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Development of the concept of "environmental damage" in international environmental law

Y. Khalatbari[1]*, D. Hermidas Bavand[1], A. Zare[2], S.A. Poorhashemi[3]

1- Department of Environmental Law, Faculty of Environment and Energy, Science and Research Branch, Islamic Azad University, Tehran, Iran.
2- Department of Private Law, Faculty of Law and Political Sciences, Tehran science and Research Branch, Islamic Azad University, Tehran, Iran.
3- Department of Environmental Law, University of Science and Research (IAU) & Director of Canadian Institute for International Law Expertise (CIFILE), Canada.
** Corresponding author's E-mail: kyalda@yahoo.com*

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ABSTRACT

Evolution of the concept of "environmental damages" is one of the aspects of development in international environmental law. In fact, after increasing global environmental problems and lack of efficiency in international environmental law to prevent the damage, unifying the concept of "environmental damage" in the law is being considered as a solution for this matter. Moreover, development of international laws including customary and conventional law play an important role in describing the "environmental damage". For instance, codification and elaboration of over a thousand bilateral or multilateral treaties and agreements on international environmental laws verify the role of these law in development of the content and substance in this legal field. However, some aspects of the "environmental damage's" concept remain unclear. So, in the present study, with analytical approach we are trying to analyze the development of the concept of "environmental damage" in International environmental law. It would also be ensured that determining and defining the "environmental damage" are important for addressing environmental problems. In addition to prevent and reduce the environmental pollution, it can be considered as a tool to establish the international responsibility in the case of Trans - boundary damage to environment. The conclusion of this paper is based on the progressive development of the "environmental damage" concept in international law.

Key words: International environmental law, Environmental damage, Environmental pollution, International responsibility and compensation.

INTRODUCTION

The evolution of the concept of environmental damage is one of the aspects of development of international environmental law. This development is extending the concept of "environmental damage" (Spinedi 1991). However, by considering the problems of international law regarding centralized power to define legal expressions, the question is: does a legal instrument which could define "Environmental damage" exist in international law? Due to the environmental degradation, pollution and other environmental damages caused by the uncontrolled economic development and population growth and other human activities have the multiple impact and harmful effects on environment (Larsson 2009). In fact, environment does not have any border, so any damage to the environment in one area or country cause damage to other countries (Poorhashemi 2013). 'Environment' is also defined broadly, including natural resources, and in terms that would cover ecosystems, biological diversity, and aesthetic values (Boyle 2005). Some scientists and researchers predict that the disappearance of the environmental quality due to the irreversible damage will affect the global environment. Environmental

damage is a rather complex concept which has not yet found a unanimous universally accepted definition. Taking into account that the main purpose of international environmental law is the protection of the global environment, unifying the concept of environmental damage is crucial to determine who is responsible for environmental degradation. The importance of the definition of "environmental damage" is based on States responsibility and liability to prevent, reduce and compensate environmental damage. Accordingly, the unique definition of "environmental damage" plays an active role in environmental protection for states (Mitchel 2009). Basically, responsibility and liability treaties are not a panacea for pollution or environmental damage or other forms of trans-boundary environmental damage and harm, and skeptics rightly question whether they have had much impact on industry or contribute to improving standards (Brunnée 2004). In addition, the Report of the Secretary-General of the United Nations Conference on Sustainable Development on 22 December 2010 affirm that states have responsibility to utilize the natural resources in the manner which avoid the loss of land or environmental benefits or for environmental damages created by projects (Report of the Secretary-General UN 2010). However, "environmental damage" has an inherent difficulty of definition due to the lack of international consensus on the definition of the term "environment". Only two texts at the international level (not legally binding) attempt 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 trans-boundary harm arising out of hazardous activities (Draft ILC 2006).

These definitions are essentially the same. According to this 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 (Principle 2, para. B. of Draft ILC. 2006). It is important to note that only the concept of cultural heritage is excluded from the definition adopted by the ILC. It is clear that "environmental damage" is directly connected to human activities. Consequently, no international environmental treaties tried to define "environmental damage" at the time of accident (Kiss & Shelton 2007). Therefore, all definitions for this concept come from different intentional situations. Moreover, in the international environmental law's treaties, the revision and correction process of a treaty is more emphasized since environmental issues are continuously changing and science has not yet been able to explore all aspects of the environment. Therefore, as a result a revision mechanism is predicted for environmental treaties. MEA with cooperation of the conference of the parties has established a special legal capacity leading to the development of international legal instruments in order to protect the environment including the definition of environmental damage (Goodwin 2013).

