CHAPTER 1

INTRODUCTION

Incidents of severe environmental annihilation are getting frequent. These occurrences are highlighted every now and then; sometimes through manmade disasters and at other times experienced by people affected or concerned in daily routine. Environmental destruction, whether by way of air/water/soil/marine pollution, land contamination, climatic changes, desertification or loss of biodiversity, have all become part of a scenario which calls for a revisit and a re-evaluation of traditional principles of environment law. If the planet Earth is to survive through sustainable development, the stress has to be on binding laws and not mere guidelines. More importantly, the current trend of entering into treaty instruments and thereafter leaving it to the individual signatories to set up a national response mechanism to environmental threats has to be replaced. The transnational nature of current state of Environment Law must be replaced by International Environment Law.

The principles of liability which are applied to deal with environmental harm are varied not just in number but also in its nature, scope and content. The range of the legal regimes dealing with liability and redress for harm to environment constitute common law principles of nuisance, negligence, strict liability and absolute liability alongwith the new emerging principles like precautionary principle, polluter pays, preventive principle etc. Both at national and international level these principles are being applied to address the issues of environmental harm. International law, since 1972 Stockholm Conference on Human Environment followed by the 1992 Rio Declaration has focused on environmental harm and damage but the
process has however not been accompanied by any significant developments in the legal rules governing international liability and redress for environmental damage.\(^1\) In the negotiation of several multilateral environmental agreements also, the development of liability and compensation regimes has often been post-postponed to some future date.\(^2\)

This need to develop liability regimes in an international context finds specific reference in principle 22 of Stockholm Declaration\(^3\) and principle 2 of Rio Declaration.\(^4\).

Principle 22 of Stockholm Declaration states that: “States shall cooperate to develop further the international law regarding liability and compensation for the victim of pollution and other environmental damage caused by activities within jurisdiction or control of such states to areas beyond their jurisdiction”.\(^5\) These principles reflect more recent developments in international law and state practice. However, their present status as principles of general international law is more questionable. Nevertheless, the evidence of consensus support provided by the Rio Declaration is an important indication of their emerging legal significance.\(^6\)

The traditional tortious principles of liability like the strict liability and fault liability have been applied both in international

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5. *Supra* note 3.
6. *Supra* note 1 at 105.
instruments and national laws. The courts in different countries have applied these principles with different results.\(^7\) Strict liability is being preferred for obviating the need to prove fault of the actors. Courts in domestic legal regimes have applied the principle and methods of proximate cause, adequate causation, foreseeability and remoteness of damage for fault based liability.\(^8\) This is a highly discretionary and unpredictable branch of law.\(^9\) Even within the same legal system there is variation in results. Further test of foreseeability could become less and less important with the progress made in the fields of medicine, biology, biochemistry and other fields.\(^10\)

On the other hand the more recent principles emerging in the field of environmental law like the polluter pays principle, the precautionary principle, the public trust doctrine, sustainable development, principle of prevention, principle of cooperation etc are in a state of flux as to their legal status and contents. For example the “polluter pays” principle is referred to in a number of international instruments. However the recognition of this principle comes in a varied manner in different instruments. In treaty law, the principle has been used for constructing strict liability regimes. The Lugano Convention endorses the principle, in the preamble by recognizing “the desirability of providing for strict liability in this field taking into account the ‘Polluter Pays’ principle”. The 2003 Kiev Protocol refers, to it as “a general principle of international environmental law, accepted also by the parties to the convention”. It also finds reference, in the 1990 International Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR convention);\(^11\) the


\(^{8}\) Ibid.

\(^{9}\) Supra note l at 105.

\(^{10}\) Ibid.

\(^{11}\) 32 ILM, 1069 (1993).
1992 Convention on the Protection of the Marine environment of the Baltic Sea area;\(^{12}\) the 1992 Convention on the Protection of the Marine Environment of the Black Sea against Pollution;\(^{13}\) the 1992 Convention on the Protection and Use of Transboundary Effects of Industrial Accidents\(^{14}\) and the EU directive 2004/35/CE on Environmental Liability.\(^{15}\) However most of these contain general rules of state responsibility and liability leaving the details for state parties to work out later in international and national legal regimes.

Some national judicial bodies have also given recognition to the principle. For example, the Indian Supreme Court in the *Vellore Citizens Welfare Forum v. Union of India*,\(^{16}\) treating the principle as part of general international law, directed the government of India to establish an authority to deal with the situation of environmental degradation due to the activities of the leather tannery industry in the state of Tamil Nadu. Whereas in the arbitration between France and the Netherlands, concerning the application of the convention of 3 December 1976 on the protection of the Rhine against pollution and the Additional protocol of 25 September 1991 against pollution from chlorides (France/Netherlands), the Arbitral Tribunal however took a different view when requested to consider the “polluter pays” principle in its interpretation of the convention, although it was not expressly referred to therein.\(^{17}\) The tribunal concluded, in its award dated 12 March 2004, that, despite its importance in treaty law, the

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\(^{13}\) *ILM*, 1110 (1993).


\(^{16}\) (1996) 7 SCC 375.

\(^{17}\) *Ibid.*
The polluter pays principle is not a part of general international law.\textsuperscript{18} Therefore, it did not consider it pertinent to its interpretation of the convention.\textsuperscript{19} In addition, it has been noted that it ‘is doubtful that whether the ‘polluter pays’ principle has achieved the status of generally applicable rule of customary international law, except perhaps in relation to states in the EC, the UNECE, and the OECD’.\textsuperscript{20} Therefore in addressing transboundary environmental harm these principles like polluter pays, precautionary principle and principle of prevention and a few more are still in a state of uncertainty as to their scope of application, content and legal status.

