INDIA'S OBLIGATIONS UNDER INTERNATIONAL ENVIRONMENTAL LAW AND NATIONAL INDUSTRIAL LAWS: A SURVEY

Dissertation submitted to the Jawaharlal Nehru University
in partial fulfilment of the requirements for
the award of the Degree of

MASTER OF PHILOSOPHY

ASIF RASHID A.

International Legal Studies
Centre for Studies in Diplomacy,
International Law and Economics
School of International Studies
Jawaharlal Nehru University
New Delhi-110067
2003

JAWAHARLAL NEHRU UNIVERSITY

SCHOOL OF INTERNATIONAL STUDIES

Centre for Studies in Diplomacy
International Law & Economics

Telegram : JAYENU
Telex : 031-73167 JNU IN
Telephones : 667676/ 418, 4
667557/
Fax : 91-11-686-5886

New Delhi-110067

CERTIFICATE

/07/2003

This is to certify that the dissertation entitled **INDIA'S OBLIGATIONS UNDER INTERNATIONAL ENVIRONMENTAL LAW AND NATIONAL INDUSTRIAL LAWS: A SURVEY** submitted by **ASIF RASHID A.**, is in partial fulfilment of the requirement for the degree of **MASTER OF PHILOSOPHY (M.PHIL.)** of this university. It is his original work and may be placed before the examiners for evaluation. This dissertation has not been submitted for the award of any other degree of this university or of any other university.

Prof. Alokesh Barua
(Chairperson)

Chairperson
Centre for Studies in Diplomacy
International Law and Economics
School of International Studies
Jawaharlal Nehru University
New Delhi-110067

Prof. V.S. Mani
(Supervisor)

to my
Umma & Vappa

CONTENTS

ACKNOWLEDGEMENT

I take this opportunity to express my gratitude to my supervisor Prof. V.S. Mani, who has inspired me to fulfil this dissertation. I am indebted to his evincing immense interest and for taking personal care and suggestions throughout this work.

I am thankful to Prof. Y.K. Tyagi, Prof. B.S. Chimni and Dr. Bharat Desai for their valuable and critical suggestions.

I also extend my sincere thanks to Dr. Deepak Singh for his helpful comments and suggestions.

I am thankful to the staff of various libraries located in New Delhi. These include Jawaharlal Nehru University, Indian Society of International Law, Indian Law Institute, and World Wide Fund for Nature, V.V. Giri National Labour Institute, and United Nations Information Centre.

I am grateful to all my friends especially Ajish, Hafiz, Hussain, Jayan, Rajesh and Sachin who helped me in many ways to complete this work.

I express my sincere thanks to classmates Pandyaraj, Puhazh, Siyad, Sreejith and Jyothi who helped me to complete this work successfully.

I also express gratitude to my friends Abilash, Anish, Biju, George, Jaison, Joshy, Mubarak, Noufal, Ommen, Prakash, Prasanth, Shobhan and Sobin.

Last but not the least, the real value of this study lies in my parents, sister Dr.Thahira Rasheed, brother-in-law Dr. Abdul Rasheed and my brother Wing Comm.A.A.Rasheed who are my inspiration.

Asif Rashid A.

CHAPTER I
INTRODUCTION

INTRODUCTION

The environmental problems relating to pollution, depletion or contamination of natural resources revolve mainly around human activities. This leads the international community to think about the environmental protection. With the increasing number of treaties resulting from the perceived need for a legal response to global environmental degradation, international environmental law has emerged as one of the significant branches of international law.[1]

Industrial development brings benefits, but it frequently entails damage to the environment and human health. The main negative impacts are: wasteful use and depletion of scarce natural resources; air, water and soil pollution; accumulation of hazardous wastes; and accidents with significant environmental consequences.

The main aim of international environmental law is to protect the biosphere[2] from deterioration, which could endanger its present or future functioning. The protection of biosphere must be effected through internationally agreed measures because it belongs to all States, to mankind as a whole. Environmental protection requires protection and conservation of the whole basis of life on earth. So, it extends beyond the mere protection of the basis of human life. There arise a number of questions: Why should we protect the biosphere and

---

[1] For details, see Alexander Kiss and Dinah Shelton, *International Environmental Law* (New York: Transnational Publishers, 1991); P. W. Birnie and A. E. Boyle, *International Law and the Environment* (Oxford: Clarendon Press, 1992); P. W. Birnie and A. E. Boyle, *International Law and the Environment* (New York: Oxford University Press, 2002).

[2] *Man Belongs to Earth: UNESCO's Man and the Biosphere Program*, UNESCO, (1988), it is Stated that the term ' biosphere designates the totality of our environment that is a part of the universe in which, all life is concentrated. It comprises the earth and several hundred meters above and under the surface of the earth and oceans'.

for whose benefit? Who has the legal obligations in this field and on what basis do such obligations exist?[3]

In the current State of the law, the protection of the environment occurs on the international plane by adopting measures targeting sectors of the biosphere such as air or water, based on their importance or benefit to humans. This anthropocentric approach is reflected in a number of international environmental texts.[4]

The intrinsic value of the biosphere is that man makes up part of the universe and cannot exist without the conservation of the biosphere and the ecosystems, which comprise it. According to this perspective, all sectors of the environment have a value not only in their short-term utility to humans but also as indispensable elements of an interrelated system which must be protected to ensure human survival.[5]

I.1. Common Interest of Humanity

The protection of the biosphere in the common interest of humanity is important not only for environmental law, but for all of international law. Above all, the common interest of humanity is human survival, which underlies all legal and social systems and may be grounded in a genetic or biological imperative. This interest requires that humanity include not only present but also future generations. In order to

---

[3] Kiss and Shelton, n. 1, p. 9.

[4] Principle 2, Declaration of United Nations Conference on the Human Environment, Stockholm (Stockholm Declaration), reprinted in 11 *International Legal Material* 1416 (1972); Preamble, para. 3, " Convention on the Conservation of European Wildlife and Natural Habitats", 1979, Bern, *United Kingdom Treaty Series* (UKTS), 56, 1982; General Assembly (G.A.) Res. 43/53, 1989, reprinted in 28 *International Legal Materials* 1326 (1989); Preamble, para.3 (a), *World Charter for Nature*, G.A. Res. 37/7, 37 U.N.G.A.O.R. Supp. No. 51 (1982).

[5] Tribe, "Ways Not to Think About Plastic Trees: New Foundations for Environmental Law", *Yale Law Journal*, vol. 83, 1974, p.1315.

protect present and future generations, it is necessary to seek and identify generally accepted expressions of the common interest.

At the end of the 1960s the term common heritage of mankind, a concretisation of the common interest of humanity, started appearing in instruments relating to the deep seabed[6], the moon and other celestial bodies[7], instruments governing Antarctica and its seas, the radio frequency spectrum and the orbit of geo-stationary satellites[8], which contain obligations of misappropriation, conservation and rational use.

States freely undertake to respect these obligations without obtaining any immediate advantage.[9] The purpose is to serve more long-term objectives which are in mankind's common interest: to prevent international tensions from creating dangers to the maintenance of peace, to respect and ensure the dignity and fundamental rights and liberties of all humans, and to halt the deterioration and destruction of natural resources.[10] In the environmental field the concept of common interest also reflects the physical reality of an indivisible environment, notwithstanding the claims of States to permanent sovereignty over natural resources.[11]

---

6 Article 1, Declaration of Principles Governing the Seabed and the Subsoil Thereof Beyond the Limits of National Jurisdiction, G. A. Res. 2749 (XXV) of Dec., 1970, 25 U. N. GAOR Supp. (No. 28) U.N. Doc. A/6695 (1970).

7 Article 11, Agreement Governing the Activities of States on the Moon and other Celestial Bodies, G.A. Res. 34/68, 34 U.N. GAOR Supp. (No. 46) U.N. Doc. A/34/46.

8 Alexander Kiss, "The Common Heritage of Mankind: Utopia or Reality"? *International Journal*, vol. XI, 1985, p. 423.

9 Kiss and Shelton, n. 1, p. 16.

10 Ibid.

11 Ibid.

Common interests shared by the international community may be protected as obligations *erga omnes.* In the *Barcelona Traction* case[12] the International Court of Justice (ICJ) recognised the distinction between reciprocal and regulatory norms:

> An essential distinction should be drawn between the obligations of a State towards the international community as a whole, and those arising vis-à-vis another State in the field of diplomatic protection. By their very nature the former are the concern of all States. In view of the importance of the rights involved, all States can be held to have a legal interest in their protection; they are obligations *erga omnes.*[13]

The court further held that:

> By their very nature i.e., the obligation towards the international community as whole, is the concern of all States. In view of the importance of the rights involved, all States can be held to have a legal interest in their protection; they are obligations *erga omnes.*[14]

The core interest in such obligations is protecting the international community as a whole. So it can be said that the purpose of international environmental law can be seen as serving the general interest of humanity, its survival and well being, rather than exchanging reciprocal rights and duties.

In earlier times, States assumed full and absolute sovereignty to mean that they could freely use resources within their territories regardless of the impact this might have on neighbouring States. But today few would argue that territorial sovereignty is an unlimited concept enabling a State to do whatever it likes.

State sovereignty cannot be exercised in isolation because activities of one State often bear upon those of others and, consequently, upon their sovereign rights.

---

[12] ICJ Reports, 1970, p. 4.

[13] Ibid.

[14] Ibid, p. 32.

According to Oppenheim,

> no State is allowed to alter the natural conditions of its own territory to the disadvantage of the natural conditions of the territory of other States if that change would harm the natural conditions of a neighbouring State- for instance to stop or to divert the flow of a river which runs from its own into neighbouring territory.[15]

But today the principle of territorial sovereignty finds its limitations where its exercise touches upon the territorial sovereignty and integrity of another State. Consequently, the scope for discretionary action arising from the principle of sovereignty is determined by such principles and adages as "good neighbourliness" and *sics utre tuo ut alienum nom laedas* (you should use your property in such a way as not to cause injury to your neighbour's) as well as the principle of State responsibility for actions causing transboundary damage.

I.2. Obligations of States Under International Environmental Law

Every State has obligations under international law to protect the environment under treaty law or international customary law. States have an obligation to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond the limits of their national jurisdiction.[16]

Several decisions of international courts and tribunals can give a lead in interpreting the meaning and implications of the principles of

---

[15] Oppenheim, *International Law* (4th edition, 1928), p. 255, quoted in Franz Xaver Parez, " The Relationship Between Permanent Sovereignty and the Obligation Not to Cause Transboundary Environmental Damage", *International Law*, vol. 26, no. 3, 1996, p. 1209.

[16] Principle 21, Stockholm Declaration, 1972, n, 4; Principle 2, Declaration on Environment and Development, 1992, Rio de Janeiro (Rio Declaration), reprinted in 31 *International Legal Materials* 874 (1992); and Article 3, Convention on Biological Diversity, 1992 (Biodiversity Convention), reprinted in 31 *International Legal Materials* 818 (1992)

international environmental law, which gives rise to obligations as well as rights.

In *The Island of Palmas Case* (United States *v.* The Netherlands, award in1928) the sole arbitrator Huber, who was then President of the Permanent Court of International Justice, declared:

> Territorial sovereignty involves the exclusive right to display the activities of a State. This right has as corollary a duty: the obligation to protect within the territory the rights of other States, in particular their right to integrity and inviolability in peace and war, together with the rights which each State may claim for its nationals in foreign territory.[17]

From this it can be inferred that it is only natural for a State to have an obligation to protect the interest of other States from activities concluded in its territory, considering that those other States cannot enter the territory of the State of origin to protect their interest themselves.

The *Trial Smelter*[18](United States *v.* Canada, awards in 1938 and 1941) arbitration affirmed that no State has the right to use its territory or permit it to be used so that its emissions cause damage on the territory of another State or to the property of persons found there. Finally, the Tribunal concluded more generally, in what no doubt constitutes its best-known paragraph:

> . . . under the principles of international law . . . no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.[19]

---

[17] *Island of Palmas Case, Reports of the International Arbitral Awards*, vol. 2, 1949, pp. 829–90.

[18] Text of the Award is available in *American Journal of International Law*, vol. 33, 1939, p. 182 and vol. 35, 1941, p. 186.

[19] Ibid.

Here the court recognized the State of origin's obligation of prevention in relation, not only to its own acts, but also to the acts of its subjects.

The ICJ, in the *Corfu Channel*[20] (United Kingdom *v.* Albania) case, reaffirmed that no State may utilise its territory contrary to the rights of other States.

In *Lake Linoux* case also it is concluded that States have the obligation not to allow knowingly their territory to be used for acts contrary to the right of other State, among them those rights pertaining to their environment and of the persons and properly of their inhabitants. That seems to constitute a general obligation of prevention [21]

In the *Barcelona Traction* case (Belgium *v.* Spain) the Court pointed out the obligations of a State towards the international community, vis-à-vis specific obligations to other States. In view of the importance of the rights involved in the former, all States can be held to have a legal interest in their protection; they are obligations *erga omnes*[22].

This concept of the obligation *erga omnes* has relevance when global environmental problems such as depletion of the ozone layer, the extinction of the world's biodiversity, the pollution of international waters, and the threat of climate change.

Obligations of a State can be divided into two - primary obligations and secondary obligations. Primary obligations are those imposed on States directly by international law, such as the obligation of the coastal States to permit the innocent passage of foreign ships through its territorial waters, or the obligation of receiving States to ensure the

---

[20] I.C.J Reports, 1949, p. 4.

[21] *Reports of the International Arbitral Awards*, vol. 12, 1957, p. 281.

[22] ICJ Reports, n.12, p. 32, para. 33.

security of foreign embassies.[23] Secondary obligations are those, which originate in the violation of a primary obligation. If primary obligation is breached, a secondary rule comes into play, which imposes on the acting State a secondary obligation, i.e., some form of reparation.[24]

It is an obligation upon every State to exercise the right of the people over their natural wealth and resources in the interest of national development and of the well being of the people of the State concerned.[25] The right to permanent sovereignty over natural resources is qualified by obligations freely undertaken by them in pursuit of international economic co-operation as well as obligations imposed by international law.

I.3. Customary International Environmental Law

Under the customary international law, the obligation to prevent trans-national pollution falls solely upon the States. Customary international law clarifies the legal duty upon States to prevent serious trans-national environmental harm.

Customary international law contains principles of international environmental protection, which are both substantial and procedural in nature. A fundamental rule of the customary international law is the obligation of States not to damage or endanger significantly the environment beyond their national jurisdiction.[26]

---

[23] J. Barboza, "International Liability for the Injurious Consequences of Acts not Prohibited by International law and Protection of the Environment", *Recueil des Cours*, vol. III, no.247, p. 311.

[24] Ibid.

[25] Principle of Permanent Sovereignty over Natural Resources (PSNR) (UN General Assembly Resolution No.1803 (XVII) of 1962), Year Book of the United Nations (New York: United Nations, 1962), p. 504.

[26] Lother Gundling, "Environment, International Protection", in R. Bernhardt, ed., *Encyclopaedia of Public International Law*, E-I, vol.II, 1995, pp. 96-104. p. 98.

Custom is a common practice, rarely put into a concrete text, supported by the conviction of the interested that it is motivated by a sense of legal obligation, not merely a comity. In the field of international environmental protection, customary international law is an insufficient instrument as it necessarily produces only general principles. UN General Assembly Resolutions and Declarations have, in principle, no binding effect. Nevertheless, some scholars strongly support that consensual resolutions, accompanied by a conformed subsequent conduct by the signatory States constitute, at least, a customary rule of law.[27]

Customary international law does offer some modest protection for the environment.[28] The requirement of a test of the custom is that a general recognition must be found among nations that a certain practice is obligatory.[29] As the web of treaty law protecting the environment increases, resonance form it enter into customary international law.[30]

In the *Libya-Malta Continental Shelf Case*[31] the ICJ observed:

> It is of course axiomatic that the material of customary international law is to be looked for primarily in the actual practice and *opinio juris* of States, even though multilateral conventions may have an important role to play in recording and defining rules deriving custom, or indeed in developing them.

---

[27] Fotis A. Karayiannopoulos, "International Environmental Law", *http://business.hol.gr/~bio/HTML./PUBS/budapest/Fotis.html# Karayiannopoulos*, visited on 27 March, 2003.

[28] Brownlie, "A Summary of International Customary Rules of Environmental Protection", *Natural Resources Journal*, vol. 13, 1973, p. 179, quoted in Geoffrey Palmer, " New Ways to Make International Environmental Law", *American Journal of International Law*, vol. 86, nos. 1-2, 1992, p. 266.

[29] Geoffrey Palmer, Ibid, p. 266.

[30] Ibid, p. 264.

[31] ICJ Reports, 1985, pp. 29-30.

In the *Nicaragua case* the ICJ notes:

> The mere fact that States declare their recognition of certain rules is not sufficient for the Court to consider these as being part of customary international law, and as applicable as such to those States. Bound as it is by Article 38 of its Statute to apply, *inter alia*, international custom "as evidence of a general practice accepted as law", the Court may not disregard the essential role played by general practice. Where two States agree to incorporate a particular rule in a treaty, their in the field of customary international law, the shared view of the Parties as to the content of what they regard as the rule is no enough. The Court must satisfy itself that the existence of the rule in the *opnio juris* of States is confirmed by practice.[32]

The Court further Stated:

> ... it is satisfied that there exists in customary international law an *opinio juris* as to the binding character of such abstention. This *opinio juris* may, though with all due caution, be deduced from, *inter alia,* the attitude of the Parties and the attitude of States towards certain General Assembly resolutions....[33]

However, some customary rules were embodied in treaties.

I.4. International Environmental Treaty Law

In the field of international environmental law, treaty law is of special importance because treaties can formulate the necessary obligations for States in a sufficiently clear manner, with respect to a specific care of environmental problems faced by States. The purpose of environmental treaty-making is to secure the widest possible participation with full adherence to environmental standards. The treaties must be ratified by States in order to make them legally binding. By ratifying or acceding to a treaty a State accepts the obligations under it and is expected to comply with it.

---

[32] ICJ Reports, 1986, pp. 97-98.

[33] Ibid, p. 99-100.

It is the duty of the contracting parties not to defeat the object and purpose of a treaty even before its entry into force.[34] A treaty produces its legal effects and binds its parties after it has come into force. This is in accordance with the well-established principle of *pacta sunt servanda*, is affirmed in Article 26 of the Vienna Convention on the Law of Treaties, 1969. It reads:

> Every treaty in force is binding upon the parties to it and must be performed by them in good faith.[35]

In the *Genocide Convention* case, the ICJ held that

"... signature constitute a first step to participation in the convention..."

Pending ratification, the provisional status created by signatories confers upon the signatory a right to formulate as a precautionary measure objection, which themselves have a provisional character. These would disappear if the signature was not followed by ratification, or they would become effective on ratifications.[36]

A closer look at the treaties and their respective objects reveals that by no means all contain preventive rules, i. e., rules aiming at the prevention of pollution or the uncontrolled use of natural resources. The scope of obligation varies to a great extent; the basic prohibition of pollution and the basic obligation to use natural resources in a reasonable manner are not in all cases accompanied by specific measures.

Some treaties merely provide a framework anticipating negotiation of additional agreements by the contracting parties, or regulations to be adopted by an executive body established by the treaty.

---

[34] Article 18, Convention on the Law of the Treaties, 1969, Vienna, reprinted in 8 *International Legal Materials* 689 (1969).

[35] Article 26, Ibid.

[36] ICJ Reports, 1951, p. 15.

I.5. General Principles of International Environmental Law

In addition to treaty law, several general principles of classical international law are relevant for States' rights and obligations with respect to nature conservation and environmental protection. These general legal principles are known as Legal norms, which are widely accepted by States. This can be evidenced from customary rules, international agreements and national legislations, domestic and international judicial decisions.

Some of the general principles gained recognition as such, play an important role in international environmental law, for example, the principle of good faith. The ICJ in the *Nuclear Test*[37] case said:

> One of the basic principles governing the creation and performance of legal obligations, whatever their source, is the principle of good faith. ... 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.

In the *Gabcikovo-Nagymaros*[38] case the ICJ made the Statement that the principle of good faith obliges the parties to apply it in a reasonable way and in such manner that its purpose can be realised.

So it can be said that whatever may be the source of an international principle, as per the principle of good faith States are under an obligation to comply with the general principle of international environmental law.

I.6. Objective of the Study

The proposed study attempts to explore the principal obligations of India under the customary international law, international

---

[37] ICJ Reports, 1974, pp. 267-268.

[38] *http://www.icj-cij.org/icjwww/idocket/his/ihsjudgment/his-judgement970925-frame.htm*, visited on 25 January, 2003.

environmental agreements such as the Vienna Convention for the Protection of the Ozone Layer, 1985; Montreal Protocol on Substances that Deplete the Ozone Layer, 1987; United Nations Framework Convention on Climate Change, Rio de Janeiro, 1992; The Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1997; Convention on Biological Diversity, Rio de Janeiro, 1992 and Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 2000, to which India is a party, and general principles of international law. The study also identifies the obligations of India under international environmental law to protect the environment and examines how far India has implemented these obligations through its important environmental and industrial laws, rules and notifications. This study will also focus on the domestic implementation of the international environmental obligations and the implementation mechanism under various environmental laws of India.

I.7. Methodology and Materials

For achieving the objectives of this study the researcher tries to find out the principal obligations of India under the international customary law, international treaty law which relates to environmental protection in which India is a party and the general principles of international environmental law. This study also tries to identify how far India has complied with these obligations through its major industrial and environmental laws, rules and notifications.

The study will depend on both primary and secondary sources. The primary sources include multilateral environmental agreements, which are signed, acceded or ratified by India. It also includes declarations adopted by Stockholm Conference, Rio Conference, and Johannesburg Conference etc. It also tries to analyse secondary

sources such as books, articles, comments of jurists, documents available on the electronic media.

I.8. Organisation of the Study

This study is divided into four chapters. The introductory chapter deals with the general obligation of States under the international customary law, treaty law and general principles of the international environmental law.

The second chapter is divided into four parts. The first part of the chapter examines the obligations of India under relevant international environmental law agreements. This includes the Vienna Convention for the Protection of the Ozone Layer, 1985; Montreal Protocol on Substances that Deplete the Ozone Layer, 1987; United Nations Framework Convention on Climate Change, Rio de Janeiro, 1992; The Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1997; Convention on Biological Diversity, Rio de Janeiro, 1992 and Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 2000. The second part identifies the obligations of India under the customary principles of international environmental law. The third part of this chapter deals with the obligations of India under the relevant general principles of international environmental law. The fourth part of the chapter examines how India implements its international environmental law obligations.

