CO₂), methane (CH₄), CFCs, nitrous oxide (N₂O) and tropospheric ozone (O₃). These are transparent to incoming shortwave solar radiation but absorb and trap longwave radiation emitted by the earth’s surface. Their presence exerts a warming influence on the earth. Scientific evidence suggests that continued increases in atmospheric concentrations of selected greenhouse gases due to human activities will lead to an enhanced ‘greenhouse effect’ and global climate change.

7.2 UN Framework Convention on Climate Change, 1992

According to the Second Report Intergovernmental Panel on Climate Change (IPCC), the body responsible for studying the scientific aspects of climate change, it is estimated that if the present rate of greenhouse gas (GHG) emissions continues, the earth’s temperature will rise by 1.4 to 5.8°C by the 2100. The Fourth Report of the IPCC has confirmed unequivocally the warming of the climate system and the increase in global air and ocean temperatures, rising global average sea levels and reductions of snow and ice. The probing questions asked are – How do we define what constitutes “dangerous anthropogenic”? How do we prepare the human race to face sea level rise and a world with new geographical features? Is the current pace and pattern of development sustainable? What changes in lifestyles, behaviour patterns and management practices are needed, and by when?

It may be recalled that the UN General Assembly in 1988, the adopted a resolution, which unequivocally determined that “climate change is a common concern of mankind” and which required “urgent action by all States”. This initiated political negotiations, which led to the completion of an international convention regime to address the issue. By 1992, sufficient scientific and political consensus had been
reached to allow 154 States to sign the United Nations Framework Convention on Climate Change, 1992 (“Convention”).

This is an extremely alarming situation which may would lead to submerging of a number of low-lying States such as Bangladesh, Sri Lanka, Maldives and Egypt, and a number of small island States, on account of rising sea levels, followed by natural disasters such as drought and floods, loss of biological diversity and spread of endemic diseases.

Based on this evidence and a number of other preparatory negotiations the international community adopted the United Nations Framework Convention on Climate Change (UNFCCC) on 9 May 1992. It entered into force on 23 March 1994. Because of UNCED’s political prominence, many international environmental debates were merged into the process, such as those of the conventions on climate change and biodiversity, which were not negotiated at UNCED or in the Prepcom meeting but were signed in Rio following separate negotiations. Formal international discussion of a convention on climate change began in 1988 with the establishment of the Inter-governmental Panel on Climate Change (IPCC), an advisory body of scientists and officials that assessed comprehensively climate science, impacts and response strategies. IPCC served as a forum for “prenegotiation”, because many of its participants expected it to be followed by formal negotiations under the same authority. Instead, the UN General Assembly passed a resolution on December 1990 that established the Inter-governmental Negotiating Committee (INC).

The negotiation of a treaty to address climate change and its effects was formally set in motion by the UN General Assembly determined that ‘climate change is a common concern of mankind’ and urged governments and intergovernmental and non-governmental organisations to collaborate in concerted effort to prepare, as a matter of urgency, a framework convention on climate change. The 1992 Convention on Climate Change went beyond the scope of the 1985 Vienna Convention, which took nearly three times as long to negotiate among a smaller group of States. The word ‘Framework’ in the title is something of a misnomer, since the 1992 Convention established:

1) Commitments to stabilise greenhouse gas concentration in the atmosphere at a safe level, over the long term, and to limit emissions of a greenhouse gases by developed countries in accordance with soft targets and timetables;

2) A financial mechanism and a commitment by certain developed country Parties to provide financial mechanism and a commitment by certain incremental cosys and adaptation measures;
3) Two subsidiary bodies to the conference of the Parties;
4) A number of important guiding ‘Principles’; and
5) Potentially innovative implementation and dispute settlement mechanisms.

The Convention was the first international environmental agreements to be negotiated by virtually the whole of the international community, with 143 States participating in the final session of the INC/FCCC. The relation between the Climate Change Convention and vital national, economic, social and environmental interests was evident from the different interest groups of States which emerged during the negotiation.

The main objective of the 1992 UNFCCC is to tackle the negative effects of climate change. The Convention's stated aim is to stabilise anthropogenic (human induced) greenhouse gas concentration at a level that allows ecosystems to adapt naturally to climate change so that food production is not threatened, while enabling economic development to proceed in a sustainable manner (Art. 2). In achieving this aim, the Parties to the Convention are to be guided by a number of principles that reflect the understanding of global environmental responsibility elaborated in the Rio Declaration on Environment and Development and Agenda 21.

Some of general commitments under the UNFCCC include:

♦ The establishment of national inventories of greenhouse gas emissions and sinks;
♦ The promotion of scientific and technical co-operation;
♦ The sustainable management of forests, oceans and ecosystems; and
♦ The integration of climate change considerations in national social, economic and environmental policies.

While undertaking these obligations Parties shall strive to avoid occurrence of climate change on such a level that would impede socio-economic development and threaten food production.

The Convention provides a framework for adopting measures towards reduction of GHG’s, based on the principle of common but differentiated responsibilities and a precautionary action, wherein adverse effects of climate change are addressed as a common concern of mankind. Without permitting reservations, the UNFCCC calls upon States to protect the climate for present and future generations.

Under the Convention, some Parties are classified as Annex-I Parties, have binding commitments. Annex-I Parties include industrialised nations that have committed
to return to their anthropogenic emissions to 1990 levels by 2000. Towards this end, the Annex-I Parties are required to adopt national policies and measures to mitigate the negative effects of climate change by both limiting the emission of greenhouse gases and by protecting greenhouse gas sinks.

However, the wording of the 1992 UNFCCC is considered to be rather vague and the extent to which it represents a binding obligation has therefore been questioned (Art. 4(2)). In recognition of the fact that these commitments are only the first step in addressing the problem of climate change, the Convention provides for the review of the adequacy of the commitments at an early stage, and then at regular intervals (Art. 4(2)(d)). This provision led to the further negotiations on setting the specific emission reduction targets found in the 1997 Kyoto Protocol.

The Conference of the Parties (“COP”) to the UNFCCC serves as the highest and principal supervisory plenary body responsible for outlining the policy and implementing the obligations of the treaty. The COP meets regularly i.e. annually to review the adequacy, implementation and effectiveness of the Convention and the Kyoto Protocol.

The COP receives advices form the Subsidiary Body for Scientific and Technological Advice (“SBSTA”) which reviews and advises on the state of scientific and technical knowledge Art. 9), and the Supplementary Body for Implementation (“SBI”), which makes recommendations on policy and implementation issues (Art. 10).

Preamble, definition, objective and principles

The Convention’s Preamble reflects a wide range of interests. It includes matters jettisoned from the ‘Principles’, and expressly recognises, inter-alia, ‘the principle of sovereignty’, that the largest share of historical and current global emissions has originated in developed countries. The Preamble also refers to the concepts of ‘per capita emissions’ and ‘energy efficiency’, matters which did not receive sufficient support to be included in the operational part of the Convention.

The ultimate objective of the Climate Change Convention is to stabilise greenhouse gas concentration in the atmosphere ‘at a level that would prevent dangerous anthropogenic interference with the climate system’. However, the Convention implicitly recognises that some climate change is inevitable, since the objective is to be achieved within a timeframe sufficient to allow ‘ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner’. Parties should adopt measures and policies which are ‘precautionary’, ‘cost-effective’ and ‘comprehensive’, and which take into account different ‘socio-economic contexts’. 

-207-
Finally, throughout the ‘Principles’, section and elsewhere in the Convention, reference is made to the need to ensure ‘sustainable economic growth’ in order to address the problems of climate change.

**Commitments**

♦ **General**

The general commitments include the development of national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and the formulation and implementation of national and, where appropriate, regional programmes containing measures to mitigate climate change by addressing emissions and removals of these gases and by facilitation of adequate adaptation to climate change.

♦ **Specific**

At the heart of the Convention are the specific commitments relating to sources and sinks of greenhouse gases binding in all developed country Parties and the EC under Article 4(2). The extent of these commitments is unclear as a result of the convoluted, language agreed to by way of compromise between developed and developing countries. The Parties agreed ‘to begin a process to enable [the conference of the Parties] to take appropriate action for the period beyond 2000, including the strengthening of the commitments of the Parties through the adoption of a protocol or another legal instrument. This process led to the adoption of a protocol to the Convention at the third conference of the Parties in Kyoto in 1997. The Kyoto Protocol set quantified targets and a timetable for the reduction of greenhouse gas emissions by developed country parties.

The convention provides for ‘joint implementation’ by Parties of their policies and measures which would lay the foundation for the efforts of those States which sought to ensure that emission reductions should be carried out in the most ‘cost effective’ way possible. The Convention additionally requires that ‘a certain degree of flexibility’, should be allowed to developed country parties ‘undergoing the transition to a market economy’.

**Institutional arrangements**

The Climate Change Convention establishes a conference of the Parties, a secretariat, two subsidiary bodies and a financial mechanism. It met for the first time in 1995 and has subsequently met annually. It has several functions, including:

i) To examine periodically the obligations of the Parties;
ii) To facilitate the co-ordination of measures;

iii) To promote and guide comparable methodologies for preparing inventories of greenhouse gas emissions;

iv) To assess the implementation of the Convention by all Parties and the overall effect of measures; and

v) To adopt regular reports on the implementation of the Convention.

A multidisciplinary Subsidiary Body for Scientific and Technological Advice was established to provide information on scientific and technological matters to the conference of the Parties. A Subsidiary Body for Implementation was established to assist the conference of the Parties in the assessment and review of the implementation of the Convention. Although some States wanted to limit participation, both subsidiary bodies are open to participation by all Parties.

The convention defines a financial mechanism for the provision of financial resources on a grant or concessional basis, including for the transfer of technology. The mechanism is required to have an equitable and balanced representation of all Parties within a transparent system of governance.

Implementation and Dispute Settlement

Apart from the role of the conference of the parties and the Subsidiary Body of Implementation, the Convention provides for the possibility of establishing a ‘multilateral consultative process’ for the resolution of implementation questions, which will be available to Parties on their request. This whittles down two more ambitious original proposals. Additionally, a dispute settlement Article provides for possible compulsory recourse to arbitration or the International Court of Justice with the consent of relevant Parties to a dispute, as well as the possibilities for the compulsory establishment of a conciliation commission with the power to make a recommendatory award, at the request of one of the Parties to a dispute twelve months after notification of the dispute. The Convention provides for amendment, the adoption and amendment of Annexes, and the adoption of Protocols, no reservations are permitted. Prior to its entry into force, Article 21 of the Convention established interim arrangements concerning the designation of an interim secretariat, co-operation with the IPCC and other scientific bodies.

7.3 The 1997 Kyoto Protocol

The Kyoto Protocol to the Framework Convention on Climate Change was adopted by the third conference of the Parties in December 1997. Negotiations for Protocol
to the Convention commenced in 1995 after the first conference of the Parties, meeting in Berlin, determined that the commitments provided for in Article 4(2) (a) and (b) of the Convention were ‘not adequate’ and decided to launch a process to strengthen the commitments of Annex-I Parties through the adoption of a protocol or another legal instrument. The process was not intended to introduce any new commitments for non-Annex-I Parties, but merely to ‘reaffirm existing commitments in Article 4.1 and continue to advance the implementations of these commitments. Negotiations were to be conducted as matter of urgency with a view to adopting the results at the third conference of the Parties in 1997. At the second conference of the Parties at Geneva in 1996, a Ministerial Declaration was adopted by which Ministers urged their respective representatives to accelerate negotiations on a legally binding protocol or another legal instrument. Given the economic and developmental implications, it is not surprising that the Kyoto Protocol negotiations were among the most difficult and complex ever conducted for a multilateral environmental agreement. Deep divisions between the Parties emerged in relation to a range of key issues, such as emissions reduction targets, sinks, emissions trading, joint implementation and the treatment of developing countries. In early 2001, the future of the Protocol was thrown into doubt with the announcement by President George W. Bush that the United States (responsible for a quarter of 1990 global greenhouse gas emissions) would not ratify the Protocol. Nevertheless, at the resumed session of the sixth conference of the Parties, held in Bonn in July 2001, the remaining States Parties reached agreement on mechanisms for implementing commitments under the Protocol. The Bonn Agreements were not drafted as a legal text, but, at a political level, reflected an important breakthrough on many of the critical negotiating issues, and a clear signal that the world community was prepared to go ahead with the Kyoto Protocol, even without United States support. The Parties were able to incorporate almost all of the deals made in Bonn into the legal text of the ‘Marrakesh Accords’, a series of decisions concerning the implementation of the Kyoto Protocol which pave the way for its entry into force.

**Policies and Measures**

Article 2 of the Protocol contains a list of policies and measures which Parties may implement in order to achieve their quantified limitation and emission reduction targets. During negotiations for the Protocol, the European Union pushed for the adoption of mandatory and co-ordinated ‘policies and measures’ but this was resisted by the United States, Canada, Australia and some other Annex-I Parties who sought more flexible approach, with policies and measures to be determined principally by each individual Party. This latter approach was largely adopted in Article 2, which provides that each Annex-I Party, in achieving its emissions
limitation and reduction commitments under Article 3, shall implement policies and measures ‘in accordance with its national circumstances’. A list of indicative measures follows, which includes enhancement of energy efficiency, the protection and enhancement of sinks, the promotion of sustainable forms of agriculture, increased research on and use of new renewable forms of energy, measures to limit or reduce emissions in the transport sector and the limitation or reduction of methane emissions.

**Entry into force and Amendments**

In order to enter into force, the Protocol requires the ratification, acceptance, approval or accession of at least fifty-five Parties to the Convention, which must include Annex-I Parties which accounted for at least 55% of the total carbon dioxide emissions of Annex-I Parties in 1990. The refusal of the world’s largest greenhouse emitter, the United States, to ratify the Protocol made the participation by other Annex-I Parties with significant emission, such as Japan, the European Community and Russia, essential for the Protocol to come into force.

Amendments to the Protocol can be adopted by a three-fourths majority vote of the Parties present and voting at the meeting at which it is proposed for adoption, followed by its ratification or acceptance by at least three-fourths of the Parties to the Protocol.

Negotiations on a successor to the Kyoto Protocol dominated the 2007 United Nations Climate Change Conference. A meeting of environment ministers and experts held in June called on the conference to agree a road-map, timetable and ‘concrete steps for the negotiations’ with a view to reaching an agreement by 2009.

**Climate Change and Sustainable Development** - By wastefully exploiting natural resources, and by the thoughtless application of technology, the industrial and agrarian societies have attained a potential for inflicting damage on a scale that has seriously endangered the survival of man on this planet. Data records clearly indicate that the increase in past trends is currently maintained in practically all areas that are of environmental global warming, tropospheric ozone, air, soil and water pollution, including chemical and radioactive wastes, as well as allergies, viral and carcinogenic diseases. There are a large number of protective measures available, but their effectiveness in reducing the climate impacts varies widely. Climate and environment are some of the most critical factors on which a sustainable future depends. They must therefore be protected.

The term “sustainable development” has its origins in the International Union for the Conservation of Nature’s (IUCN’s) 1980 World Conservation Strategy report.
(IUCN, WWF and UNEP, 1980), but it was with the World Commission on Environmental and Development report, entitled *Our Common Future* (1987) that the term gained broad currency. The 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’.

The most conspicuous services that the natural environment provides are food and inputs to production, including energy, metals and timber. The natural environment also provides more fundamental services, without which human life on earth would not be possible. These are known as Global Life-Support services, since they provide the basic necessities to allow human life such as food, shelter, and the maintenance of suitable climatic and atmospheric conditions.

**Commitments under the Protocol**

As intended by the Berlin Mandate, the 1997 Kyoto Protocol covers the period beyond the year 2000 and requires stronger commitments from Annex-I Parties to achieve quantified emission reductions within a specified timeframe. These commitments cover the six greenhouse gases listed in Annex-A of the Kyoto Protocol (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride), and each Annex-I Party’s particular ‘quantified emission reduction target’ (QELROS) is listed in Annex-B. These targets are designed to ensure that combined emissions from these ‘Annex-B Parties’ are reduced to at least 5% below 1990 levels between 2008 and 2012. However, since emission levels have risen substantially since 1990, this measure is still unlikely to stabilise human induced global warming.

In accordance with Article 4(2) of the Convention, differentiated targets were set for Annex-B Parties taking into account their particular circumstances, including their ability to access clean technology. The differentiated emission reduction targets were based on 1990 emission levels, and range from an 8% reduction for the EU to a 10% increase for Iceland (called “assigned amounts”). Changes in land use or forest plantations which result in emission reductions could also be used in principle to meet a Party’s emission reduction target, provided such changes do result in a real reduction (the ‘sinks’ must become permanent).

All Annex-B Parties are obliged to make demonstrable progress in meeting their emission reduction targets by 2005. However, the 1997 Kyoto Protocol does not actually prescribe how the targets are to be achieved. A range of indicative measures are proposed, which include: Promoting energy efficiency; promoting renewable energy; phasing out subsidies that contravene the objectives of the Convention; protecting and enhancing sinks; and promoting sustainable forms of agriculture.
To strengthen the UNFCCC, largely a framework convention the Kyoto Protocol was adopted in 1997 and it entered into force in February 2005 with more than 175 Parties.

The chief objective of the Protocol is that “…the Parties agree to individually or jointly, ensure that the aggregate anthropogenic (human-based) carbon dioxide equivalent emissions or GHG emissions by Annex-I Parties do not accede their assigned amount, calculated pursuant to their quantified emission limited and reduction commitments in scribed in Annex-I and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5% below 1990 levels in the commitment period 2008 to 2012”. It also provides for two Annexes A and B that provide a list of the GHGs and countries and their quantified limitation reduction commitments.

**Flexibility Mechanisms**

In order to achieve these reductions Annex-I (industrialised or developed countries), have been provided innovative set of tools, called ‘flexibility mechanisms’ through which they can meet their Kyoto targets. These mechanisms are designed to help the Annex-I Parties maximise the cost-efficiency of meeting their emission reduction targets. These flexible mechanisms allow State Parties (and authorised private or public sector organisations or businesses) to reduce emissions by undertaking projects in other countries or by trading in emission reduction credits, and then counting these reductions towards their own emission reduction targets. The use of the flexible mechanisms is subject to the condition that the emission reductions targets are to be supplemental to national action to reduce emissions. However, domestic reduction of targets has been seen to be completely ignored by many Annex-I countries.