Transboundary environmental harm was brought on the agenda of the International Law Commission since 1978, under the title of “Liability for Injurious consequences of Acts not prohibited by International Law”.\textsuperscript{21} In 1997 the commission decided to divide the topic into two parts and deal separately with prevention of harm and liability for harm.\textsuperscript{22} An amended draft Convention on Prevention of Transboundary Harm from Hazardous Activities was adopted in 2001.


\textsuperscript{19} Ibid. (paras 102-103).

\textsuperscript{20} Ibid.

\textsuperscript{21} Supra note 1 at 92.

and recommended to United Nations General Assembly.\textsuperscript{23} At the 56\textsuperscript{th} Session of the International Law Commission (2004) the Report of the Drafting Committee on International liability for injurious consequences arising out of acts not prohibited by international law (International Liability in case of loss from transboundary harm arising from hazardous activities) was submitted to General Assembly for comments and observations of governments invited by 1\textsuperscript{st} January, 2006. In the 58\textsuperscript{th} Session of International Law Commission in 2006 the comments and observations have been received from Governments.\textsuperscript{24}

1.1 Problem Profile

Most of the transboundary environmental harm emerges from activities which are private in nature and taking place in the territorial jurisdictions of states. This involves both the international and national legal regimes. There have been few cases at international level where states have paid compensation for transboundary environmental harm but such compensation has not been made on the basis of rules of general international law, but instead finds its legal foundation in compensation paid ex-gratia i.e. without acknowledging an obligation to repair.

Resorting to Public International Law to deal with transboundary environmental disputes has some inherent problems like the lack of a forum with uniform compulsory jurisdiction, the complexity and uncertainty of the law of state responsibility as regards environmental damage, and the absence of clarity concerning

\textsuperscript{23} Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries 2001, Text adopted by the International Law Commission at its Fifty-third session, and submitted to the General Assembly as a part of the Commission’s report covering the work of that session (A/56/10).

\textsuperscript{24} Draft Principles on the Allocation of Loss in the case of Transboundary Harm Arising out of Hazardous Activities, the text of which was annexed to General Assembly Res. 61/36 of 4 December 2006, Sixty-first Session, Supplement No. 10 (A/61/10).
the remedies available to states and their scope. International environmental law has evolved over the decades to regulate transboundary environmental harm but accessible remedies for transboundary environmental damage have been exceptionally possible in cases where states have been willing to overcome their reluctance to litigate environmental claims. The opening up of national legal systems to transboundary environmental claims has been promoted by civil liability treaties as an alternative mechanism for affixing liability for environmental damage. However there may be no remedy or no effective remedy if the applicable legal system is in different states unless there is parallel progress in harmonizing environmental standard and liability for damage. Even where adequate law exists, problems of jurisdiction, the availability of remedies and enforcement of transboundary cases may limit the usefulness of this form of litigation. Therefore, the question of liability must be addressed simultaneously at the international and national level.

Both public and private international law have a role in securing access to justice by removing some or all of these disadvantages and by ensuring that adequate legal remedies are available to plaintiffs in transboundary cases. The principle of non-discrimination in ensuring non-discriminatory treatment of transboundary plaintiffs and equal access to available national procedures and remedies is assuming significant role in international environmental law. The problems of private international law, particularly jurisdiction and choice of law in transboundary cases are serious issues seeking solutions. Harmonization of national laws dealing with liability for environmental damage may be another solution which necessitates

25 Supra note 1 at 214.
26 Ibid.
27 Ibid.
28 Ibid.
29 Id., at 221.
identification and recognition of certain elements of principles of liability in transboundary environmental harm context.

1.2 Area of Study

The main purpose is to examine if the international society has succeeded in reaching agreement on a set of rules of unified substantive law, governing in a more or less exhaustive way the main legal issues raised in context of civil liability resulting from environmental harm. This would entail a study by examining the number, the reach and the success of whatever substantive liability principles applicable in the event of transboundary environmental damage. The study will then include in its scope the some national laws, to enquire more particularly as what are the main legal principles for liability for environmental pollution and damage. The issues, which need to be addressed in this context, are the various principles of liability including the standards of such liability in terms of fault, strict liability, or absolute liability. An attempt will be made to see to what are the provisions for redress for environmental damage is available in these legal regimes.

1.3 Research Hypothesis

There is a need for universalization of liability principles in case of environmental harm. There are possible elements for a general liability and redress regime within the frame work of various conventions, treaties and national laws.

1.4 Research Methodology

It is proposed to study the laws regarding liability and compensation for transboundary environmental damage by examining the interaction between public international law and domestic legal regimes. It is intended to focus on the recent legislation in the area of liability and compensation for transboundary environmental harm as
well as comparing provisions and solutions at different regulatory levels. The study will critically analyze the legal regimes providing for liability and compensation for transboundary environmental harm and assess them for certain general principles of liability and compensation in the context. It will be a doctrinaire study.

1.5 Plan of Study

1.5.1 Conceptual Dimensions

This chapter will introduce the subject and few related concepts and definitions relevant to the topic like “environmental harm”, “damage”, “transboundary environmental harm”, etc.

1.5.2 International Law and Transboundary Environmental Harm

International law does not allow states to conduct or permit activities within their territories or in common spaces, without regard for the right of other states or for the protection of environment. This point is illustrative of maxim *sic utere tuo, ut alienum non laedes* or the “principles of good neighbourliness”. But two major propositions which enjoy significant support in states practice, judicial decision, the pronouncements of international organizations and the work of the International Law Commission and can be regarded as customary international law are:30

(i) that states have a duty to prevent, control and reduce pollution and environmental harm.

