

**RESPONSIBILITY AND LIABILITY FOR TRANSBOUNDARY ENVIRONMENTAL
HARM: A LEGAL ANALYSIS**

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ABSTRACT

It is now widely recognized that manifold human activities, including the international trade in, and the movement of, certain goods and products have negative and adverse implications for the protection of the global environment in its varied settings. In this context, the question of liability and redress for transboundary environmental harm assumes special significance. The global regulatory efforts to shape the transnational liability rules position the question of environmental harm in relation to state responsibility as the rules and principles of general international law with respect to state responsibility and international liability has been part of the scholarly discourse for long. In recent times, new problems of technology-driven commercial experiments have added to the complexity of the legal debate. This study seeks to identify and examine the concepts of State responsibility and international liability in customary international law and analyses the principal attributes of these concepts as they emerge from treaty practice, judicial decisions, commentary of experts as well as the recent work of the International Law Commission in this regard. It further reviews some of the existing multilateral civil liability treaties dealing with the questions of transnational harm so as to delineate the essential features of, and potential problems embedded within, the existing legal approaches to the resolution of transboundary damage.

KEYWORDS: State Responsibility, International Liability, Transboundary Harm, Environmental Damage, International Law

A. INTRODUCTION

It is now commonly accepted that States are under an obligation to ensure protection to the rights of other States while carrying out legitimate developmental activities within their own territory. The threshold of responsibility in this regard has been progressively extended over the years through state practice and judicial decisions to cover issues of transboundary environmental harm. In the legal academic literature, liability for international environmental harm subsumes both (i) the concept of State responsibility for breaches of international law, and (ii) liability for harm resulting from activities permitted under international law. The concepts of state responsibility and international liability address distinct and separate issues,

although they both have the same objective of providing redress mechanism for harm caused. While the former deals with internationally wrongful acts or breaches of international law, the latter addresses itself to the harmful situation arising out activities permitted under international law.¹

B. The Concept of State Responsibility

The concept of state responsibility emerged in the context of the main concerns of traditional international law to address the relationship between a given state and citizens of other countries. The obligations accepted by a state under the principle of non-discrimination against aliens, treaty obligations involving the treatment of diplomatic persons, the right of innocent passage etc. all broadened to include any internationally wrongful act in the second half of the last century.² The concept of state responsibility is a profoundly significant mechanism to ensure legal accountability and responsibility for internationally wrongful conduct. It is the foundational principle on the basis of which a state may be held accountable in interstate claims under international law.³ In fact, the practical utility of the concept of state responsibility essentially lies in the fact that a state may be hauled up before international judicial tribunals for breach of its international legal obligations. Legal consequences could entail from such a breach of international obligations. The legal obligations may arise either from customary international law or from international conventions to which a state is a party. Thus, breach of a customary international law obligation or that of a bilateral, regional or multilateral treaty entails state responsibility. It has been expounded by various international arbitral awards and judicial decisions that have substantially contributed to the discussion on the contours of state responsibility. The progressive development of international law on state responsibility owes much to these judicial pronouncements. Many of these decisions have enriched and refined our understanding of applicable norms for addressing the problem of transboundary environmental damage. In this context, it will be useful to reflect on some of the major milestones in the progressive evolution of international law on state responsibility for transboundary environmental damage.

1. Legalization of Good Neighbourliness: Duty to Care

The doctrine has its roots in the legal maxim **sic utere tuo ut alienum non laedas**, which in essence means states cannot use or permit the use of their territory to the detriment of the rights and legitimate interests of other states. This concept is closely related to the civil law concept of “abuse of rights”. Thus, the States have an obligation to exercise due diligence while devising domestic developmental plans so as to ensure that the legitimate interests of

other states and the global commons are not hampered in the process. Even in areas outside their national jurisdiction, states have an obligation not to cause environmental damage. This is closely related to the obligation of all states “to protect within the territory the rights of other states, in particular their right to integrity and inviolability in peace and war”.⁴

This principle of State responsibility was restated by the International Court of Justice in the Corfu Channel Case, 1949⁵ where it observed that there were “general and well-recognized principles” of international law concerning “every State’s obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States.”⁶ A necessary corollary of this legal prescription is that states are responsible for harm caused by transboundary pollution. An endorsement of this obligation of due diligence in a transnational legal context could be seen in the famous decision of the Trail Smelter arbitration tribunal wherein it relied upon and elaborated on the aforesaid obligation and observed that:

“Under the principles of international law...no state has the right to use or permit the use of 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 cause is of serious consequences and the injury is established by clear and convincing evidence.”⁷

The Trail Smelter arbitration, apart from the principles of good neighbourliness and the obligation of due diligence, also pointed to the significance of preventive measures for tackling the problem of transboundary environmental damage. The Tribunal while ordering the smelter to refrain from inflicting further damage and by establishing a regime for emission control underscored the need for preventive measures to forestall harmful activities.⁸

2. Duty to Care: Procedural Innovations through Legal jurisprudence

The legal basis formulated in the Trail Smelter arbitration award has largely received juristic approval and international acceptance over the years. In the Nuclear Tests case, Australia argued that the carrying out of further atmospheric nuclear tests (by France) was inconsistent with applicable rules of international law and would be unlawful “in so far as it involves the modification of the physical conditions of and over Australian territory [and] pollution of the atmosphere and of the resources of the seas”.⁹ Judge de Castro in his emphatic dissent did underscore this point and stated: “If it is admitted as a general rule that there is a right to demand prohibition of the emission by neighbouring properties of noxious fumes, the consequences must be drawn, by an obvious analogy, that the applicant is entitled to ask the

Court to uphold its claim that France should put an end to the deposit of radio-active fall- out on its territory”.¹⁰

The Lake Lanoux arbitration award¹¹ also contributed to the development of an important procedural rule of State responsibility. The matter involved the proposed diversion of an international river by an upstream state. The Tribunal was categorical that a state has an obligation not to exercise its rights to the extent of ignoring the rights of another when it stated: “France [the upstream state] is entitled to exercise her rights; she cannot ignore the Spanish interests. Spain [the downstream state] is entitled to demand that her rights be respected and that her interest be taken into consideration.”¹²

It has been contended that the significant normative contribution that can be derived from the Award is: “[a] duty for the riparian states of an international water course to conduct in good faith, consultations and negotiations designed to arrive through agreements at settlements of conflicting interests”.¹³

Though the rule’s applicability in the impugned case was limited to the utilization of shared natural resources, it has equal significance as a principle in context of other environmental conflicts and their peaceful resolution as well. The duty to engage in negotiations in good faith with the objective of arriving at, through agreements, the settlements of conflicting interests is the legal obligation that emerges from it.

3. Obligation of Good Faith: Contribution of Soft Law

One of the clearest expositions of this duty to observe and respect the rights and interests of other states in recent times can be witnessed in Article 21 of the Stockholm Declaration on the Human Environment, 1972. It declares:

“states have in accordance with the Charter of the UN and the principles of international law, the sovereign right to exploit their own natural 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.”¹⁴ The Stockholm Declaration was essentially a progressive codification of the contemporary developments in the field of international law. It may be noted that shortly before the Stockholm Conference, the General Assembly itself directed that the Conference must “respect fully the exercise of permanent sovereignty over natural resources, as well as the right of each country to exploit its own resources in accordance with its own priorities and needs and in such a manner as to avoid producing harmful effects on other countries.”¹⁵

It has been now commonly accepted that there is a need for due diligence for taking care of the needs and interests of other states and protecting them from harmful consequences while pursuing legitimate developmental goals. This basic postulate has found its resonance in numerous multilateral and regional agreements addressing varied concerns of the international community. For instance, the 1951 International Plant Protection Convention,¹⁶ the 1963 Nuclear Test Ban Treaty,¹⁷ the 1968 African Conservation Convention,¹⁸ the 1972 World Heritage Convention¹⁹ etc. contain relevant provisions that underscore the responsibility of states to prevent harmful consequences from occurring in areas beyond their national jurisdictions. The African Conservation Convention requires consultation and co operation between parties where development plans are ‘likely to affect the natural resources of any other state’.²⁰

It is clear from the above discussion that the Stockholm Declaration essentially developed the state practice as regards the question of international responsibility. While articulating the ‘basic rules’ governing the international responsibility of states in regard to the environment, the General Assembly expressly endorsed the Principle 21 of the Declaration. The Principle also formed the basis for Article 30 of the Charter of Economic Rights and Duties of States, which provides that: “All states have 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”.²¹

The general obligation upon States with respect to transboundary environmental harm has also been reaffirmed in Principle 2 of the Rio Declaration, which provides:

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

4. Duty to Prevent and Compensate for Environmental Harm: From a Soft Norm to a Hard Law?

It was subsequently incorporated, in identical terms, in the preambular paragraphs of the 1979 Convention on Long-range Transboundary Air Pollution,²² the 1985 Vienna Convention for the Protection of the Ozone Layer,²³ and the 1992 United Nations Framework Convention on Climate Change²⁴ and in Article 3 of the 1992 Convention on Biological Diversity.²⁵ The

1982 United Nations Convention on the Law of the Sea articulates the duty of states to protect and preserve the marine environment. While the Convention endorses the sovereign right of states to exploit their natural resources pursuant to their national environmental policies, it also imposes a positive obligation on states to prevent harm and thereby preserve and protect marine environment. It provides that states:

“shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as 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 they exercise sovereign rights in accordance with [the] Convention”.²⁶

More recently, in 1996, in its advisory opinion on *The Legality of the Threat or Use of Nuclear Weapons*, the ICJ underscored significance of the protection of human environment and declared that

“environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States, or of areas beyond the national control, is now part of the corpus of international law relating to the environment”.²⁷

These developments have extended the transboundary reach of the obligation to include areas beyond the limits of national jurisdiction, thus transcending the limits set in the *Trail Smelter* arbitration. The obligation has, in essence, two parts: first, to take measures to prevent the occurrence of transboundary environmental harm and, secondly, to redress the damage if the transboundary harm occurs. The various dimensions of the prevention obligation will be addressed in the discussion on the aspects of international liability in the latter part of this paper. For prevention is essentially a series of measures in anticipation of a potentially dangerous development as against the actual event. State responsibility, on the other hand, operates at the level of an actual breach of an international obligation. The general principle of international law is that a State which breaches its international obligation has a duty to right the wrong committed.

In the *Chorzow Factory Case*,²⁸ the Permanent Court of International Justice underscored the relevance of this point when it proclaimed that, “it is a principle of international Law, and even greater conception of law, that any breach of an engagement involves an obligation to make reparation.”²⁹ The Permanent Court further stated in the impugned case that a State in

breach owes to the affected States a duty of reparation, which must “as far as possible, wipe out the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed”.³⁰

In the Case Concerning the Gabčíkovo-Nagymaros Project concerning the legality of their respective actions in the shared Danube river, the International Court concurred: “It is a well established rule of international law that an injured state is entitled to obtain compensation from the State which has committed an internationally wrongful act for the damage caused by it...”³¹ The Court however, also noted the limitations inherent in the very mechanism of reparation of environmental damage. The fact that such damage is often irreversible; the Court emphasized the need for vigilance and prevention.