These mechanisms include: emission trading, the clean development mechanisms (CDM), joint implementation. CDM involves projects, which are undertaken by the industrialised countries in the developing world for reduction of GHG and sustainable development measures. Joint implementation as a word suggests would be a co-operative exercise between Annex-I Parties, to enable trade emission certificates between them on the basis of their assigned amounts. And emission trading involves trading of excess emission allowances, which an industrialised country may have gained.

**Compliance Mechanism**

It may be recalled that Compliance was one of the most contentious issues at COP-7 in Marrakech, but the Parties eventually adopted compliance procedures which
represent the ‘teeth’ of the climate change regime. The Marrakech Accords provide for the creation of a new institution, the Compliance Committee, charged with promoting compliance, providing advice and assistance to the Parties, determining cases of non-compliance and applying appropriate “consequences” for non-compliance.

The Compliance Committee has two branches; a ‘Facilitative Branch’ and a more judicial-like ‘Enforcement Branch’. The Facilitative Branch will provide advice and assistance on the implementation of the Kyoto Protocol, giving out ‘early-warnings’ in case where a Party is in danger of not complying with its emission reduction target. The Facilitative Branch will be able to make recommendations and mobilise financial and technical resources to help the Party comply. The Enforcement Branch will determine whether an Annex-I Party has met its emissions target, complied with its monitoring and reporting requirements, and met the eligibility tests for participation in the flexible mechanisms.

The compliance procedures will be triggered primarily by the results of the review of Parties’ annual reports; and a Bureau of the Compliance Committee will be responsible for allocating questions of implementation to the appropriate branch. The Enforcement Branch makes decisions by double majority voting, so that majority from each block of the members of a branch (i.e., both Annex-I and non-Annex-I Parties) must approve it. Public participation in the proceedings will be possible. If a Party feels that it has been denied due process during the enforcement proceedings, it can lodge an appeal with the COP/MOP.

When a Party does not comply with the monitoring and reporting requirements of the 1997 Kyoto Protocol, the Enforcement Branch can require the relevant Party to submit an action plan that includes an analysis of the causes of non-compliance, undertake corrective measures to remedy the non-compliance, and set a timetable for the implementation of the action plan. If an Annex-I Party is not in compliance with the eligibility requirements for the Protocol’s flexible mechanism, the Enforcement Branch will be able to order the suspension of the Party’s eligibility to participate in the mechanisms until the Party has achieved compliance.

If an Annex-I Party fails to meet its emission reduction target, the Enforcement Branch will be able to apply the following consequences:

♦ For every ton of emissions by which a Party exceeds its target, 1.3 tons can be deducted from its emissions allocation (assigned amount) for the subsequent compliance period;

♦ The Party will have to prepare a detailed plan explaining how it will meet its reduced target for the subsequent compliance period; and
The Party will not be able to use international emissions trading to sell any of its emissions allocation until it has demonstrated that it will be able to comply with its current target.

From the above, it is clear therefore that the compliance regime of the Kyoto Protocol is a strong one that can make an Annex-I Party who has not undertaken binding targets to fulfill its obligations.

It may however, be noted that the Bonn Secretariat to the UNFCCC in 2009 came up with a compliance report clearly stating that except Norway, Finland and a few Scandinavian countries other Annex-I countries have not complied with their commitments.

Annex-I Parties have refused to fulfill their obligation as per the flexible mechanisms over the issue of ‘sinks’. Sinks – largely denotes the demand of the developed countries to include forest cover in the carbon (GHG) sequestration measures and accounting of the assigned amounts of GHG reduction. The G-77 and China have opposed these moves, as they fear that afforestation, re-forestation and deforestation measures will impinge upon the use of their sovereign resources.

Copenhagen Meeting on Climate Change

COP 15 took place in Copenhagen, Denmark, from December 7 to December 18, 2009.

The overall goal for the COP 15/MOP5 United Nations Climate Change Conference in Denmark was to establish an ambitious global climate agreement for the period from 2012 when the first commitment period under the Kyoto Protocol expires. Ministers and officials from 192 countries took part in the Copenhagen meeting and in addition there were participants from a large number of civil society organisations.

The Copenhagen COP met in the background of a number of States wanting a legally binding text to emerge doing away with the Kyoto Protocol. Chief among them was the United States that had made it clear that it would attend the meeting with the understanding that KP stood dead and buried. A large number of African and small island States opposed and continue to oppose this understanding as they believe that KP can continue with a new negotiated commitment period. The two main target States were India and China who the US believes should be brought on board to undertake binding commitments like Annex-I countries. As many Annex-I industrialised countries are now reluctant to fulfill commitments under the Kyoto Protocol, a large part of the diplomatic work that lays the foundation for a post-Kyoto agreement was undertaken up to the COP 15.
At Copenhagen the work of the Long Term Action Plan (LCA) under the UNFCCC and the work under the Ad Hoc Working Group on Kyoto Protocol (AWG-KP) were taken up at parallel meetings. After nearly three weeks of negotiation with more than 100 world leaders attending meeting the Danish Presidency circulated a draft agreement on climate change. This draft text called the Copenhagen accord was adopted with the meeting of leaders from US, EU Countries, India, South Africa, Brazil and other countries. The draft Accord as it is called is not a legally binding document, but could be politically binding on those countries that agreed to place it before the plenary. In that sense, it is binding on the ‘Friends of the Chair’ called by the Danish Presidency. It may be noted that some countries objected to the Accord and many openly supported it on the final day plenary. The Accord was only taken note of and all it provides is a pledge for helping countries adversely affected by climate change, such as LDCs, small island States, developing countries with financial and technological resources to meet their incremental costs in combating climate change. A Special Green Climate Change Fund has been established for this purpose.

**Post Copenhagen**

Other COPs that followed were:

♦ 2010: COP 16/MOP 6, Cancún, Mexico

COP 16 was held in Cancún, Mexico, from November 29 to December 10, 2010. The outcome of the summit was an agreement adopted by the States’ Parties that called for the 100 billion USD per annum “Green Climate Fund”, and a “Climate Technology Center” and network. However the funding of the Green Climate Fund was not agreed upon. Nor was an commitment to a second period of the Kyoto Protocol agreed upon, but it was concluded that the base year shall be 1990 and the global warming potentials shall be those provided by the IPCC.

All Parties “Recognising that climate change represents an urgent and potentially irreversible threat to human societies and the planet, and thus requires to be urgently addressed by all Parties”. It recognises the IPCC Fourth Assessment Report goal of a maximum 2°C global warming and all Parties should take urgent action to meet this goal. It also agreed upon greenhouse gas emissions should peak as soon as possible, but recognising that the time frame for peaking will be longer in developing countries, since social and economic development and poverty eradication are the first and overriding priorities of developing countries.
2011: COP 17/MOP 7, Durban, South Africa

The 2011 COP 17 was held in Durban, South Africa, from November 28 to December 9, 2011. The conference agreed to a legally binding deal comprising all countries, which will be prepared by 2015, and to take effect in 2020. There was also progress regarding the creation of a Green Climate Fund (GCF) for which a management framework was adopted. The fund is to distribute US$100 billion per year to help poor countries adapt to climate impacts.

While the president of the conference, Maite Nkoana-Mashabane, declared it a success, scientists and environmental groups warned that the deal was not sufficient to avoid global warming beyond 2°C as more urgent action is needed.

2012: COP 18/MOP 8, Doha, Qatar

Qatar hosted COP 18 which took place in Doha, Qatar, from 26 November to 7 December 2012. The Conference produced a package of documents collectively titled The Doha Climate Gateway. The documents collectively contained:

1) An amendment of the Kyoto Protocol (to be ratified before entering into force) featuring an second commitment period running from 2012 until 2020 limited in scope to 15% of the global carbon dioxide emissions due to the lack of commitments of Japan, Russia, Belarus, Ukraine, New Zealand (nor the United States and Canada, who are not Parties to the Protocol in that period) and due to the fact that developing countries like China (the world’s largest emitter), India and Brazil are not subject to emissions reductions under the Kyoto Protocol.

2) Language on loss and damage, formalised for the first time in the conference documents.

The conference made little progress towards the funding of the Green Climate Fund. Russia, Belarus and Ukraine objected at the end of the session as they had a right to under the session’s rules.

2013: COP 19/MOP 9, Warsaw, Poland

COP 19 is the 19th yearly session of the Conference of the Parties (COP) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the 9th session of the Meeting of the Parties (MOP) to the 1997 Kyoto Protocol (the protocol having been developed under the UNFCCC’s charter). The conference was held in Warsaw, Poland from 11 to 22 November 2013.
2014: COP 20/MOP 10, city TBD, Peru

In 2014 a Latin American or Caribbean country will host the 20th yearly session of the Conference of the Parties (COP) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the 10th session of the Meeting of the Parties (CMP) to the 1997 Kyoto Protocol (the protocol having been developed under the UNFCCC’s charter). The Pre-COP conference will be held in Venezuela, the COP in Peru.

7.4 IEL Instruments to Tackle Ozone Depletion

The Ozone Layer comprises of the O₃ molecules (Ozone) that are found in the earth. Ninety per cent of atmosphere O₃ is found in the stratosphere with maximum concentration occurring at altitudes of 25 kms over the equator and 15 kms over the poles. The Ozone Layer is thought to provide a shield against harmful exposure to ultraviolet radiation from the sun and controls the temperature structure of the stratosphere. O₃ also acts as a greenhouse gas at lower altitude, is a respiratory irritant, and can adversely affect plant growth. Since the 1990's there have been losses in the ozone layer above the Arctic. Since then, significant thinning has also been discovered in the northern hemisphere and ozone depletion has become progressively greater over the course of the 1990's. Serious levels of UVB radiation have been observed over Antarctica, Australia and Mountainous regions of Europe, and damage to phytoplankton has been discovered in Antarctica.

The depletion of the Ozone Layer is caused by the anthropogenic emission of certain inert gases, particularly chlorofluorocarbons (CFCs) and halons. When these gases reach the Ozone Layer; they are exposed to ultraviolet rays and break down, releasing free chlorine (from CFCs) and bromine (from halons) which break up the Ozone molecules and deplete the Ozone Layer increased levels of ultraviolet rays are thought to cause harm to human health and the environment, including organisms in the marine environment . CFCs are used extensively as refrigerants, air conditioner, coolants and aerosol spray can ingredients and in the manufacture of Styrofoam.

The protection of the Ozone Layer from these destructive elements is the subject of a complex legal regime comprising the 1985 Vienna Convention for the Protection of the Ozone Layer (the 1985 Vienna Convention) and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (the 1987 Montreal Protocol). Since 1990, there have been various adjustments to the production and consumption of controlled substances. Since the 1960s monitoring functions have been carried out by States individually and jointly, as well as under the World Metereological
Organisation (WMO) Global Ozone Observing System. In 2002, evidence began to emerge to suggest that the global regime was limiting the rate of increase in the degradation of the Ozone Layer over the Antarctica might begin to decrease in magnitude, following a decrease in the levels of the Ozone depleting gases in the stratosphere and of the Ozone depleting chemicals in the troposphere1.

**Ozone thinning, Ozone holes and the UVR problem**

A key question in the global change research is how far human influence on the atmospheric Ozone will actually increase the deleterious effect of UVR reaching the earth’s surface. Concern over the thinning of the stratospheric Ozone goes back to the International Geophysical Year of 1957, when an international network of ‘Dobson Stations’ was set up to monitor atmospheric ozone using a technique pioneered by a scientist of the same name.

The strength of this threat, coupled perhaps with a feeling that this was one aspect of adverse global change about which, ‘something could be done’ led to the production and use of ‘substances that deplete the Ozone Layer’ was signed by the governments of most nations at a meeting in Montreal in 1987, aiming at a 50% reduction in production of CFCs by the year 2000. Tighter structures were agreed for the developed nations than for the developing nations. Most people would see the signing of the Montreal convention as a great victory for those concerned with global issue, as indeed it was. Nonetheless, the interplay of politics and economies in this type of international agreements are rarely as simple as they may seem, the environmental danger represented by CFCs had been evident to the chemical industry for some research and development directed to finding alternative propellant and other substances for CFCs were naturally interested in seeing CFCs put under restriction. The Montreal Protocol took care of those interests.

**A) 1985 Vienna Convention**

The Vienna Convention was negotiated over 5 years under the auspices of UNEP. It was the first treaty to address a Global atmospheric issue and is open to participation by all States. It has attracted widespread support from all industrialised nations and a very large number of developing countries. It established a framework for the adoption of measures ‘to protect human wealth and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the Ozone Layer’2. The Vienna Convention does not set targets or timetables for action but requires four categories of ‘appropriate measure’ to be

2 Art. 2(1); the ‘Ozone Layer’ is defined as ‘the layer of atmospheric ozone above the planetary boundary layer’ Art 1(1).
taken by Parties in accordance with means at their disposal and their capabilities, on the basis of relevant scientific and technical considerations. These obligations are: co-operation or systematic observations, research and information exchange; the adoption of appropriate legislative or administrative measures and co-operation on policies to control, limit, reduce or prevent activities that are likely to have adverse effects resulting from modifications to the Ozone Layer; and co-operation in the formulation of measures, procedures and standards to implement the Convention as well as with competent international bodies. Parties are free to adopt additional domestic measures, in accordance with international law, and maintain in force compatible measures already taken. The Convention also requires cooperation in the legal, scientific and technical, socio-economic and legal information relevant to the Convention subject to rules of confidentiality, and the development and transfer of technology and knowledge taking into account the particular needs of developing countries.

The Parties transmit information to the conference of the Parties on their implementation measures. That body is entrusted with the implementation of the Convention, assisted by a Secretariat whose services are provided by UNEP. The conference of the Parties has other functions including the adoption of protocols.

B) 1987 Montreal Protocol and the Adjustments and Amendments

♦ Introduction

The first and to date the only Protocol to the Vienna Convention is the 1987 Montreal Protocol. It is a landmark international environmental agreement, providing a precedent for new regulatory techniques and institutional arrangements and the adoption and implementation of innovative financial mechanisms. With hindsight, the Montreal Protocol appears to be relatively straightforward instruments and the fact that it approach has subsequently been relied upon extensively in other international environmental negotiations belies the controversy and complexity surrounding it at the time of its negotiations. Montreal Protocol sets forth specific legal obligations including limitations and reductions on the calculated levels of consumption and production of certain controlled Ozone depleting substances. Its negotiations and conclusion, shortly after the 1985 Vienna Convention were prompted by new scientific evidence indicating that emissions of certain substances were significantly depleting and modifying the Ozone Layer and would have potential climatic effects. Like the Vienna Convention, the Montreal Protocol and its amendment have attracted widespread support. The 1990, 1992 and 1997 Amendments and Adjustments introduced important changes to the Montreal Protocol.
Control Measures: Consumption and Production

Article 2 of the 1987 Montreal Protocol adopted limitation and reductions requirements on the consumption and production of all Annex-A substances. By Article 6, as amended by the ’92 and ’99 Amendments the Parties are assess with the assistance of panels of experts all the Article 2 control measures on the basis of available scientific environmental, technical and economic information. Montreal Protocol also provides for transfer of production and the rules regarding facilities under construction.

By Article 2(8) of the 1987 Montreal Protocol, Parties which are member States of regional economic integration organisation may ‘jointly fulfill’ their obligations provided that their total combined level of consumption does not exceed levels set by the Protocol, and that certain procedural obligations are fulfilled (the Parties to any such agreements must inform the Secretariat and all member States of the regional organisation, and the organisation itself).

Control Measures: Trade in controlled Substances

Article 4 of the Montreal Protocol established innovative trade provisions to achieve its environmental objectives. Although initially somewhat controversial, they are now widely recognised for their effectiveness in creating incentives for States to become Party to the Protocol. These measures address the trade in controlled substances by Parties with States which are not Parties to the Protocol; the trade in products containing controlled substances.

Montreal Protocol also requires Parties to discourage exports of technology for producing and using controlled substances, and to refrain from providing new subsidies, aid, credits, guarantees or insurance for the export to non-Party States of production, equipments, plants or technology which would facilitate the production of controlled substance, certain exceptions to this exists.

Developing Countries

The 1987 Montreal Protocol included provisions to take account of the special needs of developing countries, including large users of CFCs such as India and China, who were unwilling to become Parties to the Protocol. Article 5(1) of the Protocol allowed developing country Parties whose calculated level of consumption was less than 0.3 kilograms per capita a grace period of ten years beyond dates set for phase-out in Article 2(1) to (4) of the Protocol. In addition, but without specifying how it was to be achieved, the parties agreed to facilitate access to ‘environmentally safe alternative substance’ and to provide developing countries with substitute products.3

---

3 1987 Montreal Protocol, Art. 5(2) and (3).
7.5 Conclusion

The UNFCCC/Kyoto Protocol provides the legal regime for reduction of GHGs. But the law and international politics do not see eye to eye. The US, for instance, is largest polluter with more than 24%, the EU with 22%, Russian federation with 18%, Japan with 7% are the Major GHG emitter States. India and China put together do not account for more than 4% of world GHG Emissions.

The legal regime on climate change casts the historic responsibility on Annex-I Parties to undertake green GHG emissions in the first commitment period i.e. from 2008 to 2012. But the evidence and record produced by the UNFCCC Secretariat in Bonn says otherwise. Except Norway and Sweden none of the other Annex-I Parties have undertaken there assigned amount of GHG reduction. The politics has further undermined the legal regime because the United States refuses to become a Party to the Kyoto Protocol. The United States signed but did not ratify the Protocol and Canada withdrew from it in 2011.

At the COP held in Bali, Indonesia in December 2007 a road map was suggested to undertake serious reduction of GHG in the coming years on the main pillars of mitigation, adaptation, a long term action plan and transfer of technology to developing and less developed States. The developing countries lead by India and China fought tooth and nail the efforts of Annex-I Parties to include them within the first commitment period. India’s stand in this regard among various other issues has always been that GHG mitigation must be based on the principle of common but differentiated responsibilities (including historical emissions and current emissions levels and conversions to equal per capita) and respective capabilities and result in actual global reduction in GHG emissions. Such mitigation efforts should not have any adverse impact on GDP growth and poverty alleviation in developing countries.