The third chapter identifies principal provisions relating to environmental protection in the major industrial laws. It also identifies provisions relating to regulation and control of industrial pollution included in the principal environmental laws.

The fourth chapter concludes the study.

CHAPTER II

OBLIGATIONS OF INDIA UNDER INTERNATIONAL ENVIRONMENTAL LAW

OBLIGATIONS OF INDIA UNDER INTERNATIONAL ENVIRONMENTAL LAW

India has obligations under international environmental customary rules, multinational environmental treaties in which it is a Party and a number of international environmental principles laid down by Stockholm Declaration, Rio Declaration, Agenda 21 and Johannesburg Declaration. But these obligations have no binding effect unless adopted as a national law or interpreted by the judiciary as part of national law.

II.1. India's Treaty Law Obligations

At the international level, Conventions, protocols and agreements have been providing a basis for co-operation among countries at bilateral, regional and global levels for the management of environmental risks, control of pollution and conservation of natural resources. There is a need to expand the number of accessions to and ratifications of these Conventions and to institute mechanisms at the national level to ensure their application.

Treaties are the main methods by which the international community has responded to the need to regulate activities that threaten the environment. As a contracting Party to the international environmental treaties and agreements, India must have ratified a treaty by adopting it as national law before it came into force or by acceding to it after it has come into force.

The general obligation of preventing transboundary harm is also established in a number of multilateral treaties.[1] There is a large

---

[1] Article 192 (2), United Nations Convention on the Law of the Sea, 1982, Montego Bay (Law of the Sea Convention), reprinted in 21 *International Legal Material* 1261 (1982); Article 3 and 14, Convention on Biological Diversity, 1992, Rio de Janeiro (Boidiversity Convention), reprinted in 31 *International Legal Material* 822 (1992); Principle 21, The United Nations Conferece on the Human Environment, 1972, Stockholm (Stockholm

number of multilateral treaty law on environmental issues, which is binding on States Parties. The most widely ratified treaties, such as the Conventions and related protocols on Climate Change or Ozone Depletion constitute international regulatory regimes, which have become the most important sources of law on these subjects for almost all States.[2] There is also much soft law, whose legal status varies, but which is not necessarily non-binding in all cases.[3]

The obligations under treaties depend on a number of factors viz. 1) the willingness of other State Parties to enforce or to comply with the treaty, 2) the political policy of the government, 3) trade and diplomatic pressures from other countries 4) judicial and NGO involvement etc. However, India has signed, ratified or acceded to a number of Multilateral Environmental Agreements (MEAs). This study is focussing only on principal obligations of the State Parties of selected Conventions and its Protocols.

II.1.1. Obligation to Co-operate

The Vienna Convention for the Protection of Ozone Layer, 1985, Stated that it is an obligation upon the Parties to co-operate by means of systematic observations, research and information exchange in order to better understand and assess the effects of human activities on the ozone layer[4], co-operate in harmonizing appropriate policies to control, limit,

---

Declaration), reprinted in 11 *International Legal Material* 822 (1972); Principle 2, Declaration on Environment and Deveopment, 1992, Rio de Janeiro (Rio Declaration) reprinted in 31 *International Legal Material* 874 (1992).

2 P. W. Birnie and A. E. Boyle, *International Law and the Environment* (New York: Oxford University Press, 2002), p. 80.

3 Ibid.

4 Art. 2 (2) (a) reads:
To this end the Parties shall, in accordance with the means at their disposal and their capabilities: (a) "Co-operate by means of systematic observations, research and information exchange in order to better understand and assess the effects of human activities on the ozone layer and the effects on human health and the environment from modification of

reduce or prevent human activities under their jurisdiction or control,[5] and also to co-operate in the formulation of agreed measures, procedures and standards[6] and with competent international bodies for the implementation of this Convention.[7] Article 3 of the Convention specifies that the Parties will co-operate, as appropriate, in conducting research and scientific assessments in a wide variety of areas, including physical and chemical[8], biological and human health[9] and climatic effects[10] and

---

the ozone layer", Convention for the Potection of the Ozone Layer, 1985, Vienna (Vienna Convention on Ozone Layer), reprinted in 26 International Legal Material 1529 (1987).

5 Art. 2 (2) (b) reads:
To this end the Parties shall, in accordance with the means at their disposal and their capabilities: (b) "Adopt appropriate legislative or administrative measures and co-operate in harmonizing appropriate policies to control, limit, reduce or prevent human activities under their jurisdiction or control should it be found that these activities have or are likely to have adverse effects resulting from modification or likely modification of the ozone layer", Vienna Convention on Ozone Layer, Ibid.

6 Art. 2 (2) (c) reads:
To this end the Parties shall, in accordance with the means at their disposal and their capabilities: (c) "Co-operate in the formulation of agreed measures, procedures and standards for the implementation of this Convention, with a view to the adoption of protocols and annexes", Vienna Convention on Ozone Layer, Ibid.

7 Art. 2 (2) (d) reads:
To this end the Parties shall, in accordance with the means at their disposal and their capabilities: (d) "Co-operate with competent international bodies to implement effectively this Convention and protocols to which they are Party", Vienna Convention on Ozone Layer, Ibid.

8 Art. 3 (1) (a) reads:
"The Parties undertake, as appropriate, to initiate and co-operate in, directly or through competent international bodies, the conduct of research and scientific assessments on: The physical and chemical processes that may affect the ozone layer", Vienna Convention on Ozone Layer, Ibid.

9 Art. 3 (1) (b) reads:
"The Parties undertake, as appropriate, to initiate and co-operate in, directly or through competent international bodies, the conduct of research and scientific assessments on: The human health and other biological effects deriving from any modifications of the ozone layer, particularly those resulting from changes in ultra-violet solar radiation having biological effects (UV-B)", Vienna Convention on Ozone Layer, Ibid.

10 Art. 3 (1) (c) reads:
"The Parties undertake, as appropriate, to initiate and co-operate in, directly or through competent international bodies, the conduct of research and scientific assessments on: Climatic effects deriving from any modifications of the ozone layer", Vienna Convention on Ozone Layer, Ibid.

also to co-operate in promoting the development and transfer of technology and knowledge[11].

The Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, in consistent with their national laws, regulations and practices and taking into account the needs of the developing countries should co-operate in promoting research, development and exchange of information with regard to best technologies for improving the containment, recovery, recycling or destruction of controlled substances and possible alternatives to controlled substances.[12] The Parties should also cooperate in promoting public awareness of the environmental affects on the emissions of the controlled substances and other substances that deplete the ozone layer.[13]

---

[11] Article 4 (2) reads:
"The Parties shall co-operate, consistent with their national laws, regulations and practices and taking into account in particular the needs of the developing countries, in promoting, directly or through competent international bodies, the development and transfer of technology and knowledge. Such co-operation shall be carried out particularly through: (a) Facilitation of the acquisition of alternative technologies by other Parties; (b) Provision of information on alternative technologies and equipment, and supply of special manuals or guides to them; (c) The supply of necessary equipment and facilities for research and systematic observations; (d) Appropriate training of scientific and technical personnel", Vienna Convention on Ozone Layer, Ibid.

[12] Article 9 (1) reads:
"The Parties shall co-operate, consistent with their national laws, and practices and taking into account in particular the needs of developing countries, in promoting, directly or through competent international bodies, research, development and exchange of information on: (a) best technologies for improving the containment, recovery, recycling, or destruction of controlled substances or otherwise reducing their emissions; (b) possible alternatives to controlled substances, to products containing such substances, and to products manufactured with them; and (c) costs and benefits of relevant control strategies", Protocol on Substances that Deplete the Ozone Layer, 1987, Montreal (Montreal Protocol on Ozone Layer), reprinted in 26 *International Legal Materials* 1550 (1987).

[13] Article 9 (2) reads:
"The Parties, individually, jointly or through competent international bodies, shall co-operate in promoting public awareness of the environmental effects of the emissions of controlled sub-stances and other substances that deplete the ozone layer", Montreal Protocol on Ozone Layer, Ibid.

The Parties to the Climate Change Convention, 1992, should co-operate:

1) to promote a supportive and open international economic system that would lead to sustainable economic growth and development.[14]

2) to promote in the development, application and diffusion, including transfer of technologies to prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol.[15]

3) to promote scientific, technological, technical and socio-economic and other research, systematic observation and development of data archives related to the climate system and intended to reduce or eliminate uncertainties regarding the causes, effects, magnitude and timing of climate change.[16]

---

[14] Article 3 (5) reads:
"The Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change. Measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade", United Nations Framework Convention on Climate Change, 1992, Rio de Janeiro (Clmate Change Convention), reprinted in 31 *International Legal Material* 849 (1992).

[15] Article 4 (1) (c) reads:
"All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall: (c) Promote and cooperate in the development, application and diffusion, including transfer of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors", Climate Change Convention, Ibid.

[16] Article 4 (1) (g) reads:
"All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall: (g) Promote and cooperate in scientific, technological, technical, socio-economic and other research, systematic observation and development of data archives related to the climate system and intended to further the understanding and to reduce or eliminate the remaining uncertainties regarding the causes, effects, magnitude and timing of climate change and the economic and social

4) to promote the prompt exchange of relevant scientific, technological, technical, socio-economic and legal information related to the climate system and climate change.[17]

According to the Kyoto Protocol on Climate Change, 1997, Parties should co-operate:[18]

---

consequences of various response strategies", Climate Change Convention, Ibid.

17 Article 4 (1) (h) reads:
"All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall: (h)"Promote and cooperate in the full, open and prompt exchange of relevant scientific, technological, technical, socio-economic and legal information related to the climate system and climate change, and to the economic and social consequences of various response strategies", Climate Change Convention, Ibid.

18 Article 10 (c), (d) and (e) reads:
"All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, without introducing any new commitments for Parties not included in Annex I, but reaffirming existing commitments under Article 4, paragraph 1, of the Convention, and continuing to advance the implementation of these commitments in order to achieve sustainable development, taking into account Article 4, paragraphs 3, 5 and 7, of the Convention, shall: (c) Cooperate in the promotion of effective modalities for the development, application and diffusion of, and take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies, know-how, practices and processes pertinent to climate change, in particular to developing countries, including the formulation of policies and programmes for the effective transfer of environmentally sound technologies that are publicly owned or in the public domain and the creation of an enabling environment for the private sector, to promote and enhance the transfer of, and access to, environmentally sound technologies; (d) Cooperate in scientific and technical research and promote the maintenance and the development of systematic observation systems and development of data archives to reduce uncertainties related to the climate system, the adverse impacts of climate change and the economic and social consequences of various response strategies, and promote the development and strengthening of endogenous capacities and capabilities to participate in international and intergovernmental efforts, programmes and networks on research and systematic observation, taking into account Article 5 of the Convention; (e) Cooperate in and promote at the international level, and, where appropriate, using existing bodies, the development and implementation of education and training programmes, including the strengthening of national capacity building, in particular human and institutional capacities and the exchange or secondment of personnel to train experts in this field, in particular for developing countries, and facilitate at the

1) to promote, facilitate and finance, promote and enhance the transfer of, or access to, environmentally sound technologies, know-how, practices and processes pertinent to climate change;

2) to promote scientific and technical research for systematic observation and development to reduce uncertainties related to the climate system, the adverse impacts of climate change;

3) to promote the development and strengthening of endogenous capacities and capabilities to participate in international and intergovernmental efforts, programmes and networks on research and systematic observation;

4) to promote at the international level, the development and implementation of education and training programmes, including the strengthening of national capacity building, facilitate at the national level public awareness of, and public access to information on climate change.

Each Contracting Party to the Convention on Biological Diversity, 1992, should co-operate with other Contracting Parties in respect of areas beyond national jurisdiction for the conservation and sustainable use of biological diversity. [19] The contracting Parties should promote technical and scientific cooperation in the field of conservation and sustainable use

---

national level public awareness of, and public access to information on, climate change. Suitable modalities should be developed to implement these activities through the relevant bodies of the Convention, taking into account Article 6 of the Convention", Protocol to the United Nations Framework Convention on Climate Change, 1997, Kyoto (Kyoto Protocol on Climate Change), reprinted in 37 *International Legal Materials* 22 (1998).

[19] Article 5 reads:
"Each Contracting Party shall, as far as possible and as appropriate, cooperate with other Contracting Parties, directly or, where appropriate, through competent international organizations, in respect of areas beyond national jurisdiction and on other matters of mutual interest, for the conservation and sustainable use of biological diversity", Biodiversity Convention, n. 1.

of biological diversity and also cooperate with other contracting Parties in the implementation of this Convention.[20] Where a significant adverse effect on biological diversity has been determined Parties should cooperate to regulate or manage the relevant processes and to provide financial and other support for *in-situ conservation*[21] particularly to developing countries.[22] Parties should cooperate in providing financial and other support for *ex-situ conservation*[23] and in the establishment and maintenance of ex-situ conservation facilities in developing countries.[24]

The Parties to the Cartagena Protocol on Biosafety, 2000, should co-operate in identifying living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity and take appropriate measures regarding the treatment of such living modified organisms or specific traits.[25] As per the article 22 (1) of the

---

[20] Article 18 (1) and (2) reads:
1) "The Contracting Parties shall promote international technical and scientific cooperation in the field of conservation and sustainable use of biological diversity...".2) "Each Contracting Party shall promote technical and scientific cooperation with other Contracting Parties, in particular developing countries, in implementing this Convention, inter alia, through the development and implementation of national policies"..., Biodiversity Convention, Ibid.

[21] *"In-situ conservation* means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties", Article 2, Biodiversity Convention, Ibid.

[22] Article 8 (m) reads:
"Cooperate in providing financial and other support for insitu conservation outlined in subparagraphs (a) to (l) above, particularly to developing countries", Biodiversity Convention, Ibid.

[23] "*Ex-situ conservation* means the conservation of components of biological diversity outside their natural habitats, Article 2, para. 8, Ibid.

[24] Article 9 (e) reads:
"Each Contracting Party shall, as far as possible and as appropriate, and predominantly for the purpose of complementing in-situ measures: Cooperate in providing financial and other support for ex situ conservation outlined in subparagraphs (a) to (d) above and in the establishment and maintenance of ex-situ conservation facilities in developing countries", Biodiversity Convention, Ibid.

[25] Article 16 (5) reads:

protocol, the Parties should co-operate for the development or strengthening of human resources and institutional capacities in biosafety, including biotechnology, for the effective implementation of this Protocol.[26]

II.1.2. Obligation of Assessment

Risk assessments should be carried out in a scientifically sound manner taking into account the recognized risk assessment techniques.

According to this obligation the Parties to the Montreal Protocol, 1987, should assess the review of the control measures every four years from 1990 on the basis of available scientific, environmental, technical and economic information.[27]

The Parties to the Climate Change Convention, 1992, should take into account the climate change considerations in their relevant social,

---

"Parties shall cooperate with a view to: (a) Identifying living modified organisms or specific traits of living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health"; Cartagena Protocol on Biosafety to the Convention on Biological Diversity, 2000, reprinted in 39 *International Legal Material* 1027 (2000).

[26] Article 22 (1) reads:
"The Parties shall cooperate in the development and/or strengthening of human resources and institutional capacities in biosafety, including biotechnology to the extent that it is required for biosafety, for the purpose of the effective implementation of this Protocol, in developing country Parties, in particular the least developed and small island developing States among them, and in Parties with economies in transition, including through existing global, regional, sub regional and national institutions and organizations and, as appropriate, through facilitating private sector involvement", Cartagena Protocol on Biosafety, Ibid.

[27] Article 6 reads:
"Beginning in 1990, and at least every four years thereafter, the Parties shall assess the control measures provided for in Article 2 and Articles 2A to 2H on the basis of available scientific, environmental, technical and economic information. At least one year before each assessment, the Parties shall convene appropriate panels of experts qualified in the fields mentioned and determine the composition and terms of reference of any such panels. Within one year of being convened, the panels will report their conclusions, through the Secretariat, to the Parties", Montreal Protocol on Ozone Depletion, n. 12.

economic and environmental policies, and employ appropriate methods, e. g. impact assessments, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.[28]

Convention on Biological Diversity, 1992, Stated that each Contracting Party should introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity.[29]

The risk assessments should be based on scientific evidence in order to identify and evaluate the possible adverse effects of living modified organisms on the conservation and sustainable use of biological diversity.[30]

Article 16 (1) of the Cartagena protocol, 2000, provides that the Parties should establish and maintain appropriate mechanisms, measures and

---

[28] Article 4 (1) (f) reads:
(f)"Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change", Climate Change Convention, n. 14.

[29] Article 14 (1) (a) reads:
1."Each Contracting Party, as far as possible and as appropriate, shall: (a) Introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures", Biodiversity Convention, n.1.

[30] Article 15 (1) reads:
"Risk assessments undertaken pursuant to this Protocol shall be carried out in a scientifically sound manner, in accordance with Annex III and taking into account recognized risk assessment techniques. Such risk assessments shall be based, at a minimum, on information provided in accordance with Article 8 and other available scientific evidence in order to identify and evaluate the possible adverse effects of living modified organisms on the conservation and sustainable use of biological diversity, taking also into account risks to human health", Cartagena Protocol on Biosafety, n. 25.

strategies to regulate, manage and control risks identified in the risk assessment provisions of this Protocol associated with the use, handling and transboundary movement of living modified organisms[31] and these measures should be imposed to prevent the adverse effect of the living modified organism on the conservation and sustainable use of biological diversity.[32]

II.1.3. Obligations Flowing From the Precautionary Approach

The Cartagena Protocol, 2000, Stated that the lack of scientific certainty regarding adverse effects of a living modified organism on the conservation and sustainable use of biological diversity, should not prevent that Party from taking a decision with regard to the import of that organism in order to avoid or minimize such potential adverse effects.[33]

---

31 Article 16 (1) reads:
"The Parties shall, taking into account Article 8 (g) of the Convention, establish and maintain appropriate mechanisms, measures and strategies to regulate, manage and control risks identified in the risk assessment provisions of this Protocol associated with the use, handling and transboundary movement of living modified organisms", Cartagena Protocol on Biosafety, Ibid, n. 25.

32 Article 16 (2) reads:
"Measures based on risk assessment shall be imposed to the extent necessary to prevent adverse effects of the living modified organism on the conservation and sustainable use of biological diversity, taking also into account risks to human health, within the territory of the Party of import", Cartagena Protocol on Biosafety, Ibid, n. 25.

33 Article 10 (6) reads:
"Lack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of a living modified organism on the conservation and sustainable use of biological diversity in the Party of import, taking also into account risks to human health, shall not prevent that Party from taking a decision, as appropriate, with regard to the import of the living modified organism in question as referred to in paragraph 3 above, in order to avoid or minimize such potential adverse effects"; Article 11 (8) reads: "Lack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of a living modified organism on the conservation and sustainable use of biological diversity in the Party of import, taking also into account risks to human health, shall not prevent that Party from taking a decision, as appropriate, with regard to the import of that living modified organism intended for

II.1.4. Obligation of Common but Differentiated Responsibilities

It is an obligation upon the Parties to the Climate Change Convention, 1992 to implement its provisions to protect the climate system for the benefit of the present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.[34] According to Article 4 of the Convention, all Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, should promote sustainable management of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol.[35]

II.1.5. Obligation to Notify, Exchange of Information and Consult

As per Article 4 (1) of the Vienna Convention for the Protection of Ozone Layer, 1985 the Parties should facilitate and encourage the exchange of

---

direct use as food or feed, or for processing, in order to avoid or minimize such potential adverse effects", Cartagena Protocol on Biosafety, Ibid, n. 25.

34 Article 3 (1) reads:
In their actions to achieve the objective of the Convention and to implement its provisions, the Parties shall be guided, inter alia, by the following: (1) "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof", Climate Change Convention, n. 14.

35 Article 4 (1) (d) reads:
(1) All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall: (d) "Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems", Climate Change Convention, n. 14.

scientific, technical, socio-economic, commercial, and legal information relevant to this Convention[36].

The Parties to the Montreal Protocol, 1987, should notify any transfer of production to the secretariat not later than the time of the transfer or addition.[37]

Article 12 of the Climate Change Convertion, 1992 Convention Stated that as per Article 4 (1), each Party should communicate to the Conference of the Parties, through the secretariat a national inventory of anthropogenic emissions of all greenhouse gases not controlled by the Montreal Protocol,[38] a general description of steps taken or envisaged by the Party to implement the Convention[39], and any other information that

---

[36] Article 4 (1) reads:
"The Parties shall facilitate and encourage the exchange of scientific, technical, socio-economic, commercial and legal information relevant to this Convention as further elaborated in annex II. Such information shall be supplied to bodies agreed upon by the Parties. Any such body receiving information regarded as confidential by the supplying Party shall ensure that such information is not disclosed and shall aggregate it to protect its confidentiality before it is made available to all Parties", Vienna Convention on Ozone Layer, n. 4.

[37] Article 2 (7) reads:
"Any transfer of production pursuant to paragraph 5 or any addition of production pursuant to paragraph 6 shall be notified to the Secretariat, no later than the time of the transfer or addition", Montreal Protocol on Ozone Layer, n.12.

[38] Article 12 (1) (a) reads:
In accordance with Article 4, paragraph 1, each Party shall communicate to the Conference of the Parties, through the secretariat, the following elements of information: (a) "A national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, to the extent its capacities permit, using comparable methodologies to be promoted and agreed upon by the Conference of the Parties", Climate Change Convention, n. 14.

[39] Article 12 (1) (b) reads:
In accordance with Article 4, paragraph 1, each Party shall communicate to the Conference of the Parties, through the secretariat, the following elements of information: (b) A general description of steps taken or envisaged by the Party to implement the Convention", Climate Change Convention, n. 14.

the Party considers relevant to the achievement of the objective of the Convention.[40]

Parities to the 1992 Convention on Biological Diversity should promote, on the basis of reciprocity, notification, exchange of information and consultation on activities under their jurisdiction or control, which are likely to significantly affect adversely the biological diversity of other States or areas beyond the limits of national jurisdiction.[41] In Article 17 (1) it is also Stated that the contracting Parties should facilitate the exchange of information from all publicly available sources relevant to the conservation and sustainable use of biological diversity.[42]

As per the Cartagena Protocol on Biodiversity, 2000 it is an obligation upon the Party to notify the affected States about unintentional transboundary movement of a living modified organism that is likely to have significant adverse effects on the conservation and sustainable use

---

[40] Article 12 (1) (c) reads:
In accordance with Article 4, paragraph 1, each Party shall communicate to the Conference of the Parties, through the secretariat, the following elements of information: (c)"Any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, material relevant for calculations of global emission trends", Climate Change Convention, n. 14.

