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Environmental Protection And State Responsibility In International Humanitarian Law

Arie Afriansyah*

International armed conflicts is not only threatened the existence of human being, but also brought great environmental damage that has served to raise the international community's deep concern. The conflicting parties are liable for violations of their international obligations including damages to the environment. The obligations of warring parties to protect the environment are sourced not only from treaty law but also from customary law. Even though the conflict has ceased, they are still liable for the violations as long as the damages continue. That is why the legal concept of State offers an important doctrine in international conflicts offering the basis of reparation for damaged environment which needing prompt action to be taken by the responsible State

Keywords: *Environmental Protection, State Responsibility*

1. Introduction

Since its first development, the law of war has predominantly focused on the protection of human beings.¹ This law places human protection as the priority, by minimizing human injuries and casualties.² However, even though wars or armed conflicts are conducted primarily by humans, the consequences of war are rarely limited to human casualties. More often, human wars cause massive destruction to the environment.³ In relation to this, it has been argued that it is not adequate to protect peoples' lives only and to allow the environment to be

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¹ APV Rogers, *Law on the Battlefield*, (2004), 163.

² Jessica C. Lawrence and Kevin Jon Heller, 'The First Ecocentric Environmental War Crime: The Limits of Article 8(2) of the Rome Statute', (2007) 20(1) *Georgetown International Environmental Law Review* 61, 64.

³ Katherine M. Kelly, 'Declaring War on the Environment: The Failure of International Environmental Treaties during the Persian Gulf War' (1991) 7 *American University Journal of International Law & Policy* 921, 922-927.

polluted as a result of armed conflict.⁴ Civilians may be killed directly by the war, but they are also likely being harmed or indirectly killed by a polluted environment.⁵

In spite of research that shows how to prevent damage and lots of international instruments that aim to prevent environmental harm,⁶ international armed conflicts have to date brought great environmental damage that has served to raise the international community's deep concern. The perpetrators of the war may argue that objects which have been destroyed are important military targets that outweigh the importance of environmental impact. However, this position is not a reasonable and legitimate justification to harm the environment and thus jeopardise present and future generations.⁷ There are many examples of wars which have had a great impact on the environment. Some of these include the World Wars, the Vietnam War, the Korean War, the Persian Gulf War, the Kosovo conflict in 1999, the Iraq War and the Israel-Lebanon War.

Even though it is not easy to protect the environment during international armed conflict, there are many ways that can be done in order to repair the damaged environment before the damage becomes permanent. One of the most important ways is to pursue the conflicting parties' ensuring responsibility is taken by both the winning and the losing party. The conflicting parties are liable for violations of their international obligations including damages to the environment. Further, even though the conflict has ceased, they are still liable for the violations as long as the damages continue. That is why the legal concept of State offers an important doctrine in international conflicts offering the basis of reparation for damaged environment needing prompt action to hold the State responsible accountable.

This article tries to examine whether the rules of State responsibility may provide crucial additional protection element to the environment within the law

⁴ Nada Al-Duaij, *Environmental Law of Armed Conflict* (2003), 59.

⁵ Ibid. See also Michael D. Diederich, Jr., "Law of War" and Ecology – A Proposal for a Workable Approach to Protecting the Environment through the Law of War' (1992) 136 *Military Law Review* 137, 138.

⁶ Tara Weinstein, 'Prosecuting Attacks that Destroy the Environment: Environmental Crimes or Humanitarian Atrocities?', (2005) 17(4) *Georgetown International Environmental Law Review* 697, 698.

⁷ Ved P. Nanda, *International Environmental Law & Policy* (1995) 61. See Ben Boer, "The Globalisation of the Environmental Law: The Role of the United Nations" (1995) 20 *Melbourne University Law Review* 109-111.

of armed conflict based on theoretical legal reasoning. Therefore, it will not analyze their effectiveness to relevant cases as this has been discussed elsewhere. To begin with, this article focuses on identifying all relevant legal obligations of warring parties to protect the environment that sourced not only from treaty law but also from customary law. Then, it will scrutinise legal mechanism to pursue State's responsibility within international humanitarian law with reference to the rules on State responsibility in general.

2. Environmental Protection In International Humanitarian Law

As previously discussed, State obligations to protect the environment during hostilities are mainly stipulated within the rules of international humanitarian law alongside with human protection in general. One might argue that the rules in international humanitarian law which directly protect the environment during armed conflict only few in number.⁸ However, rules in international humanitarian law that provide indirect protection for the environment also play a pivotal role. These rules, both direct and indirect, need to be strongly recognised to eliminate arguments concerning the inadequacy of law on this matter.⁹ In addition to the rules derived from treaty law, obligations arising from customary law also play a significant role in protecting the environment. Subsequent to these legal obligations' identification, it is arguable that violations of these two sources of law as primary rules in international law entail international responsibility of violating States. Therefore, this mechanism will further enhance environmental protection during and after international hostilities. These rules will be examined separately below.

⁸ Erik Koppe, *The Use of Nuclear Weapons and the Protection of the Environment during International Armed Conflict* (2008), 122.

⁹ Many have argued that present legal obligations to protect the environment during international armed conflict are inadequate due to the facts of their ineffectiveness in many cases. See Adam Roberts, 'Environmental Issues in International Armed Conflict: The Experience of the 1991 Gulf War', in: Richard J. Grunawalt, John E. King, Ronald S. McClain (Eds.), *Protection of the Environment During Armed Conflict*, (1996), 222; Michael N. Schmitt, 'Green War: An Assessment of the Environmental Law of International Armed Conflict', (1997) 22 *Yale Journal of International Law* 1, 51; Stephanie N. Simonds, 'Conventional Warfare and Environmental Protection: A Proposal for International Legal Reform, (1992-1993) 29 *Stanford Journal of International Law* 165, 168; Richard G. Tarasofsky, 'Legal Protection of the Environment during International Armed Conflict', (1993) 24 *Netherlands Yearbook of International Law* 17, 22.

2.1. Treaty Law

In addition to the fact that specific and direct environmental protection rules in international humanitarian law are limited in number, such treaty rules as protect the environment during wartime are mainly incidental to efforts safeguarding human health.¹⁰ Despite these facts, it is imperative that these rules are discussed regardless of whether the protections are direct or indirect to the environment for the simple but potent reason that legal consequences arise if they are breached. Treaty rules that protect the environment will be discussed based on individual convention separately and in time sequence. This structure aims to get an understanding of the fact that environment in law of war is protected under various general and specific matters and environmental awareness in war has just begun in the 1970s alongside with general awareness of the environment worldwide. As some of these provisions have attained customary status, this section will not examine this matter as they will be provided in separate section further below.