5. Reparation for Damage: Certain Legal Aspects

The issue of reparation with regard to damage to the environment beyond the limits of national jurisdiction, outside the framework of specific treaty provisions, raises interesting questions: what indemnities are due and who is to claim them? The International Court’s observation in the Barcelona Traction Case³² would seem to suggest that there exist basic obligations to the international community as a whole (*erga omnes*) that can consequently be asserted by any State. Whether this extends to environmental damage in areas beyond the limits of national jurisdiction is an arguable point.”³³ However, in the ILC Draft Articles on State Responsibility for Internationally Wrongful Acts (2001), it is clearly stated that certain violations of international obligations could affect the international community as a whole. Moreover, the State responsibility could be invoked by states on behalf of the larger community.³⁴ Article 48 of the Draft Articles clearly permits any state to invoke responsibility for such violations without an authorizing community decision.³⁵

It may also be noted that a series of international agreements has echoed in recent times, such a common responsibility of states “to conserve, protect and restore the health and integrity of the Earth’s ecosystem”.³⁶ It has been pointed out, Article 6 of the 2002 Johannesburg Declaration takes this concept of collective responsibility another step further, by defining it as our responsibility to one another, to the greater community of life and to our children”.³⁷ The emerging concept of public trusteeship for common environmental heritage views state as ‘trustees’, holding certain environmental resources in trust for the benefit of the world’s people. Accountability of trustees to the terms of the trust is well known under the domestic

law. The challenge for international law is essentially to hold states accountable for their management of the resources they hold in trust.

C. ILC Draft Articles on State Responsibility

The International Law Commission, established by the UN General Assembly in 1947 with the objective of promoting the progressive development of international law and its codification, has grappled with the question of state responsibility for several decades. It was in 1953 that it received the mandate to undertake codification of state responsibility from the UN General Assembly. Two years later, the Commission appointed F.V. Garcia Amador of Cuba as special rapporteur. Through five rapporteurs and more than thirty reports, the Commission has been working on the topic of State responsibility since 1955 and finally adopted its “Draft Articles on the Responsibility of States for Internationally Wrongful Acts” in August 2001.³⁸ The UN General Assembly, through a resolution in December 2001, commended the Draft Articles to the attention of States. These articles address important, fundamental issues including the constituent elements of an “internationally wrongful act”, “breach” of an international obligation, situations when a state can be held responsible for acts (or omissions) of non-state actors or of another state, circumstances that justify otherwise wrongful conduct etc. The Draft Articles also grapple with a state’s obligation to remedy an internationally wrongful act (render compensation, restitution, satisfaction, etc.), states’ legal standing to complain, the kinds of countermeasures permitted and the circumstances in which they can be employed.³⁹

The Commission’s study on state responsibility has at least two basic, significant premises. First, the breach of an international obligation gives rise to a new legal regime, with its own distinctive set of legal duties and rights. The Draft Articles essentially seek to set forth these rules, together with the rules governing the conversion from the normal regime of international law to the new regime of state responsibility. These rules seek to determine when an obligation has been breached and the legal consequences that entail from such a breach. The second premise is that the secondary rules of state responsibility seek to constitute a single general regime,

“encompassing all types of international obligations regardless of their source, subject matter, or importance to the international community. They apply to both acts and omissions, to treaty obligations and customary norms, to breaches of bilateral as well as multilateral

obligations, and to the whole gamut of particular subject areas- human rights law, environmental law, humanitarian law, economic law, the law of the sea, and so forth”.⁴⁰

It is clear that in its codification efforts, the Commission was “not concerned with the substantive primary obligations of States as such but with the much more modest task of defining what rights and remedies arise when these obligations are not performed, and when they may be invoked against a state”.⁴¹

As per the Draft Articles, every breach by a State of an obligation under international law constitutes an internationally wrongful act and entails the international responsibility of that State. Article 2 defines an “internationally wrongful act” as an act attributable to a state that constitutes a breach of an international obligation. According to Article 12, “breach of an international obligation” is an act...not in conformity with what is required...by that obligation.” As it has been argued, a close reading of these three intertwined provisions make it clear that a “conduct not in conformity with an international obligation and attributable to a state equals an internationally wrongful act resulting in state responsibility”.⁴²

Articles 4-11 grapples with the complex issue of attribution. At a time when non state entities and private actors have come to occupy a significant position in international life, with profound implications for the rights and freedoms of people everywhere, the extent to which states should be held responsible for conduct involving private actors is an increasingly important issue. The impugned articles essentially codify the traditional rules and standards in this sphere. The conduct of persons or entities exercising elements of governmental authority when they act in that capacity can be attributed to the state under international law. Specific legal consequences arise from such an internationally wrongful act. First, the responsible State must cease the wrongful act if it is of a continuing character and must offer appropriate assurances and guarantees of non-repetition.⁴³ Secondly, the responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act.⁴⁴ Such reparation can take three forms: restitution, compensation and satisfaction, either singly or in combination.⁴⁵ A responsible State is under an obligation to make restitution, that is, to re-establish the situation, which existed before the wrongful act was committed.⁴⁶ In so far as the damage is not made good by restitution, the responsible State is under an obligation to compensate for the damage caused by the wrongful act.⁴⁷ Finally, where restitution or compensation cannot make good the damage, the responsible State is under an obligation to give satisfaction for the injury caused.⁴⁸ Satisfaction may consist of an acknowledgement of the breach, an expression of regret or a formal apology.

D. The Utility and Limitations of the State Responsibility Concept

The ILC Draft Articles contain a non-application clause:

“These articles do not apply where and to the extent that the conditions for the existence of an internationally wrongful act or the content or implementation of the international responsibility of a State are governed by special rules of international law”.⁴⁹

It is evident from this provision that although the secondary rules of state responsibility are general in nature and coverage, they represent only residual rules and that they do not disturb the international legal rights of individuals or non-state entities under particular treaty regimes in the international system. They need not directly apply in all cases. Specific treaty regimes or rules of customary international law can establish their own special rules of responsibility that differs from those set forth in the Draft Articles. For instance, the General Agreement on Tariffs and Trade and the European Convention on Human Rights have established more or less self contained regimes of responsibility to which these articles are inapplicable. It has been construed that the limitation on the applicability is consistent with the expanding body of international practice in which states and non-state entities invoke state responsibility under specific international agreements or even under customary international law.⁵⁰

However, it needs to be noted that even if, and when a specialised liability regime emerges under an international agreement, the general law of state responsibility will not fade into oblivion. The general law of state responsibility addresses important issues such as attribution, circumstances that preclude wrongfulness, remedies, countermeasures etc. Experience shows that such issues are not comprehensively covered under existing specialised liability regimes. It seems few regimes in international law are fully “self-contained”. Therefore, the significance of the state responsibility principles will continue to expand, given its innate ability to fill the gaps and play a unifying role in international law.⁵¹

The concept of state responsibility enables a state to bring claims in international tribunals and judicial institutions against another state or states for the breach of international obligations. There could be other significant issues which may possibly arise in varying contexts and effectively prevent the promise of the principle from being made use of. There are several practical problems with the state responsibility approach in terms of deriving applicable specific rules in the realm of transboundary environmental damage in concrete situations. The difficulties begin from the lack of adequate international forums for preferring claims. Existing international judicial forums such as the International Court of Justice have

very narrowly defined jurisdiction clauses. This effectively rules out the possibility to refer a matter to the judicial institution except under an extraordinary situation when both the contending parties agree to do so. Even when such compulsory resort to judicial proceedings is possible, the bilateral, confrontational character of the dispute resolution methods may have the disadvantage of adverse effects on relations between the concerned states. These practical difficulties have been succinctly stated in these words:

“there is a lack of refinement and specification of the concept in customary law; the customary doctrine of state responsibility requires a breach of a clearly established specific ‘obligation’ before responsibility is enjoined, and has failed to clarify whether fault must be proved or whether liability is strict, i.e, whether the breach of the obligation per se is sufficient to give rise to liability to compensate without need for proof of negligence.”⁵²

In fact, the unsettled nature of much of customary international law is an impediment to the process of reaching certainty and clarity on the points of law involved and thus, it is not easy to identify the precise nature of the obligation breached.

The fact that much of the contemporary transboundary harm arises out of the application of modern science and technology, any diagnosis of the problem will involve grappling with highly technical and scientific details. The difficulties involved in such intricate, technical character of the environmental problems might sometime appear to be insurmountable. In addition to these difficulties, the evidentiary problems of proving damage do pose real challenges in the legal proceedings. Moreover, the real problem of uncertainties, complexities, delays and the expenses involved in many international judicial proceedings add to complicate the situation. These are some of the significant factors that underpin the weaknesses in enforcing claims for transboundary environmental harm through the mechanism of interstate claims.⁵³

Scientific uncertainty about the loss of biodiversity caused by various human activities, both lawful and unlawful, continues to be a factor and it needs to be reflected in response mechanisms. Any consideration of environmental damage has to take into account the numbers and types of life forms that exist as genes, species, sub-species, micro organisms, and bacteria in various ecosystems and habitats. As most of these intricate details remain in the realm of the unknown, prudence demands that we resort to precautionary approach. As it has been aptly stated, “[i]t is no longer sufficient to talk of state responsibility for environmental damage. The context must change to reflect state responsibility for the preservation of global environmental well being”.⁵⁴ Beyond the State responsibility

principles, there could be additional rules that channel liability to states where damage has been caused by living modified organisms and such damage did not originate from a wrongful act of a State.

E. Concept of International Liability

The concept of state responsibility is concerned with legal obligations attributable to a state for its internationally wrongful acts. There have been debates over the non-wrongful liability question i.e., the question of liability of states for injurious consequences arising out of acts not prohibited under international law. This theoretical construct was essentially devised to address the nature of liability for transboundary environmental harm. It has widely engaged the attention of international legal scholars for quiet sometime. The foremost questions in this connection are the following: does transboundary environmental damage entail obligation beyond the due diligence test? What is the standard of liability in international law for transboundary environmental harm- fault-based, strict or absolute liability? Is it possible to channelise liability to states directly? What is the role of non- state actors and their contribution to the creation of environmental liability and how does international law deal with the situation of their increasing prominence?