[41] Article 14 (1) (c) and (d) reads:
"Each Contracting Party, as far as possible and as appropriate, shall: (c) Promote, on the basis of reciprocity, notification, exchange of information and consultation on activities under their jurisdiction or control which are likely to significantly affect adversely the biological diversity of other States or areas beyond the limits of national jurisdiction, by encouraging the conclusion of bilateral, regional or multilateral arrangements, as appropriate"; (d) "In the case of imminent or grave danger or damage, originating under its jurisdiction or control, to biological diversity within the area under jurisdiction of other States or in areas beyond the limits of national jurisdiction, notify immediately the potentially affected States of such danger or damage, as well as initiate action to prevent or minimize such danger or damage", Biodiversity Convention, n. 1.

[42] Article 17 (1) reads:
"The Contracting Parties shall facilitate the exchange of information, from all publicly available sources, relevant to the conservation and sustainable use of biological diversity, taking into account the special needs of developing countries", Biodiversity Convention, n. 1.

of biological diversity.[43] This notification should include available relevant information on the estimated quantities and relevant characteristics of the living modified organism and any available information about the possible adverse effects on the conservation and sustainable use of biological diversity.[44]

The importing Party should consult the notifier if it decides that information identified by the notifier does not qualify for such treatment and should inform the notifier of its decision prior to disclosure.[45] According to Article 23 (2) of the Protocol the Parties should in accordance with their respective laws and regulations consult the public

---

[43] Article 17 (1) reads:
"Each Party shall take appropriate measures to notify affected or potentially affected States, the Biosafety Clearing-House and, where appropriate, relevant international organizations, when it knows of an occurrence under its jurisdiction resulting in a release that leads, or may lead, to an unintentional transboundary movement of a living modified organism that is likely to have significant adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health in such States. The notification shall be provided as soon as the Party knows of the above situation", Cartagena Protocol on Biosafety, Ibid.

[44] Article 17 (3) reads:
"Any notification arising from paragraph 1 above, should include: (a) Available relevant information on the estimated quantities and relevant characteristics and/or traits of the living modified organism; (b) Information on the circumstances and estimated date of the release, and on the use of the living modified organism in the originating Party; (c) Any available information about the possible adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health, as well as available information about possible risk management measures; (d) Any other relevant information; and (e) A point of contact for further information", Cartagena Protocol on Biosafety, Ibid.

[45] Article 21 (2) reads:
"The Party of import shall consult the notifier if it decides that information identified by the notifier as confidential does not qualify for such treatment and shall, prior to any disclosure, inform the notifier of its decision, providing reasons on request, as well as an opportunity for consultation and for an internal review of the decision prior to disclosure", Cartagena Protocol on Biosafety, Ibid.

in the decision-making process regarding living modified organisms and should make the results of such decisions available to the public.[46]

If any Party to the Convention that makes a final decision regarding the domestic use of a living modified organism that may be subject to transboundary movement for direct use as food or feed, or for processing should inform the Parties through the Biosafety Clearing-House.[47] According to Article 14 (2) of the Protocol the Parties should inform each other about their bilateral, regional and multilateral agreements and arrangements entered into before or after the date of entry into force of this Protocol through the Biosafety Clearing-House.[48]

II.1.6. Obligations of Conservation and Sustainable Use

To achieve the objective of the Climate Change Convention, 1992 and to implement its provisions, the Parties should promote sustainable development and appropriate policies and measures to protect the climate system against human-induced change, taking into account that

---

[46] Article 23 (2) reads:
"The Parties shall, in accordance with their respective laws and regulations, consult the public in the decision-making process regarding living modified organisms and shall make the results of such decisions available to the public, while respecting confidential information in accordance with Article 21. 1", Cartagena Protocol on Biosafety, Ibid.

[47] Article 11 (1) reads:
"A Party that makes a final decision regarding domestic use, including placing on the market, of a living modified organism that may be subject to transboundary movement for direct use as food or feed, or for processing shall, within fifteen days of making that decision, inform the Parties through the Biosafety Clearing-House. This information shall contain, at a minimum, the information specified in Annex II. The Party shall provide a copy of the information, in writing, to the national focal point of each Party that informs the Secretariat in advance that it does not have access to the Biosafety Clearing-House. This provision shall not apply to decisions regarding field trials", Cartagena Protocol on Biosafety, Ibid.

[48] Article 14 (2) reads:
"The Parties shall inform each other, through the Biosafety Clearing-House, of any such bilateral, regional and multilateral agreements and arrangements that they have entered into before or after the date of entry into force of this Protocol", Cartagena Protocol on Biosafety, Ibid.

economic development is essential for adopting measures to address climate change.[49]

Each contracting Party to the Biodiversity Convention, 1992, should in accordance with their particular conditions and capabilities, develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity and integrate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.[50] It is an obligation upon each Contracting Party to integrate into their national decision-making, consideration of the conservation and sustainable use of biological resources[51] and they should adopt measures to avoid or minimise adverse impacts on biological diversity[52]. They should protect and encourage customary use of biological resources[53] that are compatible with

---

[49] Article 3 (4) reads:
"The Parties have a right to, and should, promote sustainable development. Policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes, taking into account that economic development is essential for adopting measures to address climate change", Climate Change Convention, n. 14.

[50] Article 6 reads:
"Each Contracting Party shall, in accordance with its particular conditions and capabilities: (a) Develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes which shall reflect, inter alia, the measures set out in this Convention relevant to the Contracting Party concerned; and (b) Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies", Biodiversity Convention, n. 1.

[51] Article 10 (a) reads:
"Each Contracting Party shall, as far as possible and as appropriate: (a) Integrate consideration of the conservation and sustainable use of biological resources into national decision-making, Biodiversity Convention", Ibid.

[52] Article 10 (b) reads:
"Each Contracting Party shall, as far as possible and as appropriate: (b) Adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity, Biodiversity Convention", Ibid.

[53] Article 10 (c) reads:

conservation or sustainable use requirements and should encourage co-operation between its governmental authorities[54] and its private sector in developing methods for sustainable use of biological resources.

II.1.6.1. In-situ Conservation[55]

According to Article 8 of the Convention each Contracting Party should establish and develop guidelines for the selection, establishment and management of a system of protected areas where special measures need to be taken to conserve biological diversity.[56] It is the duty of the Parties to regulate or manage biological resources important for the conservation of biological diversity with a view to ensuring their conservation and sustainable use within or outside protected areas and to promote environmentally sound and sustainable development in areas adjacent to protected areas.[57]Subject to its national legislation each Party should respect, preserve and maintain knowledge, innovations and

---

"Each Contracting Party shall, as far as possible and as appropriate: (c) Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements, Biodiversity Convention", Ibid.

54 Article 10 (e) reads:
'Each Contracting Party shall, as far as possible and as appropriate: (e) Encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources, Biodiversity Convention", Ibid.

55 Article 2, Biodiversity Convention, Ibid. For details see n. 21.

56 Article 8 reads:
"Each Contracting Party shall, as far as possible and as appropriate establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity", Biodiversity Convention, Ibid.

57 Article 8 (b) and (c) reads:
"Each Contracting Party shall, as far as possible and as appropriate: (b) Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity; (c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use", Biodiversity Convention, Ibid.

practices of indigenous lifestyles relevant for the conservation and sustainable use of biological diversity.[58]

Each Contracting Parties to the Biodiversity Convention, 1992, should as far as possible and as appropriate, identify and monitor, through sampling and other techniques, components of biological diversity important for its conservation and sustainable use[59]. Parties to the Convention should also identify processes and categories of activities, which have significant adverse impacts on the conservation and sustainable use of biological diversity and monitor their effects through sampling and other techniques.[60]

II.1.6.2.Ex-situ Conservation[61]

Each Contracting Party to the Convention should adopt measures for the ex-situ conservation of components of biological diversity and for the

---

58 Article 8 reads (j) reads:
"Each Contracting Party shall, as far as possible and as appropriate subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices", Biodiversity Convention, Ibid.

59 Article 7 reads:
"Each Contracting Party shall, as far as possible and as appropriate, in particular for the purposes of Articles 8 to 10: (a) Identify components of biological diversity important for its conservation and sustainable use having regard to the indicative list of categories set down in Annex I; (b) Monitor, through sampling and other techniques, the components of biological diversity identified pursuant to subparagraph (a) above, paying particular attention to those requiring urgent conservation measures and those which offer the greatest potential for sustainable use; (c) Identify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, and monitor their effects through sampling and other techniques...", Biodiversity Convention, Ibid.

60 Biodiversity Convention, Ibid.

61 Article 2, para. 8, Biodiversity Convention, Ibid. For details see n. 23.

research on plants, animals and micro organisms.[62] They should also adopt measures to regulate and manage collection of biological resources from natural habitats for ex-situ conservation purposes so as not to threaten the ecosystems and in-situ populations of species.[63]

II.1.7. Obligation to Adopt Domestic Measures

According to the Vienna Convention for the Protection of Ozone Layer, 1985, the Parties are under an obligation to adopt appropriate legislative or administrative measures and co-operate in harmonizing appropriate policies to control, limit, reduce or prevent human activities under their jurisdiction or control,[64]

Parties to the Biodiversity Convention, 1992, should develop or maintain necessary legislation or other regulatory provisions for the protection of threatened species and populations.[65] Each Contracting Party to the

---

62 Article 9 reads:
"Each Contracting Party shall, as far as possible and as appropriate, and predominantly for the purpose of complementing in-situ measures: (a) Adopt measures for the ex-situ conservation of components of biological diversity, preferably in the country of origin of such components; (b) Establish and maintain facilities for ex-situ conservation of and research on plants, animals and micro-organisms, preferably in the country of origin of genetic resources", Biodiversity Convention, Ibid.

63 Article 9 (d) reads:
"Each Contracting Party shall, as far as possible and as appropriate, and predominantly for the purpose of complementing in-situ measures to regulate and manage collection of biological resources from natural habitats for ex-situ conservation purposes so as not to threaten ecosystems and in-situ populations of species, except where special temporary ex-situ measures are required...", Biodiversity Convention, Ibid.

64 Art. 2 (2) (b) reads:
(2) "To this end the Parties shall, in accordance with the means at their disposal and their capabilities: (b) Adopt appropriate legislative or administrative measures and co-operate in harmonizing appropriate policies to control, limit, reduce or prevent human activities under their jurisdiction or control should it be found that these activities have or are likely to have adverse effects resulting from modification or likely modification of the ozone layer", Vienna Convention Ozone Layer, n. 4.

65 Article 8 (k) reads:
"Each Contracting Party shall, as far as possible and as appropriate develop or maintain necessary legislation and/or other regulatory

Biodiversity Convention, 1992, should take legislative, administrative or policy measures:

1) with the aim of sharing the results of research and development and the benefits arising from the commercial and other utilization of genetic resources.[66]

2) with the aim to provide access to and transfer of technology for making use of genetic resources, to those contracting Parties which provides genetic resources.[67]

3) with the aim that the private sector facilitates access to, joint development for the benefit of both governmental institutions and the private sector of developing countries and transfer of technology.[68]

---

provisions for the protection of threatened species and populations", Biodiversity Convention, n. 1.

66 Article 15 (7) reads:
"Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, and in accordance with Articles 16 and 19 and, where necessary, through the financial mechanism established by Articles 20 and 21 with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually agreed terms", Biodiversity Convention, Ibid.

67 Article 16 (3) reads:
"Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that Contracting Parties, in particular those that are developing countries, which provide genetic resources are provided access to and transfer of technology which makes use of those resources, on mutually agreed terms, including technology protected by patents and other intellectual property rights, where necessary, through the provisions of Articles 20 and 21 and in accordance with international law"..., Biodiversity Convention, Ibid.

68 Article 16 (4) reads:
"Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that the private sector facilitates access to, joint development and transfer of technology referred to in paragraph 1 above for the benefit of both governmental institutions and the private sector of developing countries and in this regard shall abide by the obligations included in paragraphs 1, 2 and 3 above", Biodiversity Convention, Ibid.

Each Party to the Cartagena Protocol on Biosafety, 2000, should adopt appropriate domestic measures aimed at preventing and penalising transboundary movements of living modified organisms carried out in contravention of its domestic measures, to implement this Protocol. Such movements should be deemed illegal transboundary movements.[69]

Each Party should designate one national authority to liase with the Secretariat and also designate one or more competent national authorities for performing the administrative functions required by this Protocol and also notify the secretariat about the names and address of its focal point and its competent national authority or authorities.[70]

II.1.8. Monitoring and Reporting Obligation

According to article 7 of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, each Party should provide to the secretariat statistical data on its production, imports and exports of each

---

69 Article 25 (1) reads:
"Each Party shall adopt appropriate domestic measures aimed at preventing and, if appropriate, penalizing transboundary movements of living modified organisms carried out in contravention of its domestic measures to implement this Protocol. Such movements shall be deemed illegal transboundary movements", Cartagena Protocol on Biosafety, n. 25, Ibid.

70 Article 19 (1) and (2) reads:
(1)"Each Party shall designate one national focal point to be responsible on its behalf for liaison with the Secretariat. Each Party shall also designate one or more competent national authorities, which shall be responsible for performing the administrative functions, required by this Protocol and which shall be authorized to act on its behalf with respect to those functions. A Party may designate a single entity to fulfill the functions of both focal point and competent national authority"; (2) "Each Party shall, no later than the date of entry into force of this Protocol for it, notify the Secretariat of the names and addresses of its focal point and its competent national authority or authorities. Where a Party designates more than one competent national authority, it shall convey to the Secretariat, with its notification thereof, relevant information on the respective responsibilities of those authorities. Where applicable, such information shall, at a minimum, specify which competent authority is responsible for which type of living modified organism. Each Party shall forthwith notify the Secretariat of any changes in the designation of its national focal point or in the name and address or responsibilities of its competent national authority or authorities", Ibid.

of the controlled substances for the year 1986 within three months of becoming a Party. If the actual data is not available the best possible estimate of such data should be provided.[71]

As per the Kyoto Protocol on Climate Change, 1997, it is an obligation upon all the Parties, in order to achieve sustainable development, to formulate cost-effective national or regional programmes to improve the quality of local emission factors for the preparation and periodic updating of national inventories of anthropogenic emissions of all greenhouse gases not controlled by the Montreal Protocol.[72] All Parties have an obligation to formulate, implement, publish and regularly update national or regional programmes containing measures to mitigate climate change and measures to facilitate adequate adaptation to climate

---

[71] Article 7 (1) and (2) reads:
(1)"Each Party shall provide to the Secretariat, within three months of becoming a Party, statistical data on its production, imports and exports of each of the controlled substances in Annex A for the year 1986, or the best possible estimates of such data where actual data are not available"; (2) "Each Party shall provide to the Secretariat statistical data on its production, imports and exports of each of the controlled substances in Annexes B and C, for the year 1989; o in Annex E, for the year 1991, or the best possible estimates of such data where actual data are not available, not later than three months after the date when the provisions set out in the Protocol", Montreal Protocol on Ozone Layer, n. 12.

[72] Article 10 (a) reads:
"All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, without introducing any new commitments for Parties not included in Annex I, but reaffirming existing commitments under Article 4, paragraph 1, of the Convention, and continuing to advance the implementation of these commitments in order to achieve sustainable development, taking into account Article 4, paragraphs 3, 5 and 7, of the Convention, shall: (a) Formulate, where relevant and to the extent possible, cost-effective national and, where appropriate, regional programmes to improve the quality of local emission factors, activity data and/or models which reflect the socio-economic conditions of each Party for the preparation and periodic updating of national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed upon by the Conference of the Parties, and consistent with the guidelines for the preparation of national communications adopted by the Conference of the Parties...", Kyoto Protocol on Climate Change, n. 18.

change.[73] It should include information on programmes that the Party believes contribute to addressing climate change and its adverse impacts, including the abatement of increases in greenhouse gas emissions.[74]

It is an obligation of each Party under the to Biodiversity Convention, 1992, to reports on measures, which it has taken for the implementation of the provisions of this Convention and their effectiveness in meeting the objectives of the Convention to the Conference of Parties.[75]

Each Party to the Cartagena Protocol, 2000, should monitor the implementation of its obligations under this Protocol, and should report to the Conference of the Parties, measures that it has taken to implement the Protocol.[76]

---

73 Article 10 (b) (ii) reads:
(b)"Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change and measures to facilitate adequate adaptation to climate change: (ii) Parties included in Annex I shall submit information on action under this Protocol, including national programmes, in accordance with Article 7; and other Parties shall seek to include in their national communications, as appropriate, information on programmes which contain measures that the Party believes contribute to addressing climate change and its adverse impacts, including the abatement of increases in greenhouse gas emissions, and enhancement of and removals by sinks, capacity building and adaptation measures...", Kyoto Protocol on Climate Change, Ibid.

74 Kyoto Protocol on Climate Change, Ibid.

75 Article. 26 reads:
"Each Contracting Party shall, at intervals to be determined by the Conference of the Parties, present to the Conference of the Parties, reports on measures which it has taken for the implementation of the provisions of this Convention and their effectiveness in meeting the objectives of this Convention", Biodiversity Convention, n. 1.

76 Article 33 reads:
"Each Party shall monitor the implementation of its obligations under this Protocol, and shall, at intervals to be determined by the Conference of the Parties serving as the meeting of the Parties to this Protocol, report to the Conference of the Parties serving as the meeting of the Parties to this Protocol on measures that it has taken to implement the Protocol", Cartagena Protocol on Biosafety, n. 25.

II.1.9. Miscellaneous Obligations of Parties

II.1.9.1. Protection of Human Health

Parties to the Vienna Convention, 1985, should take appropriate measures to protect human health and the environment against adverse effects[77] resulting or likely to result from human activities, which modify or are likely to modify the zone layer.[78]

II.1.9.2. Do Not Cause Damage to the Environment of Other States

According to Article 3 of the Biodiversity Convention, 1992, it is the general obligation of the States to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. [79]

II.1.9.3. Rehabilitation of Degraded Ecosystems and the Promotion Recovery of Threatened Species

It is the obligation of each Party under the Biodiversity Convention, 1992, to rehabilitate and restore degraded ecosystems and promote the

---

77 "*Adverse effect* means changes in the physical environment or biota, including changes in climate, which have significant deleterious effects on human health or on the composition, resilience and productivity of natural and managed ecosystems, or on materials useful to mankind", Vienna Convention on Ozone Layer, n. 4.

78 Art. 2 (1) reads:
"The Parties shall take appropriate measures in accordance with the provisions of this Convention and of those protocols in force to which they are Party to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer", Vienna Convention on Ozone Layer Ibid.

79 Article 3 reads:
"States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction", Biodiversity Convention, Ibid.

recovery of threatened species through the development and implementation of plans or other management strategies.[80] Parties to the Convention on biodiversity should adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions[81]

II.1.9.4. Regulation or Control of Risks

Parties to the Convention should establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology, which are likely to have adverse environmental impacts.[82]

II.1.9.5. Prevention of the Introduction of Alien Species

Parties should prevent the introduction of, control or eradicate those alien species, which threaten ecosystems, habitats or species.[83]

II.1.9.6. Obligations in Respect of Control Measures

---

[80] Article 8 (f) reads:
"Each Contracting Party shall, as far as possible and as appropriate rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, inter alia, through the development and implementation of plans or other management strategies", Biodiversity Convention, n. 1.

[81] Article 9 (c) reads:
"Each Contracting Party shall, as far as possible and as appropriate, and predominantly for the purpose of complementing in-situ measures to adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions", Biodiversity Convention, Ibid.

[82] Article 8 (g) reads:
"Each Contracting Party shall, as far as possible and as appropriate establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health", Biodiversity Convention, Ibid.

[83] Article 8 (h) reads:
"Each Contracting Party shall, as far as possible and as appropriate prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species", Biodiversity Convention, Ibid.

According to Article 2 of the Montreal Protocol, 1987, each Party should ensure that its calculated level[84] of consumption[85] of the controlled substances[86] does not exceed its calculated level. The increase of such level should be permitted only to satisfy the basic domestic needs of the developing country Parties for the purpose of industrial rationalisation[87] between Parties.

It is an obligation upon each Party to ban the import of controlled substances from any State not Party to this Protocol.[88] Parties to the Protocol should determine the feasibility of banning or restricting from States not Party to this Protocol, the import of products produced with, but not containing controlled substances within five years of the entry

---

84 Article 1 (7) reads:
"*Calculated levels* of production, imports, exports and consumption means levels determined in accordance with Article 3", Montreal Protocol on Ozone Layer, n. 12.

85 Article 1 (6) reads:
"*Consumption* means production plus imports minus exports of controlled substances, Montreal Protocol on Ozone Layer, Ibid.

86 Article 1 (4) reads:
"*Controlled substance* means a substance in Annex A, Annex B, Annex C or Annex E to this Protocol, whether existing alone or in a mixture. It includes the isomers of any such substance, except as specified in the relevant Annex, but excludes any controlled substance or mixture which is in a manufactured product other than a container used for the transportation or storage of that substance", Montreal Protocol on Ozone Layer, Ibid.

87 Article 1 (8) reads:
"*Industrial rationalization* means the transfer of all or a portion of the calculated level of production of one Party to another, for the purpose of achieving economic efficiencies or responding to anticipated shortfalls in supply as a result of plant closures", Montreal Protocol on Ozone Layer, Ibid.

88 Article 4 (1) reads:
"As of 1 January 1990, each Party shall ban the import of the controlled substances in Annex A from any State not Party to this Protocol; (1 bis) Within one year of the date of the entry into force of this paragraph, each Party shall ban the import of the controlled substances in Annex B from any State not Party to this Protocol; (1 ter) Within one year of the date of entry into force of this paragraph, each Party shall ban the import of any controlled substances in Group II of Annex C from any State not Party to this Protocol; (1 qua) Within one year of the date of entry into force of this paragraph, each Party shall ban the import of the controlled substance in Annex E from any State not Party to this Protocol", Ibid, as per amendment in 1997.

into force of this Protocol.[89] It also provides that each Party should discourage the export, of technology for producing and for utilising controlled substances to any States not Party to this Protocol.[90] The Parties should also refrain from providing new subsidies, aid, credits, guarantees or insurance programmes for the export and should refrain the export of products, equipment, plants or technology that would facilitate the production of controlled substances to States not Party to this Convention.[91]

---

89 Article 4 (4) reads:
"By 1 January 1994, the Parties shall determine the feasibility of banning or restricting, from States not Party to this Protocol, the import of products produced with, but not containing, controlled substances in Annex A. If determined feasible, the Parties shall, following the procedures in Article 10 of the Convention, elaborate in an annex a list of such products. Parties that have not objected to the annex in accordance with those procedures shall ban, within one year of the annex having become effective, the import of those products from any State not Party to this Protocol; (4 bis) Within five years of the date of the entry into force of this paragraph, the Parties shall determine the feasibility of banning or restricting, from States not Party to this Protocol, the import of products produced with, but not containing, controlled substances in Annex B. If determined feasible, the Parties shall, following the procedures in Article 10 of the Convention, elaborate in an annex a list of such products. Parties that have not objected to the annex in accordance with those procedures shall ban or restrict, within one year of the annex having become effective, the import of those products from any State not Party to this Protocol; (4 ter) Within five years of the date of entry into force of this paragraph, the Parties shall determine the feasibility of banning or restricting, from States not Party to this Protocol, the import of products produced with, but not containing, controlled substances in Group II of Annex C. If determined feasible, the Parties shall, following the procedures in Article 10 of the Convention, elaborate in an annex a list of such products. Parties that have not objected to the annex in accordance with those procedures shall ban or restrict, within one year of the annex having become effective, the import of those products from any State not Party to this Protocol", Montreal Protocol on Ozone Layer, Ibid, as per the amendment till 1997.