In this context, some legal aspects such as definition, redefinition of damage, validity, state consent, sovereignty, efficiency are important to be analyzed in this research (Camenzuli 2015). In this perspective, this research aims to show that the environmental damage is the main cause of environmental degradation and unique concept of "environmental damage" can identify potential damage which can be anticipated and addressed before further harm allowed deteriorating the global environment (Brian 1995).

Emergence of the concept of environmental damage in international environmental law

The use of the term of "environmental damage" is very complicated and doubtful in international environmental law. Philippe Sands stated that a narrow definition of environmental damage is limited to damage to natural resources separately (air, water, soil, fauna and flora, and their interaction). However, in more extensive approach, "environmental damage" includes damage to

natural resources, cultural heritage, landscape and environmental amenity (Sands 2012). This extension in the meaning of "environmental damage" shows the interaction between environmental elements and factors in the world. In this context, the definition of environmental damage not only includes natural environment but also all aspects of the human life and sustainable development of natural resources and cultural heritage. It is necessary to emphasize that the "environmental damage" is variously defined in different legal systems. National and international legal documents contain different definitions of the concept of environmental damage. Moreover, there are many kinds of environmental damage such as "material damage" or "non-material damage", "direct or indirect damage", and "accidental damage or intentional damage".

"Environmental damage" in customary international law

In spite of the fact that international liability law is based on custom, the customary international law tries to give States some general obligations. In this perspective, principle 21 of the Stockholm Declaration 1972 and principle 2 of the Rio Declaration 1992 propound the responsibility of States to ensure that activities under their jurisdiction or control would not cause damage to environment of other States or areas located beyond the limits of their national jurisdiction. These principles have come to represent customary international law. Traditionally, one of the most important sources of rules and principles that may have crystallized into generally binding norms of customary, international environmental law is the accumulated corpus of relevant multilateral and bilateral convention's obligations and provisions, many of which contain elaborate environmental rules. In this regard, the inclusion of certain rules and principles in treaties must greatly enhance their status as established or emerging rules of customary international law (Owen 2006). As a general rule, the judgments, advisory opinions and orders of international courts especially International Court of Justice have created the evolutionary principle that each State has the obligations toward environmental protection and should avoid all damages to other States and sovereignties. In this perspective, the cases such as Trail Smelter Case (1941), Corfu Channel Case (1949), Lake Lanoux Arbitration (1957), Nuclear Tests Case (1974), Legality of the use by a State of Nuclear Weapons in Armed Conflicts (1996) and other cases in international jurisdictions confirm the existence of customary obligation of states to avoid causing harm and creating damage to the environment of other states.

Definition of "damage" in international treaties

One of the first definitions of "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 the article 1 of this Convention "damage" means loss of life, personal injury or other impairment of health; or loss of or damage to property of states or of persons, natural or juridical, or to property of international intergovernmental organizations. In this context, damage includes all aspects of the human life and natural environment. 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 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 more about the damages caused during carriage of dangerous goods by transportation.

It is important to note that the initiative Commission 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 of the Rio Declaration 1992. In addition, the convention on liability and compensation for damage in connection with the carriage of hazardous and noxious substances by sea, 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 the 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 also mentioned in other international documents such as the Protocol on liability and compensation for damage resulting from the trans - boundary 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 & Grandoni 2009).

Multiple attempts to define "environmental damage" in international environmental law

In the past four decades, States have concluded lots of bilateral and multilateral conventions containing the definition of "environment" and "environmental damage".

The environmental damage has several difficulties in the of the international treaties. Generally, according to the principles of international environmental law (Voigt 2008), damage should be repaired which should have the following characteristics: certain, personal and direct. The Lugano convention refers some characteristics for environmental damage as follow: "(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 the 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 for any environmental damage (Voigt 2008).

In fact, "compensation" is a kind of 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 environment.