India’s National Environment Policy 2006 also advocates adherence to the principle of common but differentiated responsibilities and Equal per-capita entitlements of global environmental resources to all countries. The priority should always be on guaranteeing every country’s right to development.

PM of India Shi Manmohan Singh, put forward India's position when in the G8+ 05 Summit in June 2007 in Heiligendamm, Germany he stated that:

"We recognise wholeheartedly our responsibility as a developing country. We wish to engage constructively and productively with the international community and to add our weight to global efforts to preserve and protect the environment. We are determined that India’s per-capita GHG emissions are not going to exceed those of developed countries even while pursuing policies of development and economic
growth. We must work together to find pragmatic, practical solutions, which are for the benefit of entire humankind. These should include mitigation and adaptation strategies with fair burden sharing and measures to realise sustainable patterns of consumption and production. The process of burden sharing must be fair. It should take into account where the primary responsibility for the present levels of GHG concentration rests and not perpetuate poverty among the developing countries. No strategy should foreclose for them the possibilities of accelerated social and economic development.”

The Copenhagen Accord clearly produced an entirely different text. The work of the Long Term Action Plan (LCA) under the UNFCCC and the work under the Ad Hoc Working Group on Kyoto Protocol (AWG-KP although completed saw an entirely different text one sponsored by 25 States produce the Copenhagen Accord. But this text and the road thereafter has had a checked history. The overall umbrella and processes of the UNFCCC and the adopted Kyoto Protocol have been criticised by some as not having achieved its stated goals of reducing the emission of carbon dioxide, the primary culprit blamed for rising global temperatures of the 21st century). The critics primarily have expressed the challenges with the UNFCCC process by stating that Climate change is not a conventional environmental issue but has implicates virtually every aspect of a State’s economy, so it makes countries nervous about growth and development. This is an economic issue every bit as it is an environmental one. Hence, looking at climate change from the environmental spectrum alone, as aimed in UNFCCC framework is highly inefficient system for enacting international policy, as it attempts to work in isolation and completely neglects and even opposed economic growth. Because the framework system includes over 190 countries and because negotiations are governed by consensus, small groups of countries can often block progress.

The failure to achieve meaningful progress and reach effective – CO₂ reducing – policy treaties among the Parties over the past eighteen years is stated as a justification by countries like the United States for failing to ratify the UNFCCC’s largest body of work — the Kyoto Protocol. Countries like Canada have withdrawn from the Kyoto Protocol claiming a desire to not force its citizens to pay penalties that would result in wealth transfers out of Canada. In 2010, Japan stated that it will not sign up to a second Kyoto term, because it would impose restrictions on it not faced by its main economic competitors, China, India and Indonesia. A similar indication was given by the Prime Minister of New Zealand in November 2012. At the 2012 conference, last minute objections at the conference by Russia, Ukraine, Belarus and Kazakhstan were ignored by the governing officials, and they have indicated that they will likely withdraw or not ratify the treaty. These defections place additional pressures on the UNFCCC process that is seen by some as cumbersome and expensive.
8

Treaty on Antarctic and Polar Regions

Chapter Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>Introduction</td>
<td>224</td>
</tr>
<tr>
<td>8.2</td>
<td>Antarctic Treaty System</td>
<td>224</td>
</tr>
<tr>
<td>8.3</td>
<td>Related Organisations</td>
<td>232</td>
</tr>
<tr>
<td>8.4</td>
<td>Conclusion</td>
<td>235</td>
</tr>
</tbody>
</table>

8.1 Introduction

The Antarctica due to its environs is subject to a number of special rules for environmental protection. As is well-known, the Antarctic region comprises 26% of the world’s uninhabited area, reflecting a rich marine bio-diversity and ecosystem and home to a number of birds such as penguin and others. However, as the Arctic falls in the domestic jurisdiction of some States, it is largely subject to national regulation.

The Antarctic region is governed by four treaties, which include: the Antarctic Treaty of 1959; the Convention for the Conservation of Antarctic Seals, 1972; the Convention on the Conservation of Antarctic Marine Living Resources, 1980; the Convention on the Regulation of Antarctic Mineral Resources Activities, 1988; and the Protocol on Environmental Protection to the Antarctic Treaty, 1991\(^1\).

8.2 Antarctic Treaty System

The Antarctic Treaty and related agreements, collectively called the Antarctic Treaty System (ATS), regulate the international relations with respect to Antarctica. For the purposes of the treaty system, Antarctica is defined as all land and ice shelves south of 60°S latitude parallel.

---

Antarctica is the world’s only continent without a native human population. The Antarctic Treaty was signed in Washington on 1 December 1959 by the twelve countries whose scientists had been active in and around Antarctica during the International Geophysical Year (IGY) of 1957-58. The experience of IGY had shown that it was possible to establish bases on Antarctica and engage in scientific co-operation without getting into conflict about the different, sometimes overlapping, claims of sovereignty over the continent. The original signatories consisted of the seven countries with claims over parts of Antarctica – Argentina, Australia, Chile, France, New Zealand, Norway and the United Kingdom – and five other countries with Antarctic activities, namely Belgium, Japan, South Africa, the Soviet Union and the United States.

The Antarctic Treaty which came into effect on 23 June 1961 has been signed by 46 countries, 28 of which are Consultative Parties. Through this agreement, the countries active in Antarctica consult on the uses of a whole continent, with a commitment that it should not become the scene or object of international discord. In its fourteen articles the Treaty:

♦ stipulates that Antarctica should be used exclusively for peaceful purposes, military activities, such as the establishment of military bases or weapons testing, are specifically prohibited;
♦ guarantees continued freedom to conduct scientific research, as enjoyed during the IGY;
♦ promotes international scientific co-operation including the exchange of research plans and personnel, and requires that results of research be made freely available;
♦ sets aside the potential for sovereignty disputes between Treaty Parties by providing that no activities will enhance or diminish previously asserted positions with respect to territorial claims, provides that no new or enlarged claims can be made, and makes rules relating to jurisdiction;
♦ prohibits nuclear explosions and the disposal of radioactive waste;
♦ provides for inspection by observers, designated by any Party, of ships, stations and equipment in Antarctica to ensure the observance of, and compliance with, the Treaty;
♦ requires Parties to give advance notice of their expeditions; provides for the Parties to meet periodically to discuss measures to further the objectives of the Treaty; and
♦ puts in place a dispute settlement procedure and a mechanism by which the Treaty can be modified.
The Treaty also provides that any member of the United Nations can accede to it. Since entering into force on 23 June 1961, the Treaty has been recognised as one of the most successful international agreements. Problematic differences over territorial claims have been effectively set aside and as a disarmament regime it has been outstandingly successful. The Treaty Parties remain firmly committed to a system that is still effective in protecting their essential Antarctic interests. Science is proceeding unhindered.

Since the first Antarctic Treaty Consultative Meeting (ATCM) in 1961, the Parties have met frequently, now annually, to discuss issues as diverse as scientific co-operation, measures to protect the environment, and operational issues and are committed to taking decisions by consensus. This process has allowed the Antarctic Treaty to evolve into a system with a number of components that meet the special needs of managing activities in the Antarctic, while protecting national interests. This regime is now known by the broader title of the Antarctic Treaty System, which operates under the umbrella of the annual ATCM.

**The Antarctic Treaty System explained** - The Antarctic Treaty System comprises the Treaty itself and a number of related agreements. It also includes a range of organisations that contribute to the work of the decision-making forums. In addition, it also includes the recommendations, measures, decisions and resolutions of the Consultative Meetings relating to matters such as:

- scientific co-operation;
- protection of the Antarctic environment;
- conservation of plants and animals;
- preservation of historic sites;
- designation and management of protected areas;
- management of tourism;
- information exchange;
- collection of meteorological data;
- hydrographic charting;
- logistic co-operation; and
- communications and safety.

The Treaty Parties have put in place rules relating to specific issues. The development of these agreements has allowed the implementation, with greater precision, of legally binding provisions for the regulation of activities in Antarctica.
The Antarctic Treaty System which has grown up around the original treaty now consists of the following agreements in addition to the treaty itself:


In addition there are some 300 measures adopted by the Antarctic Treaty Consultative Meeting (ATCM), which since 1994 meets annually. Other agreements — some 200 recommendations adopted at treaty consultative meetings and ratified by governments — include:

- The Commission for the Conservation of Antarctic Marine Living Resources (1982) formed under the CCAMLR
- Protocol on Environmental Protection to the Antarctic Treaty prevents development and provides for the protection of the Antarctic environment through five specific annexes on marine pollution, fauna and flora, environmental impact assessments, waste management and protected areas. It prohibits all activities relating to mineral resources except scientific. A sixth annex — on liability arising from environmental emergencies — was adopted in 2005 but is yet to enter into force.

Let us examine some of the important agreements under Antarctic Treaty System:

A) The Convention on Conservation of Antarctic Seals

The Convention for the Conservation of Antarctic Seals (CCAS) was adopted by Antarctic Treaty Parties in 1972 and entered into force in 1978. It was adopted in response to the vulnerability of Arctic seals to commercial activities. It has been ratified by 15 States including 10 of the 12 original Antarctic Treaty consultative Parties, with New Zealand and Australia being the exceptions. The Convention limits the number of seals that are to be hunted and in some cases completely prohibits the hunting of species of some animals. The main purpose of the
Convention is to limit the vulnerability of six species of seals found in the Antarctic to commercial exploitation.

The Convention covers all the species of seals in Antarctic waters. It sets out conservative catch limits on Crabeater, Leopard and Weddell seals. The Convention prohibits catching of Ross, Elephant and Fur seals completely. It also provides for closed seasons and closed areas with respect to the commercial sealing activities.

**B) The Convention on the Conservation of Antarctic Marine Living Resources**

The Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) was signed in 1980 but came into force in 1982, as part of the Antarctic Treaty System, in pursuance of the provisions of Article IX of the Treaty. It was established mainly in response to concerns that an increase in krill catches in the Southern Ocean could have a serious effect on populations of krill and other marine life; particularly on birds, seals and fish, which mainly depend on krill for food. Presently it has been ratified by 29 States. The geographical scope of the CCAMLR applies to south of 60°S Latitude. It also applies to areas south of the Antarctic convergence at points meandering with biological boundary in the southern Ocean which may extend as far north as 45°S Latitude.

The aim of the Convention was to conserve marine life of the Southern Ocean. However this does not exclude harvesting carried out in a rational manner. For the achievement of the goals of the Convention, the collection of large quantities of information and the development of appropriate scientific and analytical techniques is required.

A ‘precautionary’ approach has been implemented to minimise risk associated with unsustainable practices in conditions of uncertainty. This approach is complemented by the need to take into account ecological links between species and ‘natural’ as opposed to ‘human-induced’ variability. Finally, conservation measures adopted by CCAMLR are based on scientific advice and require enforcement to be effective.

The Convention establishes a Commission, established under Article IX to give effect to the Convention’s objectives and principles set out in Article II. The main purpose of the Commission is to manage the marine living resources of the area for which it is responsible. The resources specifically exclude whales and seals, which are the subject of other conventions, namely, the International Convention for Regulation of Whaling and the CCAS.

The Commission is assisted by a number of bodies, namely, The Scientific Committee that provides scientific advice to the Commission, the COPs which is responsible
to conduct regular meetings, the Secretariat, located in Hobart, Tasmania, Australia, to provide administrative support, an annual budget and so on.

C) The Protocol on Environmental Protection to the Antarctic Treaty

In the 1980s the Consultative Parties to the Antarctic Treaty developed the Convention on the Regulation of Antarctic Mineral Resource Activities, which was concluded in 1988 in Wellington. However, before any country had ratified it, the Consultative Parties changed course and decided instead to expand their existing environmental measures into a comprehensive system for the protection of the Antarctic environment.

The outcome of this process was the Protocol on Environmental Protection to the Antarctic Treaty, also known as the Environment Protocol, signed in Madrid on October 4, 1991. The Protocol designates Antarctica as a “natural reserve, devoted to peace and science”, and sets forth basic principles and detailed, mandatory rules applicable to human activities in Antarctica, including obligations to accord priority to scientific research. Article 7 of the Protocol prohibits all activities relating to Antarctic mineral resources, except for scientific research. Up to 2048, the Protocol can only be modified by unanimous agreement of all Consultative Parties to the Antarctic Treaty. Also, the prohibition on mineral resource activities cannot be removed unless a binding legal regime on Antarctic mineral resource activities is in force (Art. 25.5).


The Protocol established the Committee for Environmental Protection (CEP) under Article 11, as an expert advisory body to provide advice and formulate recommendations to the Antarctic Treaty Consultative Meetings in connection with the implementation of the Protocol. The CEP meets every year at the same time as the Antarctic Treaty Consultative Meeting. Article 12 provides the functions of the Committee.
D) Antarctic Mineral Resources Convention (CRAMRA), 1988
Since 1982 the Consultative Parties were engaged in a series of negotiations aimed at establishing a treaty-based minerals regime for the Antarctic continent. At Montevideo ATCM 1987 a draft treaty embodying the essence of a minerals regime was finalised and the Convention was adopted in 1988.

The Convention provides for a number of important principles – precautionary approach, rules on liability for environmental damage, mandatory environmental impact assessment, a compliance mechanism and developed dispute settlement procedures, reversal of the burden of proof from the plaintiff to the polluter. The Convention also provides for obligations relating to: the right to scientific research, preservation of historic monuments and rational use of marine living resources. The Convention ran into rough weather because two States: France and Australia, having consultative status refused to ratify the convention in 1989.

It may be noted that the CRAMRA will only enter into force upon ratification by 16 Parties holding Consultative Party status, including 5 developing countries and 11 developed countries.

The drive towards any form of exploitation of mineral resources in Antarctica was literally frozen, when 23 out of the 26 consultative status Parties and 8 non-consultative Parties, adopted the Antarctic Environment Protocol in 1991.

Its chief objective is to protect the Antarctic environment and other dependent and associated ecosystems with a view to protect the Antarctica in the interest of mankind as a whole. The Protocol establishes a 50-year moratorium on exploitation from the date of its entry into force. It establishes a very stringent regime of environmental protection with Parties not being allowed to make reservations to the Protocol. This is more clearly reflected in Article 7 which states “......any activity relating to mineral resources, other than scientific research, shall be prohibited”. The rigor of this Article has, however, toned down by a provision that allows a review conference 50 years after it enters into force.

The 1991 protocol on environment protection was agreed with remarkable speed and entered into force on 14 January, 1998. By 2008, 33 States had ratified/approved the protocol. It designates the Antarctic Treaty Areas as a natural reserve devoted to peace and science and provides a framework for the comprehensive protection of the Antarctic environment and dependent and associated ecosystems. Article 25 imposes a 50 year moratorium on all mineral exploitation in Antarctica and this
moratorium can be lifted only if all of the Consultative and Non-Consultative Parties to the Antarctic Treaty agree a binding legal regime on Antarctic mineral resource activities that includes an agreed means for determining whether (and, if so, under which conditions) any such activities would be acceptable. After 50 years, a proposal to lift the ban will need a simple of majority of all Consultative and Non-Consultative Parties with the proviso that three quarters of the States that were Consultative Parties at the time adoption of the 1991 Protocol must agree.

Despite the 1991 Protocol imposing a 50 year moratorium, the expected increase in world demand for energy may expose Antarctic to countries and markets looking for alternative petroleum supplies. If Antarctic is indeed eventually opened for oil pollution occurrences such as oil tanker spills, dumping of waste oil, natural oil seepage and well-blowouts will rise substantially.

The Protocol also establishes a Committee for Environment Protection and sets out detailed mandatory rules in six Annexes dealing with need for co-operation, environment impact assessment, conservation of flora and fauna, waste disposal and waste management, prevention of marine pollution by ships, designation of Antarctic specially protected areas and tourism and other non-governmental activities requiring visiting rights.

It provides for inspections to ensure compliance will require the establishment of contingency plans for environment emergency and requires annual reporting by each Party to the Protocol also makes arrangements for compulsory binding dispute settlement procedures. It thus substantially strengthens the binding nature of provision on conservation and environment protection in Antarctica.

The UK was the first country to sign the 1991 protocol. It ratified it following the Antarctic Act 1994, which made provision in UK law for the ratification of Protocol and extended the application of UK law to UK nationals in Antarctica. The 1993 Act requires anyone remaining in Antarctica on a British expedition, station, vessel or aircraft to have permit. All mineral resources activities by UK nationals are prohibited unless a permit for scientific research or in connection with construction, repair or maintenance of a British station or transport infrastructure. Killing, injuring or capturing any native animal or bird is also prohibited, as is significant damage to native plants and the introduction of non-native species without a permit. Entering restricted areas established by the Protocol is unlawful without either a permit or the written authorisation of another Contracting Party. These offences may be prosecuted as if they had been committed in United Kingdom.
8.3 Related Organisations

One of the important issues where there has been little progress is the establishment of a liability regime for environmental damage to the Antarctic environment. A number of specialised bodies assist the Treaty Parties in the conduct of their work. Specific tasks may be directed to these bodies, or they may be invited to provide observers or experts to participate in Treaty forums.

The Scientific Committee on Antarctic Research (SCAR) co-ordinates Antarctic research programmes and encourages scientific co-operation. Through its various subordinate groups it is able to provide expert information on a range of disciplines and on the scientific implications of operational proposals of the Treaty meetings.

The Council of Managers of National Antarctic Programmes comprises the heads of each of the national Antarctic operating agencies. COMNAP meets annually to exchange logistic information, encourage co-operation and develop advice to the Treaty parties on a range of practical matters.

The Antarctic Treaty Parties have also developed a close relationship with environmental inter-governmental and non-government organisations that represent the broader community interests in conservation. Organisations such as the International Union for the Conservation of Nature, the United Nations Environment Programme and the Antarctic and Southern Ocean Coalition are also invited to the Treaty meetings as experts.

Bodies with technical expertise relevant to the Treaty discussions also participate. They include the International Hydrographic Organisation, the World Meteorological Organisation and the Intergovernmental Oceanographic Commission.

The International Association of Antarctic Tour Operators is an industry body representing the interests of the growing tourist trade in Antarctica. Many tour operators are affiliated with IAATO, which also provides experts to the annual Treaty meetings.