2.1.1. 1907 Hague Regulations Respecting the Laws and Customs of War on Land

As the first rules in international humanitarian law to have environmental application, the 1907 Hague Regulations Respecting the Laws and Customs of War on Land¹¹ indirectly protect the environment during armed conflict through Articles 23(g) and 55. Article 23(g) proscribes acts that “destroy or seize the enemy’s property, unless such destruction or seizure be imperatively demanded by the necessities of war”.¹² Article 55 obliges the occupying power as the exclusive administrator of the occupied country to “safeguard the capital of these properties (real estate, forests and agricultural estates), and administer them in accordance with the rules of usufruct¹³”.

¹⁰ Christopher D. Stone, ‘The Environment in Wartime: An Overview’, in Jay E. Austin, Carl E. Bruch (Eds), *The Environmental Consequences of War* (2000), 16, 21.

¹¹ Annex to the 1907 Hague Convention (IV) Respecting the Laws and Customs of War on Land, signed on 18 October 1907, entered into force on 26 January 1910, (1908) 2(1/2) *American Journal of International Law* 90.

¹² Article 23(g), *ibid.*

¹³ Article 55, *ibid.* According to Black’s Law Dictionary, usufruct means “a right to use and enjoy the fruits of another’s property for a period without damaging or diminishing it, although the property might naturally deteriorate over time”. Merriam-Webster’s Dictionary gives definition of this term as “the legal right of using and enjoying the fruits or profits of something belonging to another”.

These provisions are crucial in the light of protecting the environment during international armed conflict because of several reasons. First, even though it was intended mainly to safeguard human survival, Article 23(g)'s reference to human "property" affords broad coverage that includes the environment.¹⁴ Some scholars consider that this article provides adequate protection of the environment in terms of natural resources that are State property, such as oil stations, that may become military targets of the war.¹⁵ Furthermore, Article 55 explicitly mentions forests and agricultural estates, which are protected because of their value as indispensable supports to human life. This obligation was applied after World War II to hold German industrialists accountable for over-exploiting Polish forests for timber during the period of occupancy.¹⁶ Second, while it is true that Article 23(g) provides an escape clause of military necessity, the provision as a whole nevertheless gives notice to warring parties to take into account environmental factors during hostilities. Third, even though it was created with lack of environmental awareness, it has been argued that this regime offers protection in situation of "extreme acts of environmental degradation".¹⁷

¹⁴ Koppe, above n 8, 283. For comparison, the term "property" is also used in the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict. This Convention confined itself not to encompass the natural environment that was clearly referred to in Article 1 about definition. "Cultural Property" is defined in Article 1 as "(a) movable or immovable property of great importance to the cultural heritage of every people, such as monuments of architecture, art or history, whether religious or secular; archaeological sites; groups of buildings which, as a whole, are of historical or artistic interest; works of art; manuscripts, books and other objects of artistic, historical or archaeological interest; as well as scientific collections and important collections of books or archives or of reproductions of the property defined above; (b) buildings whose main and effective purpose is to preserve or exhibit the movable cultural property defined in sub-paragraph (a) such as museums, large libraries and depositories of archives, and refuges intended to shelter, in the event of armed conflict, the movable cultural property defined in subparagraph (a); (c) centres containing a large amount of cultural property as defined in sub-paragraphs (a) and (b), to be known as "centres containing monuments"." Convention for the Protection of Cultural Property in the Event of Armed Conflict, opened for signature on 14 May 1954, 249 UNTS 3511 (entered into force on 7 August 1956).

¹⁵ Luan Low and David Hodgkinson, 'Compensation for Wartime Environmental Damage: Challenges to International Law After the Gulf War', (1995) 35 *Virginia Journal of International Law* 405, 438; Aaron Schwabach, 'Environmental Damage Resulting from the NATO Military Action Against Yugoslavia', (2000) 25 *Columbia Journal of Environmental Law* 117, 124.

¹⁶ Richard A. Falk, *Revitalizing International Law* (1989) 171-172; Mark J.T. Caggiano, 'The Legitimacy of Environmental Destruction in Modern Warfare: Customary Substance Over Conventional Form', (1993) 20 *Environmental Affairs Law Review* 479, 486-487.

¹⁷ Tarasofsky, above n 9, 42.

2.1.2. 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare

The atrocious experiences of World War I due to application of poison gas caused States to make a stronger regulation to prevent its use in future armed conflicts. In June 1925, States agreed to a Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare.¹⁸ This Protocol prohibited the use of "asphyxiating, poisonous or other gases, and of all analogous liquids materials or devices" during hostilities.

This Protocol is a valuable norm that enhances the protection of humans and the environment during armed conflict.¹⁹ In reference to the environment, the proscriptions in this Protocol are crucial to the fact that chemicals might be transmitted throughout the food chain.²⁰ Further, the Protocol has been "relatively well observed",²¹ and the use of poison gas frequently "condemned as a violation of international law".²² One of the reasons the Protocol has been well observed is the reciprocal basis implementation from the member States.²³ This shows that well observance by States in this matter is not because they recognised the devastating effects of the weapons but they fear if other States will use this weapon against them. In spite of this notorious reason, it is crucial to admit that the use of poison weapons were outlaw and this prohibition is well adhered by States worldwide.

2.1.3. 1949 Geneva IV Convention relative to the Protection of Civilian Persons in Time of War

In 1949, States successfully codified almost all the rules and customs of warfare into four main Conventions.²⁴ Among these conventions, only one refers to environmental protection during international armed conflict. This is the

¹⁸ Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed on 17 June 1925, entered into force on 8 February 1928, (1931) 25(2) American Journal of International Law 94.

¹⁹ Tarasofsky, above n 9, 55.

²⁰ Schmitt, above n 9, 86.

²¹ Tarasofsky, above n 9, 56.

²² Schwabach, above n 15, 124.

²³ Hector Gros Espiell, 'Commentary: 1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare', in N. Ronzitti (ed.), *The Law of Naval Warfare* (1988), 409, 422.

Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War. As clearly stated in its title, the principal protection in this convention is directed to civilian persons. Environmental protection, therefore, is given to support the life of civilians. There are two provisions which provide indirect protection to the environment: Articles 53 and 147. Article 53 states that:

Any destruction by the Occupying Power of real or personal property belonging individually or collectively to private persons, or to the State, or to other public authorities, or to social or co-operative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operations.²⁵

While Article 147 states that:

Grave breaches, to which the preceding Article relates, shall be those involving any of the following acts, if committed against persons or property protected by the present Convention: ... extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly.²⁶

Article 53 closely mirrors Article 55 of the Hague Regulations in that they protect "properties" during military occupation. However, Article 53 expands the properties to which protection applies to include not only those owned by the State but also those owned by private entities. Even though Article 53 provides an exception of military necessity, it is noted that the standard "absolutely necessary" is higher than "imperatively demanded" as expressed in Article 23(g) of the 1907 Hague Regulations.²⁷ This higher standard will eventually add to the level of environmental protection during military occupation. As Schmitt observes, environmental protection during military occupation is crucial because destruction of the environment frequently occurs during that time.²⁸

²⁴ Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field; Convention (II) for the Amelioration of the Condition of the Wounded, Sick and Shipwrecked Members of Armed Forces at Sea; Convention (III) relative to the Treatment of Prisoners of War; and Convention (IV) relative to the Protection of Civilian Persons in Time of War, opened for signature 12 August 1949, 75 UNTS 970-973 (entered into force 21 October 1950).

²⁵ Article 53, 1949 Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War, opened for signature 12 August 1949, 75 UNTS 973 (entered into force 21 October 1950).

²⁶ Article 147, *ibid.*

²⁷ Tarasofsky, above n 9, 43.

Article 147 further enhances the protection proffered by Article 53 by affirming that the destruction and appropriation of property not based on military necessity and conducted unlawfully and wantonly is a grave breach of the Convention. This characterisation as a grave breach is a significant point because State parties are required to pass domestic legislation in order to prosecute those who commit or order action amounting to such proscribed action.²⁹ States are required to prosecute such offenders before their courts regardless of their nationality.³⁰ The convention also provides that States may hand over offenders to other States subject to any extradition agreement that exist between them.³¹ Given this, it is argued that this provision has heightened the deterrent effect on individual in armed conflict.³²

2.1.4.1977 Convention on the Prohibition of Military or any other Hostile Use of Environmental Modification Techniques (ENMOD Convention)

In 1977, States agreed on special conventions that focus on or have specific provisions for environmental protection during international armed conflict. They are the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention)³³ and the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I).³⁴ This section will be devoted to the former treaty while the latter will be discussed in the following section.

The ENMOD Convention was adopted by the United Nations General Assembly in 1976 and opened for signature in 1977. As of 5 October 2009, this convention has 73 State parties with 16 signatory States.³⁵ The conclusion of this Convention was inspired by the devastating experience of the United

²⁸ Schmitt, above n 9, 66.

²⁹ Article 146, 1949 Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War, opened for signature 12 August 1949, 75 UNTS 973 (entered into force 21 October 1950).

³⁰ Ibid.

³¹ Ibid.

³² Schmitt, above n 9, 67.

³³ Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, opened for signature on 18 May 1977, 1108 UNTS 17119 (entered into force on 5 October 1978).

³⁴ Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

States defoliation campaigns during the Vietnam War and the growing concern over technology development which allows States to use catastrophic environmental changes as weapons in armed conflicts.³⁶ Notably, the Convention was sponsored by two big powers of that time: the United States of America and the Soviet Union. These two States negotiated the matter on a bilateral basis, which made sense given this was a time when were the two countries that indeed possessed the technology capable of modifying the environment.³⁷ Even though the United States publicly renounced environmental modification for hostile purposes in 1972, it was the Soviet Union that took the initiative in calling a diplomatic conference to negotiate the Convention.³⁸

This Convention consists of ten articles with two articles devoted to prevent the environment from being modified and used as a weapon in international armed conflicts. The rest of the articles regulate the application of environmental modification technology for non-hostile purposes and the address implementation, consultation, enforcement, duration, amendment, review and technical matters related to the treaty. It is crucial to note that there is an accompanying document titled "Understandings Regarding the Convention" which contains written interpretations of Articles I, II, III and VIII.³⁹ Although not binding, this document is recognised as being important and relevant in terms of the interpretation on specific terms in these articles.⁴⁰

The convention begins with Article I obliging member States "not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party".⁴¹ This article also requires

³⁵ Convention on the Prohibition of Military or Any Hostile Use of Environmental Modification Techniques, International Committee of the Red Cross, <<http://www.icrc.org/ihl.nsf/INTRO?OpenView>>, at 5 October 2009.

³⁶ Liesbeth Lijnzaad and Gerard J. Tanja, 'Protection of the Environment in Times of Armed Conflict: The Iraq-Kuwait War', (1993) 40(2) *Netherlands International Law Review* 169, 186.

³⁷ Koppe, above n 8, 124.

³⁸ *Ibid* 125.

³⁹ Report of the Conference of the Committee on Disarmament, Volume I, General Assembly Official records: Thirty-first session, Supplement No. 27 (A/31/27), New York, United Nations, 1976, pp. 91-92. These Understandings were not incorporated into the Convention but part of the negotiating record and included in the report transmitted by the Conference of the Committee on Disarmament to the United Nations General Assembly in September 1976; Koppe, above n 8, 129.

⁴⁰ Koppe, *ibid.* 128.

Member States to undertake not to “assist, encourage or induce any State, group of States or international organization to engage in activities contrary to the provisions of paragraph 1 of this article”.⁴² Article II further specifies those activities which are considered to be “environmental modification techniques” as “any technique for changing – through the deliberate manipulation of natural processes – the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space”.⁴³ Article III allows environmental modification techniques to be used only for peaceful purposes and consistently with the general principles and applicable rules of international law.⁴⁴

The scope of Articles I and II was challenged in the 1991 Persian Gulf War at the event of oil wells burning and oil spilling in the Persian Gulf by Iraqi forces. Some States were despondent with the fact that these articles did not effectively cover these events. Jordan proposed a revision of the existing laws protecting the environment during international armed conflict through the UN General Assembly. In one of its justifications for the proposal, it stated that the ENMOD “was revealed as being painfully inadequate during the Gulf conflict”.⁴⁵ Following efforts at the UNGA, States discussed the same matter at the ENMOD’s Second Review Conference in 1992. Based on a working paper submitted by Finland and the Netherlands,⁴⁶ the conference focused on issues regarding whether or not conventional technology measures such as the use of herbicides and burning of oil wells fall within the scope of Article II. Unfortunately, this conference only declared the use of herbicides to be a method of war proscribed under Articles I and II and nothing was mentioned about burn-

⁴¹ Article I, Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, opened for signature on 18 May 1977, 1108 UNTS 17119 (entered into force on 5 October 1978).

⁴² Ibid.