The meaning of environmental damage was changed in the period of time and in different areas, different aspects, different legal systems and international instruments. For example, the convention on third party liability in the field of nuclear energy (Paris 1960) in article 2 points out that damage includes not only damage to or loss of life of any person but also damage to or loss of any property. In all these instruments, environmental damage is considered as "deprivation of life, personal injury, property loss or damage". In addition, the convention on liability and compensation for damage in connection with the transportation of hazardous materials by sea extend damage to life, injury or damage to person or property caused by sea pollution (London 1996). This definition was developed in 1984 and is being part of the 1984 protocol to amend the International Convention on Civil Liability for Oil Pollution Damage was adopted in 1969 (CLC) and the 1971 Fund convention of the screw. The definition of pollution damage was corrected in the 1992 Protocol to the convention on Oil Pollution. In fact, the text of this protocol was revised by international community for several years. In this context, the convention on civil liability for damage caused during carriage of dangerous goods by road, rail and inland navigation vessels (CRTD 1989), the convention of London (HNS 1996), the Basel protocol 1999, the convention on the control and movement of trans-boundary 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).

In this context, the 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 “restoration measures" which means any reasonable measures aimed to repair or restore damaged or destroyed components of the environment or of suitable alternative 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 substantial concept of damage is based on the recognition of direct loss or injury to the property or persons. In this context, the responsible has primary obligation to restore the environment to the status quo ante (Wolfram 1998).

The convention on civil liability for oil pollution damage, (Brussels 1969), and the protocol to amend the international convention on civil liability for oil pollution damage (London 1984) have linked damage to restoration. In terms of this protocol, "pollution damage" 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 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 which is negligible or 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. 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.

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, accepts this concept of damage and explanation in case of environmental damage (ILC report 1990, Mc Cafferey 1987-1988).

Further, the Convention on environmental impact assessment in a trans-boundary context (Espoo 1991) sets up a mechanism for impact assessment of environmental protection. 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 to impose the responsibility for states in case of damage, but it expressed the vast meaning of environment. It is important to note that the purpose of this convention is environmental impact assessment which is based on the preventive activity that the governments want to takes individually or jointly. States in this context have to take all appropriate and effective measures to prevent, reduce and control significant adverse trans-boundary environmental impact from proposed activities (article 2/1 of Espoo 1991). The application scope of this convention is a trans-boundary impact, which means any impact, 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 vast 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 trans - boundary context.

According to the article 31 of the convention on the law of the Sea (Montego bay 1982), 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 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 marine environment", the convention defines 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 in this convention clearly. However, it provides that States have responsibility for implementation of the international obligations concerning the protection of marine environment. In addition, States should promptly assure the adequate for environmental damage caused by environmental pollution. In this context, states have to cooperate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for environmental damage and to set up a system of compensation for damages (Article 235 Montego bay 1982).

The International Convention on civil liability for oil pollution damage (CLC 1969) defines environmental pollution in the same approach (Bernasconi 1999). About the concept of "pollution damage" in international treaties, some other international conventions include articles based on the definition of such damage. For instance, the Convention on civil liability

for bunker oil pollution damage (BUNKER 2001) in the article 1, Para. 9, and the Convention on civil liability for oil pollution damage resulting from the exploration for and exploitation of seabed mineral resources (London 1977) in the Article 1 express the definition of pollution damage. Moreover, the definition of "nuclear damage" is also stated by some environmental agreements. In this context, the Convention on civil liability for nuclear damage (Vienna 1963), in article I, Para. 1/k adopts the definition of nuclear damage. This concept 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.

CONCLUSION

Particular features of the concept of "environmental damage" are obviously based on the man-made activity by adding substances to the natural environment. So, in this context the definition is oriented to safeguard human use and consumption of environmental resources (Springer 1977). In addition, different definitions are also suggested concerning domestic and trans-boundary pollution due to the complex character of "environmental damage" at national and international levels. According to the Organization for Economic Co-operation and Development, "National pollution" means "any intentional or unintentional pollution, the physical origin of which is situated wholly within the area under the national jurisdiction of one country and which has effects within that area only". On the other hand, transnational pollution has been defined as "any intentional or unintentional pollution whose physical origin is subject to, and situated wholly or in part within the area under the national jurisdiction of one state and which has effects in the area under the national jurisdiction of another state" (OECD 1977).

It is important to note that both definitions (national and transnational) must be considered in conjunction with the general definition of pollution, since the latter definitions are more a matter of jurisdiction than of defining environmental damage (Larsson 2009).

As mentioned before, evolution of the concept of "environmental damage" is one of the aspects of development of international environmental law.

The final goal of international environmental law is to prevent the damage, to protect and preserve the global environment.

