

“Environmental Damage”: Challenges and opportunities in International Environmental Law

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ABSTRACT

The consensus of the concept of “environmental damage” by the international community is crucial to address the issues concerning liability and responsibility of states in international environmental law. Moreover, compensation of environmental damage is very difficult to achieve in international environmental law. “Compensation” is reparation applying for loss or damage as a result of acts or omissions that are subjects of international law and the effect of natural disasters on the people, property and the environment. The complexity of human-caused environmental damage, the limit of prevention and compensation of damage in the national, regional and global context are the main limit of the development of international law. For all these reasons, the consensus of “environmental damage” in international environmental law is being considered as a key to define international responsibility of state. The initial aim of this paper is to examine the evolution of the concept of “environmental damage” in international environmental law, and secondly, to determine the challenges of this concept in international environmental law.

Introduction

Environmental damage is the basic responsibility of international states. First of all, it is important to characterize the environmental damage in international environmental law. In this context, international environmental damage means to cause damage to more than one territory, with serious consequences, such as contamination of soil, water, nuclear or air pollution (Springer, 1977). On the other hand, the aim of international

environmental law is to prevent the damage, protect and preserve the global environment. For this reason, the consensus of the concept of “environmental damage” in international environmental law is being considered as a prerequisite to the protection of the environment. In this perspective, the definition of “damage” caused by environmental pollution or other sources of degradation has been elaborated in many international channels. International environmental law is rapidly developing to define “damage” or “harm” in order to prevent, conserve and protect the global environment.

It is clear the environment has no borders. Based on this fact, all countries in the world should cooperate for environmental protection. In fact, states are increasingly aware of cross-border environmental damage especially because public opinion is sensitive to all forms of environmental degradation or pollution arising from other countries (Poorhashemi, Zarei & Khalatbari, 2013). Awareness of cross-border environmental damage may lead to development of international cooperation between states. Indeed, after the United Nations Conference on the Human Environment (Stockholm declaration 1972), the global environment is considered as a mankind heritage. In this perspective, international matters concerning the protection and improvement of the environment should be handled in a cooperative spirit by all countries, large and small, on an equal footing. Cooperation through multilateral or bilateral arrangements or other appropriate means is essential to effectively control, prevent, reduce and eliminate adverse environmental effects resulting from activities conducted in all spheres; in such a way that due account is taken of the sovereignty and interests of all states (Principle 24 of Stockholm declaration 1972).

The definition of "environmental damage" is one of the common concerns of the number of international regulations (binding or non-binding instruments) from the Stockholm Declaration 1972 to the 2030 Agenda for Sustainable Development (Sustainable Development Goals, 2015). It is clear the concept of the "environmental damage" is becoming a major part of international norms and treaties.

In this context, this study has been divided into two main parts. The first part examines the evolution of the concept of "environmental damage" in international environmental law and the second part analyses the challenges of the concept of "environmental damage" in international environmental law.

Results and Discussion

I. Evolution of "Environmental damage" in international environmental law

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In the past four decades, states have concluded a number of bilateral and multilateral conventions containing the definition of "environment" and "environmental damage". The environmental damage has several difficulties in light of the international treaties. It is clear that in international environmental law, the damage

should be repaired, and at the same time, it should have the following characteristics: certain, personal and direct.

The early effort to define the "damage" in international law has been done by the Convention on international liability for damage caused by space objects of 1972 (United Nations, Treaty Series, vol. 961, p. 187). According to Article 1 of this Convention, "damage" means loss of life, personal injury or other impairment to health; or loss of or damage to property of states or of persons, natural or juridical, or property of international intergovernmental organizations (Tou 2008).