90 Article 4 (5) reads:
"Each Party undertakes to the fullest practicable extent to discourage the export to any State not Party to this Protocol of technology for producing and for utilizing controlled substances in Annexes A and B, Group II of Annex C and Annex E", Montreal Protocol on Ozone Layer, Ibid.

91 Article 4 (6) reads:
"Each Party shall refrain from providing new subsidies, aid, credits, guarantees or insurance programmes for the export to States not Party to this Protocol of products, equipment, plants or technology that would facilitate the production of controlled substances in Annexes A and B,

The framework of the Protocol should take into account various needs, including procedures for internationally-accepted risk assessment and risk management; information exchange and research; informed public participation in decision-making; assistance from countries with a high level of experience; and national capacity building.[92]Several obligations can be implied from the Articles of the Convention and Protocol to the Convention. The extensive nature of these obligations and the procedural measures taken by the Convention try to ensure that beyond an extent the development does not go unrestricted.

India has already ratified these Conventions and Protocols[93]. Even though, all the provisions under these Conventions and Protocols are not binding as such, each contracting Party including India has an obligation to comply the provisions under the fundamental principle good faith.[94]

II.2. Customary Law Obligations of India

Custom is traditionally defined to comprise, State practice and *opinio juris,* on the belief that a specific State practice is a matter of obligatory requirement of international law.[95]The customary international law

---

Group II of Annex C and Annex E", Montreal Protocol on Ozone Layer, Ibid.

92 Martin Khor, "UNEP Expert Panel Calls for Bio Safety Protocol under Biodiversity Convention," *http://www.twnside.org.sg/index.htm*, visited on 15 April, 2003

93 India ratified Vienna Convention for the Protection of the Ozone Layer, 1985 on 18th March 1991: acceded to Montreal Protocol on Substances that Deplete Ozone Layer, 1987 on 19th June 1992: ratified United Nations Framework Convention on Climate Change, 1992 on 1st November 1993:ratified Convention on Biological Diversity, 1992 on 18th February 1994: acceded to the Kyoto Protocol on Climate Change on 26th August 2002 and ratified Cartagen Protocol on Biosafety, 2000 on 17th January 2003.

94 Article 26, reads:
"every treaty in force is binding upon the Parties to it and must be performed by them in good faith", Convention on the Law of Treaties, 1969, Vienna, reprinted in 8 *International Legal Material* 689 (1969).

95 P. K. Rao, *International Environmental Law and Economics* (Oxford: Blackwell Publishers, 2002), p. 139.

emerges from the consent and uniform practice of States[96] and comes into being when a certain practice becomes sufficiently mature to justify the presumption that it has been accepted as a law by the State, which are to be bound by it.[97]

In the *North Sea Continental Shelf Case*[98], ICJ observed that the conditions leading to the creation of customary law based on a treaty provision include the following:

1) The provision must be of all norm creating nature;

2) There must be widespread participation in the treaty regime, including those States that are specially affected; and

3) State practice must be consistent with the existence of the obligation.

Under customary international law, India has a duty to prevent serious transnational environmental harm.

---

96 Article 38 (1) (b) of the Statute of the International Court of Justice reads: "The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply: ...(b) international custom, as evidence of a general practice accepted as law"...; M. H. Mandelson, "Formation of Customary International Law", *Recuil des Cours,* no. 272, 1998, p. 339; Ian Brownly, *Principle of Public International Law* (Oxford: Oxford University Press, 1990), pp. 4-5; Gorg Schwarzenberges, *A Manual of International Law* (New Delhi: Universal Law Publishing Co., 2000), p. 32, he argued that interntional customary law has two constitutive events: 1) general practice of States and 2) the acceptance by States of this general practice as law; it is also argued that custom is a continuous habit of doing a certain aspects, Robert Jennings and Arthur Watts, ed., *Oppenhein's International Law,* (New Delhi: Universal Law Publishing Co., 2003), p. 27; ICJ Reports, 1969, pp. 42-44; ICJ Reports, 1986, pp. 99-100.

97 K. Wolfke, "Controversies Regarding Customary International Law", *Netherlands Year Book of International Law*", vol. 24, 1993, p. 7.

98 ICJ Reports, 1969, pp. 42-44.

II.2.1. Duty to Prevent, Reduce and Control Environmental Harm

According to this customary principle, the States are required by international law to take adequate steps to control and regulate sources of serious global environmental pollution or transboundary harm, within their territory or subject to their jurisdiction. That is, States may not use their territory and resources under their jurisdiction in such a way as to cause significant harm to the environment of other States (*sic utere tuo ut alienum non laedas*) and areas beyond national jurisdiction. There is an increasing emphasis on the duty of States to take preventive measures to protect the environment.

Certainly not all instances of transboundary damage resulting from activities within a State's territory can be prevented or are unlawful. This clearly follows from the *Trail Smelter Case*[99], in which case the tribunal held that "no State has the right to use or permit to use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury established by clear and convincing evidence". Here the court recognizes the State of origin's obligation of prevention in relation, not only to its own acts, but also to the acts of its subjects.[100]

This principle was approved by subsequent judicial decisions and is generally considered to represent customary international law.[101] This principle was sought to be extended at the Stockholm Declaration,

---

[99] Text of the Award is available in *American Journal of International Law*, vol. 33, 1939, p. 182 and *American Journal of International Law*, vol. 35, 1941, p. 186

[100] J. Barboza, "International Liability for the Injurious Consequences of Acts Not Prohibited by International Law and Protection of the Environment", *Recueil des Cours*, vol. III, no. 247, 1994, p. 323.

[101] Alexander Kiss and Dinah Shelton, *International Environmental Law* (New York: Transnational Publishers, 1991), p. 121; see also *Nuclear Test case*, ICJ Reports, 1974, p. 253.

1972[102], to include responsibility for the harm done by nationals outside their home country, such as by ships flying their flag, or to the global commons[103]. The result was principle 21, which states as:

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

It imposes on States, the obligation to ensure that activities within their jurisdiction or control do not cause damage to the environment of other

States or to areas beyond the limits of national jurisdiction.[104] While Principle 21 calls for the prevention of extraterritorial effects causing environmental damage in other countries or in areas outside national jurisdiction, it does not in fact impose specific obligations that could be invoked by other States with regard to national management of resources. It is reaffirmed in Principle 2 of the Rio Declaration[105].

It is also stated in ECE Convention on Environmental Impact Assessment[106]. Art. 2(1) of the Convention reads:

> "Parties shall... take all appropriate and effective measures to prevent, reduce and control significant adverse transboundary environmental impact from proposed activities".

---

[102] Stockholm Declaration, n. 1.

[103] L. Sohn, " The Stockholm Declaration on the Human Environment", *Harvard International Law Journal*, vol. 14, 1973, p. 493.

[104] Stockholm Declaration, n. 1.

[105] Rio Declaration, n. 1.

[106] ECE Conventiona on Environmental Impact Assessment reprinted in 30 *International Legal Material* 800 (1991).

So it can be Stated that States have general obligation to take appropriate measures to prevent transboundary environmental harm.

In the *Lake Lanoux*[107] case also, the tribunal came into the conclusion that States have the obligation not to allow knowingly their territory to be used for acts contrary to the right of other State, among them those rights pertaining to their environment and of the persons and property of their inhabitants. According to Barboza, this also constitutes a general obligation of prevention[108].

The general obligation of preventing transboundary harm is also established in a number of multilateral treaties. In Article 192(2) of the Law of the Sea Convention[109], it is Stated that States shall take all necessary steps to ensure that activities under their jurisdiction or control are not to cause damage by pollution to other States and their environment and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where there exercise sovereign rights in accordance with this Convention.

There are several other declarations, which have no binding effect as such, Stated about this principle. According to Principle 21 of the Stockholm Declaration, 1972[110], United Nations General Assembly Resolution for Co-operation Between States in the Field of Environment,

---

[107] Reports of International Arbitral Awards, vol. 12 1957, p. 281; In the *Corfu Channel case,*(ICJ Reports, 1949, p. 22), the ICJ held that every State has obligation to not to allow knowingly its territory to be used for acts contrary to the rights of other States. Even though this case is not directly dealt with the environmental matters, it is important with regard to the obligation of a State's duty to not do harm to another State.

[108] Barboza, n. 99.

[109] Law of the Sea Convention, n. 1; the same provision can also seen in Art. 3 and 14 of the Biodiversity Convention, n. 1; Art. 3(1) and (2) as well as 7,8,and 15, Protocol on Antarctic Treaty on Environmental Protection, 1991, 30 *International Legal Material* 1461 (1991); Art. 1and 2, Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972,11 *International Legal Material* 1294 (1972).

[110] Stockholm Declaration, n. 1.

1972[111], United Nation General Assembly Resolution on Co-operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States, 1973[112] and United Nation General Assembly Resolution, 1974 adopting the Charter of Economic Rights and Duties of States[113], States are under an obligation to prevent the activities within its territory which cause significant transboundary environmental harm to other States.

Even though these instruments are non-binding, as per principle of good faith[114] and due diligence obligation[115], States are under a customary obligation not to damage the rights of other States and to prevent activities with in its territories which produces significant transboundary environmental damage to other States.

---

[111] United Nations General Assembly Resolution, 2995 (XXVII), 1972, *http://daccess-ods.un.org/access.nsf/Get?Open&DS=A/Res/2995 [XXVII]&Lang=E&Area=RESOLUTION*, visited on 23 December, 2002.

[112] United Nations General Assembly Resolution, 3129 (XXVIII), 1973, *http://daccess-ods.un.org/access.nsf/Get?Open&DS=A/Res/3129 [XXVIII]&Lang=E&Area=RESOLUTION*, visited on 23 December, 2002.

[113] United Nations General Assembly Resolution, 3281 (XXIX), 1974, *http://daccess-ods.un.org/access.nsf/Get?Open&DS=A/Res/3281 [XXIX]&Lang=E&Area=RESOLUTION*, visited on 23 December, 2002.

[114] Article 26, n. 93.

[115] In international law there is a general due diligence State obligation to prevent all significant (i.e., above a certain threshold of tolerance) transboundary harm caused by intention or negligent State conduct, either directly cause such harm, or permitting private Parties in its territory to cause it. According to Barboza, "the existence of due diligence obligation is found to emerge from the principle of customary international law of a general character prohibiting the noxious use of a State's territory, as emerges particularly from the *Corfu Channel* case where the rule is formulated in general terms not confined to a particular use of the territory or to environmental interferences". He also Stated that "this principle of innocuous is of a State's territory is part of an even more general principle expressed by the maxim of *neminem ledere*, i.e., (not knowingly) to cause damage to the rights of other States. The principles of 'due diligence' or 'due care' with respect to the environment and natural wealth and resources are among the first basic principles of environmental protection and preservation law. Apart from constant monitoring, it may require an assessment of the environmental impact of plans envisaged", (Barboza, n. 99).

II.2.2. Principle of Sovereignty Over Natural Resources

It is a well established practice, accepted as law, that within the limits stipulated by international law every State (and under certain conditions a people) is free to manage and utilise the natural resources within its jurisdiction and to formulate and pursue its own environmental and developmental policies.[116]

According to this principle, States have to conserve and utilise their natural wealth and resources for the well being of their peoples and they have to take into account the interests of other States as well as those of present and future generations of humankind.

The principle of permanent sovereignty over natural resources[117] dictates that natural resources are allocated to sovereign States according to the boundaries established to delimit their respective land territory and territorial seas. The UN General Assembly, in Article 1 and 2 of the Charter of Economic Rights and Duties of States, affirmed this principle as follows:

> "Every State has the sovereign and inalienable right to chose its economic system, as well as its political, social and cultural systems in accordance with the will of its people, without outside interference, coercion or threat in any form whatsoever." It also declared, expressly, that "every State has and shall freely exercise full permanent sovereignty, including possession, use and disposal, over all its natural resources."[118]

The sovereignty over natural resources must be exercised in an environmentally responsible way and for the benefit of both the present and future generations. This interpretation also finds support in the text, which connects the permanent sovereignty over natural resources with

---

[116] See Principle 21, Stockholm Declaration, n. 1;Principle 2, Rio Declaration, n. 1. and Article 3, Biodiversity Convention, n. 1.

[116] Paragraph 1, Principle of Permanent Sovereignty over Natural Resources (UN General Assembly Resolution No.1803 (XVII) of 1962), *Year Book of the United Nations* (New York: United Nations, 1962), p. 504.

[118] Ibid.

the UN Charter and principles of international law. The second phrase of Principle 21 builds on the well-known findings of the Tribunal in the *Trail Smelter*[119] case and of the International Court of Justice in the *Corfu Channel*[120] case and includes such international law principles as good neighbourliness and due diligence and care.

Main elements of the principle of the permanent sovereignty over natural resources have been included in several multilateral treaties, most notably, the UN Convention on the Law of the Sea[121] (1982); and the Climate Change[122] and Biodiversity Conventions[123] (1992).

The principle of permanent sovereignty over natural resources has achieved a firm status in international law and is now a widely accepted and recognized principle of international law.

Today, the principle of sovereignty over natural resources in international environmental law has led to both rights and duties of States. On the one hand, States have the right to pursue freely their own economic and environmental policies, including conservation and utilization of their natural wealth and the free disposal of their natural resources; on the other hand, obligations and responsibilities have emerged which confine the States' freedom of action.

II.3 Obligations of India Under General Principles of International Environmental Law

In addition to the treaty law, there are several general principles of international law, which states State's rights and obligations with respect to conservation and protection of the environment. The main principles of international environmental law concerning nature

---

[119] See n. 98.

[120] I.C.J Reports, 1949, p. 4.

[121] Law of the Sea Convention, n. 1.

[122] Climate Change Convention, n. 14.

[123] Biodiversity Convention, n. 1.

conservation and environmental protection, emerge from treaty law, international case law and soft law instruments such as the Stockholm and Rio Declarations. Not every principle has the same scope or status in international law of course. Some are well established, while others are still emerging.

II.3.1. Precautionary Principle

To take action against environmental threats before they run into crises, environmental policy makers confronted the difficulty of scientific uncertainty.[124] Because, environmental threats were neither observable nor scientifically certain, it was not possible to have a scientific consensus to predict future developments of the various potentially adverse ecological processes.[125] Policy makers concluded that it was for them to decide whether the risks required policy action, without waiting for firm scientific evidence.[126] From this, it can be said that the precautionary principle was construed, meaning that lack of scientific information should not be used as a reason for taking environmental policy measures.[127]

The roots of this concept can be traced to the no-harm principle and the obligation to act preventively.[128] The question raised by the preventive

---

[124] Tuomas Kuokkanen, *International Law and the Environment: Variations on a Theme* (The Hague, London, New York: Kluwer Law International, 2002), p. 262.

[125] Bo R. Doos, "Environmental Issues Requiring International Actions" in Winfried Lang and others, ed., *Environmental Protection and International Law* (1991), p. 8, quoted in Tuomas Kuokkomen, n. 123, p. 262.

[126] Ibid, p. 263.

[127] Ibid.

[128] R. G. Tarasofsky, "Legal Protection of the Environment During International Armed Conflict", *Netherlands Yearbook of International Law*, vol. 24, 1993, p. 72.

approach is at what point is it incumbent on all State to so act. This is a question of burden of proof, giving rise to:[129]

1) the obligation, which is not triggered until the risk is scientifically measurable and accountable. The Arbitral Tribunal in *Trial Smelter*[130] case Stated that there must be clear and convincing evidence of harm.[131]

2) reverse the burden of proof completely, and assume the presence of harm. This is the precautionary principle in its strongest form.[132] E.g. Oslo Commission Decision 89/1[133], which prohibits dumping at sea, unless it can be demonstrated that the environment will not be harmed.

3) the applicability of the precautionary principle.

It posits the view that waiting for clear scientific evidence may be too dangerous, and requires action on the strength of the risks involved and this was the view of the UNEP Governing council, which Stated that:

> "recognising that waiting for scientific proof regarding the impact of pollutants discharged into the impact of pollutants discharged into the marine environment may result in irreversible damage to the marine environment and in human suffering...[UNEP} recommends that all the governments adopt the principle of precautionary action as the basis of their policy with regard to prevention and elimination of marine pollution".[134]

This view was affirmed in Principle 15 Rio Declaration, it Stated as follows:

---

[129] Ibid.

[130] See n. 98.

[131] R. G. Tarasofsky, n. 127.

[132] Ibid.

[133] Oslo Convention for the Prevention of Maritime Pollution by Dumping from Ships and Air Cratt, reprinted in 11 *International Legal Material* 262 (1972).

[134] UNEP Governing Council Decision of 25th may, 1989, 15/27, quoted in R. G. Tarasofsky, n. 39.

> "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 use as a reason for postponing cost-effective measures to prevent environmental degradation".[135]

This principle is reflected in a number of multilateral treaties, such as the Law of the Sea Convention, 1982[136]; the Climate Change[137] and Biodiversity Conventions,[138] 1992 and the Convention to Combat Desertification,[139] 1994. The 'precautionary approach' is also incorporated in Principles 15 and 19 of the Rio Declaration[140]. However, what the precautionary approach exactly entails and what its hard-core consequences are has not yet crystallized. While it may be somewhat premature to label the precautionary principle as established in international law, it can without doubt be termed an emerging principle.

The precautionary approach adopts the operational principle that action should be taken to protect the environment if there are sufficient grounds for believing a threat is imminent, even if the scientific evidence regarding the threat is not yet conclusive.

Many countries have already applied the precautionary approach in the field of biotechnology by adopting safety regulations to avoid harmful effects on the environment and on human health, but these were mostly developed countries.

There is evidence that this version of the precautionary principle is gaining wider acceptance among States, and there have been several declarations endorsing the view that scientific uncertainty should not

---

[135] Rio Declaration, n. 1.

[136] Law of the Sea Convention, n. 1.

[137] Climate Change Convention, n. 14.

[138] Biodiversity Convention, n. 1.

[139] Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particular in Africa, 1994, Paris, 33 *International Legal Material* 1332 (1994).

[140] Rio Declaration, n. 1.

stall regulatory action.[141] State practice is still too general for this principle to have acquired sufficient grounding to form part of customary international law.

This approach was adopted as a guiding approach in several international environmental agreements.[142]

In the *Narmada case*[143] the Supreme Court of India made an effort to highlighted this doctrine and explained that when there is a State of uncertainty due to the lack of data or material about the extent of damage or pollution likely to be cause, then, in order to maintain the ecology balance, the burden of proof will be on the industry or the unit which is likely to cause pollution.

In the *Vellore Citizens case*[144] the Supreme Court of India observed that the precautionary principle is the essential feature of the principle of sustainable development.

II.3.2. Polluter Pays Principle

This principle is used to imply that whoever is responsible for environmental degradation should be responsible for its reparation.[145] It also covers both civil liability and criminal responsibility.[146]

---

[141] Bugen Ministerial Declaration on Sustainable Development in the ECE Region, 1990; ASEAN Workshop on Scientific Policy and Legal Aspects of Global Climate Change, Sept. 20th, 1990; London Ministerial declaration at the Second International Conference on the Protection of North Sea, 25th Nov., 1987; Ministerial Declaration of the Second World Climate Conference, 7th Nov, 1990, quoted in R. G. Tarasofsky, n. 127, p. 75.

[142] Preamble to The Vienna Convention Ozone Layer, n. 4; preamble to The Montreal Protocol on Ozone Layer, n. 12; Principle 15 of Rio Declaration, n.1; Article 3(3) of Climate Change Convention, n. 14; Preamble to The Biodiversity Convention, n. 1.

[143] AIR 2000 SC 3787.

[144] AIR 1996 SC 2715.

[145] Charles O. Okidi, "Incorporation of General Principle of International Law into National Law with Examples from Malavi, *Environmental Policy And Law*, vol. 27, no. 4, 1997, p. 331.

[146] Ibid.

Polluter pays principle has been transferred to environmental law from economy.[147] It is an economic policy for allocating the costs of pollution or environmental damage borne by public authorities, but it also has implications for the development of international and national law on liability for damage.[148] In fact, this principle is not direct principle of prevention, but which has an indirect bearing on prevention, that is, it concerns the costs internalisation and requires that the person responsible for causing pollution and its subsequent costs to pay these costs.[149] In international level, for the first time, the Organisation of Economic Conference and Development (OECD) formulated this principle through its Recommendation on Guiding Principles concerning the International Economic Aspects to Environmental Policies.[150]

This principle was included in principle 16 of the Rio Declaration.[151] According to this principle, the polluter pays principle

---

147 U. Kettlewell, "The Polluter Pays Principle: From Economic Equity to Environmental Ethos", *Texas Journal of International Law*, vol. 26, 1991, pp. 463-496, quoted in M. A. Fitzmaurice, "International Protection of the Environment", *Recueil Des Cours,* no. 293, 2001, P. 285.

148 P. W. Barnie and A. E. Boyle, n. 2. p. 92.

149 M. A. Fitzmaurice, n. 146.

150 It States as follows:
"The principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment is the so-called 'Polluter-Pays-Principle'. This Principle means that the polluter should bear the expenses of carrying out the above mentioned measures decided by public authorities to ensure that the environment is in acceptable State. In other words, the cost of these measures should be reflected in the costs of goods and services which cost pollution in production and/or consumption. Such measures should not be accompanied by subsidies that would crate significant distortions in international trade and investment", 11 *International Legal Material* 1172 (1972); M.A. Fitzmaurice, n. 146; P. W. Barnie and A. E. Boyle, n. 2.