Therefore, unifying the concept of "environmental damage" in international environmental law is being considered as a prerequisite of environmental protection. In this perspective, the definition of "damage" caused by environmental pollution or other sources of degradation has been enhanced by many international instruments.

International environmental law is rapidly 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 really clear. The vision of international environmental law to define "environmental damage" is concentrated on defining it in specific sectors of the environment such as marine pollution, nuclear pollution, watercourse, outer space…., but this approach is not sufficient to define legally binding concept of "damage" or "harm".

The vast concept of environmental damage in numerous treaties considered as a problem to reduce environmental damage in the world. For instance, each international treaty in environmental issue contains different characteristics of damage. This method cannot be useful to reveal legal concept of damage in order to prevent, reduce or compensate environmental damage. In this context, the International Law Commission's definition of "damage" successfully provide the treatment of environmental damage in the more modern liability treaties, and is consistent with the practice of the United Nations Compensation

Commission and developments in many national laws. For this reason, draft principle 2 (a) expressly includes damage to cultural property, the costs of reasonable measures of reinstatement of environment, and reasonable responsive measures. One obstacle to define "environmental damage" is based on this fact that some governments are not willing to accept uniform rules and standards to combat against environmental pollution and degradation. According to the global character of environmental pollution, national and international laws and regulations, the combat against pollution faces to difficult and complex steps. However, the basic principles of international environmental law aim to compensate the damage in any circumstances. The lack of a unique concept of damage could be considered as a gap in international environmental law. The complexity, variety and difference in the meaning of "environmental damage" in international instruments, especially in multilateral agreements require adopting a unique definition of "damage" in international environmental law. So, the question remained whether a unique definition of "environmental damage" would eventually be accepted by States.

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توسعه مفهوم خسارت زیست محیطی در حقوق بین الملل محیط زیست

ی. خلعتبری*[1] ، د. هرمیداس باوند[1]، ع. زارع[2]. س ع، پورهاشمی[3]

۱- گروه حقوق محیط زیست واحد علوم و تحقیقات دانشگاه آزاد اسلامی، تهران. ایران
۲- گروه حقوق خصوصی، دانشکده حقوق و علوم سیاسی، واحد علوم و تحقیقات دانشگاه آزاد اسلامی، تهران. ایران
۳- گروه حقوق محیط زیست دانشگاه آزاد اسلامی، واحد علوم و تحقیقات تهران، ایران و مدیر موسسه تخصصی حقوق بین الملل کانادا

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چکیده

تکامل مفهوم خسارت زیست محیطی یکی از ابعاد توسعه حقوق بین الملل محیط زیست محسوب می‌شود. در حقیقت، پس از افزایش مشکلات محیط زیست جهانی و فقدان کارایی حقوق بین الملل محیط زیست در جلوگیری از بروز خسارات زیست محیطی، یکپارچه سازی مفهوم خسارت زیست محیطی در حقوق بین الملل محیط زیست به عنوان راه حلی برای این موضوع مورد توجه قرار گرفت. علاوه بر آن، توسعه حقوق بین الملل که شامل حقوق عرفی و قراردادی است، نقش مهمی را در جلوگیری و جبران خسارت زیست محیطی ایفا می‌کند. به عنوان مثال، تدوین و تصویب بیش از هزار معاهده زیست محیطی دوجانبه و چندجانبه نشان تاییدی بر نقش حقوق بین الملل محیط زیست در توسعه محتوی و مفهوم این حوزه حقوقی است. با این حال، برخی جنبه‌های مفهوم خسارات زیست محیطی همچنان نامعلوم مانده است. در این خصوص، مقاله حاضر با رویکرد تحلیلی در تلاش است تا توسعه مفهوم "خسارت زیست محیطی" را در حقوق بین الملل محیط زیست مورد بررسی قرار دهد. همچنین در جهت مقابله با مشکلات زیست محیطی تعیین و تعریف واحدی از خسارت زیست محیطی ضروری به نظر می‌رسد. مضافاً اینکه برای جلوگیری و کاهش آلودگی‌های زیست محیطی و همچنین برای ایجاد ثبات در مسئولیت‌پذیری دولت‌ها تعریف واحدی از مفهوم خسارات فرامرزی محیط زیست امری اجتناب‌ناپذیر است. نتیجه‌گیری این مقاله بر پایه توسعه مفهوم خسارت زیست محیطی در حقوق بین الملل بنا نهاده شده است.

* مولف مسئول