The concept of international liability seems to have been inextricably intertwined with the concept of state responsibility. As such, in treaties and judicial practice, the terms responsibility and liability are used in more than one sense.⁵⁵ The term ‘responsibility’ refers to the obligation of states and ‘liability’ indicated the consequences which ensue from a breach of those obligations. The UN Law of the Sea Convention⁵⁶ preferred the above interpretation. But, many of the liability treaties dealing with oil pollution and nuclear damage⁵⁷ uses the term liability to refer to obligations in private law, even as responsibility distinguishes the obligation of states in public international law.⁵⁸ The International Law Commission has been using the terms-state responsibility and international liability- in a quite different way in its studies, giving “extended parallel meanings to both terms”. The Commission’s decision to split the issue into two separate topics has been questioned. The topics have now come to be known under two heads: i) state responsibility for internationally wrongful acts, consisting of both primary and secondary obligations; and ii) international liability for injurious consequences or activities not contrary to international law.⁵⁹

As discussed in the earlier part of this chapter, the Commission's engagement with the topic of state responsibility goes back to the 1950's. It was in 1978, that the Commission decided to include in its programme of work the topic "International liability for injurious consequences arising out of acts not prohibited by international law". As discussions matured within the expert body over the years, consensus emerged on addressing the topic at two levels, namely "prevention" and "international liability", considering that aspects of prevention and liability "are distinct from one another, though related". In 1992, the Commission decided to continue the work on this topic in stages, dealing first with the issue of "prevention of transboundary damage from hazardous activities" and in course of time, on the principles for the allocation of loss. At its fifty-third session, in 2001, the Commission adopted the final text of a draft preamble and a set of 19 draft articles on Prevention of Transboundary Harm from Hazardous Activities, and submitted the text to the United Nations General Assembly.⁶⁰

F. Prevention of Transboundary Harm

The Draft Articles on this subject deal with preventive obligations of a state in relation to potentially harmful consequences of hazardous activities which are per se not prohibited under international law. The Articles seek to clarify the ambit and scope of application of the normative principles. They cover any activity that involves a risk of significant transboundary damage through its physical consequences.⁶¹ Moreover, the activities must take place in the territory or control or jurisdiction of the source state. The risk of significant transboundary harm must be determinable by clear direct physical effect. The connection between the activity in question and harm or injury suffered must be clearly linked. Moreover, it should be proved that the harm arose as a result of the physical consequences of such activities. The risk involved must be more than "detectable" or "appreciable", but it need not be "serious" or "substantial". The Commission agreed on the term "significant" to denote a situation of damage that may trigger liability claims provided the damage leads to real detrimental effects on aspects such as human health, industry, property, the environment or agriculture in other states which may be measured by factual and objective standards.⁶²

Such delimitation excludes from its applicability a range of situations, which are equally significant from an environmental perspective. For instance, the nexus between source state and the harm incurred in areas beyond national jurisdiction may not be apparent. It is possible that attributability may become a significant challenge in such situations. Thus, the harm

suffered by global commons which are beyond the national jurisdiction would be excluded from the scope of the articles. Similarly, pollution that cannot be attributed to any one source as well as 'economic consequences arising from policies and decisions of one state over the other' is also excluded.⁶³

Article 3 and 4 provide the foundational duties of a state in relation to the question of prevention.⁶⁴ Article 3 makes it clear that states have a primary duty to prevent significant transboundary harm by employing all possible means. In any case, they have to minimize the risk thereof by exerting best efforts. In this context, may include legislative, executive and judicial interventions designed to facilitate informed decision making.⁶⁵ It seems, application of due diligence duty entails an obligation to adopt and implement national legal measures that incorporate accepted international standards. The due diligence duty of a state could find reflection in legislative enactments, administrative regulations, and enforcement mechanisms. This has been reflected in these words:

"States concerned shall take the necessary legislative, administrative or other action including the establishment of suitable monitoring mechanisms to implement the provisions of the present articles".

Article 4 underscores the need for international cooperation in the implementation of effective policies for the prevention of significant transboundary harm. Specific aspects of such cooperation are stipulated in subsequent articles. As the Commentary notes, the impugned articles:

"envisage the participation of the State likely to be affected in any preventive action, which is indispensable to enhance the effectiveness of any such action. The latter State may know better than anybody else, for instance, which features of the activity in question may be more damaging to it, or which zones of its territory close to the border may be more affected by the transboundary effects of the activity, such as a specially-vulnerable ecosystem".⁶⁶ Other subsequent articles provide that activities with potential environmental impacts shall need risk assessment, notification and information to potentially affected states, consultations with them on preventive measures etc. Prior state authorisation is also indispensable where the applicability of the articles arise".

Article 10 provides guidance for states to engage in consultations to address the situation arising out of potentially harmful activities with the objective of achieving an equitable balance of interests. Such an outcome demands that all factors and circumstances be weighed in the backdrop of all the facts that are established. It seems to have been adapted from article

6 of the Convention on the Law of the Non navigational Uses of International Watercourses. The non exhaustive list of factors and circumstances, essentially guides the parties to compare the benefits and banes of particular courses of action that they may choose to employ specific particular circumstances. A comparison between the risk of transboundary harm from a potential activity and the availability of means to prevent such harm or minimizing the risk thereof is one of the factors to be kept in mind. Secondly, an assessment could be made between the overall advantages of the project in terms of its social, economic and technical advantage for the society and the potential harmful impact it may have on the States likely to be affected.

Thirdly, a crucial aspect in the determination of equitable balancing of interests is the assessment as regards the possibility of restoration of environment in the event of significant transboundary harm. The precautionary approach is by now recognized as a very general rule of prudence in times of scientific uncertainty about the potential extent of damage. Fourthly, the willingness of States to bear the cost of preventive measures is another significant factor that needs to be taken into consideration. The 'polluter pays' principle as recognized under the Rio Declaration calls upon the States that:

“national authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment”.⁶⁷ Since the states likely to be affected by the activities are unlikely to be willing to bear the cost of preventive measures, it becomes the duty of the state of origin to ensure that the cost of pollution prevention and control measures are efficiently allocated. Fifthly, it is also important to examine the possibility of alternatives both in terms of environmental sustainability and economic viability”.

The Draft Articles on Prevention of Transboundary Harm from Hazardous Activities also contain an impressive list of other obligations such as procedures to be followed in the absence of notification by a state of origin, exchange of information between the states concerned, the need for providing relevant information to the public, access to non-discriminatory justice to the victims of transboundary harm, the need for developing contingency plans for responding to emergencies etc. The approach followed in the Draft Articles suggests that the emphasis is on the procedural duty of prevention as opposed to an obligation to repair, remedy, or compensate. By declaring what constitutes the legal content of the obligation to prevent significant transboundary harm, or minimize the risk thereof, and

to cooperate in good faith with other states, the Draft Articles have made a significant contribution to the progressive development of international law relating to environmental obligations of States.

G. ILC Draft Principles on Allocation of Loss

As a corollary to its work on the preventive obligations of States, the Commission resumed its consideration of the second part of the topic, namely international liability in case of loss from transboundary harm arising out of hazardous activities. The Commission began the consideration of the liability aspects in the backdrop of not only the completion of its study on preventive obligations of states but also at a time when it completed its work on State responsibility. Thus, in preparing the principles on the allocation of loss, the Commission was clear that the draft principles,

“should be general and residual in character and without any prejudice to the relevant rules of State responsibility adopted by the Commission in 2001”.

It was clearly understood that failure to perform duties of prevention addressed to the State in terms of the earlier draft articles on prevention entails state responsibility. It is however, possible that damage may occur even when a state diligently and faithfully discharges its duties of prevention. It may prove inadequate or where the particular risk that causes harm was not identified at the time and appropriate measures were not taken. Sometimes the best of preventive measures may prove to be too inadequate. As such it is important to ensure that victims are not left to carry the burden of losses and are able to obtain prompt and adequate compensation. International liability principles become important in the context of occurrence of harm for reasons not involving State responsibility. A working group established by the Commission, to consider possible approaches to the study of the topic of liability, recommended that the focus should be on the development of models for allocation of loss among different actors involved in the operations of the hazardous activities.⁶⁸

As regards the existing models of allocation of loss in international law and their common features, the Special Rapporteur PS Rao noted in his First Report:

“[T]hese models make one point very clear. They demonstrate that States have a duty to ensure that some arrangement exists to guarantee equitable allocation of loss. While the schemes do show common elements, they also show that each scheme is tailor made for its own context. It does not follow that in every case that duty is best discharged by negotiating a liability convention, still less one based on any particular set of elements. The duty could equally well be

discharged, if it is considered appropriate, as in European Community law, by allowing forum shopping and letting the plaintiff sue in the most favourable jurisdiction, or by negotiating an ad hoc settlement, as in the Bhopal litigation.”⁶⁹

At one of the meetings of its fifty-sixth session, the Commission adopted, on first reading, eight draft principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities.⁷⁰ The Draft Principles contain provisions on scope of application, use of terms, objective, prompt and adequate compensation, response measures, international and domestic remedies, development of specific international regimes, and implementation. The preamble of the Draft Principles thus, rightly places it within the context of the Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities adopted in 2001 by the Commission. These principles essentially seek to provide the means by which those who suffer harm or loss as a result of accidents or other incidents involving hazardous activities may have recourse to a redressal mechanism.⁷¹ The scope of application of the Draft Principles is symmetrical with that of the Draft Articles, underscoring the interrelationship of the issues of “prevention” and “international liability”.

The ambit of the Draft Principles is limited to “activities not prohibited under international law which involve a risk of causing significant transboundary harm through their physical consequences”.⁷² As the Special Reporter PS Rao noted in the commentary to the Draft Articles on Prevention of Transboundary Harm, “subparagraph (c) of Article 2 further limits the scope of the articles to “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”⁷³ The Draft Principles include the same threshold of loss to trigger the application of the regime. There has been wide ranging debate within the International Law Commission and in academic circles on the threshold question. The consensus seemed to have emerged behind the position that the risk involved must be more than “detectable” or “appreciable”, but it need not be “serious” or “substantial”. After much discussion, the Commission agreed on the term “significant” to denote a situation of damage that may trigger liability claims. However, such damage must lead real detrimental effects on such aspects as human health, property, the environment or agriculture in other states which may be measured by factual and objective standards.⁷⁴

The Draft Principles call for the provision of prompt and adequate compensation for the innocent victims and for contingent plans and response measures over and above those contemplated in the draft articles on prevention.⁷⁵ The substantive or applicable law to

resolve compensation claims may involve either civil liability or criminal liability or both. It was also assumed that liability for activities falling within the scope of the Draft Principles should be attached primarily to the operator and such liability would be without requiring proof of fault, and may be limited or subject to exceptions, taking into account social, economic and other considerations. Consensus also emerged within the Commission for adopting a scheme of allocation of loss, spreading the loss among multiple actors, including the State. That the prevention duties of the State entail certain minimum standards of due diligence was also agreed.⁷⁶

Article 5 obligates a state to take immediate response measures to minimize the transboundary damage arising from a hazardous activity. Such measures necessarily involve prompt notification, consultation and cooperation with all potentially affected states. For the purpose of compensating the victims of such transboundary damage, States are further obligated to ensure that adequate domestic administrative and judicial mechanisms, possessing the necessary competence, are in place. Article 6 (3) further requires that these mechanisms “should not be less prompt, adequate and effective than those available to its nationals and should include appropriate access to information necessary to pursue such mechanisms”.⁷⁷ Draft Principle 8 further widens the ambit of non-discrimination by prohibiting any discrimination such as that based “on nationality, domicile or residence”. In fact States are further encouraged to consider international settlement claims procedures that are “expeditious and involve minimal expenses” as possible options for ensuring access to justice for victims of transboundary damage.⁷⁸

The Draft Principles favour the development of specific international liability regimes “in order to make arrangements regarding the prevention and response measures to be followed in respect of particular categories of hazardous activities as well as the compensation and financial security measures to be taken”.⁷⁹ Principle 7 further provides guidance as to the potential elements of such bilateral, regional or global agreements. The Principle suggests that the international agreement may “include industry and or State funded compensation in the event that the financial resources of the operator, including financial security measures, are insufficient to cover the losses suffered as a result of an incident”.⁸⁰

The International Law Commission’s advocacy of sectoral development of international liability regimes is based on a number of policy considerations. First, the victims should not as far as possible be left to bear the loss resulting from transboundary harm arising from hazardous activity. Secondly, any regime of allocation of loss should,

“provide an incentive for those concerned with hazardous operations to take preventive or protective measures in order to avoid damage; to compensate damage caused to any victim; and to serve a economic function, that is, internalize all the costs (externalities)”.⁸¹

Thirdly, after surveying a number of incidents in which states, without admitting to any liability, paid compensation to victims of significant transboundary damage, the Commission was convinced that “the trend of requiring compensation is pragmatic rather than grounded in a consistent concept of liability”.⁸² Fourthly, recent decades have witnessed a proliferation of international liability agreements and negotiation processes thereof at the inter-state level, addressing specific issues in particular contexts, indicating perhaps that there could be no single, uniform model of allocation of loss. As Birnie and Boyle note, any discerning observer of the contemporary international environmental treaty practice would agree that the emerging trend is towards the establishment of “direct accountability of the polluter in national law as the best means of facilitating recovery of compensation, without having to resort to inter-State claims or the complexities of the law of State responsibility”.⁸³ Fifthly, the Commission, in proposing the draft principles, was also largely driven by the policy goal of developing a wider framework establishing the balancing of interests in transboundary relations.