151 Principle 16 reads:
"National authorities should endeavour to promote the internalisation of environmental 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 investment", Rio Declaration, n. 1.

should be followed in principle and with regard to public interest.[152] The specific costs for which polluter is responsible are, the costs of pollution prevention, control and reduction measures, which include costs of avoidance of the release of pollutants, of controlling such releases and of taking further measures to reduce the adverse effects of pollutants once released.[153] The application of this principle would ultimately require the States responsible for transboundary pollution to pay the victims.[154]

The application of this principle encounters difficulties to implement and enforce even in developed States.[155] In some Conventions[156] it is done through the central authorities. Thus the level of implementation is brought down from international to national level.[157] On national level, it is the task of a central authority, which does it.[158] It can be said that States, intergovernmental regulatory institutions and courts can and should take account of the principle in the development of environmental law and policy but they are in no sense bound by international law to make polluters pay.[159] Whatever its legal status, or its relationship to sustainable development, the polluter pays principle cannot supply guidance on the content of national or international environmental law without further definition.[160]

---

[152] M. A. Fitzmaurice, n. 146. P. 287.

[153] H. Smets, "The Polluter Pays Principle in the Early 1990's", in L. Campliglio, ed., *The Environment After Rio: International Law and Economics* (London: Graham and Trotman, 1994), p. 137, quoted in M. A. Fitzmaurice, Ibid.

[154] M. A. Fitzmaurice, Ibid.

[155] Ibid.

[156] For e.g. Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992, Helsinki, *Law of the Sea Bulletin*, vol. 22, 1993, p. 54.

[157] M. A. Fitzmaurice, Ibid.

[158] Ibid.

[159] P. W. Barnie and A. E. Boyle, n. 2, p. 93.

[160] H. Smets, n. 152, p. 131, quoted in P. W. Barnie and A. E. Boyle, n. 2, p. 95.

In India, Supreme Court in a number of cases Stated that the polluter pays principle is the part of the domestic law of the country. In a number of cases[161] the Supreme Court of India held that the polluter pays principle is a basic law of the land requires that a polluter bear the remedial or clean up costs as well as the amounts payable to compensate the victims of pollution.

II.3.3. The Principle of Common but Differentiated Responsibilities

As in other fields of international law, such as international trade and monetary law, international environmental instruments differentiate between industrialized and developing countries. As per this principle States have common but differentiated responsibilities in view of the different contributions to global environmental degradation.[162]

The rationale for differentiation is twofold. Firstly, it is recognized that so far the bulk of global emissions of greenhouse gases have originated in industrialised countries and that they should thus bear the main burden of combating climate change. Secondly, developing countries need access to resources and technologies in order to be able to achieve sustainable development.[163]

---

[161] *Indian Council for Enviro-Legal Action v. Union of India,* AIR, 1996 SC 1446; *Vellore Citizens Welfare Forum v. Union of India,* AIR, 1996 SC 2715; and *S. Jagannath v. Union of India,* AIR 1997 SC 811.

[162] Principle 7, Rio Declaration reads:
"States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit to sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command", Rio Declaration, n. 1.

[163] P. Sands, *Principle of International Environmental Law* (Manchester, New York: Manchester University Press, 1995), p. 25.

It is essential for the industrialised countries to have developing countries on board in order to control global environmental concern.[164] They admitted their historical contribution to environmental problems and recognised that developing countries lacked sufficient means to exercise appropriate environmental management.[165] The developing countries acknowledged that many ecological processes were affecting and in many cases they were more vulnerable to various adverse effect than industrialised countries.[166] Thus it appeared rational for both the developing and developed countries to conclude a new partnership on environment and development.[167]

The principle of common but differentiated responsibilities is traditionally understood as consisting of two elements.[168] Firstly, concerning the common responsibilities of States for protection of the environment, on national, regional and global levels and secondly, concerning the need to take into account different circumstances, in particular, each State's contribution to the creation of a particular environmental problem and each State's ability to prevent, reduce and control threat.[169] The second element is based on a concept of obligation to make resources available rather than only to assist developing States by developed States.[170]

---

164 Tuomas Kuokkanen, n. 125, p. 335.

165 Ibid.

166 Ibid.

167 Ibid.

168 P. Sands, n. 162, p. 217.

169 Ibid.

170 M. A. Fitzmaurice,n. 146.

This principle is embodied in a number of treaties and other international instruments.[171]

II.3.4.Environmental Impact Assessment

The environmental impact assessment[172] is a mandatory first step of investigation aimed at not only the possibility of a proposed project but also the effect of the proposed activity on the domestic environment and the environment on the territory of other States.[173] Before granting authorisation to operators of hazardous activities, the State should ensure that an assessment is undertaken to determine the extent and the nature of risk of the activity, including an evaluation of the possible impact[174] of that activity on persons or properties as well as on the environment of other States.

The criteria for determining what is permissible and what is prohibited might be the likelihood of significant harmful effects on the environment and current activities in another State, the ratio between prevention costs and any damage, the impact of other State's capacity to use their natural wealth and resources, and the health of the population of another State.

---

[171] Article 3 (1) of the Climate Change Convention, n. 14; Article 2 of the Biodiversity Convention, n. 1; Chapeau of Article 10, Kyoto Protocol, n. 18; para. 8 of the Preamble to the Cartagena Protocol, n. 25.

[172] *Environmental impact assessment* means a national procedure for evaluating the likely impact of a proposed activity on the environment, Article 1 (6), Convention on Environmental Impact Assessment in a Transboundary Context, 1991, Espoo (Espoo Convention, 1991), *http://www.unece.org/eia/eia.htm#article 1*, visited on 15th January, 2003.

[173] Phoebe N. Okowa, "Procedural Obligations in International Environmental Agreements", *British Yearbook of International Law*, vol. 67, 1996, p. 279.

[174] *Impact* means any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors, Espoo Convention, 1991, n. 171.

Activities likely to cause significant transboundary harm have certain identifiable general features: the type or source of energy used in a manufacturing activity, the substances manipulated in production, the location of the activity and its proximity to the border area, the vulnerability of zones of presumably affected States situated within in reach of the effect of an activity etc.[175]

The assessment may be a relevant factor in determining whether a State has acted with the requisite degree of diligence in discharging its customary law or treaty based duty to prevent environmental harm.[176] A State that fails to assess the impact of proposed activities on the territories of other States cannot claim that it has taken all practical measures with a view to preventing environmental damage.[177]

The conduct of environmental impact assessment, notification, consultation and exchange of information enables the Parties affected to put forward their concerns, assess the impact of the proposed activities on the environment and take remedial measures accordingly.[178] It also facilitates the collection and collation of relevant data on the effects of the proposed activities on the environment.[179] These obligations give States, which are likely to be affected by proposed activities, a chance to participate in the decision making process. This has been recognised as a

---

[175] Barboza, n. 99, p. 335.

[176] Francioni, in Neuhold Lang and Emanek, ed., *Environmental Protection and the Environment* (London, 1881), quoted in Phoebe N. Okowa, n. 172, p. 280.

[177] Phoebe N. Okowa, n.172, p. 277.

[178] Ibid, p. 280.

[179] Ibid, p.277-78.

State obligation by the *Trial Smelter* Case[180] and other environmental instruments.[181]

II.3.5. Notification, Exchange of Information and Consultation

The roots of a general obligation to notify in emergencies can be traced to the *Corfu Channel case*[182], where the obligation to notify was based on elementary consideration to notify the humanity. Since then, this notion has been incorporated onto various international agreements.[183]

The aim of the notification is to initiate a framework for consultations[184] so that the State of origin can take into account the interests of those likely to be affected.[185] These include the nature of the proposed activity, as well as any available information of its possible transboundary impact.[186] The notification requires the State of origin to inform the State, which might be affected of any activity on its territory which entails a risk of transboundary harm.[187] In the context of accidents, notification is intended to prepare the potential victim State and to give it a chance to adopt evacuation and other mitigative strategies.[188] It also

---

[180] Text of the Award is available in *American Journal of International Law*, vol. 33, 1939, p. 182 and vol. 35, 1941, p. 186.

[181] Principle 17, Rio Declaration, n. 1; Art 204, 205 and 106, Law of the Sea Convention, n. 1; Espoo Convention, n. 171; Article 14, Biodiversity Convention, n. 1.

[182] ICJ Reports, 1949, p. 22.

[183] Eg. Art 199, Law of the Sea Convention, n. 1; OECD Declaration of Principle of Transboundary pollution, C (88) 84 (Final), 8th july, 1988.

[184] Article 3 (1) reads:
"For a proposed activity listed in Appendix I that is likely to cause a significant adverse transboundary impact, the Party of origin shall, for the purposes of ensuring adequate and effective consultations under Article 5, notify any Party which it considers may be an affected Party as early as possible and no later than when informing its own public about that proposed activity", Espoo Convention, n. 171.

[185] Phoebe N. Okowa, n. 172, p. 289.

[186] Article 3 (1), Espoo Convention, n. 171.

[187] Phoebe N. Okowa, n. 172, p. 291.

[188] Ibid, p. 289.

provides the Parties an opportunity for finding an amicable solution to the problems raised, taking into account the interests of both the State of origin and the affected State.[189]

The concerned States, i.e., the States of origin and the presumably affected State, must enter into consultations with a view to achieving acceptable solutions regarding the potential transboundary impact of the proposed activity and measures to be adopted in order to prevent or minimise the risk of causing significant transboundary harm.[190]

In the *Lake Linoux case*[191] the arbitral tribunal Stated that France had complied with the particular treaty regime by notifying and consulting Spain in good faith about its intention.

The fulfillment of this obligation in good faith has given rise to another requirement, that of conducting environmental impact assessment to determine the extent of the risk. This is evident by their requirement in treaty law.[192] There is a growing evidence of a principle of international law that calls for prior notification and consultation in respect to transboundary environmental risk.

II.4. Implementation Mechanisms of International Environmental Law Obligations in India

It is the obligation of the State of origin to take legislative, administrative or other actions to ensure that all appropriate measures are adopted to prevent or minimise the risk of transboundary harm of the activity. This is a due diligence obligation, by no means an obligation of result and the breach of it by the State of origin originates

---

[189] Ibid, p. 291.

[190] Article 5, Espoo Convention, n. 171.

[191] Reports of the International Arbitral Awards, vol. 12, 1957, p. 281.

[192] Arts. 204 –206, Law of the Sea Convention, n. 1.

responsibility for wrongful acts.[193] It is expected from the State of origin that legislative, administrative and other actions be intended to prevent or minimise transboundary harm and then implementing the obligations of a State under international environmental law, which includes the customary rules, treaty law rules and other general principles. The domestic legislations of a State to enforce international environmental agreements will depend on how their legislative, executive and judicial bodies interpret and implement the treaty.

National standards have been established in certain areas under the Environmental Protection Act of 1986. Judicial rulings also play a major role in establishing permissible conduct and permissible use of natural resources in India.

II.4.1 Constitutional Mechanism of Implementations

The practicalities of implementing environmental laws are often much same as for human rights, e.g., local and national regulatory frame works, administrative machinery, protection agencies, training, education, remedies system etc.[194] In addition, what is considered as environmental law is not self contained but covers an array of legal sources of law. National constitutional rights can be widely interpreted to provide environmental protection.[195]

The increased public recognition of and concern with the environment have led to movement in national compliance systems.[196]

---

193 Principle 11, Rio Declaration, n. 1.

194 Domenic McGoldrick, " Sustainable Development and Human Rights: An Integrated Concept", 31 *International Legal Material* 874 (1992).

195 M.R. Anderson, "Individual Rights to Environmental Protection in India", in Anderson and Boyle, ed., *Human Rights Approach to Environmental Protection,* 1996, p. 199.

196 Principle 10 of Rio Declaration give some support for individual enforcement of laws and obligations before courts and tribunals; Principle 10 reads: "Environmental issues are best handled with participation of all

It was only after participating in the Stockholm Conference that the Indian Parliament enacted the 42nd Constitutional Amendment Act whereby specific provisions for environment protection were inserted in the form of Directives Principles of State Policy and Fundamental Duties[197]. By this amendment two Articles, Article 48(A) and Article 51(A)(g), were inserted into the Constitution of India.

Articles 48(A) imposes a constitutional obligation on the State to protect and improve the environment and safeguard the forests and wildlife of the country. Article 48(A) reads:[198]

> "The State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country".

Directive principles are policy prescriptions that guide the government. Although unenforceable by a court, the Directive Principles are increasingly being cited by judges as complementary to fundamental rights.[199] In several environmental cases the court have been guided by the language of Article 48A.[200]

---

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", n. 1.

197 P. C. Sinha, "International Obligations", *http:// www. India seminar.com/2000/492.htm*, visited on 15 January, 2003.

198 Durga Das Basu, "Constitutional Law of India" (New Delhi: Prentice-Hall of India Pvt. Ltd., 1998), p. 137.

199 *Som Prakash Rekhi v. Union of India*, AIR 1981 SC 212, Shyam Divan and Armin Rosencranz, *Environmental Law and Policy in India: Cases, Materials and Statutes* (New Delhi: Oxford University Press, 2001), p. 45.

200 *Virendra Gaur v. State of Haryana*, 1995 (2) SCC 571; *Indian Council for Enviro- Legal Action v. Union of India*, AIR 1996 SC 1446; *M.C. Mehta v. Union of India*, AIR 1988 SC 1037; *Rural Litigation and Entitlement Kendra, Dehradun v. State of Uttar Pradesh*, AIR 1988 SC 2187.

Article 51(A)(g) imposes a constitutional obligation on the citizens of India to protect and improve the natural environment, including forests, lakes, rivers and wildlife and to have compassion for all living creatures. Article 51(A)(g) reads:[201]

> "It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and ti have compassion for living creatures"..

Article 48(A) and 51(A)(g) laid down the foundation for sustainable development by outlining a blueprint of social and economic betterment and by providing guidelines for protection and improvement of the environment.

II.4.2. Implementation Through National Legislations

Environmental legislation has been providing operational frameworks at the national level for implementing environmental standards and regulating the activities of enterprises and people in the light of environmental objectives.

The environmental consciousness that we find in India today is to a great extend an import of the western culture concerning such issues. Colonial laws relating to the environment were contained mainly in statutes regulating the use of natural resources, laws protecting private property, and in criminal law. Most of the environmental law in India are based on the law of nuisance. Nuisance actions could challenge every major industrial and municipal activity.

The United Nations Conference on Human Environment (the Stockholm Conference) held in 1972 had the deepest impact on the codification of Indian environmental laws. Beginning in the 1980s, the Indian government enacted environmental legislations designed to regulate the emission and disposal of pollutants.

---

[201] Durga Das Basu, n. 197, p. 139.

To fulfil international obligations resulting thereby, Article 253 of the Constitution enables the Parliament of India to enact laws implementing India's international obligations as well as any decision made at an international conference, association or other body. Article 253 reads:

> "Notwithstanding anything contained in the foregoing provisions of this chapter, Parliament has the power to make any law for the whole or any part of the territory of India for implementing any treaty, agreement or Convention with other country or countries or any decision made at any international conference, association or other body."[202]

In view of the broad range of issues addressed by international Conventions, conference, treaties and agreements, Article 253 read with Entry 13[203] apparently gives Parliament the power to enact laws on virtually any entry contained in the State List. The Forty-Second Amendment also expanded the list of concurrent powers in the Constitution. The broad language of Article 253 suggests that in the wake of the Stockholm Conference in 1972, the Parliament has the Power to legislate on all matters linked to the preservation of natural resources.[204] The Parliament's use of Article 253 to enact the Air Act and Environment Act confirms this view.[205]

The Parliament has used its power under Article 253 read with Entry 13 of the Union List to enact prominent environmental laws viz. the Water Act (1974), the Air Act (1981) and the Environment Protection Act (1986). The preambles to both laws State that these Acts were passed to implement the decisions reached at the United Nation Conference on the Human Environment held at Stockholm on 1972.

---

202 Ibid, p. 313.

203 Entry 13 of the Union List covers participation in international conferences, associations and other bodies and implementing of decisions made thereat, Shyam Divan and Armin Rosencranz, n. 205, p. 47.

204 Shyam Divan and Armin Rosencranz, Ibid.

205. Ibid.

In *Maganbhai v. Union of India*[206] the Supreme Court of India held that the words 'notwithstanding anything in the foregoing provisions of this chapter' means that the distribution of legislative powers between the Union and States shall not restrict the power of Parliament to make laws under art. 253;in other words, parliament shall have competent pwer to legislate on matters included in List II, in so far as the same may be necessary for the implementation of treaties or agreements.

II.4.3. Implementation Through Judicial Decisions

India, by becoming a member of the aforementioned institutions and by giving reference to the principles and practices of international environmental laws, expresses its support to certain environmental instruments. For example, the Indian courts, in particular the higher ones, regularly cite some of these instruments and refer to their provisions while passing a verdict on certain environmental issues. India has a unique system of judicial activism in the area of environmental regulation. This activism is predicated upon a judicial interpretation of India's Constitution, which entitles citizens to a "fundamental right to life." This "right to life" has been interpreted by courts to include a "right to a clean environment." Therefore, at least in theory, any citizen can directly petition a court for redress on the grounds that his or her constitutional rights have been infringed by a polluting activity. India's pro-active judiciary has encouraged much public interest litigation in environmental matters. The court also sought to derive life breath for the right to live with human dignity and free from exploitation, out of the Directive Principle of State policy.[207]

---

[206] A.I.R. 1969 S.C 785.

[207] For details see Bharat Desai, "Enforcement of the Right to Environmental Protection through PIL in India", *Indian Journal of International Law*, vol. 33 (1993), pp. 27-40.

The Supreme Court of India has invented an impressive range of concepts and principles. The principle of strict and absolute liability, the principle of sustainable development, the polluter-pays principle, the precautionary principle and the Public Trust Doctrine have thus found firm footing in Indian jurisprudence.[208]

In a significant judgment in *Vellore Citizens Welfare Forum v. Union of India*[209], the Supreme Court of India spelt out the relation between international law and municipal law. The court observed that sustainable development as a balancing concept between ecology and development has been accepted as a part of the customary international law though its salient features have yet to be finalised by the international law jurists. Further the court Stated that once a principle is accepted as part of customary international law, there would be no difficulty in accepting it as part of domestic law.

Defining the precautionary principle in context of municipal law, the court laid down three ingredients of the precautionary principle:

1) environmental measure to be adopted by the State government and the statutory authorities- must anticipate, prevent, and attack the causes of environmental degradation.

2) where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

3) the onus of proof is on the actor or the developer/industrialist to show that his action is environmentally benign.

---

[208] R. Deepak Singh, "Response of Indian Judiciary to Environmental Protection: Some Reflections", *Indian Journal of International Law*, vol. 39, no. 3 (1999), p. 455.

[209] A.I.R. 1996 SC 1715.

In *Indian Council for Enviro-Legal Action v. Union of India*[210], the polluter pays principle has been held to be a sound principle. The Supreme Court in this case held that any principle evolved in this behalf should be simple, practical and be suited to the conditions prevailing in this country.

The court ruled that the activity carried on is hazardous or inherently dangerous, the person carrying on such an activity is liable to make good the loss caused to any other person by his activity irrespective of the fact whether he took reasonable care while carrying on his activity. Consequently the polluting industries are absolutely liable to compensate for the harm caused by them to villagers in the affected area, to the soil and to the underground water and hence, they are bound to take all necessary measures to remove sludge and other pollutants lying in the affected areas.

The polluter pays principle as interpreted by this court means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also the cost of restoring the environmental degradation. Remedying the damaged environment is part of the process of sustainable development and as such the polluter is liable to pay the cost to the individual who suffers as well as the cost of reversing the damaged ecology.

These principles have been reiterated in a number of environmental cases which came up before the court, viz, *Shrimp Culture case*[211], *Calcutta Tanneries case*[212] and the *Taj Mahal case.*[213]

---

[210] 1996 (3) SCC 212.

[211] *S. Jagannath v. Union of India*, JT 1997 (1) SC 160;

[212] *M.C. Mehta v. Union of India*, JT 1997 (1) SC 221;

[213] *M.C. Mehta v. Union of India* (1997) 2 SCC 353.

As per the principle of good faith the States should respect the obligations arising from treaties and other sources of international law.[214] The obligations of the State should be fulfilled through general principle of good faith.[215] Article 2 (2) stressed the importance of the good faith and Article 103 contemplated a hierarchy in legal obligations of States.[216] It can be said that good faith is more than a legal principle, it embraces the whole range of international law and relations.[217] Good faith applies even to those of international conduct which are unwritten or not explicitly Stated on legal text.[218] These rules flow mostly from practice and reasonable weighing of interests of States.[219]

---

[214] Para. 3 of the Preamble to the UN Charter reads:
... "to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained"..., Charter of the United Nations.

[215] Article 2 (2) of the UN Charter reads:
The Organization and its Members, on pursuit of the Purposes Stated in Article 1, shall act in accordance with the following Principles: ...(2) All Members, in order to ensure to all of them the rights and benefits resulting from membership, shall fulfil in good faith the obligations assumed by them in accordance with the present /charter", Charter of United Nations.

[216] V. S. Mani, *Basic Principles of Modern International Law* (New Delhi: Lancer Publishers, 1993), p. 200.

[217] Ibid, 201.

[218] Ibid.

[219] Ibid.

CHAPTER III

INDIA'S ENVIRONMENTAL OBLIGATIONS AND NATIONAL INDUSTRIAL LAWS

INDIA'S ENVIRONMENTAL OBLIGATIONS AND NATIONAL INDUSTRIAL LAWS

A number of countries have made significant progress in developing and adopting low-waste and clean industrial technologies and in recovering as well as recycling scarce industrial raw materials. With the growth and spread of Industries the transport, storage and disposal of chemical, toxic and radioactive wastes will pose an increasingly serious challenge. The industries extract raw materials from nature and discharge products from their front doors and pollution from their back doors. Developing countries like India, are suffering from the twin problems of excessive industrial concentration in urban areas and relative neglect of rural areas.

To understand the impact of international environmental legislation on Indian industrial laws, we need to analyse their relationship with the environmental Conventions in which India is a Party. India, by becoming a Party to an international environmental instrument, commits to its adherence and compliance at the national level.

III.1 Obligations Under Industrial Laws of India

A number of industry related laws has been passed by India with a view to protect the environment and to prevent the environmental degradation. The roots of modern environmental law could be traced to the on the law of nuisance; nuisance actions could challenge every major industrial and municipal activity, which is today a subject of comprehensive environmental legislation.[1]

---

[1] William H. Rodgers. Jr., *Handbook on Environmental Law* (1977), p. 100, quoted in C. M. Abraham and Sushila Abraham, "The Bhopal Case and the Development of Environmental Law in India", *International and Comparative Law Quarterly*, vol. 40, 1991, p. 355.