Similarly, the Antarctic Treaty Secretariat was established in 2004 to:

✦ support the Antarctic Treaty Consultative Meeting (ATCM) and the Committee for Environmental Protection (CEP),
✦ promote the official information exchange between the Parties of the Antarctic Treaty,
✦ collect, maintain and publish the records of the ATCM and the CEP, and
✦ provide information on the Antarctic Treaty system.
Under the Treaty, each Party has enjoyed peaceful co-operation and freedom of scientific research. That research has contributed significantly to knowledge of the Earth and is contributing to the protection of the global environment. Environmental monitoring in Antarctica has, for example, led to the discovery of the seasonal depletion of atmospheric ozone over the Antarctic.

As the Antarctic Treaty System matures it has become recognised as one of the most successful sets of international agreements, setting an example of peaceful co-operation for the rest of the world. As an environmental regime it is unique – an entire continent, which is essentially undisturbed, will remain protected because of the commitment and co-operation of the Treaty Parties.

As is well-known the Arctic Ocean region like the Antarctic region is a frozen ocean covered by land on all sides. The Russian Federation, Denmark, Norway, United States and Canada have at various times made territorial claims over the Arctic region. There are a number of international law issues pertaining to the Arctic region, which have become more relevant today with planting of a titanium flag by the Russian Federation on the Arctic Ocean bed in 2009. These issues involve: (i) territorial sovereignty claims and the United Nations Convention on the Law of the Sea (UNCLOS) 1982; (ii) marine environmental protection/pollution/climate change concerns (iii) need for a strong international legal structure to protect the Arctic Ocean.

**UNCLOS and Continental Shelf delineation**

Article 76 of UNCLOS provides that if a coastal State is able to prove certain morphological highs of the Arctic Ocean floor (sea floor highs) that includes ridges, plateaus and caps are natural prolongations of its land territory, then such floors shall be included in the State’s continental shelf. Many States with territorial claims of extended continental shelves have approached the Commission on the Limits of the Continental Shelf, the body responsible for recommending continental shelf limits. The Russian Federation claims that two ridges – Lomonosov and Alpha-Mendeleev are natural prolongation of its land territory; Norway has made a claim that the Yermak plateau is a natural prolongation of its territory. Likewise, Canada, Denmark are conducting studies of the Lomonosov ridge similar to the Russian Federation’s claims; and the USA not yet a Party to UNCLOS is considering an Article 76 claim that the Chukhi Cap at the plateau of the Arctic coast is also a natural prolongation of its own territory.

The Commission it must be remembered is a technical body making confidential ‘recommendations’ to help the State in its delineation process. States may reject its recommendations, while others are equally free to reject or protest the claims of a
State. In such situations States can resort to the dispute settlement procedures provided in the UNCLOS namely – negotiation, conciliation, and Third Party adjudication by the International Court of Justice or the International Tribunal for the Law of the Sea.

Protection of the Arctic marine environment, flora and fauna

With States making myriad territorial claims, protection of the Arctic region and its flora and fauna assumes special importance. It is estimated that 25% of the world oil and gas deposits are to be found in the Arctic region. While it is premature to guess when development of oil and gas in the region would begin, it is safe to State that such activity would adversely affect the fragile ecosystem. An oil spill or accident would seriously threaten wildlife flora and fauna. The Exxon Valdez oil spill (1989) in Alaska’s Prince Sound emptied nearly 11 million gallons of crude oil in the region, wherein more than two lakh birds and marine mammals were killed. And although it is more than two decades since that disaster, with the persistence of oil the effects are still being felt. It is also well-known that oil and gas activities involve huge infrastructure development of the region and cause noise pollution, which can seriously affect wildlife in the icy region. Breeding and migratory instincts of reindeer and caribou would be affected. Animals like walrus, seal and whales that hunt on basis of noise signals may loose the feeding sites. To add to the animals’ woes, effects of global warming as stated by the Fourth Report of the IPCC have affected the Arctic region, more than anywhere else. Lesser ice can also disturb the food chain of these animals and as is well documented the polar bear already a ‘highly endangered species’ on the IUCN’s Red List cannot survive without summer ice in the Arctic region.

India and Antarctica

The first Indian permanent station “Dakshin Gangotri” was established in the Antarctic ice shelf in 1983. Subsequently the second permanent station “Maitri” was established in the year 1989 to carry out scientific research activity in and around Schirmacher oasis in Antarctica. Considering the requirement of research and the need to expand the scientific studies in other frontiers in Antarctica apart from Schirmacher Oasis, India conducted a reconnaissance during the XXIII Indian Antarctic Scientific Expedition (IASE) and XXIV-IASE in the month of February 2004 and February 2005, towards selection of a suitable location for a new station.

As a part of the XXIII Indian Scientific Antarctic Expedition to Antarctica (ISEA), a Task Force undertook reconnaissance surveys in the Amery Ice Shelf – Prydz Bay area between 66°E and 78°E longitude to identify a suitable site. After extensive traverses in the Vestfold Hills Rauer group of islands, Larsemann Hills and Bolingen
islands of the Prydz Bay area, the team finally identified the probable locations for the third Indian station.

India and the Arctic Region - India too now has a Station ‘Himadri’ in the Arctic region after having joined the scientific research body Ny-Alesund Scientific Manager’s Council (NYSMAC) last year. States with an eye on the natural resources of the region will refuse to give up their territorial claims and new disputes for continental shelf delimitation are bound to come up before international tribunals. But the real challenge before the international community would be, to draw up a binding Arctic Treaty, similar to the Antarctic Treaty regime, without compromising the sovereignties of States in the region, but at the same time protecting the lives of indigenous people, local communities and the ecosystem of the region.

8.4 Conclusion

The Arctic region, unlike the Antarctic has no single comprehensive binding hard law treaty governing actions of States. The only binding law treaty is the Agreement on the Conservation of Polar Bears, 1973. Besides, many of the international treaties to which Arctic States are Parties fail to address the peculiar problems of the region and address only specific issues of the region. Examples being the International Convention for the Prevention of Oil Pollution from Ships and its 1978 Protocol (MARPOL); the 1990 International Convention on Oil Preparedness, Response and Co-operation; 1992 Convention on Biological Diversity; 1973 Convention on the International Trade in Endangered Species of Wild Flora and Fauna; and the 1985 Vienna Convention for the Protection of the Ozone Layer. These conventions to a large extent do not look at the Arctic as an ecosystem and ignore the environmental interdependence between different life forms on land and the marine environment. It is also seen that although the Arctic States have in place an Environmental Protection Strategy implemented through the Arctic Council they have been unable to address the global problems facing their region today.

A number of measures have been suggested in contemporary literature to protect the Arctic from the adverse effects of States’ territorial claims. One has been, to declare the Arctic Ocean and its natural resources as a “common heritage of mankind (CHM)”. Such a claim would be similar to what is known as the CHM under the UNCLOS, 1982. Such a CHM/global commons would not be available to a single State for appropriation, but available to mankind as a whole for peaceful purposes and even for economic development, such as resource (read gas and oil) extraction from the area. The concept of CHM is also provided under the 1979 Agreement Governing the Activities of the States on the Moon and Other Celestial Bodies (Moon Treaty). The Treaty provides that “the Moon and its natural resources
are the common heritage of mankind” and that the main objective of Treaty is the “orderly and safe development of the natural resources of the moon; [t]he expansion of opportunities in the use of those resources; and [a] n equitable sharing by all States Parties in the benefits derived from those resources”.

Another Treaty regime that could influence the drawing up of a regime for the protection of the Arctic area is the Antarctic Treaty, 1959. It may be recalled that the Antarctic Treaty area too was subject to fierce territorial claims by Argentina, Chile, Australia, New Zealand, France and the United Kingdom. The latter even brought proceedings against Argentina and Chile in the International Court of Justice. It was largely due to the efforts of the United States and the United Nations that international community came around to convince the claimant States to freeze their territorial rights and impose a moratorium on any claim to the Antarctic region. This however, did not tantamount to States renouncing their “sovereignty claims or prejudice Parties regarding their recognition or non-recognition of other Parties’ claims”. What was achieved and is important to highlight is that States agreed to devote their collective energies to undertake co-operation and treat the Antarctica as a laboratory for conducting peaceful scientific research for common good. An elaborate treaty regime to protect the region also includes the – Convention for the Conservation of Antarctic Seals 1972; Convention on the Conservation of Antarctic Marine Living Resources 1980; Convention on the Regulation of Antarctic Mineral Resource Activities 1988; and the Protocol on Environmental Protection to the Antarctic Treaty 4 October 1991.

The Antarctic region, thanks to the efforts of the international scientific community and the willingness of nations, is today a protected area. A secure international legal structure ensures the protection of the fragile environment. The beautiful icy landscapes, the rich marine fauna, krill, penguins, seals, albatrosses all make the place a genuine science laboratory of the earth.

Likewise, the Arctic with its beautiful glaciers, boreal forests and meadows, animal life like the Laysan albatross, the Kodiak bear, varieties of caribou, seals, whales and the breathtaking permafrost. However, as has been discussed in detail above this region essentially an ocean can become partially navigable in the future, especially the ice disappears.

There is enough evidence to show that the effects of climate change are melting ice in the Polar Regions. The international community must and act fast, especially in the Arctic region as these regions help protect the ocean temperatures and save earth from global warming and ensuing desertification. It is a known fact that the Russian Federation and other countries have continental shelf claims covering the entire Arctic Ocean. Unless a binding legal regime is put in place what could not be done in CRAMRA will happen in the Arctic region.
9

UN Convention on the Law of the Sea and the UNEP Regional Seas Programme

Chapter Contents                                                                 Page Nos.
9.1 Introduction                                                                 237
9.2 Protection of the Marine Environment through Law                              238
9.4 Biodiversity in the Marine Ecosystems                                         245
9.5 UNEP Regional Seas Conventions                                                249
9.6 Conclusion                                                                   280

9.1 Introduction

In this chapter we will seek to look at the historical evolution of the Law of the Sea, the UN Convention on the Law of the Sea and protection of the marine environment, the UNEP Regional Seas Programme and conclusions and recommendations. The United Nations Convention on Law of the Sea (UNCLOS), also called the Law of the Sea Convention and the Law of the Sea Treaty is the international agreement that resulted from the third United Nations Convention [Conference] on the Law of the Sea, which took place from 1973 through 1982. The Law of the Sea Convention defines the rights and responsibilities of nations in their use of the world’s oceans, establishing guidelines for businesses, the environment, and the management of marine natural resources. The Convention concluded in 1982 replaced four 1958 treaties. UNCLOS came into force in 1994, a year after Guyana became the 60th State to sign the treaty. To date 155 countries and the European Community have joined in the Convention. The United States has signed the treaty, but the Senate has not ratified it.

While the Secretary General of the United Nations receives instruments of ratification and accession and the UN provides support for meetings of States Party
to the Convention, the UN has no direct operational role in the implementation of the Convention. There is, however, a role played by organisations such as the International Maritime Organisation, the International Whaling Commission, and the International Seabed Authority (the latter being established by the UN Convention).

9.2 Protection of the Marine Environment through Law

The Romans were the first to fully recognise the utility of freedom of the seas, and they declared that the seas were “common to all men”. However, at the height of the Roman Empire, the entire Mediterranean Sea was regarded as a Roman lake. Thus, one may argue that the concept of such waters being ‘common to all men’ was simply a way of stating the right of the Roman citizens over the seas.

With the breakdown of social order of the Roman authority, various modern States, such as Spain and Portugal emerged as major maritime powers who undertook navigation and exploration in search of treasures such as gold and spices. In the later centuries, the concept of freedom of seas arose once again, with many other European States such as Britain, Netherlands challenging Spain and Portugal's right to exclusive trade with the far of countries in Asia and Africa. In his treatise, Dutch jurist Grotius argued, that every nation was free to travel to every other nation and to trade with it, utilising the high seas for that purpose. According to Grotius, the sea fell in a category of things which could not be placed under ‘ownership’ because it could not be reduced to possession, and one vessel's navigation was not an impediment to others. Later, this concept ripened into the doctrine of ‘Freedom of High Seas’, with many judicial authorities from the 18th century onwards affirming that the high seas are free and open for the use of all and may not be appropriated to any nation.

The UN Conventions and codification of ‘Territorial Sea’ and ‘reasonable use’

The First UN Conference on the Law of the Sea was held in Geneva in 1958 and the Convention on the High Seas was adopted. (Convention on the High Seas, April 29, 1958, 13 UST 2312 (1962), 450 UNTS 82 (in force September 30th, 1962)). Under this Convention however, this freedom was to be exercised by all States “with reasonable regard to the interests of other States”.

The Geneva Convention on the Territorial Sea and the Contiguous Zone, April 29, 1958, 15 UST 1606 (1964), 516 UNTS 205 (in force 10th September 1964), provides that “the sovereignty of a State extends beyond its land territory and its internal

---

waters, to a belt of sea adjacent to its coast, described as the territorial sea...The sovereignty of a coastal State extends to the air space over the territorial sea as well as to its bed and subsoil.” It has now been accepted as a rule of customary international law, together with the freedom of the high seas. Articles 1 and 2 of this Convention states that common places and the high seas are open to legitimate and sustainable use by all the States warding off absolute sovereignty of a particular State.

Such an understanding is also supported by State practice which has been upheld by decisions of arbitral tribunals and judicial bodies such as the International Court of Justice.

It is also seen that the State practice that has evolved considered the high seas were open for all, and not to be made territory of any State. To understand what 'territory', and thus 'sovereignty', of a State means, we must realise that it is a well recognised principle of international law that no State can be deemed subordinate to external authority, including the rule of a body of international law. In the case of The Schooner Exchange v. McFadden 11US (7 Cranch) 116, at 156, (1892) it was held that -

“The jurisdiction of the nation within its own territory is necessary and exclusive and absolute. It is susceptible of no limitation not imposed by itself. Any restriction upon it, deriving validity from an external source, would imply a diminution of its own sovereignty to the extent of the restriction.”

Likewise, in The Right of Passage case over Indian Territory case, (Portugal v. India), 1960 ICJ Reports) it was held that a State’s conduct within its own territory is unrestricted by international legal rules. The specific right of States to render independent decisions with respect to their natural resources and their right to freely use and exploit their natural wealth and resources has been identified in a series of statement from the UN General Assembly Resolution 626 (VII), 21st December 1952 and General Assembly Resolution 1803 (XVII), 14th December, 1962 dealing with permanent sovereignty over natural resources. Thus the ‘territory’ of a State is understood to be that geographical extent over which and for which a State can make independent legislations, without requiring to consult any external authority or entity.

In the Anglo-Norwegian Fisheries case (ICJ Reports 1951), the ICJ held that “[t]he delimitation of the sea areas has always had an international aspect, it cannot be dependent merely on the will of the coastal States as expressed in its municipal law”. In the Icelandic Fisheries case (ICJ Reports 1974.), it was indicated that the States not only have a duty in customary international law to allocate common
resources equitably but also to conserve them for future benefits in the interest of sustainable utilisation. This case does support the existence of a customary obligation on the part of the nations to co-operate in conservation and sustainable use of common property resources of High seas.


In 1982 United Nations Convention on the Law of the Seas (“UNCLOS”) was adopted and was intended to be a comprehensive restatement of almost all aspects of the Law of the Sea. Its basic objective is to establish -

“A legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and the oceans and equitable and efficient utilisation of their resources, the conservation of their living resources, and the study, protection and preservation of marine environment.”

There are six main sources of ocean pollution addressed in the Convention: land-based and coastal activities; continental-shelf drilling; potential seabed mining; ocean dumping; vessel-source pollution; and pollution from or through the atmosphere.

First of all, the Convention lays down, the fundamental obligation of all the States to protect and preserve the marine environment. It further urges all States to co-operate on a global and regional basis in formulating rules and standards and otherwise take measures for the same purpose.

Coastal States are empowered to enforce their national standards and anti-pollution measures within their territorial sea. Every coastal State is granted jurisdiction for the protection and preservation of the marine environment of its EEZ. Such jurisdiction allows coastal States to control, prevent and reduce marine pollution from dumping, land-based sources or seabed activities subject to national jurisdiction, or from or through the atmosphere. With regard to marine pollution from foreign vessels, coastal States can exercise jurisdiction only for the enforcement of laws and regulations adopted in accordance with the Convention or for “generally accepted international rules and standards”. Such rules and standards, many of which are already in place, are adopted through the competent international organisation, namely the International Maritime Organisation (IMO).

On the other hand, it is the duty of the “flag State”, the State where a ship is registered and whose flag it flies, to enforce the rules adopted for the control of
marine pollution from vessels, irrespective of where a violation occurs. This serves as a safeguard for the enforcement of international rules, particularly in waters beyond the national jurisdiction of the coastal State, i.e., on the high seas.

Furthermore, the Convention gives enforcement powers to the “port State”, or the State where a ship is destined. In doing so it has incorporated a method developed in other Conventions for the enforcement of treaty obligations dealing with shipping standards, marine safety and pollution prevention. The port State can enforce any type of international rule or national regulations adopted in accordance with the Convention or applicable international rules as a condition for the entry of foreign vessels into their ports or internal waters or for a call at their offshore terminals. This has already become a significant factor in the strengthening of international standards.

Finally, as far as the international seabed area is concerned, the International Seabed Authority, through its Council, is given broad discretionary powers to assess the potential environmental impact of a given deep seabed mining operation, recommend changes, formulate rules and regulations, establish a monitoring programme and recommend issuance of emergency orders by the Council to prevent serious environmental damage. States are to be held liable for any damage caused by either their own enterprise or contractors under their jurisdiction.

With the passage of time, United Nations involvement with the law of the sea has expanded as awareness increases that not only ocean problems but global problems as a whole are interrelated. Already, the 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil in 1992, placed a great deal of emphasis on the protection and preservation of the oceans’ environment in harmony with the rational use and development of their living resources, thus establishing the concept of “sustainable development” embodied in Agenda 21, the programme of action adopted at the Conference.

The necessity to combat the degradation and depletion of fish stocks, both in the zones under national jurisdiction and in the high seas and its causes, such as overfishing and excess fishing capacity, by-catch and discards, has been one of the recurrent topics in the process of implementation of the programme of action adopted in Rio de Janeiro.