H. Civil Liability Regimes in International Law: A Review

The second half of the last century witnessed a growing realisation at the inter state level on issues concerning the transboundary environmental damage arising out and resulting from a number of human activities, for instance emissions from industrial enterprises, marine pollution from land based sources, pursuit of nuclear energy, international trade in ultra hazardous substances by sea, oil pollution etc. International Law was called to address itself to the growing problems of transboundary environmental pollution and other sustainable development issues in varying contexts. The rapid expansion of the scope of international environmental treaty law may be viewed in the context of new challenges of environmental protection. Even as awareness about the implications of environmental degradation became acute, there was also considerable impatience with the traditional concept of state responsibility as a model for the enforcement of international standards of environmental protection.

The search for new solutions led to the emergence of ideas, including the development of international environmental protection regimes and their supervision by international institutions. Thus, the question of transboundary harm was sought to be addressed through

the development of appropriate legal rules and procedures governing liability and redress for transboundary environmental damage. There are only a limited number of multilateral treaties in the field of liability and redress for transboundary harm. Such agreements dealing with the question of liability and redress may be broadly classified into three categories. First, a number of multilateral treaties prescribe civil liability for addressing the question of liability of operators, and in some circumstances of States. Several liability regimes have been negotiated by the international community in recent decades in areas as diverse as nuclear damage, oil pollution, transport of dangerous goods and substances.⁸⁴ Secondly, there are treaties which hold the States directly liable. The best example of this genre is the Convention on International Liability for Damage Caused by Space Objects.⁸⁵ Thirdly, in many international treaties, a general reference to the question of liability and redress is usually made without specifying the procedural details. Some of the recent examples of this trend include the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,⁸⁶ the 1992 Convention on Biological Diversity,⁸⁷ the 2000 Cartagena Protocol on Biosafety to the Convention on Biological Diversity⁸⁸ etc. Most international agreements dealing with environmental protection either in a regional context or at the global level belong to the final category. Many of the MEA contain inbuilt provisions as regards the intention of developing applicable international rules and procedures at a later stage, subject to emergence of consensus.⁸⁹

I. Elements in Multilateral Liability Agreements

A liability regime generally has a number of essential elements or components to it. Most of the regimes took as their point of departure specific activity or activities, including those that might potentially give rise to harm. The central objective of these regimes is to secure compensation for loss of life or personal injury; loss or damage to property; and damage to or impairment of the environment. It is widely understood that liability is not predicated on the legality of the activity or the fault of the “operator”. It is premised upon the causal link between the activity and the resultant transboundary damage. This will include, defining the contours, ambit and scope of the damage resulting from the activity under consideration. The fixing of standard of liability - as well as its channelling are basic constituents for the effectiveness of a redress regime. While state liability is the liability of international persons under the operation of rules of international law of State responsibility, international civil liability refers to the liability of any legal or natural person under the rules of national law

adopted pursuant to international treaty obligations establishing harmonized minimum standards'.⁹⁰ The provisions for determining the legal standing for instituting a particular claim also needs to be addressed. In addition to questions of access to courts, the mutual recognition and enforcement of judgements are sought to be clarified through clear provisions.

Since issues of human rights, international trade, environmental protection and the international law of state responsibility are intricately intertwined, any liability regime will also have to necessarily deal with its relationship to the existing international rules. Any liability regime that seeks to address designated human activities with potential harmful consequences will have many standard features.

A liability regime will have specific articles addressing the activities/ situations causing damage, the concept and threshold of damage, jurisdictional application or geographical scope, channelling of liability; the standard of liability, exemptions from liability, the nature and scope of redress, including valuation of damage, limitation of liability in amount and time, financial security and funds, and jurisdiction, mutual recognition and enforcement of judgments etc. In this context, a brief review of elements in the multilateral liability agreements dealing with oil pollution damage and the potential damage from nuclear installations will provide examples for understanding the law making process in the field.

J. The Nuclear-Liability Regime

The fundamental objective of civil liability regimes in the field of nuclear damage is to ensure “adequate and equitable compensation for persons who suffer damage caused by nuclear incidents while taking the necessary steps to ensure that the development of the production and uses of nuclear energy for peaceful purposes is not thereby hindered”.⁹¹

The goal is to find a fine balance between compensation needs of victims of accidents and the survival of the industry so as to make nuclear power a feasible option and promote investment in the nuclear industry.⁹² The existing international legal framework mainly consists of three inter-related conventions: the Paris Convention on Third Party Liability in the Field of Nuclear Energy,⁹³ the Vienna Convention on Civil Liability for Nuclear Damage,⁹⁴ and the Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material⁹⁵ The Paris Convention was supplemented in 1963 by the Brussels Supplementary Convention on Third Party Liability in the Field of Nuclear Energy⁹⁶ and amended by additional protocols adopted in 1964, 1982 and 2004.⁹⁷ In 1988, the Paris and

Vienna Conventions were linked by the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention.⁹⁸ In 1997, the Vienna Convention was amended by the Protocol to amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage⁹⁹ and supplemented by the Convention on Supplementary Compensation for Nuclear Damage.¹⁰⁰ The Amending Protocol as well as the Supplementary Convention is not yet in force.

The Paris Convention, designed to cover nuclear incidents within Western Europe, was the first international legal instrument to deal with civil liability for nuclear damage. It establishes a regime of strict liability for nuclear damage, obviating the need for proof of fault as a condition precedent for liability.¹⁰¹ It however, does provide a limited number of exemptions from liability. These include the incident resulting from an act of armed conflict, hostilities, civil war or insurrection, or a grave natural disaster of an exceptional character.¹⁰² Secondly, liability is channelled exclusively to the operator of the nuclear installation.¹⁰³ The operator is the nationally authorised person or entity to deal with the question of liability and compensation when a nuclear accident occurs at a particular installation or in the course of transport to or from that installation. The operator is liable even with regard to accidents occurring during the course of transportation of the nuclear material.¹⁰⁴ However, under Article 4 (d) of the Convention, in some cases, the carrier or handler of nuclear material may be treated as an operator.¹⁰⁵ The Convention provides effective protection to the nuclear industry from unlimited, unpredictable liability involving multiple claims against suppliers, builders, designers, carriers and other potential defendants.

The Paris Convention does not apply to nuclear incidents occurring in the territory of non-contracting States or to damage suffered in such territory. The concept of “nuclear damage” was initially confined to loss of life or personal injury and loss or damage to property.¹⁰⁶ A claim for compensation can only be preferred before a court in the state party in whose territory the nuclear incident has occurred. If the incident occurred outside the territory of states parties to the Convention or if the place of nuclear installation cannot be determined with certainty, the claim must be instituted before a court in the state party in whose territory the nuclear installation of the operator liable is situated.¹⁰⁷

Another important feature is the limitation in terms of liability. The Convention imposes a ceiling on the total amount of compensation that can be paid in respect of damage caused by a single nuclear incident. Under the original scheme of things, the maximum liability of the operator was fixed at 15 million Special Drawing Rights (SDRs). In exceptional cases, the

liability was merely US \$ 5 million. It has been argued that the main reasons for this was the “limited capacity of the insurance market”.¹⁰⁸ There is also limitation as to the period within which claims for compensation can be brought. The Convention stipulates for bringing actions for compensation within ten years from the date of the nuclear incident.¹⁰⁹ It is also possible for the Contracting Parties to limit the operator’s liability to no less than two years from the time the damage or the operator liable became known or ought reasonably to have become known to the person suffering damage. Judicial awards of compensation claims in any Contracting State can be enforced in any other State party to the Convention.¹¹⁰

The 1963 Brussels Supplementary Convention¹¹¹ introduced two more layers of compensation. The new Convention improved the compensation provisions of the Paris Convention by establishing a three-tier compensation structure: (i) At the first level, Parties are required to establish by national legislation a minimum operator liability of 5 million SDRs, to be provided or guaranteed by insurance or other financial security. (ii) At the second level, a limited subsidiary liability is imposed on the Party in whose territory the nuclear installation causing damage is located. The maximum liability is up to a total of 175 million SDRs. (iii) The third and final tier is for damage exceeding the amount provided at the second level. All Contracting States, on the basis of a predetermined formula,¹¹² contribute jointly to a common Fund under this mechanism and a sum of 125 million SDRs is available under it as a final resort.¹¹³

The 1963 Vienna Convention, was negotiated under the auspices of the International Atomic Energy Agency (IAEA) with the objective of incorporating the provisions under the Paris Convention. It also provided that the liability of the operator may be limited by the Installation State to not less than US\$ 5 million for any one nuclear incident. There is, however, no provision for additional compensation at any other level. The situation has significantly improved from these modest beginnings over the years as a consequence of the realisation about the need for increased financial liability provisions and the drastic differences in the international situation from the original period.

Before 1992 the Paris and Vienna Conventions operated independently of each other and benefited only their respective Parties. No State is a Party to both regimes due to potential conflicts involved in their simultaneous application. The Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, entered into force in 1992. It sought to, “mutually extend the benefits of civil liability set forth in each Convention and to

avoid any conflict that may arise as a result of the simultaneous application of the two conventions in a nuclear incident”.¹¹⁴

The Joint Protocol, establishes an expanded liability regime. Parties to the Joint Protocol are treated as though they were Parties to both Conventions and a choice of law rule is provided to determine which regime should apply in respect of an incident.¹¹⁵ It has been noted, where the incident occurs in a nuclear installation, the applicable convention is the one to which the state in whose territory the installation is situated is a party’ and, “where the incident arises out of the carriage of nuclear material, the applicable convention is the one to which the state in whose territory the responsible operator of the nuclear installation is situated as a party”.¹¹⁶

It seems the Joint Protocol represented an improvement on the existing situation. The Paris and the Vienna Conventions were out of tune with the legitimate aspirations of potential victims. Some of the practical problems of the Convention include the low levels of compensation available under either convention as against the potentially disastrous consequences of a nuclear accident, the conspicuous absence of ‘environmental damage’ within the definition of nuclear damage, the time limits within which claims may be brought forward, jurisdictional problems a potential victim may face when the damage suffered is outside the state where the nuclear incident took place etc.