Though several independent legislations existed prior to 1972 the real impetus for bringing about a well-developed framework came only after the UN Conference on the Human Development (Stockholm Declaration), 1972. After the Stockholm Declaration, India has enacted a number of legislations to protect and minimize the environmental degradation resulting from industrial activities. The Ministry of Environment and Forests (MoEF) and the Central Pollution Control Board (CPCB) and State Pollution Control Board (SPCB) together form the regulatory and administrative core of the sector.

Although India does not have any environmental remediation statutes, it has enacted a fairly comprehensive legislative scheme to regulate air and water pollution. Under the Air (Prevention and Control of Pollution) Act of 1981 and the Water (Prevention and Control of Pollution) Act of 1974, regulatory bodies, known as Pollution Control Boards, regulate the release of pollutants into the air and water through the issuance of consent orders. Consent orders are contingent upon efficient treatment measures and can be withdrawn if standards are violated. While Pollution Control Boards have wide authority to inspect industrial plants and implement water and air quality standards, the Boards have limited regional jurisdiction. In fact, regional Boards are empowered to enact standards.

In response to problems of inconsistent standards resulting from this system, India enacted the Environmental Protection Act of 1986, which authorized Central Government to set uniform standards for emissions for specifically identified industries. The 1986 Environmental (Protection) Act also established rules governing the handling and disposal of hazardous substances. These national standards have improved environmental protection in India.

III.1.1.Treatment and Discharge of Wastes and Environmental Pollutants

III.1.1.1.Treatment of Wastes and Effluents

The Factories Act, 1948, provides that for the purpose of imposing certain prohibitions or restrictions in the employment of workers[2] and to prohibit employment in a factory on account of serious hazard,[3] the operation of a factory to be declared as dangerous. The occupier[4] of the factory is require to make effective arrangements for the treatment of wastes and effluents due to manufacturing process carried on therein so as to render them innocuous and for their disposal in accordance with the rules framed by the State

---

2 Section 87 (a), (d) and (e) reads:
"Where the State Government is of opinion that any manufacturing process or operation carried on in a factory exposes any persons employed in it to a serious risk of bodily injury, poisoning or disease, it may order or make rules applicable to any factory or class or description of factories in which manufacturing process or operation is carried on (a) specifying the manufacturing process or operation and declaring it to be dangerous; (d) providing for the protection of all persons employed in the manufacturing process or operation or in the vicinity of the places where it is carried on; (e) prohibiting, restricting or controlling the use of any specified materials or processes in connection with the manufacturing process or operation....", Factories Act, 1948, Act No. 58, 1948.

3 Section 87A (1) reads:
"Where it appears to the Inspector that conditions in a factory or part thereof are such that they may cause serious hazard by way of injury or death to the persons employed therein or to the general public in the vicinity, he may, by order in writing to the occupier of the factory, State the particulars in respect of which he considers the factory or part thereof to be the cause of such serious hazard and prohibit such occupier from employing any person in the factory or any part thereof other than the minimum number of persons necessary to attend to the minimum tasks till the hazard is removed ....."; "hazardous process means any process or activity in relation to an industry specified in the 'First Schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, bye-products, wastes or effluents thereof would; (i) cause material impairment to the health of the persons engaged in or connected therewith, or (ii) result in the pollution of the general environment: Provided that the State Government may, by notification in the Official Gazette, amend the First Schedule by way of addition, omission or variation of any industry specified in the said Schedule....", Section 2 (cb), Factories Act, Ibid.

4 "*occupier* of a factory means the person, who has ultimate control over the affairs of the factory", Section 2 (n), Factories Act, Ibid.

government.[5] Section 14 of the Act provides that in every factory effective methods to keep the workrooms free from dust and fume should be adopted.[6]

This Act has been amended in the year 1987. After this amendment the Act received an anti pollution orientation and the occupier is considered as a senior level manager. Such person is held responsible for non-compliance with the Act.

III.1.1.2. Specific Standard for Emission

As per the Air (Prevention and Control of Pollution) Act, 1981, the CPCB notifies a National Ambient Air Quality Standards[7] (NAAQS) in 1994 for major pollutants. These are deemed to be levels of air quality with an adequate margin of safety to protect public health, vegetation and property. The NAAQS prescribe specific standard for industrial, residential, rural and

---

5 Section 12 (1) and (2) reads:
(1) "Effective arrangements shall be made in every factory for the treatment of wastes and effluents due to the manufacturing process carried on therein, so as to render them innocuous, and for their disposal; (2) The State Government may make rules prescribing the arrangements to be made under sub-section (1) or requiring that the arrangements made in accordance with sub-section (1) shall be approved by such authority as may be prescribed", Factories Act, Ibid.

6 Section 14 (1) and (2) reads:
(1) "In every factory in which, by reason of the manufacturing process carried on, there is given off any dust or fume or other impurity of such a nature and to such an extent as is likely to be injurious or offensive to the workers employed therein, or any dust in substantial quantities, effective measures shall be taken to prevent its inhalation and accumulation in any workroom, and if any exhaust appliance is necessary for this purpose, it shall be applied as near as possible to the point of origin of the dust, fume or other impurity, and such point shall be enclosed so far as possible"; (2) "In any factory no stationary internal combustion engine shall be operated unless the exhaust is conducted into the open air, and no other internal combustion engine shall be operated in any room unless effective measures have been taken to prevent such accumulation of fumes there from as are likely to be injurious to workers employed in the room", Factories Act, Ibid.

7 G.S.R.384 (E), [11/4/1994], *http://envfor.nic.in/legis/air/gsr384(e).htm,* visited on 12/5/2003.

other sensitive areas. Industry-specific emission standards have also been developed for iron and steel plants, cement plants, fertilizer plants, oil refineries and the aluminum industry.As per Section 22 of the Act, persons operating any industry are not allowed emission of air pollutants in excess of the standards laid down by the State Board.[8]

Although the Water and Air Acts seems to provide the requisite law to tackle the water and air pollution problems of India, they were in fact neither readily enforceable nor effectively implemented.[9] Both these Acts in their administration were found deficient in many areas, such as the consent administration system, structure of the Boards, setting of standards and in the procedural hurdles to judicial recourse.[10]

The Act does not provide for concrete policy guidance in its provisions but simply emphasis on the purposes, constitution, functions etc. of the Boards.[11]

III.1.1.3. Prohibition of Discharge of Environmental Pollutants

The Environmental (Protection) Act, 1986, explicitly prohibits discharge or emission or permission to discharge or emit of any environmental pollutant

---

8 Section 22 reads:
No person****(Omitted by Act 47 of 1987, w.e.f. 1/4/1988) operating any industrial plant, in any air pollution control area shall discharge or cause or permit to be discharged the emission of any air pollutant in excess of the standards laid down by the State Board under clause (g) of sub-section (1) of section 17", Air (Prevention and Control of Pollution) Act, 1981(Air Act), Act no. 14 of 1981.

9 C. M. Abraham and Sushila Abraham, "The Bhopal Case and the Development of Environmental Law on India", *International And Comparative Law Quarterly*, vol. 40, 1991, p. 358.

10 C. M. Abraham, "For Better Enforcement of Our Pollution Laws", *Cochin University Law Review*, 1984, p. 221.

11 Kailash Thakur, *Environmental Protection Law and Policy in India* (New Delhi: Deep and Deep Publications 1997), p. 243.

in excess of standards.[12] A specific prohibition against handling[13] of hazardous substances[14] except in compliance with regulatory procedures and standards is also contained in the Act. Persons responsible for discharge of pollutants in excess of prescribed standards are to prevent or mitigate the pollution and report the discharge to governmental authorities.[15]

In pursuance of the powers conferred by the Act, the MoEF has published Environment (Protection) Rules, establishing general standards and industry based standards for certain types of effluent discharges.[16]

---

12 Section 7 reads:
"No person carrying on any industry, operation or process shall discharge or emit or permit to be discharged or emitted any environmental pollutants in excess of such standards as may be prescribed", The Environment (Protection) Act, 1986 (Environment Protection Act), Act No. 29 of 1986.

13 *handling* in relation to any substance, means the manufacture, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of such substance, Section 2 (d), Environment Protection Act, Ibid.

14 *hazardous substance* means any substance or preparation which, by reason of its chemical or physico-chemical properties or handling, is liable to cause harm to human beings, other living creatures, plant, micro-organism, property or the environment, Section 2 (e), Environment Protection Act, Ibid.

15 Section 9 (1) reads:
(1) "Where the discharge of any environmental pollutant in excess of the prescribed standards occurs or is apprehended to occur due to any accident or other unforeseen act or event, the person responsible for such discharge and the person in charge of the place at which such discharge occurs or is apprehended to occur shall be bound to prevent or mitigate the environmental pollution caused as a result of such discharge and shall also forthwith: (a)intimate the fact of such occurrence or apprehension of such occurrence; and (b)be bound, if called upon, to render all assistance, to such authorities or agencies as may be prescribed", Environment Protection Act, Ibid.

16 Section 25 reads:
(1) "The Central Government may, by notification in the Official Gazette, make rules for carrying out the purposes of this Act. ...any of the following matters, namely: (a) the standards in excess of which environmental pollutants shall not be discharged or emitted under section 7; (b) the procedure in accordance with and the safeguards in compliance with which hazardous substances shall be handled or caused to be handled under section 8; (c) the authorities or agencies to which intimation of the fact of occurrence or apprehension of occurrence of the discharge of any

The environment Act takes a comprehensive view of pollution dealing simultaneously with air, water and noise pollution as also regulating the treatment of hazardous materials. Section 24 of the Act is a controversial provision of the Act. It provides that if any act or omission constitutes an offence punishable under the Environmental Act of 1986 as well as any other law, the offender shall be liable to be punished under the other law and not under this Act.[17]

III.1.1.4.Emission of Environmental Pollutants

The Environment (Protection) Rules, 1986 specified certain provisions for the purpose of protecting and improving the quality of the environment and preventing and abating environmental pollution and setting the standards for emission or discharge of environmental pollutants from the industries.[18] As per the Rules the Central or State Boards may specify more stringent standards in respect of any specific industry, operation or process depending

---

environmental pollutant in excess of the prescribed standards shall be given .....under sub-section (1) of section 9; (d) the manner in which samples of air, water, soil or other substance for the purpose of analysis shall be taken under sub-section (1) of section 11; (g) the qualifications of Government Analyst appointed or recognised for the purpose of analysis of samples of air, water, soil or other substances under section 13; (i) the authority of officer to whom any reports, returns, statistics, accounts and other information shall be furnished under section 20.....", Environment Protection Act, Ibid.

17 Section 24 reads:
(1) "Subject to the provisions of sub-section (2), the provisions of this Act and the rules or orders made therein shall have effect notwithstanding anything inconsistent therewith contained in any enactment other than this Act. (2) Where any act or omission constitutes an offence punishable under this Act and also under any other Act then the offender found guilty of such offence shall be liable to be punished under the other Act and not under this Act", Environment Protection Act, Ibid.

18 Rule 3 (1) reads:
"For the purpose of protecting and improving the quality of the environment and preventing and abating environmental pollution, the standards for emission or discharge of environmental pollutants from the industries, operations or processes shall be as specified in [Schedule I to IV]", The Environment (Protection) Rules, 1986 (Environmental Protection Rules), S. O. 844 (E), Gazette of India, Extr., Pt. II, sec. 3(i), 19th Nov., 1986.

upon the quality of the recipient system.[19] These standards should be complied with by an industry within a period of one year.[20] The Central or a State Board, depending on the local conditions or nature of discharge of environmental pollutants may specify a *lesser period* in respect of any specific industry and the Central Government may also specify *any period* other than a period specified under sub-rule (3) within which the compliance of standards shall be made by such industry, operation or process.[21]

III.1.2. Prohibition and Restriction on Certain Activities

III.1.2.1. Location of Industries

The Environment (Protection) Rules, 1986, provides that the Central government may prohibit or restrict the location of industries taking into consideration of the following factors:[22]

---

19 Rules 3 (2) reads:
"Notwithstanding anything contained in sub-rule (1), the Central Board or a State Board may specify more stringent standards from those provided in [Schedule I to IV] in respect of any specific industry, operation or process depending upon the quality of the recipient system and after recording reasons therefore in writing", Environmental Protection Rules, Ibid.

20 Rule 3 (3) reads:
(3) The standards for emission or discharge of environmental pollutants specified under sub-rule (1) or sub-rule (2) shall be complied with by an industry, operation or process within a period of one year of being so specified, Environmental Protection Rules, Ibid.

21 Rules 4 (a) and (b) reads:
"Notwithstanding anything contained in sub-rule (3) (a) the Central Board or a State Board, depending on the local conditions or nature of discharge of environmental pollutants, may, by order, specify a lesser period than a period specified under sub-rule (3) within which the compliance of standards shall be made by an industry, operation or process (b) the Central Government in respect of any specific industry, operation or process, by order, may specify any period other than a period specified under sub-rule (3) within which the compliance of standards shall be made by such industry, operation or process", Environmental Protection Rules, Ibid.

22 Rule 5 (1) reads:
(1) "The Central government may take into consideration the following factors while prohibiting or restricting the location of industries and carrying on of processes and

1) Standards for quality of environment and the maximum allowable limits of concentration of various environmental pollutants.

2) The likely emission or discharge of environmental pollutants from an industry and the topographic, climatic features and the biological diversity of the area.

3) Environmentally compatible land use and the net adverse environmental impact likely to be caused by an industry.

4) Proximity to a protected area under the ancient monuments and the human settlements.

III.1.2.2.Handling of Hazardous Substances

Ozone Depleting Substances (Regulation and Control) Rules, 2000, States that while prohibiting or restricting the handling of hazardous substances in different area the Central Government may take into consideration:[23]

---

operations in different areas- (i) Standards for quality of environment in its various aspects laid down for an area. (ii) The maximum allowable limits of concentration of various environmental pollutants (including noise) [or an area. (iii) The likely emission or discharge of environmental pollutants from an industry, process or operation proposed to be prohibited or restricted. (iv) The topographic and climatic features of an area. (v) The biological diversity of the area which, in the opinion of the Central Government needs to be preserved. (vi) Environmentally compatible land use. (vii) Net adverse environmental impact likely to be caused by an industry, process or operation proposed to be prohibited or restricted. (viii) Proximity to a protected area under the Ancient Monuments and Archaeological Sites and Remains Act, 1958 or a sanctuary, National Park, game reserve or closed area notified as such under the Wild Life (Protection) Act, 1972 or places protected under any treaty, agreement or Convention with any other country or countries or in pursuance of any decision made in any international conferencel association or other body. (ix) Proximity to human settlements. (x) Any other factor as may be considered by the Central Government to De relevant to the protection of the environment in an area...", Environmental Protection Rules, Ibid.

23 Rule 13 reads:
(1) "The Central Government may take into consideration the following factors while prohibiting or restricting the handling of hazardous substances in different area is- (i) The hazardous nature of the substance (either in qualitative or quantitative terms as far as may be) in terms of its damage causing potential to the environment, human beings, other living creatures,

1) hazardous nature of the substance, either in qualitative or quantitative in terms of its damage causing potential to the environment, human beings, other living creatures, plants and property.

2) the substances that may be or likely to be readily available as substitutes for the substances proposed to be prohibited or restricted.

3) the indigenous availability of the substitute, or the State of technology available in the country for developing a safe substitute and other factors that may be relevant for the protection of environment.

III.1.2.3. Production of Ozone Depleting Substances

As per the rule 3 of the Ozone Depleting Substances (Regulation and Control) Rules, 2000, no person should produce[24] or cause to produce any

---

plants and property; (ii) the substances that may be or likely to be readily available as substitutes for the substances proposed to be prohibited or restricted; (iii) the indigenous availability of the substitute, or the State of technology available in the country for developing a safe substitute; (iv) the gestation period that may be necessary for gradual introduction of a new substitute with a view to bringing about a total prohibition of the hazardous substance in question; and (v) any other factor as may be considered by the Central Government to be relevant to the protection of environment", Environmental Protection Rules, Ibid.

[24] "*production* in relation to any ozone depleting substance means the manufacture of an ozone depleting substance from any raw material or feedstock chemicals, but does not include-(i) the manufacture of a substance that is used and entirely consumed (except for trace quantity) in the manufacture of other chemicals; or (ii) quantities which are produced incidentally in the manufacture of other chemical substances; or(iii) quantities which are recycled or reused; or (iv) quantities which are destroyed by technologies to be specified by the Central Government, Ozone Depleting Substances (Regulation and Control) Rules, 2000 (Ozone Depleting Substances Rules) S.O. 670(E), *Gazette of India, Extra-ordinary, Part II,* section3, sub-section (ii), pp. 39-96.

ozone depleting substance[25] in excess of the corresponding percentage from 1, August, 2000 to 1st January, 2010 or in excess of the quantity or calculated level of consumption[26] of such substances, unless he is registered with the authority. It also provided that production of any group of ozone depleting substances should not exceed the corresponding percentage of calculated base level of production[27]. Provided further that calculated level of consumption of such substances in India should not exceed the number specified in column (5) of Schedule II. [28] A person having received financial assistance from the Multilateral Fund in accordance with article 10 and 10 (A) of the Montreal Protocol should limit the production of ozone depleting substances and should not establish or expand the manufacturing facility

---

25 "*ozone depleting substance* means the ozone depleting substances specified in column (2) of Schedule I, whether existing by itself or in a mixture, excluding any such substance or mixture (blend) which is in a manufactured product other than a container used for the transportation or storage of such substance", Rule 2 (i), Ozone Depleting Substances Rules, Ibid.

26 "*calculated level of consumption* shall be determined by adding together calculated levels of production and imports and subtracting calculated level of exports", Rule 2 (f), Ozone Depleting Substances Rules, Ibid.

27 "*calculated level of production, sale, import or export*, as the case may be, means level determined by multiplying quantity of the ozone depleting substance by its ozone depleting potential specified in column (5) of Schedule I", Rule 2 (e); The calculated base level of consumption and the calculated base level of production for India as a whole for each group of ozone depleting substances shall be notified by the Central Government, Rule 5 (4), Ozone Depleting Substances Rules, Ibid.

28 Rule 3 (1) reads:
(1) "No person shall produce or cause to produce any ozone depleting substance after the date specified in column (5) of Schedule V unless he is registered with the authority specified in column (4) of that Schedule; Provided that for the twelve month period commencing on the date specified in column (6) of Schedule II, and in each twelve month period thereafter, no person shall produce or cause to be produced any group of ozone depleting substances in excess of the corresponding percentage of his calculated base level of production specified in column (4) of that Schedule: Provided further that calculated level of consumption of such substances in India shall, as a percentage of calculated level of consumption in base years does not exceed the number specified in column (5) of Schedule II, Ozone Depleting Substances Rules, Ibid.

for production of any ozone depleting substance and manufacture products which contain or are made with any ozone depleting substance.[29]

---

[29] Rules 3 (3), 8 (5), (6) and 9 (3), Ozone Depleting Substances Rules Stated as follows: Rule 3 (3) reads "A person having received financial assistance from the Multilateral Fund in accordance with article 10 and 10 A of the Protocol to which the Central Government is a Party for gradual reduction of production of ozone depleting substances specified as Group I and Group III in column (4) of Schedule I shall, limit the production of ozone depleting substances as specified in Group I and Group III in column (4) of Schedule I in each year from 1st August, 2000 to January 1, 2010 to quantities specified in column (4) for each year given in column (6) of Schedule III as per the agreement approved, by the Executive Committee of the Multilateral Fund"; Rule 8 (5) reads; "A person, having received financial and technical assistance from the Multilateral Fund in accordance with the Article 10 and 10 A of the Montreal Protocol on Substances that Deplete the Ozone Layer, to which the Central Government is a Party for phasing out of ozone depleting substances specified in column (2) of Schedule II used in activities specified in column (2) of Schedule IV, either himself or by any person on his behalf or through any enterprise, shall not engage in such activity as specified in column (2) of Schedule IV using ozone depleting substances specified in column (3) of the Schedule, after the date of completion of the conversion work or signing of the Handing Over Protocol, or the submission of the completion report to change from ozone depleting substance technology to non ozone depleting substance technology and the said date be registered with the authority specified in column (4) of the Schedule V"; Rule 8 (6) reads: "Any person or enterprise having received, financial assistance from the Multilateral Fund in accordance with the Article 10 and 10 A of the Montreal Protocol on Substances that Deplete The Ozone Layer shall submit an affidavit or declaration with the authority specified in column (4) of Schedule V stating that replaced equipment, resulted from completion of conversion process from ozone depleting substance technology to non ozone depleting substance technology, have been destroyed, dismantled, rendered unusable and that no ozone depleting substance should be used after the date of the completion of project and the said date be registered with the authority specified in the column (4) of the Schedule V"; Rule 9 (3) reads: "A person having received financial and technical assistance from the Multilateral Fund in accordance with the Article 10 and 10A of the Montreal Protocol on Substances That Deplete the Ozone Layer for phasing out of ozone depleting substances specified in column (2) of Schedule II used in activities specified in column (2) of Schedule IV to which the Central Government is a Party, shall not establish or expand or cause to establish or expand the manufacturing facility for production of any ozone depleting substance or with a view to manufacturing products which contain or are made with any ozone depleting substances after the approval of the project for conversion and date of completion of the conversion work from the ozone depleting substance technology to non ozone depleting substance technology", Ozone Depleting Substances Rules, Ibid.

No person should establish or expand any manufacturing facility for the production of any ozone depleting substance or manufacturing products which contain ozone depleting substance after the date specified in column (7) and (8) of Schedule II and III and import or export any products, which contain, or are made with, any ozone depleting substance after the date specified in column (2) and (4) of Schedule VII.[30] Such products, which do not contain ozone-depleting substances, should carry a label to that effect before its import is allowed.