(ii) duty to cooperate in mitigating environment risks and emergencies, through notification, consultative negotiation in appropriate cases environment impact assessment.

The obligation to prevent transboundary environmental harm is found in some of the arbitral and judicial decisions, in a wide range of global and regional treaties, and in the Stockholm and Rio Declarations, in the work of International Law Commission and in the jurisprudence of International Court of Justice. This chapter will focus on the contributions made by the above said in the development of international law on transboundary environmental harm.

1.5.3 Principles of Liability for Environmental Harm: An Indian Perspective

The Bhopal gas leak accident, one of the worst industrial disasters in human history, threw a challenge to the Indian legal system on the issues of environmental disaster.\(^{31}\) The Bhopal disaster raised complex legal and ethical questions about liability of parent companies for their subsidiaries, of transnational companies engaged in hazardous activities, and of government’s conflict between attracting industry to invest in business development while simultaneously protecting the environment and the citizens. The case also projected the legal and political issues surrounding choice of forum. The Supreme Court of India formulated the general principle of liability of industries engaged in hazardous and inherently dangerous activity in the *Oleum gas leakage* case.\(^{32}\) Chief Justice Bhagwati declared in unambiguous terms:

We have to evolve new principles and lay down new norms, which would adequately deal with the new problems, which arise in, a highly industrialized economy. We cannot allow our judicial thinking to be constricted by reference to the law as it prevails in the England or for the

\(^{31}\) *Union Carbide Corporation v. Union of India*, AIR 1990 SC 273.

\(^{32}\) AIR 1987 SC 1086.
matter of that in any other foreign country. We no longer need the crutches of a foreign legal order.\textsuperscript{33}

Keeping in view the constitutional and statutory provisions the Supreme Court held:

We have no hesitation in holding that precautionary principle and pollution pays principle are part of the environmental law of the country. Even otherwise once these principles are accepted as part of customary international law there would be no difficulty in accepting them as part of the domestic law. It is almost accepted proposition of law that the rules of customary international law which are not contrary to the municipal law shall be deemed to have been incorporated in the domestic law and shall be followed by the courts of law.\textsuperscript{34}

Geographically, India shares some of the world’s great rivers, highest mountains, and diverse wildlife and air and ocean resources with countries like Pakistan, China, Nepal, Bhutan, Burma and Bangladesh and Sri Lanka. India has entered into many bilateral and regional agreements to manage these transnational resources. Most prominent is the Indo-Pakistan Indus river Basin treaty scheme. Most of the agreements have been concerning river waters be it with Pakistan, Nepal or Bangladesh. Bilateral or regional efforts in the areas of mountain ecosystem preservation and trade in wildlife are underway under the auspices of SAARC. However there are no treaties on transboundary water pollution. None of the treaties, including the Indus Basin river treaty, has any mention of environmental

\textsuperscript{33} Ibid.

\textsuperscript{34} Vellore Citizens Welfare Forum v. Union of India, (1996) 7 SCC 375.
degradation.\(^{35}\) However India has obligation under numerous international treaties and agreements that relate to environment issues. The chapter will look into the development of legal principles of liability for environmental harm in India as evolved by the Indian judiciary.

### 1.5.4 Principles of Liability for Transboundary Environmental Harm in National and Supranational Regimes

National legal systems differ not only in their acceptance of liability for environmental damage and harm, but also in the extent to which they allow recovery for environmental damage i.e. for losses such as wildlife, which are not property and have no accepted economic value. There is a significant difference in the scope of liability principles in national law. For example strict liability in French law is an accepted principle of government liability, while in England activities conducted by public bodies under statutory authority are usually excluded from *Rylands v. Fletcher rule*.\(^{36}\) English common law also excludes from its rules of strict liability damage, which could reasonably have been foreseen, thus significantly limiting the utility of no fault liability in cases of pollution damage. In India the strict liability has been made absolute liability in case of hazardous inherently dangerous activity.\(^{37}\)

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\(^{35}\) The Indus Waters Kishenganga Arbitration (*Pakistan v. India*): Record of Proceedings 2010-2013. The Indus Waters Kishenganga Arbitration (*Pakistan v India*) arose out of disputes involving India’s construction and future operation of a hydroelectric plant in India-administered Kashmir. Pakistan initiated arbitral proceedings under the 1960 Indus Waters Treaty in May 2010, and a seven-member tribunal issued its Final Award in December 2013. The proceedings were administered by the Permanent Court of Arbitration (PCA). This volume in the PCA Award Series contains the Tribunal’s Order on Interim Measures of 23 September 2011, Partial Award of 18 February 2013, Decision on India’s Request for Clarification or Interpretation of 20 December 2013, and Final Award of 20 December 2013.

\(^{36}\) *Supra* note 5 at 16-26.

\(^{37}\) *M.C. Mehta v. Union of India*, AIR 1987 SC 1086.
Attempts have been made to harmonize the general law on environmental damage, most comprehensively in the 1993 Council of Europe Convention on Civil Liability for Damage Resulting from Activities Dangerous to Environment, but this treaty has not yet been widely adopted and has had little impact on existing national law. Meanwhile the European Community has adopted the Environment Liability Directive for preventing and remedying environmental damage. The chapter will look at how these legal systems have developed the principles of liability for environmental harm and their implications on addressing any claim for transboundary environmental harm in their domestic courts.