⁴³ Article II, *ibid.*

⁴⁴ Article III, *ibid.*

⁴⁵ A/46/141, 8 July 1991, Request for the inclusion of an additional item in the provisional agenda of the forth-sixth session; Exploitation of the Environment as a Weapon in Times of Armed Conflict and the Taking of Practical Measures to Prevent Such Exploitation; Annex: Explanatory Memorandum, p. 2, para. 2. This proposal eventually leads to the UNGA resolution (A/Res/47/37) on the protection of the environment in times of armed conflict, which adopted without a vote on 25 November 1992.

⁴⁶ ENMOD/CONF.II/8 of 8 September 1992; Second Review Conference of the Parties to the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques; Working Paper Submitted by Finland and the Netherlands; available from <<http://documents.un.org/>>, at 13 October 2009.

ing of oil wells.⁴⁷ However, this conclusion is an important confirmation that this convention is not only applied to high technology but also to low technology or conventional approaches.⁴⁸

In terms of environmental damage thresholds, ENMOD requires “widespread, long-lasting or severe” damage. The interpretation of these thresholds is expressly addressed in the Understandings. This widespread may cover “an area on the scale of several hundred square kilometres”; long-lasting may take times of “a period of months, or approximately a season”; and severe involves “serious or significant disruption or harm to human life, natural and economic resources or other assets”. While three thresholds are also employed in Article 35 of the Additional Protocol I, they are different in application. It is clear that these damage thresholds are lower and easier to establish than the thresholds of Additional Protocol I, as will be explained below. This proposition is based on the word “or” as indicating an alternative option, rather than the cumulative effect of the word “and” used in Additional Protocol I. This means that in establishing a violation ENMOD convention, it is enough if the damage meets only one of the criteria, while in Additional Protocol I the damage must meet all of the three criteria.⁴⁹

In addition to damage thresholds, Article I also states that the damages or injuries must be directed simply “to any other State Party”. This means that the application of this convention is limited to State Parties regardless of whether that State is a warring or a neutral party. Reyhani noted that this limited application was intended to encourage States to ratify this convention and to prevent States from gaining benefit from this rules without becoming parties to it.⁵⁰ In relation to this, there are at least three situations of damage which would fall outside the ambit of the ENMOD if they occurred: (1) damage in the territory of non-State Party;⁵¹ (2) damage in the territory of the acting State; and (3) damage in the areas where there is no State’s jurisdiction such as the high seas, unless the devastating action on this area affects ship of a State Party to the ENMOD.⁵²

⁴⁷ Koppe, above n 8, 132. UNGA Resolution A/Res/47/52(E) of 9 December 1992. Adopted without a vote.

⁴⁸ Tarasofsky, above n 9, 47.

⁴⁹ Koppe, above n 8, 135.

⁵⁰ Roman Reyhani, ‘Protection of the Environment During Armed Conflict’, (2007) 14 *Missouri Environmental Law & Policy Review* 323, 327.

⁵¹ According to Stephanie N. Simmonds, environmental modification technique is not a violation to the ENMOD if it employed against a State’s own people. Simonds, above n 9, 187.

It is worth emphasizing that the ENMOD Convention focuses on the hostile use of environmental modification techniques, rather than more generally on the protection of the environment from the adverse effects of the use of weapons generally during situations of armed conflicts. Further, closer examination of Articles I-III reveals that ENMOD Convention only outlaws the use of technology used to modify the environment, and not to any prior testing and development of the technology.⁵³ However, this future-oriented approach should be welcomed in order to prevent environment modification technology employment by States as weapons in international armed conflicts which may result in serious destruction to the ecosystem.

2.1.5. 1977 Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)

After a number of diplomatic forums, Additional Protocols I and II proposals were drafted by the ICRC and negotiated in the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts between 1974 and 1977.⁵⁴ These two treaties were adopted by consensus on 8 June 1977 and opened for signature on 12 December 1977.⁵⁵ One year later, on 7 December 1978, they entered into force⁵⁶ with the official title of Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)⁵⁷ and Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II).⁵⁸ For the purpose of this study, the Additional Protocol I will be the main focus since it deals with international armed conflicts.

⁵² Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict* (2004), 180.

⁵³ Adam Roberts and Richard Guelff (eds.), *Documents on the Laws of War*, 3rd ed., 2000, 408.

⁵⁴ Koppe, above n 8, 142.

⁵⁵ Michael Bothe, Karl Josef Partsch, Waldemar A. Solf, *New Rules for Victims of Armed Conflicts: Commentary on the Two 1977 Protocols Additional to the Geneva Conventions of 1949* (1987), 6.

⁵⁶ Koppe, above n 8, 143.

⁵⁷ Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

As of October 2009, Additional Protocol I had 168 State Parties including France, the People's Republic of China, the Russian Federation and the United Kingdom. However, some important States have decided not to become parties to this Protocol such as the United States, India, Israel, and Pakistan.⁵⁹

Articles 35(3) and 55 give remarkable and significant direct protection to the environment during international armed conflict. Article 35(3), situated in Section I of Part III dealing with "Basic Rules" of Methods and Means of Warfare, states:

It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.⁶⁰

Article 55 which deals with the "Protection of the Natural Environment" in Chapter III (Civilian Objects) of Section I (General Protection against the Effects of Hostilities) of Part IV (Civilian Population), states:

1. Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.
2. Attacks against the natural environment by way of reprisals are prohibited.⁶¹

It is interesting to note that these two provisions were not part of the original drafts prepared by the ICRC and were proposed during the conference.⁶² The decision of the ICRC to exclude them was based on a situation in which the environmental protection during armed conflict had been the subject of a negotiation of bilateral agreement between the United States and the Soviet Union at that time in the issue of controlling environmental modification techniques as a weapon during armed conflict.⁶³ However, these rules were eventually proposed and included in the Protocol I as a result of the horrible environmental consequences of the Vietnam War.⁶⁴

⁵⁸ Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17513 (entered into force 7 December 1978).

⁵⁹ *Ibid.*

⁶⁰ Article 35(3), *ibid.*

⁶¹ Article 55, *ibid.*

⁶² Schmitt, above n 9, 74; Koppe, above n 8, 145.

⁶³ Bothe, Partsch and Solf, above n 55, 344.

Many commentators celebrate Articles 35(3) and 55 as significant achievements in protecting the environment during international armed conflict.⁶⁵ However, many also believe that these provisions are difficult to apply to real cases because of their vague words and high thresholds for damage.⁶⁶ Despite this pessimism, Article 35(3) and 55 signify a crucial development of environmental protection in times of international hostilities. These provisions explicitly protect the natural environment as indispensable support to human health and survival.⁶⁷

Besides Articles 35(3) and 55, it is important to observe that there are other provisions in Protocol I that may offer protection to the environment although in indirect way. Article 51 prohibits indiscriminate attacks including "those which employ a method or means of combat the effects of which cannot be limited as required by this Protocol".⁶⁸ This article may be used in connection with the environment because indiscriminate effects of weapons will eventually threaten the environment. Further, Article 51 considers an attack as indiscriminate if the attack may be expected to cause "damage to civilian objects" which would be disproportionate in relation to the actual and direct military advantage.⁶⁹ Civilian objects may include properties such as houses, farmlands and buildings where all of these represent the value of the environment.