III.1.2.4. Selling, Stocking or Distribution of Ozone Depleting Substances

No person should either himself or by any other person on his behalf or enterprise sell, stock or exhibit for sale or distribute any ozone depleting substance after the date specified in column (5) of Schedule V unless, he is

---

[30] Rules 9 (1) and (2) and 10 (1), (2) and (3) Stated as follows: Rule 9 (1), (2) reads "No person shall establish or expand or cause to establish or expand any manufacturing facility for production of any ozone depleting substance after the date specified in column (7) of Schedule II and III, (2) No person shall establish or expand or cause to establish or expand any manufacturing facility, with a view to manufacturing products which contain, or are made with, any ozone depleting substance after the date specified in column (8) of Schedule II & III"; Rule 10 (1), (2), (3) reads: (1) "No person shall import or cause to import any product specified in column (2) of Schedule VII which are made with or contain ozone depleting substances specified in column (3) after the date specified in column (4) of that Schedule unless he obtains a license issued by the authority: Provided that such products which do not contain such ozone depleting substances shall carry a label to that effect before its import is allowed after the date specified in Column 4 of Schedule VII. (2) No person or enterprise shall export or cause to export any product specified in column (2) of Schedule VII unless such product carries a label specifying whether or not the product has been made with or contains, as the case may be, ozone depleting substances specified in column (3) of that Schedule, after the date specified in column (5) of that Schedule. (3) No person shall either himself or by any other person or enterprise on his behalf sell, stock or exhibit for sale or distribute any product resulting out of activities, or provide services, specified in column (2) of Schedule IV using ozone depleting substances specified in column (3) after the date specified in column (4) of that Schedule", Ozone Depleting Substances Rules, Ibid.

registered or given a declaration in accordance with these rules with the authority.[31]

After the date specified no person or enterprise should sell, stock, distribute or exhibit or cause to be sold, stocked, distributed or exhibited any ozone depleting substances to any person or enterprise who has informed the Central Government that he or that enterprise shall not use the specified ozone depleting substances in manufacturing or other activities.[32]

III.1.2.5. Exporting and Importing of Ozone Depleting Substances

No person or enterprise should export or cause to export any product unless such product carries a label specifying whether or not the product has been made with or contains, as the case may be, ozone depleting substances.[33]

---

31 Rule 6 (1) reads:
(1) "No person shall either himself or by any other person on his behalf or enterprise sell, stock or exhibit for sale or distribute any ozone depleting substance after the date specified in column (5) of Schedule V unless he is registered with the authority specified in column (4) of that Schedule; Provided that no person or enterprise shall sell ozone depleting substances specified in column (3) of Schedule IV for activities specified in column (2) of that Schedule unless the person engaged in that activity has got himself registered with the authority and has given a declaration in accordance with these rules and the person selling ozone depleting substances has verified particulars of the registration given in the declaration with the certificate of registration as per procedure specified in Part II of Schedule XII; Provided further that after the date specified in column (4) of Schedule IV, no person or enterprise shall sell, stock, distribute or exhibit or cause to be sold, stocked, distributed or exhibited ozone depleting substances specified in column (3) for activities specified in column (2) of that Schedule", Ozone Depleting Substances Rules, Ibid.

32 Rule 6 (2) reads:
(2) "No person shall either himself or by any person on his behalf, or enterprise sell, stock or exhibit for sale or distribute any ozone depleting substance to any person or enterprise who has informed the Central Government that he or that enterprise shall not use the specified ozone depleting substances in manufacturing or other activities after the date specified by such person or as the case may be, the enterprise", Ozone Depleting Substances Rules, Ibid.

33 Rule 10 (2) reads:

No person should import or cause to import from or export or cause to export to any country not specified in Schedule VI, ozone-depleting substance after the commencement of these rules[34] unless he obtains a license issued by the authority.[35]

III.1.2.6. Activities Related to Biological Resources

Draft Biological Diversity Rules, 2003 Stated that if it deems necessary and appropriate the Authority can take steps to restrict or prohibit the request for access to biological resources[36]

1) if the request for access is for any endangered taxa or for any endemic and rare species;

---

(2) "No person or enterprise shall export or cause to export any product specified in column (2) of Schedule VII unless such product carries a label specifying whether or not the product has been made with or contains, as the case may be, ozone depleting substances specified in column (3) of that Schedule, after the date specified in column (5) of that Schedule", Ozone Depleting Substances Rules, Ibid.

34 Rule 4 reads:
"No person shall import or cause to import from or export or cause to export to any country not specified in Schedule VI any ozone depleting substance after the commencement of these rules", Ozone Depleting Substances Rules, Ibid.

35 Rule 5 (1) reads:
"No person shall import or cause to import from or export or cause to export to, any country specified in Schedule VI, any ozone depleting substance unless he obtains a license issued by the authority", Ozone Depleting Substances Rules, Ibid.

36 Rule 17 (1) reads:
"The Authority if it deems necessary and appropriate shall take the steps to restrict or prohibit the request for access to biological resources for the following reasons: (i) The request for access is for any endangered taxa; (ii) The request for access is for any endemic and rare species; (iii) The request for access may likely to result in adverse effect on the livelihoods of the local people; (iv) The request to access may result in adverse environmental impact which may be difficult to control and mitigate; (v) The request for access may cause genetic erosion or affecting the ecosystem function; (vi) Use of resources for purposes contrary to national interest and other related international agreements entered into by the country", The Draft Biological Diversity Rules, 2003, *http://envfor.nic.in/divisions/biodiv/dbdr2003.htm*, visited on 15/3/2003.

2) which may likely to result in adverse effect on the livelihoods of the local people;

3) which may result in adverse environmental impact;

4) which may difficult to control and mitigate;

5) which may cause genetic erosion or affecting the ecosystem function;

6) which may be contrary to national interest and other related international agreements entered into by the country.

III.1.3.Environmental Conservation

As per the Biodiversity Act, 2002, the Central Government should develop national strategies, plans and programmes for the conservation and promotion and sustainable use of biological diversity which includes measures for identification and monitoring of areas rich in biological resources, promotion of *in situ*,[37] and *ex situ*,[38] conservation of biological resources, incentives for research, training and public education to increase awareness with respect to biodiversity.[39]

---

[37] *"in situ conservation* means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties", Section 36 (5), (b), The Biological Diversity Act, 2002 (Biodiversity Act), Act no. 18, 2003.

[38] "*ex situ conservation* means the conservation of components of biological diversity outside their natural habitats", Section 36 (5), (a), Biodiversity Act, Ibid.

[39] Section 36 (1) reads:
"The Central Government shall develop national strategies, plans, programmes for the conservation and promotion and sustainable use of biological diversity including measures for identification and monitoring of areas rich in biological resources, promotion of *in situ*, and *ex situ*,

If an area in which biological diversity and biological resources are rich and their habitats is being threatened by overuse, abuse or neglect, Central Government should issue directions to the concerned State Government to take immediate ameliorative measures.[40]

If it deems appropriate, The Central Government shall, as far as practicable integrate the conservation, promotion and sustainable use of biological diversity into the relevant sectoral or cross-sectoral plans, programmes and policies.[41]

The Central Government should undertake measures:

1) for the assessment of environmental impact of any project which is likely to have adverse effect on biological diversity, with a view to avoid or minimize such effects and provide for public participation in such assessment;

2) to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology that are likely to have adverse impact on the

---

conservation of biological resources, incentives for research, training and public education to increase awareness with respect to biodiversity", Biodiversity Act, Ibid.

40 Section 36 (2) reads:
"Where the Central Government has reason to believe that any area rich in biological diversity, biological resources and their habitats is being threatened by overuse, abuse or neglect, it shall issue directives to the concerned State Government to take immediate ameliorative measures, offering such State Government any technical and other assistance that is possible to be provided or needed", Biodiversity Act, Ibid.

41 Section 36 (3) reads:
"The Central Government shall, as far as practicable wherever it deems appropriate, integrate the conservation, promotion and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies", Biodiversity Act, Ibid.

conservation and sustainable use of biological diversity and human health.[42]

The State Government may, notify areas of biodiversity importance as biodiversity heritage sites and may frame rules for the management and conservation of all the heritage sites.[43]

As per the Draft Biological Diversity Rules, 2003,the authority should take all necessary steps to implement the national strategies, plans, programmes developed by the Central Government in pursuance of Section 36[44]

III.1.4. No Fault Liability

The Public Liability Insurance Act, 1991 provides that where death or injury results from an accident, the owner is liable to provide relief, as is specified in the schedule of the Act.[45] The claimant is not required to plead

---

[42] Section 36 (4) (i) and (ii) reads:
"The Central Government shall undertake measures, (i) wherever necessary, for assessment of environmental impact of that project which is likely to have adverse effect on biological diversity, with a view to avoid or minimize such effects and where appropriate provide for public participation in such assessment; (ii) to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology likely to have adverse impact on the conservation and sustainable use of biological diversity and human health", Biodiversity Act, Ibid.

[43] Sectoion 37 (1) reads:
"Without prejudice to any other law for the time being in force, the State Government may, from time to time in consultation with the local bodies, notify in the Official Gazette, areas of biodiversity importance as biodiversity heritage sites under this Act", Biodiversity Act, Ibid.

[44] Rule 24 (1) reads:
"The Authority shall take all necessary steps to implement the national strategies, plans, programmes developed by the Central Government in pursuance of Section 36", Draft Biodiversity Rules, n. 36.

[45] Section 3 (1) reads:
(1)"Where death or injury to any person (other than a workman) or damage to any property has resulted from an accident, the owner shall-be liable to give such relief as is specified in Schedule for such death, injury or damage", The Public Liability Insurance Act, 1991, Act no. 6 of 1991.

and establish that the death, injury or damage in respect of which the claim has been made was due to any wrongful act, neglect or default of any person.[46]

Before handling[47] any hazardous substance, every owner should take one or more insurance policies against liability to give relief under sub-section (1) of section 3.[48]

III.1.4.1. Liability to Pay Compensation on the Basis of Principle of no Fault

The National Environmental Tribunal Act, 1995, provides that where death of, or injury to, any person (other than a workman) or damage to any property or environment 'from an accident, the owner should pay compensation for such death, injury or damage for such claim the claimant shall not be required to plead and establish that the death or injury was happened due to any wrongful act, neglect or default of any person.[49]

---

[46] Section 3 (2) reads:
(2) "In any claim for relief under sub-section (I) (hereinafter referred to in this Act as claim for relief), the claimant shall not be required to plead and establish that the death, injury or damage in respect of which the claim has been made was due to any wrongful act, neglect or default of any person", Public Liability Insurance Act, Ibid.

[47] *"Handling* in relation to any hazardous substance, means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance", Section 2 (c), Public Liability Insurance Act, Ibid.

[48] Section 4 (1) reads:
(1) "Every owner shall take out, before he starts handling any hazardous substance, one or more insurance policies providing for contracts of insurance thereby he is insured against liability to give relief under sub-section (1) of section 3; Provided that ally owner handling any hazardous substance immediately before the commencement of this Act shall take out such insurance policy or policies as soon as may be and in any case within a period of one year from such commencement", Public Liability Insurance Act, Ibid.

[49] Section 3. (1) (2) reads:
(1) "Where death of, or injury to, any person (other than a workman) or damage to any property or environment has resulted 'from an accident, the owner shall be liable to pay compensation for such death, injury or damage

III.1.5. Miscellaneous Obligations

III.1.5.1. Licensing System

The industries (development and regulation) Act, 1951 applies generally to large-scale production units. This Act was originally conceived in the context of economic development priorities of India. As such, it makes no direct or indirect reference to environment but provides an obvious mechanism in the form of licensing system for ensuing planning of future development on sound and balanced lines on such a way that the environmental concerns are adequately met.

Under the provisions of the Act a license is necessary for operating a new manufacturing establishment or for significantly altering the operation of an existing plant.[50] It also provides power to the Central Government to revoke or amend conditions of license.[51] By imposing conditions for issuing licenses, can be stretched to serve the cause of environment.[52]

---

under all or any of the heads specified in the Schedule. (2) In any claim for compensation under sub-section (1), the claimant shall not be required to plead and establish that the death, injury or damage in respect of which the claim has been made was due to any wrongful act, neglect or default of any person", The National Environmental Tribunal Act, 1995, Act no. 27 of 1995.

50 Section 11(1) reads:
(1) "No person or authority other than the Central Government, shall, after the commencement of this Act, establish any new industrial undertaking, except under and in accordance with a licence issued in that behalf by the Central Government: Provided that a Government other than the Central Government may, with the previous permission of the Central Government, establish a new industrial undertaking", The Industries (Development and Regulation) Act, 1951, Act no. 65 of 1951.

51 Section 12 reads:
(1) "If the Central Government is satisfied, either on a reference made to it in this behalf or otherwise, that any person or authority, to whom or to which a licence has been issued under Section 11, has, without reasonable cause, failed to establish or to take effective steps to establish the new industrial undertaking in respect of which the licence has been issued within the time specified therefor or within such extended time as the Central Government may think fit to grant in any case, it may revoke the licence. (2) Subject to any

III.1.5.2. Ozone Depleting Substance

No person should import or cause to import from or export or cause to export to any country not specified in Schedule VI, ozone-depleting substance after the commencement of these rules[53] unless he obtains a license issued by the authority.[54]

III.1.5.3. Consent System of Administration

Under the Water Act, 1974, the control of water pollution was sought to be achieved through a 'consent' system of administration.[55] The Act generally

---

rules that may be made in this behalf, the Central Government may also vary or amend any licence issued under Section 11: provided that no such power shall be exercised after effective steps have been taken to establish the new industrial undertaking in accordance with the licence issued in this behalf", The Industries (Development and Regulation) Act, Ibid.

52 Kailash Takur, *Environmental Protection Law and Policy in India* (New Delhi: Deep & Deep Publications, 1997), p. 238.

53 Rule 4 reads:
"No person shall import or cause to import from or export or cause to export to any country not specified in Schedule VI any ozone depleting substance after the commencement of these rules", Ozone Depleting Substances Rules, n. 24.

54 Rule 5 (1) reads:
"No person shall import or cause to import from or export or cause to export to, any country specified in Schedule VI, any ozone depleting substance unless he obtains a license issued by the authority", Ozone Depleting Substances Rules, Ibid.

55 Section 25 (1) reads
"Subject to the provisions of this section, no person shall, without the previous consent of the State Board; (a) establish or take any steps to establish any industry, operation or process, or any treatment and disposal system or an extension or addition thereto, which is likely to discharge sewage or trade effluent into a stream or well or sewer or on land (such discharge being hereafter in this section referred to as discharge of sewage); or (b) bring into use any new or altered outlets for the discharge of sewage; or (c) begin to make any new discharge of sewage"; 4) "The State Board may: (a) grant its consent referred to in sub-section (1), subject to such conditions as it may impose, being: (i) in cases referred to in clauses (a) and (b) of sub-section (1) of section 25, conditions as to the point of discharge of sewage or as to the use of that outlet or any other outlet for discharge of sewage; (ii) in the case of a new discharge, conditions as to the nature and composition, temperature, volume or rate of discharge of the effluent from the land or premises from which the discharge or new discharge is to be made; and (iii) that the consent will be

prohibits disposal of noxious, poisonous or polluting matter into streams or wells or sewer or on to the land in excess of the standards established by the State Boards.[56] The consent system under the Act is not effective, the Pollution Control Boards have some how been lenient in passing consent orders which allow industries to discharge effluents subject to certain conditions.[57] If exercised judiciously, the consent jurisdiction vested in the Boards can be a powerful tool for the prevention and control of water pollution.[58]

The Act itself did not initially bring about any changes in the State of the environment. It gives focuses on the establishment of bureaucratic agency. The Act was amended in 1988 to conform to the provisions of the Environmental Protection Act of 1986. The amendment included a new section, Section 33A into the Water Act. It empowers the State Boards to issue directions to any officer, person or authority, including the order to

---

valid only for such period as may be specified in the order, and any such conditions imposed shall be binding on any person establishing or taking any steps to establish any industry, operation or process, or treatment and disposal system or extension or addition thereto, or using the new or altered outlet, or discharging the effluent from the land or premises aforesaid; or (b) refuse such consent for reasons to be recorded in writing", Water (Prevention and Control of Pollution) Act, 1974(Water Act), Act no. 6 of 1974.

56 Section 24 (1) reads:
"Subject to the provisions of this section: (a) no person shall knowingly cause or permit any poisonous, noxious or polluting matter determined in accordance with such standards as may be laid down by the State Board to enter (whether directly or indirectly) into any stream or well or sewer or on land]; or (b) no person shall knowingly cause or permit to enter into any stream any other matter which may tend, either directly or in combination with similar matters, to impede the proper flow of the water of the stream in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes or of its consequences..." , Water Act, Ibid.

57. Bharat Desai, "Some Enforcement Issues for Water Pollution Control in India", *International Studies*, vol. 30, no. 3, 1993, P.327.

58 Ibid.

close, prohibit or regulate any industrial operation and to stop or regulate the supply of water, electricity or any other services. [59]

III.1.5.4. Reporting

Every person who produces, imports, exports, purchases, stocks, manufactures or sells and who has facility to destroy or reclaim any ozone depleting substance shall maintain records and file reports in the manner specified in Part I.[60]

The Manufacture, Storage And Import Of Hazardous Chemical Rules, 1989, stipulated that an occupier shall not undertake any industrial activity

---

[59] Section 33A reads:
"Notwithstanding anything contained in any other law, but subject to the provisions of this Act, and to any directions that the Central Government may give in this behalf, a Board may, in the exercise of its powers and performance of its functions under this Act, issue any directions in writing to any person, officer or authority, and such person, officer or authority shall be bound to comply with such directions; Explanation.-For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct- (a) the closure, prohibition or regulation of any industry, operation or process; or (b) the stoppage or regulation of supply of electricity, water or any other service", Water Act, n. 55.

[60] Rules 14 (1), (2), (3), (4), (5) and (6) reads:
(1) "Every person who produces, imports, exports or sells any ozone depleting substance shall maintain records and file reports in the manner specified in Part I of Schedule X; (2) Every person stocking or purchasing any ozone depleting substance for use in activities specified in column (2) of Schedule IV shall maintain records and file reports in the manner specified in Part II of Schedule X; (3) Every person who has received technical or financial assistance from any international organisation or any financial assistance, which includes concession or exemption from payment of duties, from the Central Government, shall maintain records and file reports in the manner specified in Part III of Schedule X and the list of such persons shall be notified by the Central Government; (4) Every person who has facility to reclaim an ozone depleting substance shall maintain records and file reports in the manner specified in Part IV of Schedule X; (5) Every person who has facility to destroy any ozone depleting substance shall maintain records and file reports in the manner specified in Part V of Schedule X; (6) Every person who manufactures, imports, exports or sells compressors shall maintain records and file reports in the manner specified in Part VI of Schedule X", Ozone Depleting Rules, n. 24.

unless he has submitted a written report to the concerned authority containing the particulars specified in Schedule 7[61] at least 3 months before commencing that activity.62 The Rules also stipulate that an occupier should not undertake any industrial activity unless he has prepared a safety report on that industrial activity containing the information specified in Schedule 8.63 The Rules provide that the concerned authority should prepare and keep up-to-date an adequate off-site emergency plan detailing how emergencies relating to a possible major accident on that site will be dealt with.[64]

---

61 Schedule 7 says about the information to be furnished for the notification of sites.

62 Rule 7 (1) reads:
(1) An occupier shall not undertake any industrial activity unless he has submitted A written report to the concerned authority containing the particulars specified in Schedule 7 at least 3 months before commencing that activity or before such shorter time as the concerned authority may agree and for the purpose of this paragraph an activity in which subsequently there is or is liable to be a threshold quantity or more of an additional hazardous chemical shall be deemed to be a different activity and shall be notified accordingly", Manufacture, Storage And Import Of Hazardous Chemical Rules, 1989 (Hazardous Chemical Rules), S.O. 966(E), *http://envfor.nic.in/legis/hsmhsm2/html,* visited on 25 January, 2003.

63 Rule 10 (1) reads:
(1) "Subjects to the following paragraphs of this rule, an occupier shall not undertake any industrial activity to which this rule applies, unless he has prepared a safely report on that industrial activity containing The information specified in Schedule 8 and has sent a copy of that report to the concerned authority al least ninety days before commencing that activity", Hazardous Chemical Rules, Ibid; Schedule 8 Stated about the information to be furnished in a safety report.

64 Rule 14 (1) reads:
(1) "It shall be the duty of the concerned authority as identified in Column 2 of Schedule 5 to prepare and keep up-to-date an adequate off-site emergency plan detailing how emergencies relating to a possible major accident on that site will be dealt with and in preparing that plan the concerned authority shall consult the occupier, and such other persons as it may deem necessary", Hazardous Chemical Rules, Ibid.

III.1.5.5. Notification and Information

According to Manufacture, Storage and Import of Hazardous Chemical Rules, 1989, where a major accident occurs on a site[65] or in a pipeline[66], the occupier shall notify the concerned authority of that accident and furnish thereafter to the concerned authority a report relating to the accidents. The occupier should take appropriate steps to inform persons outside the site either directly or through District Emergency Authority in an area about the nature of the major accident, the safety measures and the "Do's' and 'Don'ts" which should be adopted in the event of a major accident.[67]

III.1.5.6. Labelling

No person or enterprise should engage in any activity that uses ozone-depleting substances unless he is registered with the authority or the products are labelled to indicate that they contain the ozone depleting substance.[68]

---

65 "*Site* means any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not", Rule 2 (m), Hazardous Chemical Rules, Ibid.

66 "*Pipeline* means a pipe (together with any apparatus and works associated therewith) or system of pipes (together with any apparatus and work associated therewith) for the conveyance of a hazardous chemical other than a flammable gas as set out in Column 2 of Part II of Schedule 3 at a pressure of less than 8 bars absolute: the pipeline also includes inter-State pipe", Rule 2 (k), Hazardous Chemical Rules, Ibid.

67 Rule 15 (1) (a) and (b) reads:
(1) "The occupier shall take appropriate steps to inform persons outside the site either directly or through District Emergency Authority who are likely to be in an area which may be affected by a major accident about- (a) the nature of the major accident hazard; and (b) the safety measures and the "Do's' and 'Don'ts" which should be adopted in the event of a major accident", Hazardous Chemical Rules, Ibid.

68 Rule 8 (1) and (2) reads:

III.1.5.7. Collection and Levy of Cess on Water

The Water (Prevention and Control of Pollution) Cess Act, 1977,empowered the Central Government to impose a cess on water consumed by the industries, which includes industrial cooling, spraying in mine pits or boiler feed, domestic purposes, processing which results in water pollution by biodegradable water pollutants or processing which results in water pollution by water pollutants which are not easily biodegradable or are toxic.[69]

It is argued that the provision for cesses under the water Act allows one to pollute more by paying cess at a higher rate and by foregoing rebate.[70]

III.1.5.8.Enforcement Mechanism

The Acts also empowers the Central Government to constitute authorities and appoint officers to implement the provisions. As per Section 5 of this Act, the Central Government may issue directions to any person, officer or

---

(1) "No person or enterprise shall engage in any activity specified in column (2) of Schedule IV that uses ozone depleting substances specified in column (3) of that Schedule after the date specified in column (5) of Schedule V unless he is registered with the authority specified in column (4) of that Schedule; (2) No person shall engage in any activity specified in column (2) of Schedule IV using ozone depleting substances specified in column (3) of that Schedule after the date specified in column (5) of Schedule V unless the products are labelled to indicate the ozone depleting substance they contain", Ozone Depleting Substances Rules, n. 24.