1.5.5 Civil Liability and Transboundary Environmental Harm

Globalization is affecting law and legal systems throughout the world in profound new ways. Whereas an activity causing environmental harm is conducted by private parties in one state may cause harm in another state, as in the *Trial smelter* case, the issue remains one of state’s duty of control, cooperation or notification. However private parties or companies are not in general bound by public international law, hence the practice of channeling environmental liability towards private actors in national law is now a widely developed alternative to the international liability of states in cases of pollution damage. We find that the emergence of the civil liability for ultra hazardous activities like nuclear activities and marine oil pollution has been perceived to be successful models for international regulation of ultra hazardous activities. Its preference over other forms of liabilities is manifested by its application to the liability regimes under recent multi lateral environmental treaties. This has enlarged the scope for transnational litigation. This chapter

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39 Supra note 1 at 214.
would inquire whether we are seeing the emergence of a dual system in which civil liability will generally represent the most efficient means of securing redress for transboundary environmental harm, leaving state responsibility as a subsidiary remedy of last resort useful only when parties are unable to compensate the loss.  

1.5.6 Emerging Dual System and Private International Law Issues in Transboundary Environmental Harm cases

These developments are blurring lines the traditionally separated conceptions of domestic and international law and public and private law. Most of the international instruments dealing with environmental liability in a specific field like oil pollution, nuclear radiation, hazardous substances and wastes are inclined towards creation of unified rules of substantive law. There is now an interesting interplay between international environmental law and national legal regimes wherein private actors liability at national legal regimes has become an important complement to traditional international liability norms of state responsibility and liability. An attempt will be made to study these recent trends. The role of transnational private litigation in development of liability principles for environmental harm will be the focus of this chapter. The question which legal system or systems will have jurisdiction over the dispute is problematic one in case of transboundary environmental litigation. Jurisdiction will generally lie in Courts of the defendant’s residence, domicile or place of business. But there may be cases where principle of forum non-convenience is resorted to as means of declining jurisdiction over actions relating to foreign land. Jurisdiction will usually also exist in place where the injury occurs for example in

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40 Ibid.
41 Ibid.
Aguinda v. Texaco,\textsuperscript{43} and in the Bhopal case, where there was no doubt that Ecuador and India respectively had territorial jurisdiction. By virtue of international liability conventions, pollution incidents at sea also fall under the jurisdiction of the Courts of the State where the damage occurs. The same is true in EC law which in matters relating to tort or delict gives exceptional jurisdiction to the Courts of the place where harm occurred. So where there are a variety of jurisdictional rules applicable, the courts of several countries may have concurrent jurisdiction. Now a claim for transboundary environmental damage may involve events, impacts and persons in several countries and possibly on high seas, the question which legal system should determine liability and other issues is a real and important one.\textsuperscript{44} There are various possibilities, each of which is adopted in a number of legal systems.

Each of these choices has advantages and disadvantages. But the problem with the present diversity of choice of law rules, and the lack of any consensus, is that they add to the unpredictability, complexity and expense of transboundary litigation and are in that sense obstacles to better transboundary access to environmental justice. Moreover, it does not follow that a Court will apply the same choice of law to all aspects of the case before it. US Courts have often applied US law to determine liability of American defendants but then applied the plaintiff’s legal system when it comes to assessing the compensation due. This is what happened in Amoco Cadiz case. This shows the need to address these problems by looking at possible solution including the possibility of a private international law convention to harmonize choice of law in transboundary environmental suits or undertaking measures to harmonize substantive liability in national law. The study will try to analyse these issues.

\textsuperscript{43} 452 F 3d 1066.

\textsuperscript{44} Supra note 42.
1.5.7 International Law Commission on Prevention of Transboundary Harm

The topic of “Liability for Injurious Consequences of Acts not prohibited by International Law” has been on International Law Commission’s agenda since 1978. A Draft Convention on the Prevention of Transboundary Harm from Hazardous Activities was adopted in 2001 and recommended to United Nations General Assembly. The draft convention applies to all activities within the jurisdiction or control of the states, which involve a risk of causing significant transboundary harm, including environmental harm. It is not exclusively with transboundary environmental harm. Risk is broadly defined to include both the possibility of unlikely but disastrous accidents, such as exploding nuclear power plants like Chernobyl and probable but smaller scale harm such as industrial air pollution like Trail smelter case. Harm is significant if it is more than detectable but it need not be serious or substantial. Therefore what is significant depends on the circumstances of each case and may vary over time. Prohibited activities like ocean dumping of waste, or the export of waste to developing countries, both of which international law now prohibits are not included within the scope of the draft convention. But most industrial activities, which cause environmental harm, are not prohibited and the draft convention now provides a legal regime to regulate the risks and consequences of such activities.

45 Supra note 21.
46 Ibid.
47 Supra note 36.
48 Ibid.
50 Ibid.
1.5.8 ILC’s Draft Principles on the Allocation of Loss in the case of Transboundary Harm Arising out of Hazardous Activities: A Critical Appraisal

The working group on International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law submitted its draft articles on International Liability in case of Loss from Transboundary Harm Arising out of Hazardous Activities consisting of eight articles to the United Nations General Assembly in 2005. The General Assembly had invited comments from the Governments to be submitted by January 1, 2006. These comments are with the International Law Commission. This study will appraise the proposed draft principles critically.

1.5.9 Conclusion and Suggestions

The study will address the above said problems and issues relating to the topic of research and propose appropriate suggestions.