According to Article 31 of the Convention on the Law of the Sea (Montego bay 1982), the states "bear international responsibility for any loss or damage to the coastal State resulting from the non-compliance by a warship or other government ship operated for non-commercial purposes with the laws and regulations of the coastal State concerning passage through the territorial sea or with the provisions of this Convention or other rules of international law" (Montego bay 1982). Concerning the "pollution of the marine environment", the Convention defined it as "introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities" (Article 1/4 Montego bay 1982). In fact, the term of environmental damage is not defined clearly in this convention. However, it provides that the states have responsibility for implementation of the international obligations concerning the protection of marine environment. In addition, the states should promptly assure the adequate compensation in the case of environmental damage caused by environmental pollution. In this context, states have to cooperate for the implementation of international law and the development of international law concerning the responsibility and liability for the assessment of and compensation of environmental damage and to set up a system of compensation for damages (Article 235 Montego bay 1982). International Convention on civil liability for oil pollution damage (CLC 1969) defined environmental pollution with the same approach (Bernasconi 1999).

One of the most significant current discussions in international environmental law is restoration and compensation of environmental damage. In this regard, the convention on civil liability for oil pollution damage (CLC), (Brussels 1969) and Protocol to amend the international Convention on civil liability for oil pollution damage (London 1984) insist on the linkage between damage and restoration on one side and preventive and deterrent measures to reduce damage cost of environmental issues and reasonable measures to raise the strength to cover the environment, on the other side. In terms of this Protocol, "Pollution damage" is defined as "(a) loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken; (b) the costs of preventive measures and further loss or damage caused by preventive measures" (London 1984).

Moreover, the Convention on the regulation of Antarctic mineral resource activities (Wellington 1988) expressly defines “environmental damage” in its paragraph 15 of Article 1, that any impact on the living or non-living components of that environment or those ecosystems, including harm to atmospheric, marine or terrestrial life, beyond that which is negligible or which has been assessed and judged to be acceptable pursuant to the convention (Wellington 1988). This definition not only involves the definition of damage, but also states the definition of the environmental damage. Therefore, it is possible to generalize this definition to argue that the concept of environmental damage is the damage that is caused to the environment. In other words, environmental damage is considered as a change in a specific section or the entire environment, that has a significant detrimental impact on the quality of the environment, or a change in its ability to maintain an acceptable quality of life or a lasting and stable balance of ecosystems. In comparison with other international conventions, the definition of environmental damage is clearer than others (Larsson, 2009).

It is becoming increasingly difficult to ignore the Convention on civil liability for damage caused during carriage of dangerous goods by road, rail and inland navigation vessels (CRTD) of 1989 in article 1, Para. 10 which defined the “damage” as “(a) loss of life or personal injury on board or outside the vehicle carrying the dangerous goods caused by those goods; (b) loss of or damage to property outside the vehicle carrying the dangerous goods caused by those goods, to the exclusion of any loss of or damage to other vehicles in the same train of vehicles or any loss of or damage to property on board such vehicles; (c) loss or damage by contamination to the environment caused by the dangerous goods, provided that compensation for impairment of the environment other than for loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken” (CRTD 1987). This definition concerned itself more about the damages caused during carriage of dangerous goods by transportation. It is important to note that the Commission initiative was after the deficiencies of the existing international law, especially after the United Nations Conference on the Human Environment, (Stockholm 1972) which called on states “to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage caused by activities within the jurisdiction or control of such states...” (Stockholm 1972. Principe 22). This preoccupation was reaffirmed by the Principle 13 Rio Declaration 1992.

In this regard, the sixth report of the International Law Commission on “international liability for injurious consequences arising out of acts not prohibited by international law”, by Mr. Julio Barboza, Special Reporter of the Commission, accepted this concept of damage and explanation in case of environmental damage (ILC report 1990, MC Cafferey S. C. 1987-1988).

Further, the Convention on environmental impact assessment in a transboundary context (Espoo 1991) set up a mechanism for impact assessment for protection of the environment. In this convention, the environment includes “human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors. In addition, environment includes effects on cultural

heritage or socio-economic conditions resulting from alterations to those factors” (Espoo 1991). Although this convention is not for creating the responsibility for the states in case of damage, it expressed the vast meaning of environment. It is important to note that the purpose of this convention is the environmental impact assessment which is based on the preventive activity that the governments want to take individually or jointly. The states in this context must take all appropriate and effective measures to prevent, reduce and control significant adverse transboundary environmental impact from proposed activities (Article 2/1 of Espoo 1991). The scope of the application of this convention is a transboundary context, which means not exclusively of a global nature, within an area under the jurisdiction of a Party caused by a proposed activity the physical origin of which is situated wholly or in part within the area under the jurisdiction of another Party (Article 1/viii of Espoo 1991). This broad definition of scope of application of the convention shows the development of international treaties to define environmental damage not only in the national jurisdiction but also in a transboundary context.