⁶⁴ Reyhani, above n 50, 328.

⁶⁵ Stone, above n 10, 21; Al-Duaij, above n 6, 105; Schmitt, above n 9, 70; Betsy Baker, 'Legal Protections for the Environment in Times of Armed Conflict', (1993) 33 *Virginia Journal of International Law* 352, 382; Alexandre Kiss, 'International Humanitarian Law and the Environment', (2001) 31(4-5) *Environmental Law & Policy* 223, 225; Michael N. Schmitt, 'The Environmental Law of War: An Invitation to Critical Reexamination', (1996) 6 *US Air Force Academy Journal of Legal Studies* 237, 257.

⁶⁶ Stone, *ibid*; Laurent R. Hourcade, 'Environmental Law of War', (2001) 25 *Vermont Law Review* 653, 673; Bothe, Partsch and Solf, above n 55, 348; Richard Desgagné, 'The Prevention of Environmental Damage in Time of Armed Conflict: Proportionality and Precautionary Measures', (2000) 3 *Yearbook of International Humanitarian Law* 109, 113; Walter G. Sharp Sr., 'The Effective Deterrence of Environmental Damage During Armed Conflict: A Case Analysis of the Persian Gulf War', (1992) 137 *Military Law Review* 1, 16.

⁶⁷ Neil A.F. Popovitz, 'Humanitarian Law, Protection of the Environment, and Human Rights', (1995) 8 *Georgetown International Environmental Law Review* 67, 75; Al-Duaij, above n 6, 105.

⁶⁸ Article 51(4)(c), Additional Protocol I to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

⁶⁹ Article 51(5)(b), *ibid*.

⁷⁰ Article 54(2), *ibid*.

⁷¹ *Ibid*.

⁷² Article 56(1), *ibid*.

Article 54(2) protects the environment by prohibiting action “to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population”.⁷⁰ This provision expressly mentions “foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works”⁷¹ where these are in their natural form as part of the environment.

Article 56 (1) prohibits any attack to works or installations “which are containing dangerous forces, namely dams, dykes and nuclear electrical generating stations” even if they are legitimate military targets if “such attack may cause the release of dangerous forces and consequent severe losses among the civilian population”.⁷² Further, it also stated that other military objectives located at or in the vicinity of these works or installations also entitled to the same protection.⁷³ However, it is crucial to remember that the protection of these objects will cease if they are used “in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support”.⁷⁴

It is interesting to note that Articles 59 and 60 provide unique opportunities for environmental protection when States may create special protected zones. Article 59 mentions the first category of this protected zone as non-defended localities.⁷⁵ This zone is absolutely protected from attack and can be declared unilaterally or by agreement of the warring parties. Article 60 prohibits conflicting parties from operating their military actions within an area which has been agreed to be a “demilitarised zones”.⁷⁶ These “demilitarised zones” created only through agreement from the parties; in other words there should be consent from the warring parties. Therefore, creation of this zone is more difficult than protected zones under Article 59 where they offer more promising environmental protection.⁷⁷ As an example of protected zone, it has been acknowledged that demilitarised zones between North Korea and South Korea proven to be a safe haven for the environment.⁷⁸

⁷³ Ibid.

⁷⁴ Article 56(2), *ibid.*

⁷⁵ Article 59, *ibid.*

⁷⁶ Article 60, *ibid.*

⁷⁷ Tarasofsky, above n 9, 53.

⁷⁸ See Ke Chung Kim, ‘Preserving Biodiversity in Korea’s Demilitarised Zone’, (1997) 278(5336) *Science* 242.

2.1.6.1981 Certain Conventional Weapons Convention and Protocol III

Another important treaty that has specific protection for the environment during armed conflict is the 1981 Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects⁷⁹ and especially its third Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III).⁸⁰ Definition of the phrase of "conventional weapons" may be found in a report from the Conventional Armaments Commission as any weapons "except atomic weapons and weapons of mass destruction".⁸¹ It seems logical based on this definition that the ICRC drafted proposal of this convention excluding notorious weapons such as nuclear weapons or weapons of mass destruction. Further, it was noted that the other reasons were the ICRC did not want to "broach" any issue of non-conventional weapons that were the subject to other diplomatic conferences and present customary rule of rights of States to choose methods and means of warfare is not unlimited considered sufficient to fill any legal gap.⁸² As of 16 October 2009, this convention had 110 States Parties with five other signatories States.⁸³

The first reference to environmental protection in this treaty is located in the Convention's preamble of the fourth paragraph that reads:

[t]hat it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe

⁷⁹ Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects and Protocols, opened for signature 10 April 1981, 1342 UNTS 22495 (entered into force 2 December 1983).

⁸⁰ Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III) to Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, opened for signature 10 April 1981, 1342 UNTS 22495 (entered into force 2 December 1983).

⁸¹ The Conventional Armaments Commission was set up by the Security Council by S/RES/18 (1947), adopted on 13 February 1947; implementation of General Assembly Resolutions on the principles governing the general regulation and reduction of armaments and information on armed forces. In 1952 the Conventional Armaments Commission was merged with the Atomic Energy Commission, which was established in 1946 the General Assembly Resolution A/RES/1(1) of 24 January 1946 on the establishment of a commission to deal with the problems raised by the discovery of atomic energy. Together they formed the United Nations Disarmament Commission, established by the General Assembly Resolution A/RES/502 (VI), of 11 January 1952 on regulation, limitation, and balanced reduction of all armed forces and all armaments; international control of atomic energy. Koppe, above n 8, 180, footnote 325.

⁸² Koppe, *ibid*, 182.