In this respect, among the most important outputs of the Conference was the convening of an intergovernmental conference under United Nations auspices with a view to resolving the old conflict between coastal States and distant-water fishing States over straddling and highly migratory fish stocks in the areas adjacent to the 200 nautical-mile exclusive economic zones. This Conference adopted the 1995
Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks which introduces a number of innovative measures, particularly in the area of environmental and resource protection obliging States to adopt a precautionary approach to fisheries exploitation and giving expanded powers to port States to enforce proper management of fisheries resources.

The protection and preservation of the marine environment under Part XII of the United Convention of the Law of the Sea, 1982 (hereinafter Convention) provides a comprehensive legal framework for controlling the serious degradation of the marine ecosystem. Although Articles 192 to 237 deal with protection and preservation of the marine environment per se, environmental clauses are found in a number of different provisions dealing with maritime zones.

The importance attached to environmental provisions of the Law of the Sea under the Convention is evident in Article 1 of the Preamble, which provides that -

“Consequently the States Parties recognise the desirability of establishing through this Convention, with due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilisation of their resources, the conservation of their living resources, and the study, protection and preservation of the marine environment.”

In can thus be seen that unlike the four Geneva Conventions on the Law of Sea 1958, the 1982 UN Convention on the Law of the Sea provides for a comprehensive environmental law regime governing the uses of the seas, including exploration and exploitation of their resources.

The provisions on the protection and preservation of marine environment constitute a substantial part of the UN Law of the Sea Convention. Prior to the adoption of this Convention pollution of the sea by oil and pollution by dumping ships and aircraft was of major concern to the international community. In addition conservation of marine fisheries either because of over exploitation in some cases or parts of the sea or adverse impact of pollution or available fish stocks was also a matter of concern but generally was dealt as part of regulation of fishery resources of the sea.

Article 24 of the 1958 Convention on the High Seas required States to draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines or resulting from the exploration and exploitation of the seabed and the subsoil. Article 25 of the same Convention required States to take measures to prevent pollution of the seas from dumping of radioactive wastes taking into account
relevant international standards and regulations. However, radioactive pollution was not defined by the Convention.

Similarly, Article 5(7) of the 1958 Convention of the Continental Shelf obliged States to undertake appropriate measures in the safety zones established around continental shelf, installations, to protect living resources from harmful agents. However, harm resulting from such exploitation to the marine environment beyond the limits of national jurisdiction was not covered. Similarly various conventions that dealt with oil pollution from ships or nuclear materials only provided for a piecemeal approach to deal with problems posed to marine environment due to pollution from different sources.

However, the United Nations Conference on Human Environment held at Stockholm in 1972 put the problem of protection and preservation of the marine environment in a better perspective and certain basic concepts and principles adopted by the Stockholm declaration on assessment and control of marine pollution provided the basis for the development of articles of Part XII of the 1982 Convention. Principle 7 of the Stockholm Declaration provides that “States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea”.

The scope of the Convention is very wide as it takes into consideration the global dimension of marine pollution and the different sources of pollution. It extends the scope to environmental degradation in the maritime zones, internal waters, high seas and also the international seabed area.

The Convention in essence is a basic universal legal instrument, which establishes general rules to serve as the legal framework for specific global or regional instruments. It thus plays a co-ordinating role and States in Article 237 that obligation under Part XII are without prejudice to the specific obligations assumed by States under special conventions and agreements concluded previously and relate to the protection and preservation of the marine environment. However, it provides a rider that such specific obligations should be carried out in a manner consistent with the general principles and objectives of the Convention.

Part XII of the United Nations Convention on the Law of the Sea provides a comprehensive framework governing all sources of marine pollution. A general obligation is provided in Article 192 wherein “States have the obligation to protect and preserve the marine environment”. Further Article 193 reiterates the rights of permanent sovereignty of States over their natural resources and provides that
“States have the sovereign right to exploit the natural resources pursuant to the environmental policies and in accordance with their duty to protect and preserve the marine environment.”

While undertaking an obligation to protect and preserve their environment UNCLOS provides States are under a duty to use “the best practicable means at their disposal and in accordance with their capabilities”. This clearly takes into consideration the needs and aspirations of a number of developing countries whose priority is often socio-economic development and are faced with limited resources to invest them on achieving higher and higher international environmental standards often set and urged by the developed States.

One of the important functions of Part XII of UNCLOS is to provide international rules and standards for the enforcement of marine pollution abatement activities. States also are under duty to undertake a due diligence obligation (prevent, reduce and control) and the best available means at their disposal and in accordance with the capabilities. This requires in some respects harmonisation of national policies with international rules and standards with regard to preservation of the marine environment.

As regards standards setting, Section 5 of Part XII deals with six sources of marine pollution. This include pollution from land based sources (Article 207); pollution from seabed activity subject to national jurisdiction (Article 208); pollution from activities in the Area (Article 209); pollution by dumping (Article 210); pollution from vessels (Article 211); and pollution from or through the atmosphere (Article 212).

As regards pollution from land-based sources States are under an obligation to adopt national legislations, regional and global rules, while bearing in mind their economic capacities and also the need for their socio-economic development. To date, there is no global treaty or convention regulating land based marine pollution. However, the UNEP is activity engaged in a Global Programme for Action (GPA) for adopting detailed national, regional and if possible international rules for combating land based marine pollution.

With respect to pollution from seabed activity Part XII provides for a similar obligation. Pollution from activities in the Area is to be governed by international rules, regulations and procedures established in accordance with Part XI of UNCLOS. The International Seabed Authority, the body responsible for seabed activities, adopted the Regulation governing Prospecting, Exploration and Exploitation of poly-metallic nodules in July 2001. This regulation provides for detailed rule for future exploitation of seabed minerals and resources.
A combination of national legislation and international rules is envisaged with respect to pollution by dumping. States are under an obligation to abide by a due diligence duty to preserve the marine environment from dumping. Moreover Article 210 also provides that dumping within the territorial sea or the Exclusive Economic Zone or the continental shelf, may not be carried out without the express prior approval of the coastal State.

9.4 Biodiversity in the Marine Ecosystems

It is seen that the oceans cover nearly 70% of the planet’s surface area, and marine and coastal environments contain diverse habitats that support an abundance of marine life. Marine organisms of the same species live in a specific area are populations of that particular species. They are dependant on other populations of plant and animals. For example, a variety of marine animals in a food chain system coexist. Life in our seas produces a third of the oxygen that we breathe, offers a valuable source of protein and moderates global climatic change. This form a whole single unit often called as a marine ecosystem. Some examples of important marine ecosystems include oceans, estuaries and salt marshes, lagoons, tropical mangrove forests and coral reefs etc. These marine ecosystems are intricately linked with global atmosphere and other ecosystems.

Today marine ecosystems are facing an unprecedented human-induced threat from industrial pollution, fishing which is often illegal, unreported and unregulated (IUU); pollution from maritime transportation, disposal of solid and other wastes including dumping at sea, and introduction of exotic and alien species and the threat of global climate change that affects oceans and seas.

An important area on the agenda of the Convention on Biological Diversity is that of marine biodiversity. It is important to have a eco-systemic approach to the protection and preservation of the marine environment. An ‘Ecosystem’ means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. ‘Biological diversity’ as defined under the Convention on Biological Diversity means “the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

♦ Sustainable Fisheries

Fish currently supply the greatest percentage of the world’s protein consumed by humans. This fact may soon change, however, given that most of the world’s major
fisheries are being fished at levels above their maximum sustainable yield; and many regions are severely overfished. More than 70% of the world’s fisheries are overexploited, which threatens the health, economy and livelihoods of communities all over the world. The global fishing fleet is estimated to be 250% larger than needed to catch what the ocean can sustainably produce.

There are a number of issues that need to be addressed quickly in order to preserve fish stocks as a natural resource.

These include among others:

- **Overfishing**

Overfishing, formally defined as “situations where one or more fish stocks are reduced below predefined levels of acceptance by fishing activities” means that fish stocks are depleted to the point where they may not be able to recover. Areas such as the eastern coast of Canada and the north-eastern coast of the U.S. have fished certain species to collapse, which consequently caused the fishing communities that relied on those stocks to collapse. In some cases, depleted fish stocks have been restored; however this is only possible when the species’ ecosystem remains intact. If the species depletion causes an imbalance in the ecosystem, not only is it difficult for the depleted stocks to return to sustainable levels, other species dependent on the depleted stocks may become imbalanced causing further problems.

Access agreements through government deals are helping fisheries in developing nations negotiate better agreements with rich countries that will help protect the marine environment and livelihoods of fishing communities. These local people rely on fish to sustain their health and their livelihoods.

Foreign fishing fleets of enormous size and power from rich countries can overwhelm local people and deplete the fish stocks causing further harm to the marine environment by disrupting the food chain. The more fish stocks become overexploited, the more fisheries must search for productive waters which are then quickly depleted.

The seafood industry, like all industries, is largely market driven. Seafood consumers are increasingly aware of the threats to global fish stocks yet greater awareness is needed so that the market demands sustainable products from well-managed fisheries. A potentially powerful intervention is being implemented by organisations such as Blue Ocean Institute and the Monterey Bay Aquarium by publishing seafood
guides to help consumers make informed choices when buying seafood. Furthermore, recent legislation requires fish sellers to identify the source of seafood. Some retail outlets such as Whole Foods Market are committed to preserving the ocean's resources by raising awareness and selling only products of well-managed fisheries. Organisations such as the WWF have worked with corporations such as Unilever, one of the world's largest consumer food companies, to form the Marine Stewardship Council (MSC), which provides a mechanism for identifying and certifying sustainable fisheries.

An independent, global charity, the MSC is headquartered in London and works to promote sustainable marine fisheries, and responsible, environmentally appropriate, socially beneficial and economically viable fishing practices. This is accomplished by the development of a set of standards, the MSC Principles and Criteria for Sustainable Fishing, to assess and certify fisheries. These standards are based on scientific data and were developed with relevant stakeholders. Third-party certifiers are used to assess MSC certified products. The MSC “seal of approval” allows consumers to purchase fish and other seafood from well-managed sources.

Inadequate conservation and management practices

The ocean seems invulnerable because it is vast and under-explored; however, it is increasingly important to know that its resources are finite, and depletion of these resources beyond sustainable levels is irreversible. Overfishing not only causes depletion in individual fish stocks, but also disruption to entire ecosystems and food webs in the ocean. Management of these ecosystems as a whole is needed to ensure the sustainability of commercial fish stocks. The management of ecosystems as opposed to managing only target species entails:

- Maintaining populations of target species to enable their natural role in ecosystems and to enable sustainable reproduction rates.
- Eliminating the use of fishing gear that creates a high level of bycatch, or the incidental catch of non-target species.
- Closing feeding, breeding and spawning grounds to protect marine ecosystems.

The European Union has established a European Common Fisheries Policy (CFP) that seeks to prevent overfishing by better management of fisheries and by liaising with other national governments and markets to ensure sustainability. Another solution is the establishment of no-take zones and marine reserves, areas where fishing is prohibited, to help replenish commercial fish stocks to secure long-term sustainability.
200-mile Exclusive Economic Zones (EEZs) were established in the 1970s to protect fishing resources in developing countries. Foreign vessels negotiate to obtain access to waters within the EEZs. Unfortunately, while this aids developing countries and their fishing communities, the alternative for foreign fleets is to fish the high sea, depleting those resources, or to fish illegally. Access Agreements to the EEZ’s have alleviated this problem by negotiating a lump sum to allow foreign boats fish their waters. Nevertheless, access agreements continue to contribute to overfishing and to threatening the food security of developing countries. More equitable and sustainable negotiations are needed.

♦ Habitat loss as a result of harmful fishing practices, which have decreased some fish populations

Reducing or eliminating destructive fishing practices is essential to sustainable fishing. Bottom trawling destroys habitats, indiscriminate fishing practices such as drift nets, long-lining and cyanide fishing are destructive to habitats and non-targeted species, lost or discarded fishing gear is also destructive to underwater habitats. Deep-sea trawling is particularly harmful to ecosystems because it strips the entire environment of all living things including deep ocean corals. Continued stripping of deep-sea areas may cause species to become extinct before they have a chance to be identified by science. Illegal Unregulated and Unreported (IUU) fishing is also often destructive to the marine environment and the species that rely on it.

The use of cyanide is a popular method of capturing live reef fish for the seafood and aquarium markets. Cyanide fishers squirt cyanide into coral reefs where fish seek refuge, which stuns them making them easy to catch. Cyanide poisons reefs and kills other reef organisms. Less than half the fish caught with cyanide survive long enough to be sold to aquariums or restaurants. It is widely used in Southeast Asia and is spreading to other parts of the world where market demand for live reef fish has created incentives for local fishers. Live fish are much more profitable and are sold to the aquarium trade and to luxury fish markets in Asia.

A moratorium on deep-sea trawling is needed to stop this destructive practice. The damage done to deep sea corals and undiscovered species is immeasurable. National governments and the United Nation’s Food and Agriculture Organisation have developed an International Plan of Action on IUU Fishing, but better monitoring and enforcement is needed.
Viable alternatives are needed and/or laws enacted to stop the destructive practice of cyanide fishing. Consumers can help greatly by choosing to only purchase aquarium fish from retailers that do not purchase fish caught by cyanide. This benefits the consumer as well given that the vast majority of reef fish caught using this method die within a few weeks.

♦ **Government subsidies**

Governments provide subsidies to fisheries to enable them to increase the catching capacity of their fleets in the form of new vessels and improvements to existing boats, fuel subsidies, tax benefits and job support. Japan is the largest subsidiser of its fishing industry providing US$2-3 billion annually. These subsidies are intended to support the fishing industry in these countries, however they do more harm than good with the increased capacity causing the overexploiting of commercial fish stocks and increasing the amount of waste due to bycatch.

Redirecting these funds to be used for improving fishery management would greatly help reduce fishing pressure on already depleted stocks, and would support the industry by preserving the resource for the future. In the EU, subsidies to support new or to improve existing boats are decreasing and changes in social measures such as retraining fishermen for alternative employment are increasing. Organisations such as WWF are working with the World Trade Organisation to end subsidies by governments that support poor fishing practices.

### 9.5 UNEP Regional Seas Conventions

One of the immediate tasks before the United Nations Environment Programme (UNEP) after its inception in 1972, was the development of regional seas programme to address the growing incidents of marine pollution. In 1974, the UNEP established the regional seas programme to be able to help and assist the coastal nations in their endeavour to mitigate and prevent the pollution and degradation of the world’s coastal areas, inshore water and open oceans. The Regional Seas Programme has been viewed by many as a “comprehensive, progressive assault upon the degradation of the marine environment”. This programme is often tailor-made to suit the peculiar needs and circumstances of the regions.

It largely involves: an action plan for co-operation and the management, protection, rehabilitation and development of the coastal and marine resources; an intergovernmental agreement in the nature of Framework Convention embodying in most instances a set of general principles and obligations, (although in some cases there may be binding agreements); and, detailed protocols dealing with
specific regional problems such as oil spills, dumping, emergency co-operation
and also specially protected marine areas.

As regards the legal scope of these regional conventions they largely apply to their
respective regions. However, in some cases invitations are open to States and other
intergovernmental and international organisations to participate.

Today, more than 140 countries participate in 13 Regional Seas programmes
established under the auspices of UNEP which involve the Black Sea, Wider
Caribbean, East Asian Seas, Eastern Africa, South Asian Seas, ROPME Sea Area,
Mediterranean, North-East Pacific, North-West Pacific, Red Sea and Gulf of Aden,
South-East Pacific, Pacific, and Western Africa. Six of these programmes, are directly
administered by UNEP.

Apart from the 1974 Helsinki Convention (Baltic Sea), 1974 Paris Convention and
1992 OSPAR (North – Sea and North – East Atlantic) and the 1976 Barcelona
Convention (Mediterranean), there were number of regional sea Conventions
adopted under the UNEP auspices. These include the 1978 Kuwait Convention
(Persian and Arabian Gulf), the 1981 Abidjan Convention (West-Africa), the 1982
Jeddah Convention (Red Sea and Gulf of Aden), 1982 Lima Convention (South-
East Pacific), the 1983 Cartegena Convention (Caribbean), 1985 Nairobi Convention
(East-Africa) and the 1986 Noumea Convention (South-Pacific). Incidentally, the
1976 Barcelona Convention, the 1981 Lima Convention, 1978, the Kuwait
Convention and the 1983 Cartegena Conventions, have all adopted special regimes
by way of Protocols to govern marine pollution from land-based sources.

Most of these regional seas Conventions incorporate three basic elements. These
include: a general obligations to prevent, reduce and abate pollution; identification
of the geographical application of the area of the Convention; and lastly, they identify
the types of discharges into the seas. A cursory look at some of these Conventions
shows that the Barcelona Convention, the Kuwait Convention and the the Jeddah
Convention provide for a prevent, reduce and abate (due diligent) approach.
Whereas, the Cartegena Convention uses the words “prevent, reduce and control”.
As opposed to this, the Abidjan Convention provides for a “prevent, reduce, combat
and control approach”. In sum, can be stated that the most of these Conventions
adopt a cautious due deligent approach, unlike the 1976 Barcelona Convention
and the Helsinki Convention which after their amendments now, provide for a
more stringent precautionary principle and a polluter pays principle based
approach.

The applicable area of the Convention is generally provided for as the ‘Convention
area’. However, there are a few exceptions namely, the Jeddah and the Abidjan
Conventions. Moreover, as will be seen in the following sections, the Mediterranean Protocol of 1996 to the Barcelona Convention, and the 1985 Quito Protocol to the 1981 Lima Convention make elaborate provisions for including ‘internal waters’, within the ambit of the Convention area.

With regard to the types of discharges, the 1978 Kuwait Convention, the 1983 Jeddah Convention, and the 1976 Barcelona Convention include ‘airborne pollution’ as a combined product with land-based sources of marine pollution. However, the Abidjan Convention and the Cartagena Convention contain two separate sections: one on land-based marine pollution and the other dealing with airborne pollution.

**Mediterranean Region**

This Convention also called the **Barcelona Convention** was adopted on 16 February 1976, and entered into force on 12 February 1978. It adopts the definition for pollution provided by the UN Convention on the Law of the Sea wherein ‘pollution is largely regarded as anthropocentric’. It calls upon the Contracting Parties to undertake individual and joint due diligence measures to prevent, abate and combat pollution in the Mediterranean Sea area.