1.6 Scope of the Topic and Terminology

As highlighted in the problem profile one of the most significant aspects relating to environmental matters is that they address not just numerous transactions and actors but also different jurisdictions and legal systems. Therefore one of the key challenges for international environmental law is how to determine the most appropriate, and practicable, definitions and rules. There are variable terms with variable definitions and content. However from the literature on the subject certain workable definitions have been used to begin with yet with the intention not to foreclose the issues regarding them, rather to look for more clarity and understanding on them.
1.6.1 Environment

The studies conducted for UNEP and the ILC have both concluded that in most of the legal regimes the term ‘environment’ covers at least air, water, soil, flora, fauna, ecosystems, and their interaction, and noted that some agreements also include cultural heritage, landscape, and amenity values. The most comprehensive definition of environment is in Convention on Regulation of Antarctic Mineral Resource Activities 1988 in which an entire continent and the surrounding marine environment have been protected on an ecosystem basis. However, whether put in holistic terms, or merely in terms of its component elements, there is now substantial consensus behind the proposition that international law protects the environment of other states and common spaces from harm. But as these examples indicate, what is meant by ‘the environment’, and therefore by ‘environmental harm’, may differ in individual treaties, and will depend on what each treaty is intended to regulate and protect. For a comprehensive general definition, the ILC draft articles on Prevention of Transboundary Harm are expected to play a role in bringing uniformity in the components of environment. According to the ILC Draft Principle 2(b) “environment” includes natural resources, both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; and the characteristic aspects of

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52 Convention on Regulation of Antarctic Mineral Resource Activities (Wellington) 2 June 1988, not in force, ILM, Vol. 27, 859 (1988); see also Article 2 (b) of Annex VI of the Protocol on Environmental Protection to the Antarctic Treaty on Liability arising from Environmental Emergencies defines “environmental emergency” means “any accidental event that . . . results in, or imminently threatens to result in, any significant and harmful impact on the Antarctic environment”.

53 The ILC draft Convention on Prevention of Transboundary Harm applies to harm to ‘persons, property or the environment’ Article 2(b). Supra note 21.
the landscape.\textsuperscript{54} The thesis will focus on search for the uniformity in the components of environment in various legal regimes.

\subsection*{1.6.2 Environmental Damage}

A general definition of environmental damage is a complex issue.\textsuperscript{55} Various treaties and state practice have defined environmental damage keeping in view the objectives for which the laws have been framed. Generally environmental damage includes damage to natural resources like air, water, soil, fauna and flora, and their interaction. Damage to persons and property is not included until and unless such damage is consequential to environmental damage.\textsuperscript{56} Loss of environmental amenity has also emerged as one of the components of definition of environmental damage.\textsuperscript{57} According to the UNEP Working Group the term ‘natural resources’ relates primarily to the idea of commercial value whereas ‘environmental damage’ relates to injury caused to components of environment to which typically no commercial value attaches.\textsuperscript{58}

\subsection*{1.6.3 Environmental Harm}

The evolution of the concept of environmental harm as a legal concept can be traced in the recent times from work of various agencies of United Nations and non-governmental groups. The Experts Group on Environmental Law of the World commission on Environment and Development (WCED) defined ‘environmental interference’ to mean: any impairment of human health, living

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\textsuperscript{54} A/CN.4/L.686.
\textsuperscript{56} \textit{Supra} note 47 at 876-878.
\textsuperscript{57} \textit{Ibid.}
\end{footnotesize}
resources, ecosystems, material property, amenities or other legitimate uses of a natural resource of the environment caused, directly or indirectly by man through polluting substances, ionizing radiation, noise, explosions, vibration or other forms of energy, plant, animals, diseases, flooding, sand drift or other similar means. As opposed to this effect oriented approach, the OECD definition of ‘pollution’ focuses on the relationship between the effects of an act or a failure to act by man and its causes. “Pollution” is ‘the introduction by man, directly or indirectly, of substances or energy into the environment resulting in deleterious effects of such a nature as to endanger human health, harm to living resources and ecosystems and impairment or interference with amenities and other legitimate uses of the environment. The broad definition of environmental damage in most of the international and national instruments includes damage to persons, property and environment per se within the national jurisdiction. The suggestions to include damage to global commons beyond national jurisdiction, perhaps to the extent that damage to such areas is directly traceable to the hazardous activity in question were dissuaded by the inherent problems of questions of standing to sue in case of damage to environment per se, the type of claims that would be admissible including claims concerning the “no-use value”. These were, in the opinion of some governments, unresolved matters and perhaps best left for a separate examination or regulated by national

60 Supra note 1 at 101-102.
61 1974 OECD Principles Concerning Transfrontier Pollution (Title A).
62 Draft Principles on the Allocation of Loss in the case of Transboundary Harm Arising out of Hazardous Activities, the text of which was annexed to General Assembly Res. 61/36 of 4 December 2006, Sixty-first Session, Supplement No. 10 (A/61/10) at 122.
legislation. On a more wider scale the Antarctic Environment Protocol protects the Antarctic environment in terms of ‘dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values’, and covers a very broad range of ‘adverse effects’ which must be avoided by activities planned to take place there. These include effects on climate and weather, air and water quality, marine and terrestrial environments, fauna and flora, as well as endangered species, and biological diversity.\(^64\) Both the Ozone Convention and the Climate Change Convention likewise apply, to controlling adverse effects on ‘the composition, resilience or productivity of natural and managed ecosystems’.\(^65\)

1.6.4 ‘Harm’, ‘Damage’ and ‘Injury’

In general parlance the term ‘harm’ is a physical concept, ‘damage’ a financial concept and ‘injury or loss’ a legal concept.\(^66\) In *Trail Smelter* case,\(^67\) the Arbitral Tribunal recognised only economic harm. Yet the contemporary concept of harm arguably encompasses not only injury to persons and property, but also to the intrinsic value of the environment, including individual components and whole ecosystems.\(^68\) However, defining and evaluating purely ecological harm is complex and has remained controversial. Most of the national legal systems are groping with this problem. In international law also the issue of harm is not covered by the ILC Responsibility Articles, since it was seen to belong to the realm of primary, rather than

\(^{64}\) 1991 Protocol to the Antarctic Treaty on the Environment, Article 3.