After years of negotiations at the IAEA, significant changes were agreed upon at the 1997 Vienna Diplomatic Conference. The Vienna Amending Protocol and the Convention on Supplementary Compensation for Nuclear Damage have significantly improved the compensation provisions of the Paris and Vienna conventions. A remarkable feature is the introduction of subsidiary State liability, through the establishment of supplemental public funding, beyond the maximum limit of operator liability. The Protocol establishes a new minimum level for operator liability of 300 million SDRs and simplified the procedure for amending the limits of liability in the future.¹¹⁷ Secondly, the Protocol extends the definition of damage to cover both “environmental damage” and pure economic loss arising from nuclear damage. The current definition of “nuclear damage” includes: economic loss arising from loss of life, personal injury and loss or damage to property; the costs of measures “of reinstatement of impaired environment”; “loss of income deriving from an economic interest in any use or enjoyment of the environment, incurred as a result of a significant impairment of that environment”; and, the costs of preventive measures.¹¹⁸

Thirdly, as the original Vienna Convention contained no provision concerning its territorial application, the 1997 Protocol introduced a new Article I A, which provides that the Convention applies to nuclear damage wherever suffered. Thus, it is possible to argue that the Vienna Convention applies even in the territory of non parties provided the damage took place in the territory. However, the Protocol empowers an Installation State to exclude from the application of the Convention damage suffered in the territory of a non-contracting State or in any maritime zones established by a non-contracting State in accordance with the international law of the sea in the absence of equivalent reciprocal benefits.¹¹⁹ Fourthly, the limitation period has also been extended to thirty years with respect to loss of life and personal injury and ten years with respect to any other damage, however, such claims must be instituted within three years of the date on which the victim knew, or should have known, of the injury and the operator liable.¹²⁰ With the objective of welfare of common people, Article 13 of the Protocol seeks to simplify the procedural aspects and to ameliorate the hardships allowing a state to institute proceedings before a foreign court on behalf of its national residents who are victims of a nuclear incident.

The Convention on Supplementary Compensation applies to both the Paris and Vienna conventions. It seeks to establish a worldwide liability regime to supplement and enhance compensation measures under the two conventions with a view to increasing the amount available for nuclear damage. The parties have to ensure the availability of compensation to the tune of 300 million SDRs with respect to damage as defined under the 1997 Protocol. Beyond this amount, the Contracting Parties have to make available through public funds specific amounts calculated on the basis of a predetermined formula as an additional tier of compensation. The funds provided at the second level apply to nuclear damage suffered within the territory of a Contracting Party, in maritime areas beyond the territorial sea of a Contracting Party, and in the exclusive economic zone of a Contracting Party.¹²¹

Two other international agreements dealing with maritime transportation of nuclear goods also need to be noted. The 1962 Convention on the Liability of Operators of Nuclear Ships¹²² was negotiated in the backdrop of serious concerns about the potentially disastrous consequences that may ensue from an accident involving civilian vessels built with nuclear energy as their means of propulsion. Under the Convention, nuclear damage is defined as loss of life, personal injury, or loss or damage to property caused by a nuclear accident involving the nuclear fuel, radioactive products, or waste of the ship.¹²³ The operator of the ship is “absolutely liable” for any nuclear damage except when the incident was under circumstances

such as hostilities and civil war and the maximum liability is limited to 1,500 million gold francs per incident.

The operator must carry insurance certificate from the licensing State and the claimant may bring an action for compensation either before the courts of the licensing State or before the courts of the contracting state in whose territory the damage has been sustained within ten years from the date of the incident. The Convention also provides for mutual recognition and enforcement of judgements.¹²⁴ The practical utility of the Convention is still debatable given the fact that nuclear powered ships have ceased operating a number of years ago and the Convention is yet to enter into force as the ratification requirement remains to be a hurdle.

The 1971 Convention Relating to Civil Liability in the field of Maritime Carriage of Nuclear Material¹²⁵ seeks to avoid a conflict of competing legal norms in relation to the maritime transportation of nuclear material. The maritime legal instruments are applicable for the transportation of goods through the seas and a ship owner's liability might as well be governed by such legal principles. The Paris and Vienna Conventions seek to provide that liability for nuclear damage arising out of carriage of nuclear material is to be channelled through the operator of the installation to or from which the material is being transported. Thus, the 1971 Convention essentially seeks to pre-empt the possibility of a ship owner being hauled up for any responsibility in relation to a nuclear incident, unless of course he committed or omitted to do an act with intent to cause damage.¹²⁶

K. Oil Pollution Liability Convention

It is an established principle of general international law that, "States are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment' and that they 'shall be liable in accordance with international law".¹²⁷

This legal position obligates the coastal states to be responsible for activities that it permits within its jurisdiction or control. It seems, the flag states' responsibilities in respect of its vessels are also clear. The international trade in important petroleum products, generally, takes place through large oil tankers plying across the oceans. The sinking of ships such as the Torrey Canyon, the Amoco Cadiz and the Exxon Valdez brought home for the international community the potential for devastating consequences of such marine accidents upon coastal communities, fisheries, wild life and local ecology. The coastal State to intervene in case of an oil pollution threat and the question of liability for oil pollution came under serious international scrutiny under these unfortunate circumstances.

The response of the international community took the shape of progressive development of a legal regime encompassing all concerns relating to oil pollution from ships. The oil pollution liability and redress regime is essentially composed of three major international agreements and their numerous Protocols: the 1969 International Convention on Civil Liability for Oil Pollution Damage,¹²⁸ the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution,¹²⁹ and the 1977 Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources.¹³⁰ These Conventions, concluded under the auspices of the International Maritime Organization,¹³¹ have had a number of amendments for strengthening liability and jurisdiction provisions.¹³² It also addressed the felt need for improved compensatory requirements for persons who suffer damage resulting from the escape or discharge of oil from ships.

The Convention which places strict but limited liability on the owner of the ship at the time of the pollution damage resulting from the escape or discharge of oil from a seagoing vessel actually carrying oil in bulk as cargo. The owner's liability for any single incident depends upon, and limited by, the tonnage of the ship.¹³³ The owner of a tanker carrying more than 2000 tons of persistent oil as cargo is legally required to maintain insurance or other financial security to cover his liability under the Convention.¹³⁴ The liability is also limited in time: actions for compensation must be brought within three years of the occurrence of the incident. It cannot case shall an action be brought after six years from the date of the incident.¹³⁵ The regime admits only a limited number of exemptions. The owner is not liable if he can prove, inter alia, that the damage was as a result of certain events listed in Article III such as an act of war, hostilities etc or if the damage was exclusively caused by the intentional act or negligence of a third party.¹³⁶

It is provided that the claims for compensation for damage suffered from an incident of oil pollution may be preferred with the courts of the contracting party in whose territory the incident has occurred, regardless of where the ship causing the damage is registered. Article X of the Convention provides for mutual recognition and enforcement of judgments in the territories of all contracting parties. It restricts Article 2 of the Convention territorial application to pollution damage caused in the territory of a contracting party, including its territorial sea sought to exclude liability. No claim for compensation may however be made against the ship's manager, operator, charterer, crew, pilot, salvor, or their servants or agents, however, damage resulted from their personal act or omission 'committed with intent to

cause such damage, or recklessly and with knowledge that such damage, or recklessly and with knowledge that such damage would probably result' may lead to liability.¹³⁷ The 1992 Protocol further amended the jurisdictional scope of the impugned Convention to cover the exclusive economic zone of a contracting party or in area up to 200 miles from its territorial sea baselines. It may be noted that the 1969 Convention restricted the definition of "pollution damage" to "loss or damage...by contamination resulting from escape or discharge of oil", including the cost of preventive measures taken to minimize the damage. The 1992 Amendment has clarified this as including impairment of the environment and loss of profits arising from such impairment.¹³⁸ However, compensation for the impairment of the environment is limited to "costs of reasonable measures of reinstatement actually undertaken or to be undertaken".¹³⁹ Thus, only quantifiable losses are compensatable as against environmental damage as such. Preventive measures taken can of course be quantified and hence, lead to a claim for compensation.

It appears that one of the most important features of the 1992 Protocol has been to substantially increase the limitation of liability as indicated below: 1) for a ship not exceeding 5000 gross tonnage, liability is limited to 3 million SDR (about US \$ 3.8 million); 2) for a ship of 5000-1,40,000 gross tonnage, liability is limited to 3 million SDR plus 420 SDR (about US \$ 538) for each additional unit of tonnage; 3) for a ship over 1,40,000 gross tonnage, liability is limited to 59.7 million SDR (about US \$ 76.5 million).¹⁴⁰ As Michael Faure and Wang Hui note, the Protocol however, maintained the basic principle of 'a joint contribution by the oil industry and the shipping industry, as well as strict liability of the tanker owner with financial caps on liability'.¹⁴¹

L. The 1971 Oil Fund Convention

Fund Convention was established with the purposes of serving two major objectives: First, to guarantee full compensation to the victims of oil pollution damage in cases where the regime established by the 1969 Convention does not afford full protection. Secondly, it seeks to alleviate the financial burden imposed on the shipping industry by the 1969 Convention by shifting part of the financial responsibility to the oil cargo interests. The Convention established an International Fund for Compensation for Oil Pollution Damage with the objective of paying compensation in cases where a victim is unable to obtain full and adequate compensation under the terms of the 1969 Convention because either: (a) no liability arises under the 1969 Convention; or (b) the owner liable under the 1969 Convention

is financially incapable of meeting his obligations in full; or (c) the damage exceeds the owner's liability under the 1969 Convention.¹⁴² The Fund is obliged to indemnify the ship owner or his insurer for a portion of the ship owner's liability under the 1969 Convention.¹⁴³ Contributions to the Fund are made by all persons receiving oil by sea in Contracting States. The Fund may also provide assistance to a Contracting Party in the form of personnel, materiel or credit facilities to enable such Party to take measures to prevent or mitigate pollution damage for which the Fund may be called upon to pay compensation. The Convention applies to pollution damage caused in the territory, including the territorial sea, of a Contracting Party and to preventive measures taken by a Contracting Party within or outside its territory.

A number of Protocols were adopted to the 1971 Convention over the years to incorporate desired amendments in 1976, 1984, 1992 and 2000. In 1992, the IMO Protocol to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 replaced the earlier versions and the 1971 Convention ceased to be in force as from May 24, 2002.¹⁴⁴ The 1992 Protocol made important changes to the 1971 regime. The principal effects of these amendments are to "raise liability and compensation limits, to include pollution damage in the EEZ as well as in the territorial sea of a party to the Conventions, and to include the cost of preventive measures for the first time".¹⁴⁵

The 1992 Convention, extends the jurisdictional application of the regime to cover the exclusive economic zone and preventive measures taken within or outside the limits of national jurisdiction. It also establishes a separate Fund [similar to the 1971 International Oil Pollution Compensation Fund] since Parties to the 1992 Protocol cease to be Parties to the 1971 Oil Fund Convention. While the Fund's obligation to pay compensation continues to be limited, there has been significant improvement from the previous position. The total amount of compensation payable jointly by the ship owner and the Fund shall not now exceed 135 million SDRs for any one incident as against 30 million SDRs under the 1971 regime.¹⁴⁶

The proposals for an increased limit available under the 1992 Protocols began to emerge in the backdrop of two major incidents- the wreck of the Nakhodka [1997] off Japan and the Erika disaster off the coast of France [1999]. The Legal Committee of the International Maritime Organization took up the matter and [after deliberations in October 2000] passed resolutions increasing the limits of the 1992 Protocols by 50% and the new rules were to take effect in 2003 November.¹⁴⁷ In the meanwhile, the Prestige incident triggered further round of debates on the need for stronger measures and even higher limits.¹⁴⁸

M. Convention on Civil Liability

The Convention for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources¹⁴⁹ also establishes a strict liability regime for oil pollution damage arising from the exploration for and exploitation of seabed mineral resources. The operator of an offshore installation is liable to pay compensation for “loss or damage outside the installation caused by contamination resulting from the escape or discharge of oil from the installation,” including the cost of preventive measures. The Convention applies to damage suffered within the territory of a contracting party and to preventive measures wherever taken. Exemptions from liability are similar to those established by the Conventions previously examined.¹⁵⁰ Liability in respect of any one incident is limited to 40 million SDRs.¹⁵¹ The operator is required to maintain insurance or other financial security to cover his liability under the Convention with an amount that is not less than 35 million SDRs.¹⁵² Actions for compensation must be brought within 12 months of the date the victim knew or ought reasonably to have known of the damage, but in any case no action shall be instituted after four years.¹⁵³ Actions for compensation can be brought either in the courts of the contracting party where the damage was suffered or in the courts of the “Controlling State”.¹⁵⁴ The Convention provides for mutual recognition and enforcement of judgments in the territories of all contracting States.¹⁵⁵

This Convention is not yet in force. However, it has been argued that the failure of the Convention to enter into force is of ‘limited significance’ given the fact that “an industry scheme - the Oil Pollution Liability Agreement - has since 1975 provided compensation up to a limit of US \$ 120 million for the victims of oil pollution, under a system that broadly parallels the Mineral Resources Convention”.¹⁵⁶

N. Space Liability Convention

The 1972 Convention on International Liability for Damage Caused by Space Objects¹⁵⁷ was negotiated in the backdrop of increased space exploration activities by numerous states. It seeks to provide international rules and procedures concerning liability for damage caused by space objects and to ensure prompt payment of full and equitable compensation to victims of such damage. It is interesting to note that the Convention is the only international legal instrument that imposes absolute liability with practically no exemptions.