The Convention also calls upon the Parties to prevent pollution caused from a number of point sources. For the purpose of the present thesis, it would be germane to mention that Article 5 titled “Pollution caused by Dumping from Ships and Aircrafts” calls upon ‘the Contracting Parties to take all appropriate measures to prevent and abate pollution of the Mediterranean Sea area caused by dumping from ships and aircrafts’.

To keep pace with the growing environmental consciousness in the region, the Barcelona Convention was revised in 1995 and a new convention titled **Convention for the Protection of Marine Environment and Coastal Region of the Mediterranean Sea** was adopted in 1995. Unlike the 1976 Barcelona Convention, the amended Convention provides for a set of general obligations.

These obligations follow a similar due diligence approach to prevent, control and reduce marine pollution. However, it needs to be noted that general obligations also include a more pro-active role by Contracting Parties wherein there are called...
upon to “...combat and to the fullest possible extent eliminate pollution from the Mediterranean sea area and to protect and enhance the marine environment in that area so as to contribute to its sustainable development”.

The principle of “sustainable development” has been given the status of a general obligation under this Convention. This substantive obligation is further developed as Contracting Parties are bound by the obligation to undertake and apply within their capabilities, the principles of precautionary rule, the polluters pays principle, environment impact assessment and promote an integrated management of the coastal zones bearing mind the ecological needs of the region. Article 5 of the Convention titled “Pollution caused by Dumping from Ships and Aircrafts or Incineration at Sea” provides that “the Contracting Parties shall take appropriate measures to prevent, abate and the fullest extent eliminate pollution of the Mediterranean Sea area caused by dumping from ships and aircraft or incineration at sea”.

The Convention also provides for detailed institutional mechanisms within the auspices of the UNEP for implementation of the obligations provided hereunder.

A Protocol to the Barcelona Convention titled Protocol for the Prevention and Elimination of Pollution of the Mediterranean by Dumping from the Ships and Aircraft (Dumping Protocol) was adopted in Barcelona Spain 1976 and entered into force on 12 February 1978. This Protocol was succeeded by the Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft and Incineration at Sea, 1995.

**ROPME Region** (Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution 1978)

The Governments of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates adopted the Kuwait Convention for the protection of the marine environment.

Like other UNEP conventions, the **Kuwait Convention** also adopts the Law of the Sea definition of the “pollution of the marine environment”. It places due diligence obligations on all the Contracting Parties to prevent, abate and combat pollution of the marine environment in the Kuwait sea area. The Parties are called upon to establish national standards, laws and regulations on dumping which are consistent which established standards of the London Convention.

---

3 *ILM*, vol. 15, No.1, 1976, pp. 300-306.

4 Countries of this region include: Iraq, Iran, Kuwait, Saudi Arabia, Bahrain, Qatar, the United Arab Emirates and Oman.
The **Kuwait Convention** provides for co-operation in dealing with pollution emergencies, scientific and technical co-operation, environmental impact assessment as well as liability and compensation measures for pollution damage. It also establishes regional organisations for the protection for the marine environment.

Although the Convention provides for adoption of additional protocols, presently there is no specific protocol regulating pollution of the sea area by dumping. A protocol on protection of the marine environment against pollution from land-based sources was adopted on 21 February 1990.


The **Abidjan Convention** while following a due diligence approach to the control of marine pollution adopts the Law of the Sea definition for “pollution of the marine environment”. Parties are called upon to undertake general obligations for establishing national laws and standards governing pollution by dumping in accordance with those established by international and regional organisations. They also have to take measures to avoid cross-sectoral positions as a part of the larger environmental management of the Convention area.

The Abidjan Convention also provides for combating pollution emergencies, development of environmental impact assessment technical co-operation and rules on liability and compensation for pollution damage.


The Jeddah Convention like another UNEP Conventions adopts the Law of the Sea definition of marine pollution and calls upon member States to follow due diligence approach towards preventing, reducing, abatement and *combating* marine pollution. The word “combating”, not found in other UNEP Regional Seas Programmes, shows the resolve of the region to fight pollution, as they already suffer from vessel-source pollution.

It also provides for a definitional clause on conservation which means rational use by man of living and non-living and marine coastal resources in a manner ensuring optimum benefit for the present generations, while maintaining the potential of

---

5 Countries of this region include: Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon and Sao Tome and Principe.
that environment to meet the needs and aspirations of future generations. Such a
definition should be construed as including conservation, protection, maintenance,
sustainable and renewable utilisation, and enhancement of the environment.

The Convention provides for rules on co-operation in pollution emergencies,
scientific co-operation EIA and rules on liability and compensation.

Regional organisation for the conservation of the Red Sea and the Gulf of the Aden
environment has been established for implementing the Convention.

**Wider Caribbean** (Convention for the Protection and Development of the Marine
Environment of the Wider Caribbean Region)\(^6\)

The **Cartagena Convention** adopted on 24 March 1983 provides for a due diligence
approach to reduce, prevent and control pollution in the Convention area.

Article 6 of the Convention calls upon the Contracting Parties to take appropriate
measures to prevent, reduce and control pollution caused by dumping of waste
consistent with applicable international standards.

Similar to other UNEP Conventions, the Cartagena Convention has obligations to
co-operate in cases of emergencies, environment impact assessment, scientific and
technical co-operation and rules on liability and compensation, in accordance with
international law.

Although, the Cartagena Convention provides for a Protocol concerning Pollution
from Land-based sources, there is no specific protocol on dumping of radioactive
substances. This is not to deny that the protocol can regulate pollution caused by
radioactive substances that are passed as effluents and emissions from land based
sources.

**East Africa** (Convention for the Protection, Management and Development of the
Marine and Coastal Environment of the East Africa Region, Nairobi 1985)\(^7\)

The **Nairobi Convention** calls upon Parties to protect and manage the marine and
coastal environment on a due diligence basis. Contracting Parties have also been
called upon to take measures in conformity with international law and regulate

\(^6\) Countries of this region include: Cuba, Haiti, Jamaica, Mexico, Belize, Guatemala, Honduras,
Nicaragua, Costa Rica, Panama, Columbia, Bahamas, Dominican Republic, Netherlands, Antigua
and Barbuda, Saint Christopher and Nevis, Dominica, France, Saint Lucia, Barbados, Saint Vincent
and Grenadines, Grenada, Trinidad and Tobago, Suriname, Guyana, Venezuela, UK and USA.

\(^7\) Countries of this region include: Somalia, Kenya, Tanzania, Seychelles, Comoros, Mozambique,
Madagascar, Mauritius, France (Reunion) and South Africa.
effective discharge of pollutants consistent with established international standards on dumping.

Article 6 deals with pollution by dumping and states that Parties shall take all appropriate due diligence measures to prevent, reduce and combat pollution of the Convention area caused by dumping bearing in mind applicable international standards and recommended practices. The Convention provides similar cooperation for combating pollution emergencies, technical assistance, EIA and rules of liability. The UNEP has been designated with secretarial functions.

**Black Sea** *(Convention on the Protection of the Black Sea against Pollution, Bucharest, 1992)*

The *Bucharest Convention* was adopted on 21 April 1992 and entered into force in 15 January 1994. Similar to the Barcelona Convention, the Bucharest Convention adopts the definition of pollution provided by the UN Convention on the Law of the Sea. The Black Sea one of the worst areas affect by radioactive waste disposal defines dumping as “any deliberate disposal of waste or other matter from the vessels or aircraft and any deliberate disposal of vessels and aircraft themselves”, similar to the global regime on dumping controlled by the London Convention 1972.

A general provision adopting international law proscriptions provides that the Contracting Parties will participate in the Convention bearing in the mind the “sovereign equality of the States, non-interference in internal matters, mutual benefit and respect for relevant principles and norms of international law”.

It is however, difficult to understand as to why the Convention provides sovereign immunity to State owned ships and warships that are immune from the application of this convention. In this regard, it may seen as no mere coincidence that during the erstwhile regime of communist rule in Soviet Union, the largest amount of clandestine dumping of radioactive waste was undertaken by State owned vessels and warships.

The Bucharest Convention is a framework convention and like all UNEP regional sea instruments provides for a due diligence obligations to – prevent, reduce and control pollution. Article X of the Convention specifically deals with pollution by dumping and calls upon Contracting Parties to undertake mandatory measures to prevent, reduce and control pollution caused by dumping in the Black Sea area. It

---

8 Countries of this region include: Bulgaria, Ukraine, Russian Federation, Romania, Turkey and Georgia.
also prohibits granting of any permits by Contracting Parties within their jurisdiction to allow dumping by natural or juridical persons hailing from non-Black Sea States. A novel section dealing with protection of the marine living resources is provided for under Article XIII of the Bucharest Convention. It calls upon the Contracting Parties to not only prevent, reduce and control pollution in the Black Sea area, but also ask them to pay special attention to avoiding harm to marine life and living resources, in particular by changing their habits and creating hindrance to fishing and other legitimate uses of the Black Sea, and in this respect shall give due regard to recommendations of the competent international organisations.

A detailed clause on responsibility and liability has also been provided for, wherein Contracting Parties have been called upon to adopt rules and regulations “on liability for damage caused by the natural or juridical persons to the marine environment of the Black Sea in areas where it exercises, in accordance with international law, its sovereignty, sovereign rights or jurisdiction”.

The Convention makes it mandatory for the Contracting Parties to harmonise their legal systems to be able to provide prompt and adequate compensation for the pollution caused by the marine environment.

An institutional mechanism in the form of a Commission has been provided for implementation of the Bucharest Convention. It is also important to note that the Convention does not provide for any form of reservation.

Protocol on the Protection of the Black Sea Marine Environment against by Pollution by Dumping A Protocol was adopted along with Convention on 21 April 1992 and it entered into force on 15 January 1994. Article 2 of the Protocol provides “dumping in the Black Sea of wastes or other matter containing substances listed in Annex-I of this Protocol is prohibited”. Annex-I of the Protocol prohibits a number of substances, chief among them being “radioactive substances and waste, including used radioactive fuel”.

The Protocol follows the listing system whereby permits are required for dumping of noxious, as well as, other wastes on the basis of their toxicity and scientific quality. It may also be noted that the Protocol follows the reverse listing procedure adopted by the 1996 Protocol to the London Convention, wherein only those substances that are listed are prohibited.

In such a situation there is a mandatory obligation upon the Contracting Parties to only allow substances of lesser hazardous value and risk, to be allowed for dumping. Moreover, such a reversal of listing also leads to the reversal of the “burden of
proof’, whereby the dumper will have to show that all dumped substances are safe and it is not for the pollution victim to prove his case.

The precautionary approach prohibits the dumping of hazardous nuclear waste on the excuse that insufficient scientific evidence is available as to the future effects on human body and surrounding environment.

The Commission provided under the Bucharest Convention has been given an important role of monitoring dumping activities wherein competent national authorities who have issued permits for dumping in accordance with Articles 3, 4 and 5 would have to submit their records to it for perusal.

The Protocol also provides for a compulsory obligation to co-operate and exchange information on all activities concerning dumping and issuance of permits between the Contracting Parties. The Annexes appended to the Protocol form an integral part of the Protocol. Moreover, the characteristics and composition of the dumped matter will have to be taken into consideration while issuing permits for dumping at sea. The important factors that need to be taken into account include: amount of matter to be dumped, physical and biological properties, long term toxicity, persistence, bio-accumulation and transformation in the marine environment and the probability of the dumped substance affecting the marketability of marine resources, such as fishes.

Further, the Contracting Parties will also have to bear in mind the possible effects on the other legitimate uses of the sea while undertaking dumping.

It is also to be noted that the practical availability of alternate disposal options would have to be found to safeguard dumping at sea, which would entail exhausting land-based disposal options, before issuing permits for dumping of radioactive waste.

At the policy level too, it is seen that Black Sea States have adopted various regional policy decisions calling for a ban on radioactive dumping at Sea. The Odessa Ministerial Declaration on the Protection of the Black Sea adopted on 7 April 1993 took a decision to “to ban, with immediate effect, the dumping of radioactive materials in the Black Sea”.

**South Pacific** (Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea 1986)*

---

* Countries of this region include: Federated States of Micronesia, USA, Republic of Marshall Islands, Nauru, Tuvalu, Kiribati, Cook Islands, France, Palau, Australia, Papua New Guinea, New Zealand, Fiji, Solomon Islands, Niue, Western Samoa and UK.
The Pacific region comprises 22 island States with 33 million square km. area, i.e. nearly four times the area of the continent of Australia and three times that of USA. Even as its represents 6% of the earth’s surface, land area of the region is only 2%. There is great disparity among the islands in size and economic well-being, wherein Papua New Guinea the largest State of the region is 93,000 times larger than the smallest island of Pitcairn.

The area around the Pacific has been one of the worst polluted due to the long standing policy of France to conduct underground and atmospheric nuclear tests in the Muroroa and Fangatufa Atolls in the South Pacific region and also the nuclear testing by the United States in the Bikini Atolls.

For the Pacific Islanders the ocean is a way of life. They are intrinsically involved with the oceans as a means of food source and a basis of their rituals, traditions and customs. It is because of this link that any threat or destruction of the oceans is viewed as destruction of their culture and way of life. The activities which impact upon their marine environment include are over fishing, use of poisons and explosives for fishing, pollution from sewage, fertilizers, toxic substances and numerous other anthropocentric activities. Although the region has witnessed environmental degradation from various sources, radioactive pollution and the innate inability of the Pacific island States to do anything, is one that has caught the eye of the international community.

Environmental issues were first addressed in the South Pacific through the South Pacific Conference held in 1950. But it was the US and French nuclear tests that brought the community together. The efforts of non-governmental organisations, such as the World Conservation Union or the IUCN, led to the adoption of the Convention for the Protection of the Natural Resources and the Environment of the South Pacific, also called the Noumea Convention.

The South Pacific Regional Environmental Programme (SPREP) was established in 1978. Though in the initial years it functioned as a part of the South Pacific Commission, today it functions independently.

Today, a host of conventions – the Noumea Convention, the United Nations Convention on the Law of the Sea 1982 and others regulate the South Pacific region. But for the purposes of our study, relevant to ocean dumping of radioactive wastes, we will concentrate on: the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (the Noumea Convention), 1986 its Protocol, and the Raratonga Protocol.
The Noumea Convention

The Noumea Convention area comprises all the Pacific Island States, Australia and New Zealand. Besides, these States the Convention area includes “areas of high seas which are enclosed from all sides by the 200 nautical mile zones”. The Convention also leaves wide open for addition of areas within its geographical scope. Article 3 provides, Any Party may add areas under its jurisdiction within the Pacific Ocean between the Tropic of Cancer and 60°S latitude and between 130°E longitude and 120°W longitude to the Convention Area.

Adopting the London Convention definition on dumping, the Convention provides for a set of general obligations. These include a due diligence approach of preventing, reducing and controlling pollution caused by dumping. Parties shall utilise their fullest capacities towards this end and shall endeavour to harmonise their national policies. Bearing in mind the peculiar problem of the region, Parties are also called upon to formulate regional standards, agreed measures and procedures taking into consideration international standards prescribed by various competent global and regional organisations.

Articles 10 of the Noumea Convention titled “Disposal of Wastes”, calls upon Parties to adopt a due diligence approach towards controlling pollution caused by dumping of wastes, which also includes “…prohibition of dumping radioactive wastes or other radioactive matter in the Convention area”.

To be able to save the seabed from dumping, Article 10 also provides that -

Without prejudice to whether or not disposal into the seabed and subsoil of wastes or other matter constitutes ‘dumping’, the Parties agree to prohibit the disposal into the seabed and subsoil of the Convention Area of radioactive wastes or other radioactive matter.

A further extension of this resolve is seen wherein disposal would also “…apply to the continental shelf of a Party where it extends, in accordance with international law, outwards beyond the Convention area”.

Article 12 is separately devoted to prohibition of nuclear testing. Although appearing to be a meek effort it calls upon Parties to take all appropriate measures to prevent, reduce and control pollution in the Area, which might result from the testing of nuclear devices.

The Noumea Convention calls upon Parties to “take appropriate measures to protect and preserve rare or fragile ecosystems and depleted, threatened, or endangered flora and fauna as well as their habitat in the Convention area”.

-259-
Parties are also obligated to develop and maintain with the assistance of global and regional organisations, technical guidelines and legislation giving adequate emphasis to environmental and social factors to facilitate balanced development of their natural resources and planning of their major projects, which affect the marine environment. Other obligations include: co-operation in combating pollution in cases of emergency; scientific and technical co-operation; sharing of information and; a clause on liability and compensation.

The South Pacific Commission serves as the institutional mechanism for implementation of the Convention.

**Protocol to the Noumea Convention for the Prevention of Pollution of the South Pacific Region by Dumping, 1986**

To be able to cope better, with the persistent problem of dumping of wastes, the Protocol for the Prevention of Pollution of the South Pacific by Dumping was adopted in 1986.

A similar set of due diligence obligations to prevent, reduce and control pollution is provided by the Protocol. However, it must be noted that dumping in the territorial sea, the EEZ or the continental shelf of a Party shall not be carried out without the express prior approval of the Party. Any approval of such dumping will have to be undertaken pursuant to agreement of the other Parties of the Protocol and the geographical situation to be affected by the dumping operation. Parties are also called upon to ensure that national laws and regulations are consistent with relevant internationally recognised rules and procedures relating to dumping. Parties are under an obligation to undertake environmental impact assessments (EIAs) before undertaking any hazardous operation.

Like the global regime on dumping i.e. the London Convention the Protocol adopts a listing approach whereby listed “prohibited substances” in Annex-I of the Protocol are prohibited from dumping. A permit system is provided for issuance of special permits and general permits for dumping of substances listed in Annexes-I and II.

It however, needs to be noted that certain exculpatory situations have been provided wherein an emergency situation “posing unacceptable risk to human health”, without any other recourse would make it obligatory upon a Party to issue a permit for dumping.

Under the Protocol, Parties would have to designate appropriate authorities that shall oversee dumping activities and are also responsible for implementation of the Protocol. The SPREP is the institutional mechanism responsible for assisting
the Parties in preparation of reports as well as conveyance of notification of proposed dumping activities.

**The South Pacific Nuclear Free Zone Treaty (Raratonga Treaty)**


Although in essence, the Treaty is a nuclear free zone treaty, the reach of the agreement has wider ramification for nuclear contamination of the region.