\(^{65}\) 1985 Convention on the Ozone Layer, Article 1(2); 1992 Framework Convention on Climate change, Article 1(1).

\(^{66}\) *Supra* note 1 at 16.

\(^{67}\) *Supra* note 36.

\(^{68}\) Id., at 12-14, and A. Boyle, ‘Reparation for Environmental Damage in International Law: Some Preliminary Problems’, in M. Bowman and A. Boyle (eds.), *Environmental Damage in International and Comparative Law*, 17 (2002).
The term ‘damage’ is used in liability regimes like the 1999 Basel Protocol on Liability and Compensation for Damage Resulting from the Transboundary Movement of Hazardous Wastes and Their Disposal, the 1993 Lugano Convention, the 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, the Council Directive 2004/35/CE on Environmental Liability with regard to Prevention and Remediying of Environmental Damage. The most significant achievement of these regimes was the recognition of harm to the environment, primarily for costs of reinstatement of the affected environment.

The International Law Commission in its Draft Principles on Allocation of Loss arising from Transboundary Harm from hazardous activities, has significantly expanded the scope of compensable damage. The ILC Draft Principles in Article 2 (b) defines “damage”, as significant damage caused to persons, property or the environment. Subparagraphs (i) and (ii) cover personal injury and property damage, including some aspects of consequential economic loss, as well as property, which forms part of the national cultural heritage, which may be State property. Subparagraphs (iii) to (v) deal with claims

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71 Supra note 21.
72 Supra note 22, Article 2(a) “damage” means significant damage caused to persons, property or the environment; and includes:
(i) loss of life or personal injury;
that are usually associated with damage to the environment. They may all be treated as parts of one whole concept. Together, they constitute the essential elements inclusive in a definition of damage to the environment. These subparagraphs are concerned with questions concerning damage to the environment per se.\textsuperscript{73}

This is damage caused by the hazardous activity to the environment itself with or without simultaneously causing damage to persons or property and hence is independent of any damage to such persons and property.\textsuperscript{74} The broader reference to claims concerning the environment incorporated in subparagraphs (iii)-(v) thus not only builds upon trends that have already become prominent as part of recently concluded international liability regimes but opens up possibilities for further developments of the law for the protection of the environment per se. An oil spill off a seacoast may immediately lead to lost business for the tourism and fishing industry within the precincts of the incident. Such claims have led to claims of pure economic loss in the past without much success. However, some liability regimes now recognize this head of compensable damage.

The term ‘transboundary damage’ means damage caused to persons, property or the environment in the territory or in other places under the jurisdiction or control of a State other than the State of origin.\textsuperscript{75} The ILC’s Draft principles on Allocation of Loss from Hazardous Activities, 2006, delimits their scope of application to transboundary environmental damage to physical consequences and

\begin{itemize}
  \item[(ii)] loss of, or damage to, property, including property which forms part of the cultural heritage
  \item[(iii)] loss or damage by impairment of the environment;
  \item[(iv)] the costs of reasonable measures of reinstatement of the property, or environment, including natural resources;
  \item[(v)] the costs of reasonable response measures”.
\end{itemize}

\textsuperscript{73} Supra note 22 at 127.
\textsuperscript{74} Ibid.
\textsuperscript{75} Ibid.
excludes transboundary damage caused by State policies in trade, monetary, socio-economic or similar fields.\textsuperscript{76}

1.6.5 Transboundary Environmental Harm

The scope of the thesis as is indicative from the topic is limited to ‘transboundary environmental harm’. In legal parlance the international community seems to have accepted the wider term ‘harm’ as the work of International Law Commission shows its inclination towards the prevention aspect of environmental harm and risk. International liability presupposes a transboundary element. Originally, Quentin-Baxter and Barboza conceived of the topic in terms of a bilateral relationship between two states. Yielding to pressures from within the ILC, Barboza conceded that also damage sustained by the “global commons” of mankind could be taken into account.\textsuperscript{77} However the ILC draft articles on Prevention of Transboundary Harm has limited the term “transboundary” harm to its componential elements of “territory”, “jurisdiction” and “control”.\textsuperscript{78} The activities must be conducted in the territory or otherwise in places within the jurisdiction or control of one State and have an impact in the territory or places within the jurisdiction or control of another State. Transboundary harm could occur accidentally or it may take place in circumstances not originally anticipated or may be a result of gradually accumulated adverse effects over a period of time. The term ‘transboundary harm’ creates a causal link where the reference is only to the risk of harm and not to the subsequent phase where harm has actually occurred. The term “damage” is employed to refer to the latter

\textsuperscript{76} Id., at 128.
\textsuperscript{77} ILC Report, 242 (1989).
\textsuperscript{78} Commentary to draft Article 1, paras. 7-12 Draft Article 2(c) “Transboundary harm” means harm caused in the territory of or in other places under the jurisdiction or control of a State other than the State of origin, whether or not the States concerned share a common border.
phase. The notion of “transboundary damage” denotes specificity to the harm, which occurred. The broader concept of transboundary harm has been retained in the thesis also.

The concept of ‘risk’ has gained significant role in determining the scope of an activity covered under significant transboundary harm. The transboundary environmental harm is generally referred to in context of “hazardous activity” meaning an activity which involves a risk of causing significant harm. The risk element encompasses activities with a low probability of causing disastrous transboundary harm or a high probability of causing significant transboundary harm.

Environmental harm becomes transboundary environmental harm if that harm manifests itself on the territory of another state or in an international area i.e. an area beyond the limits of national jurisdiction. If the source of environmental harm is a ship, aircraft or a person in an international area, a state may possess jurisdiction on the basis of principles of nationality.