Under the Convention, a launching State is absolutely liable to pay compensation for damage caused by its space object on the surface of the Earth or to aircraft in flight.¹⁵⁸ For the purposes of the Convention, a “launching state” is the one that launches or procures the

launching of a space object or from whose territory such an object is launched. Exoneration from such liability is contemplated only in cases of contributory negligence on the part of a claimant State or of the victims it represents.¹⁵⁹ To be more precise, a launching state has to prove gross negligence or an act or omission on the part of the claimant with the deliberate intention to cause damage.

The definition of damage under the Convention does not include environmental damage. It is restricted to loss of life, personal injury or other impairment of health, or loss of or damage to property. The mechanism for reparation essentially follows the approach of traditional international law.¹⁶⁰ Thus claims for compensation are to be presented by the State that suffers damage, or whose nationals suffer damage, to the launching State through either diplomatic channels or the Secretary-General of the United Nations. Such claims must be made within one year following the occurrence of the damage or the identification of the liable launching State. If no settlement is reached through diplomatic negotiations within one year of presentation, the parties concerned are required to establish a Claims Commission. The decision of the Commission shall be final and binding if the parties have so agreed. Otherwise, the Commission shall render a final and recommendatory award, which the parties are enjoined to consider in good faith. The amount of compensation payable is to be determined in accordance with international law and the principles of justice and equity with a view “to provide such reparation in respect of the damage as will restore the person, natural or juridical, State or international organization on whose behalf the claim is presented to the condition which would have existed if the damage had not occurred”.¹⁶¹

O. Conclusion

The paper surveyed and identified the legal content of environmental obligations of states by examining the principles of state responsibility and rules of international liability as they emerge from a variety of sources: customary international law, international agreements, treaty practice of states, judicial decisions and expert opinions, including work of the International Law Commission. The short overview of multilateral liability frameworks in the areas of nuclear activities, oil pollution damage from ships and space exploration had the modest objective of finding out the main elements and capturing the main currents of issues relating to their functional effectiveness.

The law relating to environmental liability is still in its infancy and the process of evolution of legal norms in this sphere are certainly on, although the pace and extent still leaves much

to be desired. The concept of environmental obligations derives their inspiration and legal content from basic principles of international law. It is well known that breach of an international obligation entails state responsibility. What constitutes the environmental, international obligations of a state is a complex matter. The recent ILC Draft Articles on Prevention of Transboundary Harm and the Draft Principles on the Allocation of Loss in the case of Transboundary Harm, represent the growing maturity of the law relating to environmental obligations of States. It is by now clear that states have an obligation to prevent significant transboundary harm and to reduce the risk thereof and to cooperate with other states in times of emergency in the matter. The progressive evolution and development of international rules of state responsibility and liability must be seen as positive inducements to fulfil the obligations relating to prevention, restoration, and compensation.

The survey of international legal instruments suggests that these instruments create a civil liability regime. Among them, other than a few that impose subsidiary State liability only one establishes original State liability. It seems the States have been reluctant to establish international rules of strict liability for transboundary harm arising from otherwise lawful activities. It appears that in general, liability is tied to the conduct of a dangerous activity and is generally channelled to the entity that undertakes the activity. The earlier instruments, such as the oil pollution and nuclear-damage treaties, conceived of damage only in terms of injury to person or property. The recent amendments in these regimes show that they are increasingly being sensitive to environmental aspects as well. Still the compensation for environmental damage per se [besides loss of profits arising from any impairment of the environment], is largely restricted to the costs of measures of reinstatement actually undertaken or to be undertaken. The instruments are largely silent on the issue of compensation in situations where such reinstatement is not feasible. In the wake economic globalization, economic interests of states and business entities have a major political role. But, harmonization of operational conditions in potentially dangerous activities can help the cause of strengthening international regulation to meet with the challenges of the day.

REFERENCES

- ¹ Owing to their separate characteristics, the International Law Commission has treated the issues relating to these concepts separately in its own studies. See *The Work of the International Law Commission*, Vol. I, 6th edn. (New York: United Nations, 2004).
- ² Catherine Tinker, "Responsibility for Biological Diversity Conservation under International Law" in Charlotte Ku and Paul F. Diehl (eds.) *International Law: Classic and Contemporary Readings* (New Delhi: Viva Books, 2004), pp. 411- 38, at p. 414.
- ³ According to Article 2 of the Draft Articles on Responsibility of States for Internationally Wrongful Acts, "There is an internationally wrongful act of a State, when conduct consisting of an action or omission is

- attributable to the State under international law; and that conduct constitutes a breach of an international obligation of the State.” See Report of the International Law Commission, UNGAOR, 56th Session, Supplement No. 10, A /56/10 (New York: United Nations, 2001).
- 4 Permanent Court of Arbitration, *Palmas Case*, 2 HCR (1928) 84, p. 93.
- 5 United Kingdom v. Albania, 1949 International Court of Justice (ICJ) Reports 1949, p. 4.
- 6 Ibid, p. 22.
- 7 American Journal of International Law, vol. 35, 1941, p. 736.
- 8 Trail Smelter Award, *ibid*.
- 9 Australia v France, ICJ Reports 1974, 253 at p. 389.
- 10 Ibid.
- 11 Lake Lanoux Arbitration (*Spain v. France*), 1957 International Law Reports (ILR) 101.
- 12 Ibid.
- 13 See Johan G.Lammers cited in M.Gandhi, “State Responsibility and International Environmental Law” in Bimal N. Patel (ed.) *India and International Law* (Leiden: Martinus Nijhoff, 2005), pp. 223-247, at p.225.
- 14 Report of the UN Conference on the Human Environment, UN Doc. A/ CONF./ 48/ 14, 1972. Also see, 11 International Legal Materials 1416, at p. 1416.
- 15 UNGA Res. 2398 (XXIII), 1968; See also UNGA Res. 2581 (XXIV), 1969.
- 16 Several amendments have taken place in the International Plant Protection Convention in the last four decades. For the original text and subsequent revisions, visit, <http://www.ippc.int/> (last visited on April 19, 2014).
- 17 See Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (*Moscow*), 480 UNTS 3 (1964). The Treaty entered into force on 10 October 1963.
- 18 See African Convention on the Conservation of Nature and Natural Resources (*Algiers*), 1001 UNTS 4 (1968). The Convention entered into force on 16 June 1969.
- 19 See UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, 11 International Legal Materials 1358 (1972). The Convention entered into force on 17 December 1975.
- 20 Article XVI (1) (b), African Conservation Convention, see 18.
- 21 See Charter of Economic Rights and Duties of States, UNGA Res. 3281 (XXVII), 1974.
- 22 Convention on Long Range Transboundary Air Pollution (*Geneva*), 18 International Legal Materials 1442 (1979). The Convention entered into force on 16 March 1983.
- 23 See Convention for the Protection of the Ozone Layer (*Vienna*), 26 International Legal Materials 1529 (1985). The Convention entered into force on 22 September 1988.
- 24 See United Nations Framework Convention on Climate Change, 31 International Legal Materials 851 (1992). The Convention entered into force on 16 March 1995.
- 25 See Article 3, Convention on Biological Diversity, 31 International Legal Materials 818 (1992). The Convention entered into force on 10 December 1993.
- 26 See Article 194 (2) of the United Nations Convention on the Law of the Sea (*Montego Bay*), opened for signature December 10, 1982, see 1833 UNTS 397.; See also 21 International Legal Materials 1261 (1982). The Convention entered into force on 16 November 1994.
- 27 Advisory Opinion of 8 July 1996, 35 International Legal Materials 809 (1996).
- 28 Permanent Court of International Justice, *Case Concerning the Factory at Chorzow*, 13 September 1928, Series A, No.8 / 9 1927).
- 29 PCIJ Series A, No. 17, 1928, p.29.
- 30 PCIJ Ser. A, No. 13, 46-48.
- 31 *Hungary v. Slovak Republic, Gabčíkovo- Nagymaros Project*, ICJ Reports 1997, p. 7. The judgement is available at <http://www.icj-cij.org/docket/files/92/7375.pdf> (last visited on April 19, 2014).
- 32 ICJ Reports 1970, p. 4. The Court articulated the concept of erga omnes obligations to underscore the point about responsibility for obligations beyond the national jurisdictions of states.
- 33 See Francisco Orrego Vicuña, “State Responsibility, Liability and Remedial Measures under International Law” in E. B. Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions*, (Tokyo: United Nations University, 1992), pp. 124-40.
- 34 Article 42 says: “A State is entitled to as an injured State to invoke the responsibility of another state if the obligation breached is owed to :
- (a) That state individually; or (b) A group of states including that state, or the international community as a whole, and the breach of the obligation:
- (i) Specifically affects that State; or
- (ii) Is of such a character as radically to change the position of all the other States to which the obligation is owed with respect to the further performance of the obligation”.