⁸³ Available at <<http://www.icrc.org/ihl.nsf/INTRO?OpenView>>, 17 October 2009.

damage to the natural environment.⁸⁴

It is clear that this reference is not part of the convention's rights and duties imposed on States that subscribed to it. However, inclusion of this reference may eventually signal legal effect to States Parties.⁸⁵ According to Article 31 Vienna Convention on the Law of Treaties, preamble a treaty plays an important role as an additional tool in interpreting the concerned treaty.⁸⁶ It is acknowledged that a convention's preamble commonly represents the motives of the States Parties and the underlying principles of the convention itself.⁸⁷

The second important reference to the environment is stipulated in Article 2(4) Convention's Incendiary Protocol. It states:

It is prohibited to make forests or other kinds of plant cover the object of attack by incendiary weapons except when such natural elements are used to cover, conceal or camouflage combatants or other military objectives, or are themselves military objectives.⁸⁸

Unfortunately, this provision only provides protection to the environment on a limited extent. First, it only protects forests or other plant cover from devastation.⁸⁹ Second, it proscribes only attacks that using incendiary weapons not all kind of weapons.⁹⁰ Further, this provision also provides a conditional clause for military necessity justification as opposed to environmental protection in the convention's preamble and Additional Protocol I. In spite of these

⁸⁴ Preamble, Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects and Protocols, opened for signature 10 April 1981, 1342 UNTS 22495 (entered into force 2 December 1983).

⁸⁵ Koppe, above n 8, 187.

⁸⁶ Article 31(1) and (2), Vienna Convention on the Law of Treaties, opened for signature 23 May 1969, 1155 UNTS 18232 (entered into force 27 January 1980).

⁸⁷ Gerald Fitzmaurice, 'The Law and Procedure of the International Court of Justice 1951-4: Treaty Interpretation and Other Treaty Points', (1957) 33 *British Yearbook of International Law* 203, 228; Ian Sinclair, *The Vienna Convention on the Law of Treaties*, (1984), 127; Koppe, above n 8, 187.

⁸⁸ Article 2(4), Protocol on Prohibition or Restrictions on the Use of Incendiary Weapons (Protocol III) to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, opened for signature 10 April 1981, 1342 UNTS 22495 (entered into force 2 December 1983).

⁸⁹ This scope is more concrete and specific compare to protection in Articles 35(3) and 55 Additional Protocol I where they protect the environment in general (in abstracto). Koppe, above n 8, 188.

critiques, however, it is important to argue that this provision should be welcomed because it provides protection to a concrete and specific area of the environment from a specific weapon that States should observe it.⁹¹

From this identification of treaty law, as far as environmental protection during armed conflict is concerned, it is clear that treaty law in international humanitarian law do provide legal protection directly or indirectly. As time sequence had showed, environment *per se* had just its protection since the 1970s alongside with the emerging environmental awareness in general worldwide.

2.2. Customary Law

In addition to conventional rules, it is crucial to argue that the environment is also protected by customary international law, especially in the area of the law of war.⁹² This source of law is important because it binds all States.⁹³ However, in some cases, there is a possibility that when State(s) are not bound by customary international law they may act as persistent objectors.⁹⁴ Despite this exception, customary international law plays significant role in complementing or affecting treaty rules in certain ways. Roberts and Guelff propose that there are at least four ways.⁹⁵ First, rules in a treaty, which embody existing customary international law, bound also to States that are not subscribed to the concerned treaty. Second, in the development of customary law, pre-existing treaty rules may be pulled into its ambit and then become generally binding upon all

⁹⁰ It is observed that level of environmental damage caused by incendiary weapons is not limited by a damage threshold as in Additional Protocol I. Koppe, *ibid*.

⁹¹ Reyhani, above n 50, 333.

⁹² Tarasofsky, above n 9, 22; Koppe, above n 8, 204. As Schmitt observes: "Custom is at the core of the *jus in bello*. Indeed, as a source of the law of war it predates any of the applicable treaty law currently in force". Schmitt, above n 9, 51.

⁹³ Antonio Cassese, *International Law*, (2001), 157.

⁹⁴ See Gerald Fitzmaurice, 'The Law and Procedure of the International Court of Justice 1951-54: General Principles and Sources of Law', (1953) 30 *British Yearbook of International Law* 1, 26; Ted L. Stein, 'The Approach of a Different Drummer: The Principle of the Persistent Objector in International Law', (1985) 26(2) *Harvard International Law Journal* 478, 478; Olufemi Elias, 'Some Remarks on the Persistent Objector Rule in Customary International Law', (1991) 6 *Denning Law Journal* 37; Adam Steinfeld, 'Nuclear Objections: The Persistent Objector and the Legality of the Use of Nuclear Weapons', (1996) 62(4) *Brooklyn Law Review* 1635, 1646; Camilla G. Guldahl, 'The Role of Persistent Objection in International Humanitarian Law', (2008) 77(1) *Nordic Journal of International Law* 51, 53; the International Law Association, London Conference, Committee on Formation of Customary Law, Final Report: Statement of Principles Applicable to the Formation of General Customary International Law (2000), para. 15(a), p. 27, available at <<http://www.ila-hq.org/en/committees/index.cfm/cid/30>> visited on 31 October 2009.

⁹⁵ Roberts and Guelff, above n 53, 7-8.

States. Third, customary law may support treaty provisions interpretation and may also supplement them. Finally, even though customary law usually strengthens written law, a new widespread and uniform State practice may pose a question about whether or not a new custom had emerged and supersede earlier law.⁹⁶

Within customary law, it is arguable that there are three groups of rules that provide protection to the environment during international armed conflict. First, protection to the environment is given by general customary rules where they can be found within the principles of the law of war. These protections are rather indirect because they fall into the general category of protecting the civilian population and property. Second, it can be argued that some provisions from treaties in the law of war, as examined above, have attained the status of customary law. Therefore, they are binding not only State parties but also upon all States. Third, since the 1970s, one study has shown that there are new emerging customary rules which directly protect the environment during international armed conflict alongside with the growing global awareness of the environment.⁹⁷

2.2.1. Customary Principles of *Ius in Bello*

As stated above, environmental protection from the customary principles of the law of war is indirect. In observing these principles, it has been argued that there is no recognised text which formulates the customary principles of law of war.⁹⁸ However, one must start with two central foundations of the law of war, i.e. only legitimate object which States should endeavour to accomplish during war is to weaken the military forces of the enemy and the choice of means and methods of warfare by belligerents is not unlimited.⁹⁹ Following on from these two basic foundations, there are four principles which become the parameters of permissible actions during hostilities by belligerents. They are the principles of necessity, humanity, proportionality and discrimination.¹⁰⁰ In addi-

⁹⁶ Ibid.

⁹⁷ Koppe, above n 8, 246.

⁹⁸ Richard Falk, 'The Environmental Law of War: An Introduction', in Glen Plant (Ed), *Environment Protection and the Law of War; A "Fifth Geneva" Convention on the Protection of the Environment in Time of Armed Conflict*, (1992), 78, 84.