Also it has been held that ‘The possession of jurisdiction is only a prima facie evidence of who is in control of an activity. Control as a basis of liability was recognized by the ICJ in the Namibia case in the following words: “[p]hysical control of territory, not sovereignty or

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80 Commentary to draft Article 2, paras. (4) and (5),Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 10 (A/56/10), para 98.
82 Ibid.
The legitimacy of title is the basis of State liability for acts affecting other States”.\(^8^3\)

Thus, from this advisory opinion a former mandatory can, in principle, be held liable if it unlawfully continues to have physical control of a mandated territory. Nauru held the mandataries of the island liable for harm to the environment caused by the exploitation of phosphates by the mandataries in the era preceding independence. Eventually Nauru initiated proceedings before the International Court of Justice against Australia, one of the mandataries. Following a ruling of the Court in favour of Nauru on the preliminary objections raised by Australia, it was agreed out of Court that Australia would pay compensation.\(^8^4\) Similarly, an occupying power can be held liable if it has physical control of the territories it has unlawfully invaded and occupied. Thus, Iraq has been held liable for the injurious consequences of the occupation of Kuwait. The UN Security Council decided that Iraq “is liable under international law for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations”.\(^8^5\) The setting on fire of oil wells by Iraqi troops during the occupation would seem to be covered by the reference to “environmental damage and the depletion of natural resources”. The UN Compensation Commission established by the Security Council to adjudicated claims arising out of the Iraqi occupation of Kuwait, including those with respect to ‘environmental damage’.\(^8^6\)


The term ‘transboundary environmental harm’ excludes obligations which aim to the preservation of the national environment, in particular obligations to protect unique ecosystems or to maintain biological diversity, which are allegedly emerging.\textsuperscript{87} The emergence of obligations of this kind is based on the idea that the protection of unique ecosystems and the maintenance of biological diversity are the common concern of humankind.\textsuperscript{88} Hence, acts in violation of these obligations do not come within the definition of ‘transboundary environmental harm’, unless physical transboundary cause and effect relationships ensuring from such acts can be established. The ILC draft articles and draft principles on transboundary harm also follow the same approach.

1.6.6 Threshold of Harm

Be it prevention or liability for environmental harm, a threshold is necessary for any possible action in law. With the exception of radioactive contamination, States in their mutual relations tolerate some measure of pollution and it is generally perceived that such pollution becomes actionable only if it is significant.\textsuperscript{89} Adjectives like ‘appreciable’, ‘significant’, ‘substantial’, or ‘serious’ qualify the concept of harm in environmental context. While the Trail Smelter case referred to ‘serious injury’,\textsuperscript{90} suggesting a relatively high

\textsuperscript{87} 1992 UNCED Convention on Biological Diversity; 1985 Vienna Convention for the Protection of the Ozone Layer; 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources (Article 1(1)); 1972 UNESCO Convention Concerning the Protection of World Cultural Heritage; 1971 Ramsar Convention on Westlands of International Importance, Especially as Water Fowl Habitat; 1968 African Convention on the Conservation of Nature and Natural Resources (Article 2); as well as other regional nature conservation conventions and particular species convention; see also 1986 WCED Elements for a Draft Convention on Environmental Protection and Sustainable Development (Article 3).
\textsuperscript{88} Supra note 21 at 1.
\textsuperscript{89} A/CN.4/487, paras 87-98.
\textsuperscript{90} 35 AJIL 716 (1941). See also 1992 ECE Convention on the Transboundary Effects of Industrial Accidents, Article 1.
threshold, in its early work the ILC preferred the term ‘appreciable’ to qualify the degree of harm. Most interpretations refer to an obligation to prevent transboundary harm or damage “and usually assume that this must reach some threshold level of seriousness before it becomes wrongful. While there is no doubt that injury to persons or property falls within the scope of this principle, the more difficult question is the extent to which protection of the environment or the prevention of environmental harm also do so. Both Trail Smelter and the early civil liability conventions took a narrow view, compensating for injury to persons or property but appearing to exclude wider environmental interests such as wildlife, aesthetic considerations, or the unity and diversity of ecosystems. However a shift took place in the civil liability conventions and protocols where environmental damage as a distinct interest is covered by international tort law.

While working on the topic for ILC, Robert Quentin-Quentin Baxter proposed a higher threshold of “substantial harm”, the draft article 2 (a), provisionally adopted in 1994, suggested a lower threshold, of

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92 ILC draft Convention on Prevention of Transboundary Harm, Article 2(b) and Report of the Working Group, 1996, at 259; Trail Smelter Arbitration, supra note 36.
93 Some liability regimes provide as follows: Article I, paragraph 1 k of the 1963 Vienna Convention on Civil Liability for Nuclear Damage defines nuclear damage to include “(i) loss of life, any personal injury or any loss of, or damage to, property ...”; Article I, paragraph 1 (k) of the 1997 Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage (1997 Vienna Convention), also refers to “(i) loss of life or personal injury; (ii) loss of or damage to property; “...” Article I, paragraph vii of the 2004 Paris Convention defines nuclear damage to include “1. loss of life or personal injury; 2. loss of or damage to property; ...” the CTRD defines the concept of “damage” in paragraph 10 of Article 1 “(a) loss of life or personal injury ...; (b) loss of or damage to property ...” the Basel Protocol defines “damage”, in Article 2, paragraph 2 (c), as: “(i) Loss of life or personal injury; (ii) Loss of or damage to property other than property held by the person liable in accordance with the present protocol”; the Kiev Protocol, defines damage in Arctic Convention defines damage in Article 2 (7) as: “a. Loss of life or personal injury; b. Loss or damage to property.
94 1992 Convention on Civil Liability for Oil Pollution Damage; 1993 ECE Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment; 1997 Vienna Protocol on Civil Liability for Nuclear Damage and 1997 Vienna Conention on Supplementary Compensation for Nuclear Damage
“significant harm”, which the 1996 Working Group of the Commission approved. It was then clarified that the concept of “significant” harm refers to more than “detectable” or “appreciable” harm, but to less than “serious” or “substantial” harm. Further, it was defined to mean a harm that is not de minimis, or that is not negligible. Rene Lefeber, recognises the need for a threshold and examines the rationale for and the possible ways of explaining the meaning of the threshold of “significant harm”.95 The threshold of “significant” has gained currency and acceptance in the context of the topic of international liability, but the ILC insists that it “denotes factual and objective criteria and involves a value judgment which depends on the circumstances of a particular case and the period in which such determination is made”.96