One of the most important events of the development of the concept of “environmental damage” is the Lugano Convention on 1993. In fact, the characteristics of environmental damage are mentioned in the Lugano Convention which refers some characters for environmental damage as below: “(a) loss of life or personal injury; (b) loss of or damage to property other than to the installation itself or property held under the control of the operator, at the site of dangerous activity; (c) loss or damage by impairment of the environment in so far as this is not considered to be damage within the meaning of sub paragraphs a or b above provided that compensation for impairment of the environment, other than for loss of profit from such impairment, shall be limited to the costs of measures of reinstatement actually undertaken or to be undertaken; (d) the costs of preventive measures and any loss or damage caused by preventive measures...”(Lugano 1993). Moreover, it is necessary to set up a form of reparation and measures to accelerate restoration procedure for any environmental damage (Voigt 2008).

In this context, protocol of 1992 to the MARPOL Convention of 1973 used the reasonable costs of measures in the concept of damage. Paragraph 8 of Article 2 of the Lugano Convention 1993 refers to “restoration measures” as any reasonable measures aiming to repair or restore damaged or destroyed components of the environment or of alternative suitable for the parts of the environment. This measure emphasizes the relationship between damage and restoration of damage in environmental issues. This measure is also accepted in many national law systems. In fact, the basic concept of damage is based on the recognition of direct loss or injury to the property or persons. In this context, the operator of damage has primary obligation to restore the environment to the status quo ante. (Wolfram 1998)

In addition, Convention on liability and compensation for damage in connection with the carriage of hazardous and noxious substances by sea of 1996 defined the damage as “(a) loss of life or personal injury on board or outside the ship carrying the hazardous and noxious substances caused by those substances; (b) loss of or damage to property outside the ship carrying the hazardous and noxious substances caused by those substances; (c) loss or damage by contamination of the environment caused by the hazardous and noxious substances, provided that compensation for

impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken; and (d) the costs of preventive measures and further loss or damage caused by preventive measures"(HNS 1996). The concept of damage in this convention is similar to the concept of damage in Convention on civil liability for damage caused during carriage of dangerous goods by road, rail and inland navigation vessels (CRTD 1989).

The legal definition of "damage" is mentioned also in others international documents such as Protocol on liability and compensation for damage resulting from the transboundary movement of hazardous wastes and their disposal (Basel 1999). Therefore, generally speaking, the definition of damage has been mentioned in special areas (space, hazardous and noxious substances, carriage of dangerous goods....) and it has not been mentioned in environmental context. Consequently, it is important to discuss some international documents to describe environmental damage in international environmental law. (Fabri, H. R. & Grandoni, L. 2009)

In recent years, there has been an increasing interest in international environmental agreements to define the different types of environmental damage. For instance, Convention on civil liability for bunker oil pollution damage (BUNKER 2001) in Article 1, Para. 9, and Convention on civil liability for oil pollution damage resulting from the exploration for and exploitation of seabed mineral resources (London 1977) in Article 1 presented the definition of "pollution damage". Moreover, the definition of "nuclear damage" has also been accepted by some international environmental agreements. In this context, the Convention on civil liability for nuclear damage (Vienna 1963), in its Article I, Para. 1/k adopts the definition of nuclear damage. This definition was elaborated by Article I, Para. 1/k of the Protocol 1997 of the Vienna Convention 1963. However, the Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (Brussels 1971) did not define damage in the text (Poorhashemi & Arghand, 2013).