⁹⁹ The former foundation was incorporated in the 1868 St. Petersburg Declaration while the latter was incorporated in the 1874 Brussels Declaration and the 1880 Oxford Manual and was formally codified in the 1899 and 1907 Hague Regulations, in Article 35(1) of the 1977 Additional Protocol I, and in the preambles of the 1980 Convention on Certain Conventional Weapons and the 1997 Ottawa Convention on Anti-Personnel Mines. Tarasofsky, above n 9, 22; Roberts and Guelff, above n 53, 9.

tion to these principles, it is crucial to take into account the fact that the principle of neutrality may also provide significant protection to the environment of neutral parties from potential damage during international armed conflicts.

2.2.1.1. Principle of (Military) Necessity

This principle determines an action in warfare as lawful if weapons and tactics employed are reasonably necessary to achieve military objectives.¹⁰¹ This principle was a response to the warfare strategy that considers military necessity as a supreme value and justifies any conduct in order to win the war therefore affording little protection to the victims of war.¹⁰² This principle was codified in the 19th century in the 1863 Lieber Code that defines:

Military necessity, as understood by modern civilized nations, consists in the necessity of those measures which are indispensable for securing the ends of the war, and which are lawful according to the modern law and usages of war.¹⁰³

Further, rejection of absolute claims of military necessity was expressly stipulated in the 1868 St Petersburg Declaration¹⁰⁴ and confirmed by the International Military Tribunal which stated:

To claim that [rules and customs of warfare] can be wantonly – and at the sole discretion of any one belligerent – disregarded when he considers his own situation to be critical, means nothing more or less than to abrogate the laws and customs of war entirely.¹⁰⁵

Environmental protection is implied in this principle via customary protec-

¹⁰⁰ Falk, above n 98, 84; Roberts, above n 9, 228; Caggiano, above n 16, 494; Simonds, above n 9, 168.

¹⁰¹ Falk, *ibid*; Roberts, *ibid*, 228; Tarasofsky, above n 9, 23;

¹⁰² Rogers, above n 5, 3-4.

¹⁰³ Article 14, Instructions for the Government of Armies of the United States in the Field (1863 Lieber Code), in L. Friedman, *The Law of War - A Documentary History*, (1972), 158.

¹⁰⁴ It limits States' usage special weapons in warfare that cause unnecessary injury to the enemy where it is considered to be the violation of the law of humanity. The Declaration of St. Petersburg Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight, signed on 11 December 1868, (1907) 1(2) *American Journal of International Law* 95.

¹⁰⁵ Trial of Alfred Felix Alwyn Krupp Von Bohlen Und Halbach and Eleven Others (Krupp Trial); Case No. 58, in: The United Nations War Crimes Commission, *Law Reports of Trials of Major War Criminals*, Vol. X, (1949) 34, 139.

¹⁰⁶ Article 23(g), Annex to the 1907 Hague Convention (IV) Respecting the Laws and Customs of War on Land, signed on 18 October 1907, entered into force on 26 January 1910, (1908) 2(1/2) *American Journal of International Law* 90.

tion of enemy property that stipulated in Article 23(g) of the 1907 Hague Regulations. It outlaws action "to destroy or seize the enemy's property, *unless such destruction or seizure be imperatively demanded by the necessities of war*".¹⁰⁶ This declaratory rule was also observed during the Nuremberg Tribunals to charge some German Generals for their destruction of enemy's property policy.¹⁰⁷

2.2.1.2. Principle of Discrimination

This principle requires belligerents to distinguish their attacks between combatants and non-combatants and also between military objectives and civilian properties or protected places. It has been acknowledged that protection under this principle is the core purpose of humanitarian law¹⁰⁸ and is narrowly shaped by the principle of humanity.¹⁰⁹ This principle, formulated in Article 48 of the Additional Protocol I, reads:

In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives.¹¹⁰ Currently, legal definitions of combatant and non-combatant are provided by the Additional Protocol I. It defines combatant as any member of conflicting armed forces excludes the medical personnel and chaplains.¹¹¹ It then defines non-combatant as any person who does not belong to the scope of Article 43 (combatant).¹¹² Some scholars mention the latter group includes old men, women, children and unarmed priests.¹¹³ However, persons in this group will no longer be protected if they act in a same manner to the first group.¹¹⁴

¹⁰⁷ Trial of Wilhelm List and Others (The Hostages Trial); Case No. 47, in: The United Nations War Crimes Commission, Law Reports of Trials of Major War Criminals, Vol. VIII, (1949) 34, 68; Trial of von Leeb and Thirteen Others (German High Command Trial); Case No. 72, in: The United Nations War Crimes Commission, Law Reports of Trials of Major War Criminals, Vol. XII, (1949) 1, 93-94.

¹⁰⁸ Michael N. Schmitt, 'The Principle of Discrimination in 21st Century Warfare', (1999) 2 Yale Human Rights & Development Law Journal 143, 144.

¹⁰⁹ Rogers, above n 5, 7.

¹¹⁰ Article 48, Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

¹¹¹ Article 43 (1&2), *ibid*.

¹¹² Article 50(1), *ibid*.

¹¹³ Theodor Meron, 'Shakespeare's Henry the Fifth and the Law of War', (1992) 86(1) American Journal of International Law 1, 23; Rogers, above n 5, 8.

This customary principle embodies the prohibition of indiscriminate attacks in warfare. Under Article 51 Additional Protocol I, indiscriminate attacks are prohibited where these include any attacks that are "not directed against a specific military objective", "employ a method or means of combat the effects of which cannot be directed at a specified military objective" or "employ a method or means of combat the effects of which cannot be limited as required" by the Protocol and "consequently, in each case are of a nature to strike military objectives and civilians or civilian objects without distinction".¹¹⁵ This Article also considers attacks as indiscriminate when they committed by:

(a) any methods or means which treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects and (b) may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.¹¹⁶

It is arguable that the environment may be also protected under this rule in particular through the distinction of military objectives from civilian objects.¹¹⁷ This protection is clearly reflected in the Additional Protocol I¹¹⁸ and the Protocol III of the 1981 Certain Conventional Weapons Convention.¹¹⁹ The distinction principle of the environment during armed conflict is included in the 1994 Guidelines for Military Manuals and Instructions on the Protection of the Environment in times of Armed Conflict.¹²⁰

¹¹⁴ Article 51(3), Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

¹¹⁵ Article 51(4), *ibid.*

¹¹⁶ Article 51(5), *ibid.*

¹¹⁷ Jean-Marie Henckaerts, L. Doswald-Beck (Eds), *Customary International Humanitarian Law*; Volume I: Rules, (2005), 143.