- ³⁵ Article 48 of the ILC Draft Articles reads: “ Invocation of responsibility by a State other than an injured State:
1. Any State other than the injured state is entitled to invoke the responsibility of another state in accordance with paragraph 2 if:
(a) The obligation breached is owed to a group of states including that state, and is established for the protection of a collective interest of the group; or,
(b) The obligation breached is owed to the international community as a whole.
2. Any State entitled to invoke responsibility under paragraph 1 may claim from the responsible state:
(a) Cessation of the internationally wrongful act, and assurances and guarantees of non-repetition in accordance with article 30; and
(b) Performance of the obligation of reparation in accordance with the preceding articles, in the interest of the injured State or of the beneficiaries of the obligation breached.
3. The requirements for the invocation of responsibility by an injured state under articles 43, 44 and 45 apply to an invocation of responsibility by a state entitled to do so under paragraph 1”.
Draft Articles on Responsibility of States for Internationally Wrongful Acts , in Report of the International Law Commission on the work of its Fifty-third session, UN Doc.A/56/10 (2001). Available at www.un.org/law/ilc (last visited on April 19, 2014).
- ³⁶ See Philippe J. Sands, *Principles of International Environmental Law* (Manchester: Manchester University Press, 2003), p. 218.
- ³⁷ Peter H. Sand, “Environmental Summitry and International Law”, *Yearbook of International Environmental Law*, vol. 13, 2002, pp. 21-41 at p. 30.
- ³⁸ See, note 34.
- ³⁹ See Daniel Bodansky and John R. Crook, “The ILC’s State Responsibility Articles: Introduction and Overview”, *American Journal of International Law*, vol. 96, 2002, p. 773.
- ⁴⁰ James Crawford, *International Law Commission’s Draft Articles on State Responsibility: Introduction, Text and Commentaries*, Cambridge: CUP (2002), at p.12.
- ⁴¹ Alan E. Boyle, “State Responsibility and International Liability for Injurious Consequences of Acts not prohibited by International Law: A Necessary Distinction?”, *International and Comparative Law Quarterly*, vol. 39, no. 1, 1990, p. 10.
- ⁴² Edith Brown Weiss, “Seeking State Responsibility in the Twenty First Century”, *American Journal of International Law*, vol. 96, (2002), at p. 782.
- ⁴³ Article 30, ILC Draft Articles on State Responsibility for Wrongful Acts.
- ⁴⁴ *Ibid*, Article 31.
- ⁴⁵ *Ibid*, Article 35.
- ⁴⁶ *Ibid*, Article 36.
- ⁴⁷ *Ibid*, Article 37.
- ⁴⁸ *Ibid*, Article 38.
- ⁴⁹ *Ibid*, Article 55.
- ⁵⁰ See Note 42, p. 796.
- ⁵¹ See Daniel Bodansky and John R. Crook; note 39, p. 774.
- ⁵² Patricia Birnie, “International Environmental Law: Its Adequacy for Present and Future Needs” in Hurrell, Andrew & Kingsbury, Benedict (ed.), *the International Politics of the Environment: Actors, Interests and Institutions* (Oxford: Clarendon Press, 1992), pp. 51-84 at p. 66.
- ⁵³ See generally Brian Smith, *State Responsibility and the Marine Environment* (Oxford: Clarendon Press, 1988).
- ⁵⁴ Susan H. Bragdon, “ National Sovereignty and Global Environmental Responsibility: Can the Tension be Reconciled for the Conservation of Biological Diversity?”, *Harvard International Law Journal*, vol. 33, 1992, p. 391.
- ⁵⁵ Alan E. Boyle, note 41, p. 9.
- ⁵⁶ See Articles 139, 235, 263.
- ⁵⁷ The 1960 Paris Convention on Third Party Liability in the field of Nuclear Damage; 1962 Brussels Convention on the Liability of Operators of Nuclear Ships; 1963 Vienna Convention on Civil Liability for Nuclear Damage; 1969 Convention on Civil Liability for Oil Pollution Damage, with 1984 Protocol.
- ⁵⁸ Alan E. Boyle, see note 41, p. 9.
- ⁵⁹ See Catherine Tinker, see note 2; for an especially illuminating, trenchant criticism of the ILC work, Alan E. Boyle, note 41.
- ⁶⁰ See “International Liability for Injurious Consequences arising out of Acts not prohibited by International Law”, (Draft Articles on Prevention of Transboundary Harms from Hazardous Activities) in Report of the International Law Commission, 53rd Session (New York: United Nations, 2001), pp. 366-436.

⁶¹ Article 1 of the Draft Articles states: “The present articles apply to activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences”. Article 2 (a) defines “risk of causing significant transboundary harm” as including risks taking the form of a high probability of causing significant transboundary harm and a low probability of causing disastrous transboundary harm” and 2 (b) defines harm as “harm caused to persons, property or the environment”, Ibid.

⁶² See paragraphs 4 and 5 of the Commentary to Article 2, Draft Articles on Prevention of Transboundary Harms from Hazardous Activities, see note 60.

⁶³ See P.S. Rao, First Report on the Legal Regime for Allocation of Loss In Case of Transboundary Harm Arising out of Hazardous Activities, A/ CN.4/ 531, paragraph 27. The International Law Commission observed that it was desirable to study those activities which are beyond the scope of the present articles to be equally important and a suitable subject for the Commission to work upon, with a fresh mandate from the General Assembly.

⁶⁴ Article 3 of the Draft Articles states: “The State of origin shall take all appropriate measures to prevent significant transboundary harm or at any event to minimize the risk thereof”. Article 4 states: “States concerned shall cooperate in good faith and, as necessary, seek the assistance of one or more competent international organizations in preventing significant transboundary harm or at any event in minimizing the risk thereof”, see note 60.

⁶⁵ It may be noted in this context Article 11 of the Rio Declaration which states: “States shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply...” See, note 1.

⁶⁶ See “Draft Articles on Prevention of Transboundary Harms from Hazardous Activities”, see note 60, Paragraph (1) of the Commentary to Article 4, p. 396.

⁶⁷ See Principle 16, Rio Declaration, see note 1.

⁶⁸ For the report of the Working Group, see Official Records of the General Assembly, Fifty seventh Session, Supplement 10 (A/ 57/10), Chapter VII. The expert group was essentially seeking to set in motion a more flexible approach given the lack of consensus on the contours of an international liability regime as such. The 2002 Working Group further recommended that the Commission should:

a) Limit the scope of the topic to the same activities which are covered by the regime of the prevention adopted by the Commission in 2001;

b) Cover within the scope of the topic loss to persons, property, including the elements of State patrimony and natural heritage, and the environment within national jurisdiction.

⁶⁹ P.S. Rao, First Report on Prevention of Transboundary Damage from Hazardous Activities, A/CN.4/ 487, paragraphs 71-86.

⁷⁰ The Commission also requested states to provide their comments and observations on the Draft principles by January 01, 2006.

⁷¹ Article 3 states: “The present draft principles aim at ensuring prompt and adequate compensation to victims of transboundary damage, including damage to the environment”. The preamble notes the concern of the General Assembly: “...that appropriate and effective measures should be in place to ensure, as far as possible, that those natural and legal persons, including states, that incur harm or loss as a result of such incidents should be able to obtain prompt and adequate compensation....”

⁷² See Article 1 of the Draft Principles on Prevention of Transboundary Harm from Hazardous Activities, United Nations General Assembly, International Liability for Injurious Consequences Arising out of Acts Not Prohibited under International Law: Draft Principles on the Allocation of Loss in the case of Transboundary Harm Arising out of Hazardous Activities, A/CN.4/L.662, 20 July 2004. For the latest version of these principles, see Annex II.

⁷³ Article 2 (d) of the Draft Articles reads:

⁷⁴ See supra note 52. Article 2 (a) of the Draft Principles states: “ ‘Damage’ means **significant** damage caused to persons, property or the environment; and includes:

(i) Loss of life or personal injury;

(ii) Loss of, or damage to, property, including property which forms part of the cultural heritage; Loss or damage by impairment of the environment;

(iii) The costs of reasonable measures of reinstatement of the property, or environment, including natural resources;

(iv) The costs of reasonable response measures.”

⁷⁵ Principle 4 states: Prompt and adequate compensation-

1. Each state should take necessary measures to ensure that prompt and adequate compensation is available for victims of environmental damage caused by hazardous activities located within its territory or otherwise under its jurisdiction or control.
2. These measures should include the imposition of liability on the operator or, where appropriate other person or entity. Such liability should not require proof of fault. Any conditions, limitations or exceptions to such liability should be consistent with draft principle 3.
3. These measures should also include the requirement on the operator or, where appropriate other person or entity, to establish and maintain financial security such as insurance, bonds or other financial guarantees to cover claims of compensation.
4. In appropriate cases, these measures should include the requirement for the establishment of industry wide fund at the national level.
5. In the event that the measures under the preceding paragraphs are insufficient to provide adequate compensation, the states should also ensure that additional financial resources are allocated.

⁷⁶ Ibid.

⁷⁷ See, note 72.

⁷⁸ See Principle 6 (2), Ibid.

⁷⁹ See Principle 7(1), Ibid.

⁸⁰ See Principle 7 (2), Ibid.

⁸¹ See note 63, 21 March 2003, paragraph 43-46.

⁸² International Law Commission, Survey of Liability Regimes relevant to the topic of International Liability for Injurious Consequences arising out of Acts not prohibited under International Law, A/CN.4/471, 1995, paragraph 32 of the commentary to Article 5.

⁸³ Patricia Birnie and Alan Boyle, *International Law and the Environment*, 2nd edn. (Oxford: Oxford University Press, 2002), p. 281.

⁸⁴ Some of the most important liability regimes that have their differing objectives in varied spheres of industrial and other human activities are the following: The Convention on Third Party Liability in the field of Nuclear Energy, 1960; Convention on Civil Liability for Nuclear Damage, 1963; Convention on the Liability of Operators of Nuclear Ships, 1962; Convention Relating to Civil Liability in the field of Maritime Carriage of Nuclear Material, 1971; International Convention on Civil Liability for Oil Pollution Damage, 1969; Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969; International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971; and Protocol of 1992 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971; Convention on Civil Liability for Oil Pollution Damage resulting from Exploration for, and Exploitation of Sea-bed Mineral Resources, 1977; Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels, 1989; Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, 1993; International Convention on Liability and Compensation for Damage in connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996.

⁸⁵ 961 UNTS 187. The Convention entered into force on 1 September 1972. See also Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, 610 UNTS 205, Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, UNGA Res. 1962 (XVIII) of 13 December 1963; Principles Relevant to the Use of Nuclear Power Sources in Outer Space, UNGA Res. 47/68 of 14 December 1992.

⁸⁶ 28 International Legal Materials, 657 (1989).

⁸⁷ 31 International Legal Materials, 818 (1992).

⁸⁸ 39 International Legal Materials, 1027 (2000).