69 Section 3 (1) and (2) reads:
(1) "There shall be levied and collected a cess for the purpose of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and utilisation hereunder, (2) The cess under sub-section (1) shall be payable by (a) every person carrying on any specified industry; and (b) every local authority, and shall be calculated on the basis of water consumed by such person or local authority, as the case may be, for any of the purposes specified in column (1) of Schedule II, at such rate, not exceeding the rate specified in the corresponding entry in column (2) thereof, as the Central Government may, by notification in the Official Gazette, from time to time, specify", Water (Prevention and Control of Pollution) Cess Act, 1977, Act no. 36, 1977.

70 Kailash Takur, n. 11, p. 228.

any authority to close, prohibit or regulate any industry and its operation or process, stop or regulate supply of electricity, water or any other service[71] and any person empowered by the Central Government have the right to enter into the industry for the purpose of performing any of the functions entrusted to him.[72]

The authority should lay down the procedure and guidelines for the regulation of access to biological diversity for governing the activities provided under Section 3 to 7.[73]

III.1.5.8.1. Biodiversity Management Committee

Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use

---

71 Section 5 reads:
"Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions. *Explanation*--For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct-- (a) the closure, prohibition or regulation of any industry, operation or process; or (b) stoppage or regulation of the supply of electricity or water or any other service", Environment Protection Act, n.12.

72 Section 10 reads:
(1) "Subject to the provisions of this section, any person empowered by the Central Government in this behalf shall have a right to enter, at all reasonable times with such assistance as he considers necessary, any place, (a) for the purpose of performing any of the functions of the Central Government entrusted to him...", Environment Protection Act, Ibid.

73 Rule 12 reads:
In particular and without prejudice to the generality of the other provisions, the Authority may perform the following functions:(i) lay down the procedure and guidelines to govern the activities provided under Section 3 to 7. (ii) Advise the Central Government on any matter concerning conservation of Biological bio-diversity, sustainable use of its components and fair and equitable sharing of benefits arising out of the use of biological resource and knowledge.(iii) coordinate the activities of the State Bio-diversity Boards, constituted under Section 22 of the Act"...Draft Biodiversity Rules, n. 36.

and preservation of habitats, conservation of land races[74], folk varieties[75] and cultivars[76], domesticated stocks and breeds of animals and micro organisms and chronicling of knowledge relating to biological diversity.[77]

Laws relating to the environment are not being properly implemented in India.[78] Poor implementation is generally attributed to lack of bureaucratic and political commitment, want procedures and systems, absence of awareness, and inadequate database and information.[79] The environmental problems in India are not merely confined to the side effects of industrialisation, but reflect the inadequacy of resources to provide infrastructural facilities. Legislation and policy pronouncements will be ineffective as long as the enforcement mechanism remains weak. Bureaucratisation of agencies responsible for control of pollution such as the local self-governmental bodies and Pollution Control Boards is a serious

---

74 "*landrace* means primitive cultivars that was grown by ancient farmers and their successors", Section 41 (1) Explanation (c), Biodiversity Act, n. 37.

75 "*folk variety* means a cultivated variety of plant that was developed, grown and exchanged informally among farmers", Setion 41 (1) explanation (b), Biodiversity Act, Ibid.

76 "*cultivars* means a variety of plant that has originated and persisted under cultivation or was specifically bred for the purpose of cultivation", Section 41 (1) explanation (a), Biodiversity Act, Ibid.

77 Section 41 (1) reads:
(1) "Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity", Biodiversity Act, Ibid.

78 Bharat Desai, n. 62, p. 326.

79 G. Suandaram, "Implementation on Environmental Regulations" (a paper presented to the South and Central Asian Cooperation Workshop held at the Administrative Staff College of India, Hyderabad), Hyderabad, 1986, p. 3, quoted in Bharat Desai, Ibid, p. 327.

problem of Indian pollution control mechanism. Democratisation of these bodies with the involvement of people having interest and expertise in environment protection is a method of activating the environment mandate.[80]

[80] Kailash Thakur, n. 11, pp. 419-420.

CHAPTER IV
CONCLUSION

CONCLUSION

The environmental degradation like global warming, ozone depletion and biological diversity invited the attention of the international community to strengthen environmental protection. As a result, a new branch of international law, international environmental law has emerged. The international environmental law consists of the treaty law, customary rules and the general principles recognised by the civilised nations.

The rights and obligations of states pertaining to the protection of the environment constitute the essence of international environmental law. Every state has an obligation to protect the environment within their jurisdiction and control and also to ensure that the activities in their jurisdiction should not cause environmental degradation to other states or beyond their jurisdiction.

The basic problem of international environmental protection is that effective rules must be established by way of agreements. It means, even if an agreement is reached; only the contracting parties are bound by it, even though the agreement may concern a problem that is important for many other states. In general, it can be said that agreements give states wide discretion in deciding how the obligations pertaining to the protection of environment are to be fulfilled.

This study has aimed to identify principal obligations of India under the international environmental law. It includes obligations of India under a selected number of multilateral environmental agreements in which India is a party. It also focuses to identify customary law principles and general principles of international environmental law.

The first chapter is the introduction to the study. The second chapter is divided into four parts. The first part of the chapter gives a brief account of the obligations of India under selected international environmental agreements, such as The Vienna Convention for the Protection of the Ozone Layer, 1985; Montreal Protocol on Substances that Deplete the Ozone Layer, 1987; United Nations Framework Convention on Climate Change, Rio de Janeiro, 1992; The Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1997; Convention on Biological Diversity, Rio de Janeiro, 1992 and Cartagena Protocol on Bio safety to the Convention on Biological Diversity, 2000, in which India is a party.

These conventions and protocols were ratified or acceded to by India. As per these conventions or protocols, India has obligations to cooperate to promote exchange of information in order to understand the effects of environmental degradation and to assess, identify and evaluate the impacts of any proposed projects.

The second part examines the obligations of India under the customary international law. The customary law include duty of a state to prevent, reduce and control environmental harm, sovereign right of a state to conserve and utilise their natural resources not only for present generation but also for the benefit of the future generations of human kind. It also analyses state's transboundary cooperation with each other to mitigate transboundary environmental risk. Not to damage or endanger the environment beyond the national jurisdiction of a country is an obligation of a state under the customary international law. It contains substantial and procedural environmental protection. This has been recognised by a number of decisions of international judicial institutions from the arbitral decision of the trial smelter case.

Several general principles of international environmental law, which stated the obligations of a state to conserve the nature and protect the environment, are included in a number of environmental agreements. The obligations of India under the general principles of the environmental law are examined in the third part of the chapter. It includes polluter pays principle, precautionary principle, intergenaral equity, common but differential responsibilities and some of the procedural obligations such as environmental impact assessment, notification and consultation and exchange of information.

The fourth part of the chapter analyses the implementation mechanism of the international obligations in India, i.e. through the constitution, the legislations and the judicial decisions. In India, the ratification of a treaty depends exclusively on the executive. It is the executive who will decide whether India should ratify a treaty or not. The parliament has no voice in the matter of the ratification of a treaty. In India international treaties are enforced through the constitutional provisions. Article 252 of the Constitution of India authorises Union Government to adopt national legislation at the request of two or more states. Article 253 of the constitution provided that the parliament has the power to enact any legislation to implement any treaty or decisions made at any international plane. Indian judiciary has played a vital role in implementing the environmental obligations of India. In a number of cases, the Supreme Court of India even implemented international obligations. The Supreme Court has held that precautionary principle or the polluter pays principal are the law of the land.

The third chapter identifies the provisions relating to the environmental protection under the major industrial and environmental laws, rules and notifications, such as Factories Act, 1948; The industries (development and regulation) Act, 1951; Water

(Prevention and Control of Pollution) Act, 1974; Water (Prevention and Control of Pollution) Cess Act, 1977; Air (Prevention and Control of Pollution) Act, 1981; The Environmental (Protection) Act, 1986; Public Liability Insurance Act, 1991; The National Environmental Tribunal Act, 1995; Biodiversity Act, 2002; The Environment (Protection) Rules, 1986; Ozone Depleting Substances (Regulation and Control) Rules, 2000; Manufacture, Storage And Import Of Hazardous Chemical Rules, 1989; Draft Biological Diversity Rules 2003. This chapter also look into how India complied the obligations through these Acts, Rules and notifications.

By making treaties, the international community has tried to regulate activities that threatened the environment. The obligations of a state under the international environmental agreements depend upon the intention or willingness of the state parties to implement the treaty in that state. The intention of a party can be traced from the language of the instrument. The international environmental agreements, such as the Ozone Depletion Convention, the Climate Change Convention and the Biodiversity Convention are the framework conventions. The language of these instruments is not of a binding nature. It gives maximum flexibility to a party to the agreement to comply with the provisions and obligations enumerated. On the bases of the principle of good faith, the state should comply with the obligations arising out of the customary rule, treaty law and general principles of international law.

India has enacted a number of environmental protection laws to regulate industrial pollution. But these laws relating to environmental protection has not been implemented properly. In all the environmental laws, the central or state government are empowered to establish authorities to protect the environment and to reduce environmental degradation. The authorities appointed by the central government are empowered to take such measures, exercise

such powers and perform such functions, which are necessary to protect the environment. They are also empowered to issue directions for closure, prohibition or regulation of any industry.

To improve the environmental protection or to reduce the environmental degradation through the industrial pollution in India, it can be suggested that the Governments, Centre and State, should establish and enforce environmental standards, and should provide fiscal and other incentives to industry for the retrofitting of equipment for pollution control. They should also ensure penalties for non-compliance, in conformity with the "polluter pays principle".

The authorities should ensure that Industrial enterprises must carry out impact assessment prior to the location and designing of industrial plants and it should gather public opinion from the locality and ensure their participation. Governmental policies should facilitate the location of industries in areas, which would relieve urban congestion and encourage rural development.

Transnational Corporations should comply with the environmental legislation of the host country, while respecting similar legislation of the home country.

Many developing countries do not possess the technical or institutional capability to analyse or monitor environmental implications of industrial processes. So the government should take necessary measures to obtain technical or institutional capability to monitor and reduce the activities, which will affect the ecological balance.

The transfer of industrial technology and skills from developed to developing countries to arrest environmental degradation associated with industry should be internationally supported.

Governments should require periodic reports from the industries on measures implemented to protect and improve the environment, specially those industries involving high environmental and health risks.

The authorities should strengthen the national laws and rules for the proper implementation of the provisions under the environmental laws related to the control and regulation of industrial pollution. Also, measures should be adopted to strengthen industrial laws, which are related to environmental protection.

There should be a code of conduct for the Transnational Corporations to comply with the ecological balance of the region at which it intends to start its manufacturing or any other processing unit.

If India does not take necessary steps to make the environmental protection strong by enacting laws to cope up with the need of the international environmental concern, the environmental degradation in India will further increase.

SELECTED BIBLIOGRAPHY

Primary Sources

International

Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer, 1990, London, reprinted in 30 *International Legal Material* 541 (1991).

Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer, 1992, Copenhagen, reprinted in 32 *International Legal Material* 874 (1993).

Convention for the Prevention of Maritime Pollution by Dumping from Ships and Air Craft, Oslo, reprinted in 11 *International Legal Material* 262 (1972).

Convention for the Protection of the Ozone Layer, 1985, Vienna, reprinted in 26 *International Legal Material* 1529 (1987).

Convention on Biological Diversity, 1992, Rio de Janeiro, reprinted in 31 *International Legal Material* 818 (1992).

Convention on Environmental Impact Assessment in a Transboundary Context, 1991, Espoo (Espoo Convention, 1991), *http://www.unece.org/eia/eia.htm.*

Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989, Basel, reprinted in 28 *International Legal Material* 657 (1989).

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, reprinted in 11 *International Legal Material* 1294 (1972).

Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, 1994, Paris, reprinted in 33 *International Legal Material* 1332, (1994).

Declaration on Environment and Development, 1992, Rio de Janeiro, reprinted in 31 *International Legal Material* 874 (1992).

Drafts Articles on Prevention on Transboundary Harm from Hazardous Activities. (With Commentary), In Report of the ILC, 53rd session, UN GOR, 56th session, Supp. no. 10 at 370-436; UN doc. A/56/10(2001).

Principle of Permanent Sovereignty over Natural Resources (UN General Assembly Resolution No.1803 (XVII) of 1962), *Year Book of the United Nations* (New York: United Nations, 1962), p. 504.

Protocol on Antarctic Treaty on Environmental Protection, 1991, re printed in 30 *International Legal Material* 1461 (1991).

Protocol on Substances that Deplete the Ozone Layer, 1987, Montreal, reprinted in 26 *International Legal Material* 1550, (1987).

Protocol to the UN Framework Convention on Climate Change, 1997, Kyoto, re printed in 37 *International Legal Material* 22 (1998).

The UN Conference on the Human Environment, 1972, Stockholm, reprinted in 11 *International Legal Material* 822 (1972).

The UNEP Draft Principles on Conduct in the Field of Environment for the Guidance of States in the Conservation and Harmonious Utilisation of Natural Resources Shared by Two or More States, reprinted in 17 *International Legal Material* 1097 (1978).

The World Charter for Nature, reprinted in 23 *International Legal Material* 455 (1983).

United Nations Convention on the Law of the Sea, 1982, Montego Bay, reprinted in 21 *International Legal Material* 1261, (1982).

United Nations Framework Convention on Climate Change, 1992, Rio de Janeiro, reprinted in 31 *International Legal Material* 849, (1992).

United Nations General Assembly Resolution, 2995 (XXVII), 1972, *http://daccessods.un.org/access.nsf/Get?Open&DS=A/Res/2995[XXVII]&Lang=E&Area=RESOLUTION*

United Nations General Assembly Resolution, 3129 (XXVIII), 1973, *http://daccessods.un.org/access.nsf/Get?Open&DS=A/Res/3129[XXVIII]&Lang=E&Area=RESOLUTION*

United Nations General Assembly Resolution, 3281 (XXIX), 1974, *http://daccessods.un.org/access.nsf/Get?Open&DS=A/Res/3281[XXIX]&Lang=E&Area=RESOLUTION*

National

Air (Prevention and Control of Pollution) Act, 1981.

Manufacture, Storage And Import Of Hazardous Chemical Rules, 1989.

National Environmental Tribunal Act, 1995.

Ozone Depleting Substances (Regulation and Control) Rules, 2000.

The Biological Diversity Act, 2002.

The Draft Biological Diversity Rules, 2003.

The Environment (Protection) Act, 1986.

The Environment (Protection) Rules, 1986.

The Environmental (Protection) Act, 1986.

The Factories Act, 1948.

The Industries (Development and Regulation) Act, 1951.

The Public Liability Insurance Act, 1991.

Water (Prevention and Control of Pollution) Act, 1974.

Water (Prevention and Control of Pollution) Cess Act, 1977.

Secondary Sources

Books

Anderson, M.R., "Individual Rights to Environmental Protection in India", in Anderson and Boyle, ed., *Human Rights Approach to Environmental Protection* (1996).

Barnie, Patricia W. and Alan Boyle, *Basic documents on international law and the environment* (Oxford: Clarandon Press, 1995).

Barnie, Patricia, *International Law and The Environment* (Oxford, New York: Oxford University Press, 2002).

Barnie, Patricia, *International Law and the Environment* (Oxford: Clarendon Press, 1992).

Basu, Durga Das, "*Constitutional Law of India*" (New Delhi: Prentice-Hall of India Pvt. Ltd., 1998).

Brown, L.R. and others, *Vital Signs 1996: The Trends that are Shaping Our Future* (New York: W.W.Norton, 1996).

Desai, Ashok A., *environmental Jurisprudence* (Allahabad: Modern Law House, 2002).

Divan, S. and A. Rosencranz, *Environmental Law and Policy in India: Cases, Materials and Statutes*, 2nd edition (New York: Oxford University Press, 2001).

Kiss, Alexander and Dinah Shelton, *International Environmental Law* (New York: Transnational Publishers, 1991).

Kuokkanen, Tuomas, *International Law and the Environment: Variations on a Theme* (The Hague, London, New York: Kluwer Law International, 2002).

Leelakrishnan, P., *Environmental law in India* (New Delhi: Butter worths, 1999).

Mani, V. S., *Basic Principles of Modern International Law* (New Delhi: Lancer Publishers, 1993).

Rao, Chandrasekhara P., *The Indian Constitution and International Law* (New Delhi: Taxmann, 1993).

Rao, P. K., *International Environmental Law and Economics* (Oxford: Blackwell Publishers, 2002).

Sands, Philippe, ed., *Greening International Law* (London: Earthscan Publishers, 1993).

Sands, Philippe, *Principles of International Environmental Law* (Manchester: Manchester University Press, 1995).

Shastri, Satish, *Pollution and Environmental Law* (Jaipur: Printwell Publishers, 1990).

Srivastava, Sandeep, *Environmental Legislation in India: A Guide for Industry and Business* (New Delhi: Environmental Management Division, CII, 1999).

Strengthening Environmental Legislation in India, Report prepared by Centre for Environmental Law, WWF-India (1999).

Takur, Kailash, *Environmental Protection Law and Policy in India* (New Delhi: Deep & Deep Publications, 1997).

Articles

"Developments in the Law: International Environmental Law", *Harvard Law Review*, vol. 104, 1991, pp.445-639.

Abraham, C. M. and Sushila Abraham, "The Bhopal Case and the Development of Environmental Law on India", *International and Comparative Law Quarterly*, vol. 40, 1991, pp. 334-365.

Abraham, C. M., "For Better Enforcement of Our Pollution Laws", *Cochin University Law Review*, 1984, pp. 334-364.

Abraham, C.M. and Armin Rosencranz , "An Evaluation of Pollution Control Legislation in India", *Columbia Journal of Environmental Law*, Volume 11, 1986, pp.101-18.

Bakken, Per, "Using Cleaner Production to Achieve Implementation of MEAs", *Industry and Environment*, vol. 24, no. 1-2, Jan.-Jun., 2001, pp 54-56.

Birnie, Patricia, "International Environmental Law: Its Adequacy for Present and Future Needs", in Andrew Hurrell and Benedict Kingsbury, ed., *The International Politics of the Environment: Actors, Interests and Institutions* (Oxford: Clarendon Press, 1992), pp. 51-84.

Birnie, Patricia, "The Role of International Law in Solving Certain Environmental Conflicts", in John E. Caroll, ed., *International Environmental Diplomacy: The Management and Resolution of Trans-frontier Environmental Problems* (Cambridge: Cambridge University Press, 1988), pp.95-21.

Boyle, Alan E., "Environmental Protection", *International and Comparative Law Quarterly*, vol. 39, July 1990,pp. 940-44.

Breidnenich, Clare and others, "The Kyoto Protocol to The United Nations Framework Convention on Climate Change", *American Journal of International Law*, vol. 92, no. 1-2, 1998, pp. 315-331.

Dennis, Nona B. and others, "Addressing Sustainable Development in Environmental Impact Assessments", *Industry and Environment*, vol. 23, no.1-2, January-June, 2000, pp. 61-64.

Desai, Bharat "Enforcement of the Right to Environmental Protection through PIL in India", *Indian Journal of International Law*, vol. 33, 1993, pp. 27-40.

Desai, Bharat "Some Enforcement Issues for Water Pollution Control in India", *International Studies*, vol. 30, no. 3, 1993, pp. 319-333.

Divan, Shyam, "International Environmental Law", *http://www.ceerindia.org/documents/internationalenvtlawshyamdivan.htm*

Fitzmaurice, M. A., "International Protection of the Environment", *Recueil des Cours,* no. 293, 2001, pp. 9-488.

Jamwal, Nidhi, "Written Off: Parameters Set for Self-Policing by Polluting Industries, But Environment Gets Short Shrift", *Down To Earth*, April 30, 2003, pp. 39-41.

Khor, Martin, "UNEP Expert Panel Calls for Bio safety Protocol under Biodiversity Convention", *http://www.twnside.org.sg/index.htm*

Leelakrishnan, P., "Environmental Law", *Annual Survey of Indian Law*, (New Delhi: Indian Law Institute), vol. 35, 1999, pp. 295309.

Mandelson, M. H., "Formation of Customary International Law", *Recuil des Cours,* no. 272, 1998, pp. 330-345.

McGoldrick, Domenic, "Sustainable Development and Human Rights: An Integrated Concept, 31 *International Legal Material* 874 (1992).

Munson, Abby, "The United Nations Convention on Biological Diversity" in John Kirkby and others ed., *The Earthscan Reader in Sustainable Development* (London: Earthscan Publishers, 1995), pp. 55-62.

Nordsrtom, Nina, "Managing Transboundary Environmental Accidents: The State Duty to Inform" in David D. Caron and Charles Leben, ed., *The international Aspects of Natural and Industrial Catastrophes* (Hague, Boston, London: Martinus Nijhoff Publishers, 2001), pp. 291-378.

Okidi, Charles O., "Incorporation of General Principle of International Law into National Law with Examples from Malavi, *Environmental Policy And Law*, vol. 27, no. 4, 1997, pp. 327-334.

Okowa, Phoebe N., "Procedural Obligations in International Environmental Agreements", *British Yearbook of International Law*, vol. 67, 1996, pp. 275-335.

Palmer, Geoffrey, "New Ways to Make International Environmental Law", *American Journal of International Law*, vol. 86, nos. 1-2, 1992, pp. 256-271.

Prajapati, Rohit, "Mockery of Environmental Law: An Assessment of Gujarat's Record in the Implementation of Environmental Laws", *Combat Law,* vol. 1, issue 5, December-January, 2003, pp. 8-11.

Reddy, Narasimha D. and another, "Environmental Laws Lack Holistic Spirit: Adjudication in Pathancheru Pollution Case: Contradiction, Inaction, and Lack of Technical Know-how", *Combat Law,* vol. 1, issue 5, December-January, 2003, pp. 23-29.

Sharma, Subodh K., "Climate Change: The Need for Capacity Building and Networking",*http://www.renewingindia.org/newsletters/repsovision/current/index.htm.*

Singh, Deepak R., "Response of Indian Judiciary to Environmental Protection: Some Reflections", *Indian Journal of International Law*, vol. 39, no. 3, 1999, pp. 447-467.

Singh, Nagendra, "Sustainable Development as a Principle of International Law" in Paul de Waart and others ed., *International Law and Development* (Dordrecht, Boston, London: Martinus Nijhoff Publishers, 1988), pp. 1-11.

Sinha, P. C., "International Obligations", *http:// www. india-seminar.com/2000/492.htm*

Sohn, L., "The Stockholm Declaration on the Human Environment", *Harvard International Law Journal*, vol. 14, 1973, pp. 483-497.

Tarasofsky, R. G., "Legal Protection of the Environment During International Armed Conflict", *Netherlands Yearbook of International Law*, vol. 24, 1993, pp. 65-79.

Wolfke, K., "Controversies Regarding Customary International Law" *Netherlands Year book of international law*", vol. 24, 1993 pp. 6-12.