In the final analysis, it is important to note that the concept of "environmental damage" changed and developed in the period of time and in different areas, different aspects, different legal systems and international institutions. For example, the Convention on third party liability in the field of nuclear energy (Paris 1960) in its article 2 includes not only damage to or loss of life of any person, but also damage to or loss of any property. In all these legal instruments, environmental damage is considered as "deprivation of life, personal injury, property loss or damage" (Poorhashemi et al 2013). In addition, Convention on liability and compensation for damage in connection with the transportation of hazardous materials by sea extends to damage to life, injuries or damage to persons or property damage caused by sea pollution (London 1996). This definition was developed in 1984 and is part of the 1984 Protocol to amend the International Convention on Civil Liability for Oil Pollution Damage which was adopted in 1969 (CLC) and the 1971 Fund Convention of the screw. The definition of pollution damage in the 1992 Protocol to the Convention on Oil Pollution was corrected, probably because the Convention on oil pollution has been successfully examined for many years in many other international conventions that cover environmental losses. In this context, the Convention on civil

liability for damage was caused during carriage of dangerous goods by road, rail and inland navigation vessels (CRTD 1989), Convention of London (HNS1996), the Basel protocol 1999, the Convention on the control and movement of transboundary hazardous waste and Disposal (Basel 1989) and the International Convention on civil liability for damages caused by oil pollution (Warehouse 2001) are significant examples of this approach concerning the concept of environmental damage (Sucharitkul 1996).

To sum up the foregoing, it is important to note that for the assessment of the damage regarding the statement of environmental liability of a state or civil entity, the relevant treaties shall unify the notion of damage as an objective point of view as an essential element of causal relationship in order to set up this conjunctive criterion, thereupon the liability shall be based. For all these reasons, this clarification and definition is relatively deficient as well as divergent within the scope of international environmental law. The focal point of the above-mentioned treaties of the environmental sectors or separate domains of environmental challenges generally contradict themselves regarding the notion of the damage (Kecskés, G. 2014).

II. The challenges of the concept of "Environmental damage" in international environmental law

Firstly, International environmental law is based on the principles of the precaution and the prevention (Sands & Peel, 2012). In this regard, the priority of this branch of law is prevention of the damage rather than the application of the "polluter pays principle". In this perspective, international environmental law seeks to determine the best modalities of an environmental responsibility and liability to ensure the compensation for causing any damage to the environment. In fact, international environmental law tries to find a solution in which the environmental responsibility can contribute to improve the enforcement of the international regulations and national legislations in this matter. In addition, international environmental regulations and some national environmental legislation try to define the standards and procedures with a view to protect the global environment before causing any damage. In this logic, if polluters are to repair the damage caused to the environment by paying the corresponding costs, they will reduce pollution as long as the cost of depollution remains below the amount of compensation of the damage. The principle of environmental liability thus prevents environmental damage. The principle of liability may also encourage different states to apply precautionary principles by avoiding risks and damages to the environment and improve the environmental knowledge and best available technology in environmental protection. However, in the absence of the normative international responsibility in the field of environmental protection, the international customary law requires state's international responsibility in environmental damage . In this context, lack of normative international responsibility for causing the damage to the environment is considered as a main challenge in international environmental law (Owen, 2006).

Secondly, in the actual situation of international environmental responsibility, all forms of damage to the environment are not qualified to be compensated by the author of such damage. In fact, the "damage" to be considered as an "environmental damage" in international responsibility law required these conditions: one (or more) identifiable author(s) to the damage is necessary (polluter); the damage must be concrete and quantifiable; a causal link must be established between the damage and the identified polluter (s). In this perspective, environmental liability can be applied, for example, in cases where the damage arising from industrial accidents or the pollution caused by substances or hazardous waste from identifiable sources. Nevertheless, environmental responsibility is not an appropriate legal instrument in the case of widespread and diffuse pollution since it is impossible to establish a link between the damage and the identified polluter.