⁸⁹ See, for example, the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter; the 1976 Convention for the Protection of the Mediterranean Sea against Pollution, Kuwait Regional Convention for Cooperation on the Protection on the Marine Environment from Pollution, 1978; the Convention on Long-range Transboundary Air Pollution, Geneva, 1979; the Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, 1981; the United Nations Convention on the Law of the Sea, Montego Bay, 1982; the Regional Convention for the Conservation of the Red Sea and Gulf of Eden Environment, 1982 ; the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, 1983 ; The Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, 1985; the Convention for the Protection of the Natural Resources and the Environment of the South Pacific Region, 1986; the Protocol for the Protection of the Marine Environment against Pollution from Land- based Sources, 1990 ; the Bamako Convention on the

- Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, 1991 ; the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992 ; the Convention for the Protection of the Marine Environment of the North East Atlantic, 1992 ; the 1992 Convention on the Protection of the Black Sea against Pollution; the Convention on the Transboundary Effects of Industrial Accidents, 1992; the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 1992; the Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region, 1995 and the 2003 World Health Organization Framework Convention on Tobacco Control.
- ⁹⁰ Philippe Sands, *Principles of International Environmental Law* (Manchester: Manchester University Press, 1995), p. 629.
- ⁹¹ See the Preamble of the Paris Convention, take from note 111.
- ⁹² Guenther Doeker and Thomas Gehring argue that the primary objective of the nuclear liability treaties is to protect the industry rather than its potential victims. See “Private or International Liability for Transnational Environmental Damage: The Precedent of Conventional Liability Regimes”, 2 *Journal of Environmental Law*, vol. 2, no. 1, 1990, pp. 8-12. See also Louise de La Fayette, “Nuclear Liability Revisited”, *Review of European Community and International Environmental Law*, vol. 1, 1992, pp. 443-45.
- ⁹³ Hereinafter “the Paris Convention”, adopted in Paris on 29 July 1960 under the auspices of the Nuclear Energy Agency of the Organization for Economic Cooperation and Development (OECD/NEA), 956 UNTS 251 (1960); The Paris Convention is a regional instrument for West European countries. It entered into force on 1 April 1968 and currently has 14 Contracting Parties. Amendments were incorporated in 1964 and 1982.
- ⁹⁴ Hereinafter “the Vienna Convention”, adopted on 21 May 1963 under the auspices of the International Atomic Energy Agency (IAEA); The Vienna Convention is global in character. It entered into force on 12 November 1977 and currently has 32 Contracting Parties. For the text, see 2 *International Legal Materials* 727 (1963).
- ⁹⁵ Herein after “the 1971 Brussels Convention”. Adopted on 17 December 1971, under the auspices of IAEA, OECD and the International Maritime Organization (IMO). The 1971 Brussels Convention is global in character. It entered into force on 15 July 1975 and currently has 14 Contracting Parties.
- ⁹⁶ Hereinafter “the Brussels Supplementary Convention”. For the text, see 2 *International Legal Materials* 685 (1963). See also the Protocol to Amend the Convention of 31 January 1963 Supplementary to the Paris Convention of 29 July 1960 on Third Party Liability in the Field of Nuclear Energy, as amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982. All references are to 2004 Brussels Convention , unless otherwise specified.
- ⁹⁷ See the Protocol to Amend the Convention on Third Party Liability in the Field of Nuclear Energy of 29 July 1960, as Amended by the Additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982 (2004 Paris Convention).
- ⁹⁸ Hereinafter “the Joint Protocol,” negotiated at the initiative of both the IAEA and OECD/NEA, entered into force on 27 April 1992.
- ⁹⁹ Hereinafter “the Vienna Amending Protocol”. For the text, see 36 *International Legal Materials* 1462 (1997).
- ¹⁰⁰ Hereinafter, “the Convention on Supplementary Compensation”.
- ¹⁰¹ See Article 3 of the Paris Convention.
- ¹⁰² See Article 9 of the Paris Convention.
- ¹⁰³ See Article 3 of the Paris Convention.
- ¹⁰⁴ See Article 4 of the Paris Convention.
- ¹⁰⁵ See Birnie and Boyle, *International Law and the Environment*, p. 477, 2nd edn. (Oxford: Oxford University Press, 2002). Thus, the primary purpose of the 1971 Brussels Convention is to exonerate any person transporting nuclear material, who might be held liable by virtue of an international convention in the field of maritime transport, from liability for nuclear damage in cases where the operator of a nuclear installation is liable under the Paris or the Vienna Conventions.
- ¹⁰⁶ See Article 3 (a) of the Brussels Supplementary Convention.
- ¹⁰⁷ See Article 13 (a) and (b) of the Paris Convention.
- ¹⁰⁸ See Thomas Gehring and Markus Jachtenfuchs, “Liability for Transboundary Environmental Damage: Towards a General Liability Regime?”, *European Journal of International Law*, vol. 4, 1993, pp. 92-106 at
- ¹⁰⁹ See Article 8 of the Paris Convention.
- ¹¹⁰ See Article 13 (d) of the Paris Convention.
- ¹¹¹ Brussels Supplementary Convention, 1041 UNTS 358. The Convention came into force in 1974.

- ¹¹² The formula is based on proportions determined partly by the relative Gross National Product and partly by the relative amounts of thermal power produced by the nuclear reactors in the Contracting States. See Articles 3 and 12 of the Paris Convention, see n. 93.
- ¹¹³ Article 12, *ibid*.
- ¹¹⁴ See Survey of Liability Regimes relevant to the topic of International Liability for Injurious Consequences arising out of Acts not Prohibited by International Law, para. 144, UNGA Doc. A/CN.4/543, 2004.
- ¹¹⁵ Currently the Joint Protocol has 20 Contracting Parties.
- ¹¹⁶ Robin R. Churchill, "Facilitating (Transnational) Civil Liability Litigation for Environmental Damage by means of Treaties: Progress, Problems and Prospects," 12 Yearbook of International Environmental Law, vol. 12, 2003, p. 3-41, at p. 10.
- ¹¹⁷ See, for example, Article 7 of the Vienna Amending Protocol; Article III of the Convention on Supplementary Compensation.
- ¹¹⁸ *Ibid*, see Article 2.
- ¹¹⁹ *Ibid*, See Article 3.
- ¹²⁰ *Ibid*, See Article 8.
- ¹²¹ See Article V of the Supplementary Compensation Commission.
- ¹²² Hereinafter, "the Nuclear Ships Convention". For the text, see American Journal of International Law, vol. 57, 1963, p. 268.
- ¹²³ See Nuclear Ships Convention, Art II.
- ¹²⁴ Robin R. Churchill, see note 116, p. 14.
- ¹²⁵ Convention relating to Civil Liability in the field of Maritime Carriage of Nuclear Material, 11 International Legal Materials 277 (1972).
- ¹²⁶ See Robin R. Churchill, note 116, at p.13.
- ¹²⁷ See Article 235 (1) of the UN Convention on the Law of the Sea, 1982, 21 International Legal Materials 1261 (1982).
- ¹²⁸ 973 UNTS 3 (1969), Hereinafter referred to as "the Oil Pollution Convention". The Oil Pollution Convention came into force on June 19, 1975. The 1992 Protocol to the Oil Pollution Convention has now completely replaced the original Convention.
- ¹²⁹ 11 International Legal Materials 284 (1972). Hereinafter referred to as "the Oil Fund Convention". The Oil Fund Convention entered into force on October 16, 1978.
- ¹³⁰ 16 International Legal Materials 1450 (1977).
- ¹³¹ See the website of the International Maritime Organization (IMO) at: www.imo.org/conventions
- ¹³² See IMO amendments in the form of additional Protocols in 1976, 1984, 1992, 2000 and 2003. For instance, the 1984 Protocol essentially sought to increase the amount of compensation to deal with major oil spill problem in the backdrop of the older scheme proving ineffective. The Protocol never entered into force. However it formed the basis of the 1992 Protocol. For the text, see Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage (London, 25 May 1984).
- ¹³³ See the 1992 IMO Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969, available at <http://www.imo.org/About/Conventions/Pages/Home.aspx> (accessed on April 19, 2014).
- ¹³⁴ See X.Chen, Limitation of Liability for Maritime Claims: A Study of US Law, Chinese Law and International Conventions (Hague: Kluwer Law International, 2001), p. 140.
- ¹³⁵ Article VIII, Oil Pollution Convention. See, note 128.
- ¹³⁶ Article III (2) to the Oil Pollution Convention provides the no liability situations when the owner proves that the damage : (a) "Resulted from an act of war, hostilities, civil war, insurrection or a natural phenomena of an exceptional, inevitable or irresistible character (b) Was wholly caused by an act or omission done with the intent to cause damage by a third party, or (c) Was wholly caused by the negligence or other wrongful act of any Government or other authority responsible for the maintenance of lights or other navigational aids in the exercise of that function". See also Article III (3) which states that: "if the owner proves that the pollution damage resulted fully or partially either from an act or omission done with intent to cause damage by the person who suffered the damage or from the negligence of that person, the owner may be exonerated wholly or partially from his liability to such person".
- ¹³⁷ Under Article 3 of the 1992 Protocol to amend the International Convention on Civil Liability for Oil Pollution It may be noted that the 1969 Oil Pollution Convention did not bar claims against the ship operator, nor against the pilots. For the text of the Convention, see Alan Boyle, Basic Documents on International Law and the Environment (Oxford: Oxford University Press, 1995).
- ¹³⁸ Article 2, *ibid*.
- ¹³⁹ Article 2 (3), *ibid*.

- ¹⁴⁰ See Michael Faure and Wang Hui, "The International Regime for the Compensation of Oil Pollution Damage: Are They Effective?" *Review of European Community and International Environmental Law*, vol. 12, no. 3, 2003, pp. 242- 253, at p. 246.
- ¹⁴¹ Ibid.
- ¹⁴² See Article 4, Oil Fund Convention, 1971, see note 128.
- ¹⁴³ See Article 5, *ibid*.
- ¹⁴⁴ See Malcolm N. Shaw, *International Law*, 5th edn. (Cambridge: Cambridge University Press, 2003), p. 809.
- ¹⁴⁵ P.W. Birnie and A.E. Boyle, *International Law and the Environment*, 2nd edn. (Oxford: Oxford University Press, 2002), pp. 385-86.
- ¹⁴⁶ See the 2003 Protocol establishing an International Oil Pollution Compensation Supplementary Fund. The amendments incorporated in 2000 to the 1992 Fund Protocol further raised the amount to the current level of 203 million SDRs.
- ¹⁴⁷ The compensation limits set by the new amendments were as follows: "1) for a ship not exceeding 5000 gross tonnage, liability is limited to 4.51 million SDR- Under the 1992 protocol , the limit was 3 million SDR; 2) for a ship of 5000-1,40,000 gross tonnage, liability is limited to 4.51 million SDR Plus 631 SDR for each additional gross tonne over 5000 tonnes- under the 1992 Protocol, the limit was 3 million SDR Plus 420 for each additional gross tonne; 3) for a ship over 1,40,000 gross tonnage, liability is limited to 89.77 million SDR- under the 1992 Protocol, the limit was 59.7 SDR." See Michael Faure and Wang Hui, note 99, p. 248.
- ¹⁴⁸ See Communication from the Commission to the European Parliament and to the Council of 20 December 2002 on Improving Safety at Sea in response to the Prestige Accident, COM./ 2002/681 available at www.europa.com (accessed on 10 June, 2006).
- ¹⁴⁹ The Convention for Oil Pollution Damage resulting from Exploration for and Exploitation of Seabed Mineral Resources For the text, see 16 *International Legal Materials* 1451 (1977). The Convention is not yet in force.
- ¹⁵⁰ Ibid, see Article 3.
- ¹⁵¹ Ibid, Article 6.
- ¹⁵² Ibid, Article 8.
- ¹⁵³ Ibid, Articles 10, 11.
- ¹⁵⁴ A "Controlling State" means a State party which exercises sovereign rights for the purpose of exploring for and exploiting the resources of the seabed and its subsoil in the area in or above which the installation is situated.
- ¹⁵⁵ See the Mineral Resources Convention, Article 12.
- ¹⁵⁶ See Robin Churchill, see note 116, pp. 24-5. The text of the Oil Pollution Liability Agreement can be found at <http://www.opol.org.uk/agreement.htm> (accessed on April 19, 2014).
- ¹⁵⁷ For the text of Space Liability Convention, see 10 *International Legal Materials* 965 (1971).
- ¹⁵⁸ See Article II of the Space Liability Convention.
- ¹⁵⁹ See Article VI of the Space Liability Convention.
- ¹⁶⁰ See Thomas Gehring and Markus Jachtenfuchs, "Liability for Transboundary Environmental Damage: Towards a General Liability Regime", *European Journal of International Law*, vol. 4, 1993, p. 102.
- ¹⁶¹ See Article XII of the Space Liability Convention, 1972. The international legal instrument is available at <http://www.oosa.unvienna.org/oosa/SpaceLaw/liability.html> (accessed on April 19, 2014).