The preamble of the Treaty, while emphasizing the catastrophe nuclear weapons can cause also reflects the resolve of the Pacific community whereby they are “Determined to keep the region free of environmental pollution by radioactive wastes and other radioactive waste matter”.

The Treaty has two provisions on dumping of radioactive wastes. Under Article 7 of the treaty Parties undertake “…not to dump radioactive wastes at sea within the South Pacific nuclear free zone; and two, “…not to assist anyone in dumping such wastes at sea, in the zone”. It also obligates Parties ‘to support the conclusion of a regional protocol as soon as possible to the Noumea Convention which would preclude dumping of radioactive wastes at sea by anyone anywhere in the region’”. Such an obligation was fulfilled by adoption the adoption of the 1986 Protocol to the Noumea Convention.

To add to these obligations Parties are called upon to “…respect international law with regard to the freedom of the seas and …to ensure that performance of obligations is verifiable by international standards”.

**Waigani Convention**

As opposed to the Noumea and the Raratonga treaties, the Waigani Convention *per se* deals with the movement and disposal of hazardous wastes in the South Pacific region.

The Convention reflects intergenerational equity concerns of region in the first preambular paragraph which provides that Parties to the Convention are “…conscious of their responsibility to protect, preserve and improve the environment of the South Pacific for the good health, benefit and enjoyment of present and future generations of the people of the South Pacific”. Further it adds that the Parties are “concerned about the dangers posed by radioactive wastes to the people and environment of the South Pacific”.
Although, the Convention does not deal with radioactive waste disposal/dumping, Article 4 casts a ‘general obligation’ upon Parties. Paragraph 1 (a) of Article 4 titled “Hazardous Wastes and Radioactive Wastes Import and Export Ban”, provides:

That each Pacific Island Developing Party shall take appropriate legal, administrative and other measures within the area under its jurisdiction to ‘ban the import of all hazardous and radioactive wastes from outside the Convention area. …further, such import shall be deemed an illegal and criminal Act.

Paragraph 3 titled “Ban on Dumping of Hazardous Wastes and Radioactive Wastes at Sea provides that “each Party which is a Party to the London Convention, the South Pacific Nuclear Free Zone Treaty, 1985, the 1982 United Nations Convention on the Law of the Sea or the Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, 1986 reaffirms the commitment under those instruments which require it to prohibit dumping of hazardous and radioactive wastes at sea”. Further, it exhorts States which are “…not a Party either to the London Convention or the Protocol for the Prevention of Pollution of the South Pacific Region by Dumping 1986, should consider becoming a Party to both of these instruments”.

Such a proliferation of lawmaking has led to establishment of an effective legal framework regulating entry, handling, transport, discharge, dumping and other activities associated with radioactive substances.

South East Pacific Region (Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific, Lima 1981)\(^10\)

The South East Pacific Region (Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific, also called the Lima Convention, adopts the UN Convention on the Law of the Sea definition of ‘pollution of the marine environment’. The Convention follows a due diligence approach to prevent, reduce and control pollution caused by dumping. Parties are also called upon to ensure that regulations and laws are consistent with accepted international standards on dumping. Principle 21 of Stockholm Conference is echoed in the general obligations wherein Parties shall:

Take measures to ensure that activities under their jurisdiction or control are so conducted that they do not cause damage by pollution to others or to their environment, and that pollution arising from incidents or activities under their

\(^{10}\) Countries of this region include: Panama, Chile, Peru, Ecuador and Columbia.
jurisdiction or control does not, as far as possible, spread beyond the areas where the High Contracting Parties exercise sovereignty and jurisdiction.

Article 4 of the Lima Convention provides for a combined effort to prevent, reduce and control pollution of the marine environment, which includes combating pollution from land-based sources, dumping, vessels and installations.

It also provides for co-operation during emergencies, monitoring of pollution, a mandatory environmental impact assessment, exchange of information and data and a clause on liability and compensation. To further strengthen their resolve to keep radioactive contamination out of the South-East Pacific a Protocol on radioactive pollution was adopted.

**Protocol for the Protection of the Southeast Pacific against Radioactive Pollution, 1989**

The Protocol to the Lima Convention of 21 September 1989 applies to the maritime area of the South-East Pacific within the 200-mile maritime zone over which the High Contracting Parties exercise sovereignty and jurisdiction. It also applies to the entire continental shelf when the High Contracting Parties extend it beyond their 200 miles.

It provides for a detailed set of general obligations where the Contracting Parties agree, “to prohibit dumping of radioactive wastes and other radioactive substances in the sea and or on the seabed within the Protocol area”.

The Protocol also provides that Contracting Parties agree, “To prohibit all burial of radioactive wastes and other radioactive substances in the marine subsoil within the area to which the Protocol applies”.

The definition of dumping is more expansive than the London Convention, wherein dumping means.

Any deliberate disposal at sea of radioactive wastes and other radioactive substances from vessels, aircraft, platforms or other man-made structures at sea; any deliberate sinking at sea of vessels, aircraft, platforms or other man-made structures containing or transporting such wastes or other substances.

The Protocol provides for undertaking due diligence obligations for the prevention, reduction and control of radioactive pollution in the region. It makes it obligatory for all High Contracting Parties to enact national laws and regulations to prohibit the dumping and burial of radioactive wastes and other substances. It calls upon
International Environmental Law and Policy

Parties to co-operate for exchange of scientific information, monitoring programmes, co-operation in times of emergencies and training programmes.

A novel system of penalties imposing compliance mechanism has been provided for, wherein “Each High Contracting Party undertakes to ensure compliance with the provisions of the Protocol and to take steps to prevent and penalise any activity in contravention thereof”. To ensure stringent compliance, no reservations are permitted under the Protocol.

The Permanent Commission for the South Pacific serves as the executive Secretariat and the institutional mechanism for the implementation of the Protocol.

The Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean, 1967 (Tlatelolco Treaty) also prohibits contamination of the marine environment by radioactive wastes and other substances.

9.6 Conclusion

The UN Convention on the Law 1982 is widely regarded the constitution of the oceans. It establishes a legal order that not only protects the marine environment but also ensures peaceful and orderly relations among States. The Convention has provided a global framework which has prompted not only global action but also regional and national actions.

The Convention not only codified customary law but also progressively developed existing understanding on the uses of the seas. For example, India adopted its domestic law namely the Territorial Waters, Continental Shelf, Exclusive Economic Zones and Other Maritime Zones Act 1976, much before the UN Convention was adopted in 1972 and it entered into force only in 1994. Part XII of the Convention provides a wide framework for adopting global/regional conventions on all the six types of pollution. The oil pollution conventions under the auspices of IMO and the UNEP Regional Conventions are a testament to this fact.

The UNEP Regional Seas is hailed as the most successful flagship programme of the organisation. The easily acceptable PRC standards of prevent, reduce and control pollution on the basis of capacities has endured the programmes to many States. The principle of ‘reasonable regard for the oceans’ has now been translated to a concrete programmatic action.
Water is one of the most widely shared resources of the planet. Rivers often constitute the border between States or flow across different countries and lakes often lie on the territory of different States. Therefore water can be a factor for competition as well as a reason of co-operation among States. Disputes for the control of water resources have a long history. Also major water development projects (e.g. the construction of a dam) have caused violence and civil strife. But throughout history, States have manifested their interest in co-operating for the management of water resources and have recognised the need to establish rules and principles for a peaceful co-operation\(^1\).

Theorists have come up with a variety of doctrines on how to share water resources among nations. However, because of the volatile political situation prevalent among most nations, in addition to the genuine requirement of water, none of the theories have been accepted \textit{in toto} by any of the countries. Water disputes have not only arisen between two or more nations, but even amongst States in federal States, like India examples being Narmada Dam dispute and the Cauvery River Dispute.

10.2 Territorial Sovereignty Theory

The principle of absolute territorial sovereignty suggests that States have the right to unrestrained use of resources found within their territories, irrespective of the transboundary consequences of such use. This principle is often equated with the Harmon Doctrine. The doctrine gets its name after former United States Attorney General Judson Harmon. In 1895, in response to a dispute between the United States and Mexico over the utilisation of the Rio Grande, Attorney General Harmon, declared that, “the rules, principles and precedents of international law impose no liability or obligations upon the United States”.

Most States and legal publicists have rejected this principle outright. In the Lake Lanoux Arbitration (France v. Spain), 24 I.L.R 101 (Arbitral Tribunal 1957) for example, the international tribunal concluded that upper riparian States are obligated to consider the rights and interests of lower riparian States, as well as to attempt to reconcile any disputes over water resource use or modification projects.

Under the Natural Water Flow Theory also known as the territorial integrity theory every lower riparian owner is entitled to the natural flow of the river unhampered by the upper riparian owners, otherwise it results in violation of its territorial sovereignty. In other words, this theory is diametrically opposite to the Harmon Doctrine. The rider, however, is that the former has the right to make reasonable use of the water while it was in his territory.

The Equitable Utilisation Theory provides that a State can freely use waters flowing through its territory on the condition that this utilisation does not prejudice the interests of other riparian States.

It is stated that concrete rights to water usage creates a feeling of entitlement that can be stifling to negotiation. However, the equitable utilisation principle furthers the negotiation process because it avoids this sense of entitlement, providing for a more flexible negotiation process. Furthermore, the doctrinal incorporation of this principle also allows for an agreement with terms that will be adaptable.

This doctrine essentially deals with and ‘equitable’ distribution of water in States and not an ‘equal’ distribution of water, making it difficult to evolve principles for determining the equitable share of each riparian State which may apply in all cases or situations. The idea is the maximum benefit accruing to all the riparian States of the river, keeping in view the economic and social needs of the different riparian States. To arrive at a proper or a just balance is not an easy task. The problems of each State and river are unique and a solution in one case may not be feasible for
adoption in another. Hence, the working out of an equitable share for each basin State requires an analysis of complex technical and economical data and the judicious balancing of conflicting claims of and uses of the river by different riparian States. Therefore, there can be no set international guidelines to deal with such a situation or which can accurately law down how much water should be distributed in certain specific situations. The problem is further complicated by the fact that the diverse uses of the river by the different States are not simultaneous.

This principle of ‘Equitable Utilisation which was first highlighted in the Corfu Channel Case (ICJ Reports 1947), received strong support from the International Court of Justice (ICJ) in the Gabcikovo–Nagymaros Case. The Court concluded that Slovakia by unilaterally assuming control of a shared resource deprived Hungary of its right to an equitable and reasonable share of the natural resources of the Danube. The Court found that because of this unilateral action. Slovakia failed to respect the international legal norm of proportionality, as it was required to do.

10.3 UN Convention on International Watercourses, 1997

The international watercourse law is in evolution since the preparation and adoption of the Helsinki Rules, 1966. The International Law Commission took some twenty years later to further develop and crystallise the law. The draft articles adopted by the International Law Commission in 1994 provided the basis for the United Nations to adopt the Convention on the Law of the Non-Navigational Use of International Watercourses, 1997.

The Watercourses Convention was adopted by the General Assembly on 21st May, 1997, as an annex to Resolution 51/229. The Convention is not yet in force; it will enter into force when it has been ratified by 35 States. The Watercourses Convention defines the term “watercourses” (Art. 2) as “a system of surface waters and ground waters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus” and an “international watercourse” as a watercourse “parts of which are situated in different States”. This definition takes into account the reality of the hydrological cycle and suggests the need for States to take into consideration the physical unity of interconnected surface water and groundwater when managing shared freshwater resources. However it does not apply, strictly speaking, to groundwater that is not connected in some way with surface water, so-called “confined” groundwater.

2 Case Concerning the Gabcikovo-Nagymaros Project (Hungary v. Slovakia) 1997 ICJ 7, (Sept. 25).
Part II of the Watercourses Convention contains a number of general principles, some of which are reflective of customary international law, and are binding on all States. These include:

♦ Obligation to utilise an international watercourse in an equitable and reasonable manner;
♦ Duty to prevent significant harm to other riparian States; and
♦ Obligation to provide prior notification of planned measures that might affect other States sharing a watercourse.

The first of these principles is the principle of equitable utilisation and participation (Art. 5). The principle of equitable utilisation, as set forth above, is chiefly concerned with appointment, or allocation, of water between States sharing an international watercourse. It therefore relates primarily to water use, and thus to water quantity, rather than to water quality.

Similar to the Helsinki Rules on International Watercourses 1966, the Watercourses Convention sets forth in Article 6 a non-exhaustive list of factors to be taken into account by a State to ensure that its utilisation of an international watercourse is equitable and reasonable. These factors include:

♦ Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;
♦ Social and economic needs of the watercourse States concerned;
♦ Population dependent on the watercourse in each watercourse State;
♦ Effects of the use or uses of the watercourses in one watercourse State on other watercourse States;
♦ Existing and potential uses of the watercourse;
♦ Conservation, protection, development and economy of use of the water resource of the watercourse and the costs of measures taken to that effect; and
♦ Availability of alternatives, of comparable value, to a particular planned or existing use.

It is important to understand that the weight to be given to each factor “is to be determined by its importance in comparison with that of other relevant factors”. In determining what is a reasonable and equitable use “all relevant factors are to be considered together and a conclusion reached on the basis of the whole”.
Another fundamental principle governing States’ conduct in relation to international watercourses is the obligation not to cause significant harm, contained in Article 7 of the Convention. According to paragraph 1 of Article 7, States sharing a watercourse must “in utilising an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States”.

Article 7 of the Convention imposes an obligation on a watercourse State, in utilising an international watercourse in its territory to prevent the causing of significant harm to other watercourse States. However, harm is not defined. “Significant” relates to the threshold of harm to be avoided. This means any harm which is not negligible or de minimus but more than observable or appreciable. Further, the obligation imposed is one of due diligence which requires the State to take all appropriate measures. This does not impose an obligation of avoiding the harm altogether. In that sense it is not an absolute obligation. However, in case of harm of a significant nature the Watercourse State is under an obligation to consult the affected watercourse States to eliminate or mitigate such harm and where appropriate to discuss the question of compensation.

Article 7 is an important article and on which negotiations both in the Commission and later in the Working Group engaged considerable disagreement. One perspective was that the obligation not to cause significant harm cannot override the right to reasonable and equitable utilisation. Such use should continue while the State causing harm could only be required to consult and negotiate suitable arrangements to mitigate the harm involved and where appropriate pay due compensation. On the other hand the view is taken that any use which involved significant harm automatically makes such a use as not reasonable or equitable and hence the use itself should be prohibited if significant harm could not be avoided or as soon as it is resulted. The latter view did not remain and the final text adopted by the Convention let the options open to States involved or concerned either to terminate the activity or to continue with the same in a modified form or by making necessary payments by way of compensation. All possibilities are open but the end results can only be achieved through negotiations and by mutual agreement.

Articles 8-10 provide for co-operation among watercourse States. According to Article 8, States sharing a watercourse must “co-operate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilisation and adequate protection of an international watercourse”, and “may consider the establishment of joint mechanisms or commissions.....to facilitate co-operation on relevant measures and procedures in the light of experience gained through co-operation in existing joint mechanisms and commissions in various regions”.

-269-
Another form of co-operation is provided for in Article 9, according to which States sharing a watercourse should regularly “exchange readily available data and information on the condition of the watercourse” and related forecasts, in particular those relating to the hydrological, meteorological, hydro-geological and ecological nature of the watercourse, including its water quality. If the required information is not readily available, the requested State should “employ its best efforts to comply with the request”, although it may condition compliance upon payment of the reasonable costs of collecting and processing the data or information. Supply of timely hydrological data is very important, especially in the rainy seasons when various projects are under stress by excess water.

The Convention under Article 10 establishes that none of the different categories of the uses of the watercourse (e.g. navigation, irrigation, hydroelectric power production, industrial uses and so on) has priority over other kinds of uses in the absence of an agreement or custom to the contrary and it provides that, whenever different uses of an international watercourse conflict with each other, such conflict “shall be resolved with reference to [the principles of equitable and reasonable utilisation and participation and obligation to not cause significant harm], with special regard being given to the requirements of vital human needs”.

According to the Watercourses Convention, a riparian State must provide timely notification to other watercourse States of planned measures which may have a significant adverse effect upon them. These measures may include, for instance, new irrigation schemes, dams, plants discharging their waste into the stream etc. to other riparian States. This will allow the other riparian States to synchronise their existing uses with the new use or to determine whether the new use will cause them harm or will be inequitable. In the latter case, the States concerned will have an opportunity to reach an appropriate resolution before the plans are implemented and it becomes more difficult to do so. Articles 11-19 of the Convention establish detailed notification procedures for such cases. Notification can also be important from the safety point of view. Co-operation between States can also help in planning activities in one’s own country on the basis of the data supplied. It must be remembered all water related projects are extremely cost intensive and early notification helps riparian States in designing the activities.

**Protection of environment**

The Convention also has a separate chapter, Part IV on protection, preservation and management, Part V on harmful conditions and emergency situations. The Watercourses Convention contains a general obligation and several specific ones relating to the protection and preservation of international watercourses. The
general obligation, set forth in Article 20, provides as follows: “Watercourse States shall, individually and, where appropriate, jointly, protect and preserve the ecosystems of international watercourses”.

The specific obligations related to pollution, alien species, and the marine environment include that States must “prevent, reduce and control the pollution of an international watercourse that may cause significant harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse...” (Art. 21). This may be seen as a specific application of the general obligation to prevent harm reflected in Article 7. Article 22 requires States to take all necessary measures to prevent the introduction of species, alien or new, into an international watercourse, which may be detrimental to the ecosystem of the watercourse resulting in significant harm to other watercourses. Article 23 deals with duty of the watercourse States to take necessary measures to protect and preserve the marine environment, including estuaries. Article 27 puts a duty on watercourse States to prevent or mitigate conditions that may be harmful to other watercourse States whether resulting from natural causes or human conduct.

The Watercourse Convention also contains provisions on the prevention and mitigation of harmful conditions and emergency situations (Art. 27 and 28 respectively), dealing with the prevention of such harmful conditions as floods, ice hazards, water-borne diseases, erosion, salt-water intrusion, drought and desertification, and with emergency situations that may be brought on by such phenomena as floods, landslides and industrial accidents. In case of an emergency Article 28 requires a watercourse State within whose territory an emergency originates to take all practical measures in co-operation with potentially affected States and where appropriate competent international organisations to prevent, mitigate and eliminate harmful effects of the emergency.