Thirdly, on one hand, if the nature of international responsibility for environmental damage is based on the precautionary approach and prevention principal and on the other hand, the international customary law is guaranteed the compensation of environmental damage, all states have to define the environmental legislation in order to compensate the environmental damage in their limit of sovereignty. Consequently, the link between international environmental law and national environmental legislation is crucial in this regard. However, most States did not define a global legislation for liability for damage resulting from activities that are harmful to the environment in their jurisdiction. In addition, the existing liability systems in national wide are applied generally only in the case of damage to human health or property, or when a site is polluted very clearly. For this reason, these national liability systems do not cover all types of "environmental damage".

Fourthly, one of the sources of diversification of the environmental damage's concept is the lack of international consensus on term of the "environment" itself. Only two texts attempted to define the "environment": the Lugano Convention of 1993 and the Draft principles of the International Law Commission (ILC) on the allocation of loss in the case of transboundary harm arising out of hazardous activities, (2006). According to principle 2 (b) of the Draft "environment includes: natural resources, both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors; and the characteristic aspects of the landscape" (International Law Commission, 2006). However, it is important to note that the notion of cultural heritage is excluded from the definition adopted by the Commission.

Finally, international state responsibility in its traditional approach still requires an adaptation of the classic rules concerning the concept of "environmental damage". In fact, the complexity that characterizes both natural phenomena and ecological processes in the definition of environmental damage depend upon the development of international responsibility law. Beyond this complexity, the temporal and geographical dimensions of ecological damage, accompanied by considerable scientific uncertainty, also have complicated the legal rules and regulations in this matter.

Conclusion

The recognition of legal environmental protection in international law is based on the global and collective awareness of the need to protect the environment as a common good of humanity. In this perspective, international responsibility to protect the environment is clearly reflected in the principle 21 of the Stockholm Declaration (1972) and principle 2 of the Rio Declaration (1992). Moreover, the Sic utere principle under which a state has no right to use or authorize the use of its territory for the purpose to cause harm to other states proves state responsibility in this matter. For the aforementioned reasons, there is no doubt that the primary state responsibility is based on the concept of the "environmental damage". In addition, the consensus of the definition of the "environmental damage" in international environmental law is the foundation of state responsibility.

The present study was designed to determine the evolution of the concept of the "environmental damage" and the challenges to this concept in international environmental law. International environmental law is developing to define "damage" or "harm" in order to prevent, conserve, and protect the global environment. However, despite the efforts to define "environmental damage" in international environmental law, its concept is not very clear. As mentioned above, the concept of "environmental damage" has become diversified in international environmental treaties and agreements. In this regard, this diversification has affected international responsibility of states in environmental issues. All these characteristics make the definition and reparation of damage difficult because the classical rules of responsibility are inappropriate for their application in international environmental law. In other words, international law does not contain global principles, criteria or methods for determining compensation of environmental damage. While traditional liability regimes are not adequate to deal with environmental damage, it appears that a new liability regime is needed in this issue. The development of international responsibility law demonstrates the creation of so-called "environmental" responsibilities, which depart from the traditional civil liability regime.

Moreover, in the absence of conventionally accepted solutions to achieve unified concept of the environmental damage in international environmental law, referring to the national liability for compensation of the damage caused by pollution or environmental degradation is the significant approach in this matter. This approach is nevertheless limited by the fact that it is difficult, by national legal instrument to impose the adoption of local legislation on a foreign state or individuals which established in its territory.

The following conclusions can be drawn from the present study. First of all, international environmental law is based

generally on the precautionary approach and preventive management and measures. Secondly, “environmental damage” is generally diverse and varied in many areas such as air, water, soil and so on. In this context, unifying the concept of environmental damage is too complicated. Thirdly, this research is essentially intended as a theoretical approach to analyze the notion of environmental damage in international environmental law in both soft and hard law with its practical consequences in the implementation of international environmental law. For this reason, based on the objective of responsibility of a state, the concept of environmental damage is most adapted in relation to the realities of the current situation of international responsibility law. Finally, for unique definition of environmental damage in national and international levels, it must fully consider the concept of sustainable development, precautionary principle, preventive principle, environmental impact assessment and environmental assessment. However, it is important to consider the future development of international environmental law to achieve a consensus on the notion of “environmental damage”.

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