Harm is ‘significant’ if it is ‘more than detectable, but it need not be ‘serious’ or ‘substantial’; what is significant depends on the circumstances of each case, and may vary over time”.97 Both the Ozone and Climate Change Conventions also use ‘significant’ to qualify references to deleterious effects but the latter treaty then sets a higher threshold of threats of serious or irreversible damage’ when introducing the precautionary principle.98

96 The latter is dependent on the circumstances of a particular case and the period in which it is made. For instance, a deprivation which is considered significant in one region may not necessarily be so in another. A certain deprivation at a particular time might not be considered “significant” because scientific knowledge or human appreciation at that specific time might have considered such deprivation tolerable. However, that view might later change and the same deprivation might then be considered “significant damage”. For instance, the sensitivity of the international community to air and water pollution levels has been constantly undergoing change. Commentaries to ILC’s Draft Articles on Prevention of Transboundary Harm, 153 (2001).
97 Ibid.
98 Article 1 of both conventions and Article 3(3), 1992 Framework Convention on Climate change.
1.7 Liability for Transboundary Environmental Harm and Environmental Principles

International and national laws have always recognized the liability for injury and harm. In international and municipal law, the concept of liability may perform a corrective function, a preventive function, and a reparative function. The corrective function refers to liability as a method of enforcing the law ex post facto when there is a violation of the existing law. In its preventive function, liability appears as an incentive ex ante facto that urges an actor to do its utmost to avert the imposition of liability. The object of the reparative function is to shift the injurious consequences of conduct in whole or in part from the victim to the author of that conduct through a compensatory arrangement. In transboundary context, traditionally, the focus has been on the reparative function of liability. Both, contemporary international law and municipal law generally provide for the injurious consequences of harm on the basis of *ubi jus, ibi remedium* i.e. only a violation of a right creates a right to redress.

The principle of preventing significant trans-boundary harm has been reiterated both in the Stockholm and the Rio declaration and as a rule of international law. This thesis compares how principles of liability are applied and developed for affixing liability for environmental damage in various countries. Whereas environmental law emerged to regulate conduct of actors by making violators of rules punishable through administrative or criminal sanctions, an environmental liability regime provides additional support to the scheme by providing the means to help recover the costs of damages.

99 Supra note 1 at 114.
100 Ibid.
101 Ibid.
102 Ibid.
103 Supra note 3, Principle 21 of Stockholm Declaration and Supra note 4, Principle 2 of Rio Declaration.
that occur either in violation of existing environmental standards or as a result of unregulated behaviour. A well-designed liability regime can have an important preventive effect by giving a signal to potential polluters that they will need to provide compensation for any pollution that they may cause, and thus requiring them to better integrate the environmental impacts of their actions in their decision making. The concept of liability is being influenced by recent developments in the international concern for environment protection which is inclined towards sustainable development.

If we were to look at the evolution of concept of liability for environmental harm three successive models of thought have been behind its growth. Nicolas de Sadeleer explains the development of the models in the following terms:104

1. The curative model emerged in response to the realization that nature could no longer cure itself; it needs to be helped to repair the damage inflicted upon it by re-introducing, cleaning up, restoring. For reasons of equity and feasibility, the authorities sought to apportion the economic cost of such intervention by requiring polluters to pay the cost of pollution.

2. Preventive model: The realization that the physical repair of environmental harm is not always possible marks the second stage of State action for environmental protection, during which risks are still predictable. The preventive model is intended to limit reparation to what could be compensated.

3. Precautionary model: The emergence of increasingly unpredictable risks is at present causing the authorities to

base their policy on a third, anticipatory model. Although still in its early stages, this model should make it possible to slow the pace at which we are approaching major, but still uncertain, risks.

The curative model has been of significance and in the struggle to make states and individual liable it has been at the centre stage of international, supranational, regional and national law making. In this model, everything is seen as capable of being indemnified, replaced, repaid, and compensated. The model puts emphasis on reparation and restoration while at the same time it requires limited intervention of state authorities, putting few constraints on production activities, since pollution is tolerated as long as it does not cause abnormal damage. Also, the 1992 UN Conference on Environment and Development in Rio de Janeiro, the participating states found it necessary to reiterate Principle 22 of the Stockholm Declaration in more or less similar terms: “States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding liability and compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction”.

Therefore the principles of liability for environmental damage are significant to both international and national regimes. Especially so when in the absence of individual victims the environment becomes the victim. Since the thesis is a critical analysis of the principles of liability in context of transboundary environmental harm the focus is

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105 Ibid.
106 Ibid
on the principles of state responsibility and state liability for transboundary harm and the significance of the emerging principles like the polluter pays principle, the principle of prevention, the precautionary principle and the principle of non discrimination in addressing transboundary environmental harm. Though other environmental principles like the common but differentiated responsibilities, intergenerational equity, sustainable development etc also are relevant but to address them would be spreading the topic too much in its scope. The principles examined in the thesis correspond to the three models described above.