Article 32 noted the other more recent concept of environmental law on non-discrimination.

Watercourse States are free to enter into more specific agreements including agreements to protect the environment itself from significant harm as a result of reasonable and equitable utilisation of an international watercourse. The Convention also contains a non-binding dispute settlement procedure if no agreement is reached among the Parties on a procedure of settlement of disputes. Article 33(3) of the Convention provides for submitting the dispute, at the request of any of the Parties to the dispute, to impartial fact finding. The parties are under a duty to consider the report of the fact-finding commission in good faith but it is not automatically binding.
In the next section we shall look at a few river treaties and look at how they have functioned.

♦ **Indus Water Treaty**

The Indus Treaty between India and Pakistan has acquired a reputation internationally as a successful instance of conflict resolution. It has been working reasonably well despite a difficult political relationship between the two countries and was not abrogated even during periods of war. The Indus River rises in Tibet and crosses the Indian subcontinent in the form of six separate rivers. These waters are used most notably for agricultural irrigation, domestic consumption and transport. The partitioning of India and Pakistan in 1947 resulted in India controlling most of the headwaters of the river, while Pakistan controlled the larger share of the irrigated lands. In the ensuing dispute, India relying on the principle of territorial sovereignty initially asserted that it had the right to use the waters as it saw fit. Under this doctrine, Pakistan would have had no say if India chose to divert most of the headwaters for its own purposes. Initial negotiations between India and Pakistan did not proceed well. India continued to maintain its territorial sovereignty rights, while Pakistan sought some sort of equitable resolution to the dispute. Proposals for Commissions to settle the disputes were rejected, and obligations under past agreements were repudiated. A settlement to the dispute did not seem likely. This stalemate was ended, however, when the President of the International Bank for Reconstruction and Development (World Bank) offered his organisations services as a mediator to the dispute. Both parties accepted this offer, and the treaty borne of the subsequent negotiations was based on the principle of equitable utilisation. The Indus Water Treaty allocated three of the six rivers to each of the negotiating countries. It also resulted in the formation of a Permanent Indus Commission with one representative from each country, and it delineated various means through which any future disputes would be settled. The Indus Water Treaty of 1960 demonstrates the effectiveness of the principle of *equitable utilisation*. This doctrine emphasizes distribution of resources in the manner that is most beneficial to all the parties involved. Equitable utilisation has proven to be a mainstay of international water rights negotiations. This treaty also elucidates the practicality and efficiency of having a strong, non-political mediator.

Of late the Treaty has come under the scanner because of the disputes that have arisen between India and Pakistan with respect to the Baglihar and Kishenganga hydroelectric projects. In case of Baglihar Pakistan has approached the Neutral Expert who gave his determination in 2007 with respect to the design of the Plant. With respect to Kishenganga, Pakistan has approached the Court of Arbitration envisaged under the Treaty as it believes that India’s diversion of the river into
another river violates the Treaty and river diversion is not permitted under the Treaty.

♦ The Ganges River Treaty

In the relationship between India and Bangladesh, the dispute over Ganga waters was for two decades an important component, perhaps the most important one and though it now stands resolved by the treaty of December 1996, it would be a mistake to regard it as having wholly disappeared. Though India traditionally has had better relations with Bangladesh than with Pakistan, India and Bangladesh have a turbulent history of water sharing. The Ganges River flows south from Nepal into West Bengal, where it splits into two rivers. One portion continues to flow south through Indian territory and becomes the Hooghly River. The other portion, taking the name Padma River, flows east into Bangladesh. To appreciate the significance of the 1996 Ganges River Treaty, one must consider it in the context of the negotiations that preceded it. It began with India’s 1951 decision to construct the Farakka Barrage on the Ganges River ten miles away from Bangladesh in the Indian territory of West Bengal. The Farakka Barrage, which was not completed until 1971, was built to divert water from the Ganges River to the Hooghly. During the twenty years between the announcement of the construction and its completion, Pakistan (of which Bangladesh was then a part) closely opposed the Barrage’s construction through various diplomatic means. After Bangladesh gained its independence from Pakistan, its relationship with India improved. Nevertheless, the Farakka Barrage remained a “thorny issue, and Bangladesh opposed it vehemently”. Despite this dispute, Bangladesh and India have been able to come to an agreement on water issues in a number of instances. Furthermore, the 1996 agreement was based on the principle of equitable utilisation, presenting a more efficient use of the waters.

♦ Mahakali River Treaty

The Mahakali River Treaty between India and Nepal also signed in 1996 is another example of a water allocation agreement based on many of the same principles. The relationship between India and Nepal has typically been very strong and peaceable. However, much like the relationship between India and Bangladesh, water sharing and water related developments have proven to be a weak spot in diplomacy. There is notable exception to the similarities between the situation between Nepal and India and that between India and Bangladesh; Nepal has the advantage of being upstream from the more powerful India. Thus, though the Mahakali agreement is at least ostensibly modeled on the principles of equitable utilisation, it does demonstrate how inequality of power can manifest itself in negotiations. The equitable utilisation principle is used most prominently in the
Mahakali treaty in those portions pertaining to the proposed Pancheshwar Multipurpose Project. This project will be placed along a portion of the Mahakali River that forms the border between India and Nepal. One of the concerns relates to the Kalapani issue. The Nepalese object to the Indian military presence in the area called Kalapani. This is a territorial dispute. In regard to the treaty, itself, there is a difference between the Indian and Nepalese views on what the ‘equal sharing’ principle implies.

♦ Mekong River Dispute

Similar is the case of the Mekong River that involves a dispute between six riparian States share the Mekong: the upper basin States Myanmar and China have so far been only marginally involved in co-operation. In 1995 Cambodia, Laos, Thailand and Vietnam (the lower basin States) signed an Agreement on Co-operation for the Sustainable Development of the Mekong River Basin. The Mekong Basin Commission is the intergovernmental body which co-ordinates the Mekong Basin states. However, China, is not a member and has been developing large dams in the upper basin which seem to be significantly disrupting flows. Estimates suggest as much as 50% of dry season flow is lost affecting fisheries and flood lands in at least 4 countries.

Other crisis disputes include the utilisation of the Amu Darya and Syr Darya flowing across the cradle of civilisations in central Asia. At present, for 55 million inhabitants of five post-Soviet countries, namely Kazakhstan, Kirgyzstan, Tajikistan, Turkmenistan and Uzbekistan, depend on these two rivers are the source of livelihood for the people because they provide irrigation, hydroelectric power, fishing, internal navigation, and most importantly, potable water. The transition from the unified, centralised, regional water management system of the Soviet Union to an incoherent, often disputed piecemeal governance under the dispensation of five countries has made the rivers an issue of discord.

♦ The Jordan River Dispute

Despite its small size, the Jordan River is one of the most important in the region and the locus of intense international competition. It is shared by Jordan, Syria, Israel and Lebanon. Since the establishment of Israel, this basin has been the center of intense international conflict and the dispute over the waters of the Jordan River is an integral part of the ongoing conflict.

Tensions also exist in the Jordan basin between Syria and Jordan over the construction and operation of a number of Syrian dams on the Yarmuk River. These dams were built to allow Syria to make use of the Yarmuk’s flow, which would otherwise be available for use in Israel or Jordan.
The Nile River Dispute

The nations that share the Nile are Egypt, Sudan, Ethiopia, Kenya, Tanzania, Zaire, Uganda, Rwanda and Burundi. The Nile River is also a shared water resource of tremendous regional importance, particularly for agriculture in Egypt and Sudan. A treaty was signed in 1959 allocating the water of the Nile between Egypt and Sudan. Although this treaty has effectively reduced the risk of conflict between the two countries over water, none of the other seven nations of the basin is party to it, and several have expressed a desire to increase their use of Nile River water. Additional use of water by these other nations of the Nile basin, particularly by Ethiopia, could reduce water available to the downstream nations and greatly increase tensions over water.

International water law is one of the most contemporary areas of dispute because of the shrinking of freshwater resources. The ILC is seized of the matter with the topic Sharing of Transboundary Resources, as well as Transboundary Aquifers. Ever increasing population and the lifestyles freshwater resources are drying up. Added to this global warming and desertification are also affecting the natural aquifers. The Jordan and Euphrates dispute in the Israeli-Arab world are prime examples of this phenomenon.

Although bilateral treaties have always regulated river sharing, the 1997 UN Convention is a genuine attempt at providing a legal framework for providing appropriate guidance for States to enter into suitable agreements taking into account the particular characteristics of an international watercourse they share.

Someone has said that the next global war would be fought for water. It is never too late to act. The principles of rational and equitable sharing of watercourses regarded as reflective of customary law provide an opportunity for cooperation to end this disaster and States in their wisdom must attempt to incorporate the provisions of the Watercourses Convention to avoid future water disputes.

10.4 Regional Seas Agreement

International law, particularly the formulation of legal agreements between nations with commonly shared resources; provide a powerful tool for regulating access to those resources and for controlling activities with potentially destructive impacts on the environment. There are several international agreements and a series of regional and national agreements which are directly relevant to the conservation of marine biodiversity. These include agreements to regulate pollution resulting from maritime activity, control trade in endangered marine species, curb the hunting
of endangered whales, protect coastal sites of universal value, trace the effects of climate change on marine ecosystems, and deal with pollution from land-based activities. In addition, there are currently nine UNEP Regional Seas Conventions with their attendant protocols which address marine issues of particular regional importance.

UNCLOS was preceded by the emergence of the UNEP Regional Seas Programme, an ambitious attempt at developing treaties and soft rules and standards at the regional levels, taking account of the different needs and capabilities of the various regions. The Regional Seas Programme followed the 1972 Stockholm Conference and the creation of UNEP. In 1974, the FAO General Fisheries Council for the Mediterranean has sponsored guidelines for framework convention on the protection of the environment against pollution in the Mediterranean. This led to the adoption in February 1975, under the auspices of UNEP, of the Mediterranean Action Plan, which has since been a model for other regions, the Plan comprised five basic components: environmental assessment, environmental management, institutional arrangements, financial arrangements and regional legal instruments. It was followed by the 1976 Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution (1976 Barcelona Convention) and two Protocols: a Protocol Ships and Aircraft (1976 Barcelona Dumping Protocol), and a Protocol for Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency (1976 Barcelona Emergency Protocol). In November 1976, UNEP convened its first ‘Task Force on Legal Instruments for Regional Seas’; and in 1978 the UNEP Governing Council endorsed a Regional Seas Programme, which is now a part of the broader UNEP Programme Activity Center for Oceans and Coastal Areas.

The UNEP Regional Seas Programme extends to fourteen regional areas: of these, thirteen regions now have their own Action Plans, and an Action Plan for the Upper South-West Atlantic is in development. Ten regions are the subject of the binding international agreements: the Mediterranean, the Arabian Gulf, the Gulf of Guinea, the South-East Pacific, the Red Sea and the Gulf of Aden, the Caribbean, the Indian Ocean and East Africa, the South Pacific, the Black Sea and the North-East Pacific. The UNEP Regional Seas Programme now comprises a total of thirty-two framework Conventions and Protocols; other are under negotiation.

Other Regional Arrangements
Other arrangements outside the UNEP Regional Seas Programme establish regional rules for protection of the marine environment. Apart from treaties specifically addressing particular sources of pollution, the most developed arrangements address the North-East Atlantic and North Sea, the Baltic region, the Arctic, the...
Caspian Sea and Scandinavia. A number of regional and global conventions addressing the protection of natural resources include provisions on the protection of the marine environment. Significant obligations have also been adopted by regional intergovernmental conferences; although not formally binding as a matter of international law, such declarations or recommendations have influenced the subsequent development of international law by treaty or resolution of international law. Examples include measures for the protection of the North Sea environment adopted by four international conferences.

The rules for the protection of the marine environment are among the most highly developed in the field of international environmental law. A range of regulatory techniques are applied to tackle pollution from different sources, with pollution from ships and by dumping at sea often addressed by rules of considerable specificity. Moreover, a network of regional institutions has been established since 1972 which provides for a understanding that whose auspices international co-operation might flourish and supplement global arrangements created earlier. Some evidence suggests that conventions such as MARPOL 73/78, the oil pollution liability conventions and the dumping conventions have contributed positively to the protection of the marine environment. However, there is more evidence to suggest that these sources do not pose the greatest threat and that so long as the oceans remain the dumping ground for the land-based sources of pollution from industrial and domestic activities the benefits arising from the modest successes which have been achieved will be of limited consequences over the long term. In this regard, the UNCLOS Annex-VII arbitral tribunal established to resolve the MOX dispute between Ireland and the UK may clarify and make a singular contribution to the interpretation of the rules.

The great majority of marine pollution originates from land-based sources and these are subject to regulation which is, according to GESAMP, of only limited effectiveness. At best, existing regulation of land-based sources might marginally limit the rate of increase; it has not resulted in real decreases in the total amount of pollutants entering the oceans and seas from this source. The fact that the regional and global rules have attracted widespread support suggests either that they are not being applied or that they are inadequate. Clearly there exists an urgent need for regulatory measures to ‘prevent, reduce and control pollution’. Experience in this and other sectors indicates that targets and timetables for regulated phase-out will provide a more effective regulatory tool, and in those regard the soft targets and timetables set out in the Action Plan endorsed by Ministers when they signed the 1992 OSPAR Convention identify a likely new trend. Whatever regulatory techniques are deployed there is additionally a clear need for a more stringent
application of existing rules, the development of new techniques and instruments to address pollution from land-based and other sources, and more effective enforcement mechanisms, including independent monitoring and surveillance. The entry into force of UNCLOS has created some momentum by speeding up the extension of port State control, and also by bringing a range of new institutional arrangements into operation which may, in time, contribute positively to the prevention of marine pollution. The emphasis in Agenda 21 on improving coastal zone management and regulating human habits recognises that the protection of the oceans and seas will ultimately be achieved only by integrating considerations requiring the protection of the marine environment into activities which are carried out on land. This suggests the need for a cradle-to-grave regulatory approach which would also require greater use of environmental impact assessment procedures and the integration into those procedures of a consideration of the consequences on the marine environment. Regulating the oceans currently targets the rubbish dump; it will be more effective when it targets the sources.

10.5 International Maritime Organisation (IMO)

The International Maritime Organisation (IMO) was established by the UN in 1948. At the time of its establishment, it was known as the Inter-Governmental Maritime Consultative Organisation (IMCO), with the purpose of co-ordinating international maritime safety and related practices. However the IMO did not enter into full force until 1958. IMO is a specialised agency of the UN which is responsible for measures to improve the safety and security of international shipping and to prevent marine pollution from ships. It develops and maintains a comprehensive regulatory framework for shipping. It is also involved in legal matters, including liability and compensation issues and the facilitation of international maritime traffic. Its remit today includes safety, environmental concerns, legal matters, technical co-operation, maritime Security and the efficiency of shipping.

The IMO was established by the Geneva Convention adopted in 1948. The first meeting of IMO took place in January, 1959. 167 Nations are Member-Countries of the IMO and three Nations are Associate Members. IMO is based in the United Kingdom with around 300 international staff. The concept of IMO was born after the Titanic disaster of 1912. Up until that time, each nation had made its own rules about ship design, construction and safety equipment. The IMCO was formed in response to the Titanic event. However, IMCO had to be put to hold when World War I broke out. After the war ended, IMCO was revived and produced a group of regulations concerning shipbuilding and safety called Safety of Life at Sea (SOLAS), which is still one of the most important treaties pertaining to maritime safety.
The IMCO eventually became IMO. When IMO first began operations its chief concern was to develop international treaties and other legislation concerning safety and marine pollution prevention. By the late 1970s, however, this work had been largely completed, though a number of important instruments were adopted in more recent years. IMO is now concentrating on keeping legislation up to date and ensuring that it is ratified by as many countries as possible. Currently the emphasis is on trying to ensure that these conventions and other treaties are properly implemented by the countries that have accepted them.

Many of the main IMO treaties (including, for example, SOLAS, the Tonnage and Load Lines Conventions, the Collision Regulations, the International Convention on Standards of Training, Certification and Watch-keeping for Seafarers as well as International Convention for the Prevention of Pollution from Ships, 1973 also known as MARPOL), have all been ratified by States that are, collectively, responsible for more than 98% of the world’s fleet.

The Organisation of IMO consists of an Assembly, a Council and four main Committees:

♦ The Maritime Safety Committee;
♦ The Marine Environment Protection Committee;
♦ The Legal Committee; and
♦ The Technical Co-operation Committee.

There is also a Facilitation Committee and a number of Sub-Committees support the work of the main technical committees. The Secretariat of the IMO is situated in London.

The governing body of IMO is the Assembly which is made up of all 167 Member States and meets normally once every two years. It adopts the budget for the next biennium together with technical resolutions and recommendations prepared by subsidiary bodies during the previous two years. The IMO also has a Council that acts as a governing body in between Assembly sessions. It prepares the budget and work programme for the Assembly. The main technical work of the IMO is carried out by the various Committees and numerous sub-committees.

10.6 Conclusion

In 1997, more than 100 nations gathered to adopt the UN Watercourses Convention – a flexible and overarching global legal framework that establishes basic standards
and rules for co-operation between watercourse States on the use, management, and protection of international watercourses.

The UN Watercourses Convention counts today 27 contracting States – 8 short of the number required for entry into force.

In early 2006, WWF launched a global initiative to promote the UN Watercourses Convention and accelerate its ratification process. The initiative has mobilised several governments and other stakeholders in efforts to raise awareness, build capacity and support countries interested in becoming Parties to the convention. Such partners include Green Cross, the UN Secretary General’s Advisory Board on Water and Sanitation (UNSGAB), the IHP-HELP Center for Water Law, Policy and Science, under the auspices of UNESCO, and the Global Nature Fund, among others.

Today, WWF and its partners are calling for the entry into force of the UN Watercourses Convention. In an effort to achieve this goal, WWF has collected signed postcards, symbolising the signatory’s commitment to call for additional ratifications and a pledge to work proactively towards having the convention in force. The postcard campaign is meant to be an inspiring living process, with successive endorsement messages adding up, in order to help build a critical body of support, resources and capacity for facilitating additional ratifications for the convention’s entry into force.