¹¹⁸ Articles 35(3), 48, 52 and 57, Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

¹¹⁹ It stated that "It is prohibited to make forests or other kinds of plant cover the object of attack by incendiary weapons except when such natural elements are used to cover, conceal or camouflage combatants or other military objectives, or are themselves military objectives". Article 2(4), Protocol on Prohibition or Restrictions on the Use of Incendiary Weapons (Protocol III) to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, opened for signature 10 April 1981, 1342 UNTS 22495 (entered into force 2 December 1983).

2.2.1.3. Principle of Humanity

This principle requires any weapons and tactics employed in warfare must not cause any superfluous suffering to its victims in the way of "prolonged or painful death or is in a form calculated to cause severe fright or terror".¹²¹ Therefore, any weapons and tactics which might result in these outcomes are illegal *per se*.¹²² It has been acknowledged that this principle has origin in the "laws of humanity".¹²³ The laws of humanity have been recognised in the well-known "Martens Clause".¹²⁴ It was originally stipulated in the Preamble to the 1899 Hague Convention II that reads:

Until a more complete code of the laws of war is issued, the High Contracting Parties think it right to declare that in cases not included in the Regulations adopted by them, populations and belligerents remain under the protection and empire of the principles of international law, as they result from the usages established between civilized nations, from the laws of humanity and the requirements of the public conscience.¹²⁵

In spite of controversies regarding its legal status,¹²⁶ this clause has brought significant legal effect to the development of the law of war in general. It was noted that this clause was aimed to anticipate pessimistic interpretation within the law of war that "anything not expressly prohibited was permitted".¹²⁷ Therefore it has two fundamental functions, both "to preserve the existing body of customary law not yet codified and to allow for its continuous development".¹²⁸

¹²⁰ UN Doc. A/49/323, Report of the Secretary General to the General Assembly in the forty ninth session, United Nations Decade of International Law. Annex, para. 4. These Guidelines was strongly endorsed by the UN General Assembly to all States to disseminate them widely and to give due consideration to the possibility of incorporating them into their military manuals and other instructions addressed to their military personnel. Henckaerts and Doswald-Beck, above n 117, 144.

¹²¹ Falk, above n 98, 84-85.

¹²² Ibid.

¹²³ Koppe, above n 8, 115.

¹²⁴ See Theodor Meron, 'The Martens Clause, Principles of Humanity, and Dictates of Public Conscience', (2000) 94(1) American Journal of International Law 78.

¹²⁵ Preamble to the 1899 Hague Convention (II) with respect to the Laws and Customs of War on Land, with annexed Regulations, signed on 29 July 1899, entered into force on 4 September 1900, (1907) 1(2) American Journal of International Law 129. It was then repeated in several instruments such as the Preamble of Hague Convention (IV) of 1907; Articles 63, 62, 142, and 158 respectively of the four Geneva Conventions of 1949; Article 1(2) of Additional Protocol I of 1977; and in the Preamble of Additional Protocol II of 1977.

¹²⁶ Tarasofsky, above n 9, 33.

¹²⁷ Ibid 34.

¹²⁸ Ibid 35.

Further, in examining the Martens Clause, the International Military Tribunal stated that:

It is a general clause, making the usages established among civilised nations, the laws of humanity, and the dictates of public conscience into the legal yardstick to be applied if and when the specific provisions of the [Hague Convention IV] and the Regulations annexed to it do not cover specific cases occurring in warfare, or concomitant to warfare.¹²⁹

In terms of environmental protection, it is arguable that solid global emergence of environmental awareness has shown a new requirement of public conscience, in particular in the area of the law of war. This was one of the conclusions of the 1991 Ottawa Conference of Experts on 'the Use of the Environment as a Tool of Conventional Warfare' where:

[t]here was a shared view that the application and development of the law of armed conflict have to take into account the evolution of environmental concerns generally. The customary laws of war, in reflecting the dictates of public conscience, now include a requirement to avoid unnecessary damage to the environment.¹³⁰

In addition, it is interesting to note what Canada has claim in regard to environmental protection rules during armed conflict. The Canadian government stated that:

The customary laws of war, in reflecting the dictates of public conscience, now include a requirement to avoid unnecessary damage to the environment. This includes consideration of environmental effects in the planning of military operations.¹³¹

2.2.1.4. Principle of Proportionality

This principle requires that the use of weapons and tactics of warfare must be proportionate to any military objectives. In other words, even when attempting to fulfil legitimate military objectives, armed forces should not employ

¹²⁹ Trial of Alfred Felix Alwyn Krupp Von Bohlen Und Halbach and Eleven Others (Krupp Trial); Case No. 58, in: The United Nations War Crimes Commission, *Law Reports of Trials of Major War Criminals*, Vol. X, (1949) 69, 133.

¹³⁰ Chairman's Conclusions, 1991 Ottawa Conference on the Use of the Environment as a Tool of Conventional Warfare, para. 9. Quoted in Tarasofsky, above n 9, 35.

¹³¹ Barry Mawhinney, 'Canadian Practice in International Law; At the Department of External Affairs in 1991-1992', (1992) 30 *Canadian Yearbook of International Law* 347, 347.

excessive weapons and tactics which might bring severe collateral damage. It is observed that this principle is usually mentioned together with the principle of military necessity because of their simultaneous application.¹³² This principle is clearly stated in the Additional Protocol I by obliging States to: refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.¹³³

In relation to the protection to the environment, it has been suggested that there is significant worldwide recognition and practice of the principle that "incidental damage affecting the natural environment must not be excessive in relation to the military advantage anticipated from an attack on military objective".¹³⁴ This recognition may be found in the Guidelines for Military Manuals and Instructions on the Protection of the Environment in times of Armed Conflict¹³⁵ and in the San Remo Manual on Naval Warfare.¹³⁶

Recognition of the principle of proportionality in environment protection was also evident in authoritative statements from States and international court. NATO, during its bombing campaign in Yugoslavia, recognized this principle on its decisions to determine most of the targets by taking into account "all possible 'collateral damage,' be it environmental, human, or to civilian infrastructure".¹³⁷ Further, in examining the environmental damage of the NATO bombing, the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia, in its final report to the ICTY's Prosecutor, viewed that the impacts were "best considered from the underlying principles of the law of armed conflict such as necessity and proportionality".¹³⁸ It then

¹³² Ling-Yee Huang, 'The 2006 Israeli-Lebanese Conflict: A Case Study for Protection of the Environment in Times of Armed Conflict', (2008) 20 Florida Journal of International Law 103, 107.

¹³³ Article 57(2)(iii), Additional Protocol I to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

¹³⁴ Henckaerts and Doswald-Beck, above n 117, 145.

¹³⁵ UN Doc. A/49/323, Report of the Secretary General to the General Assembly in the forty ninth session, United Nations Decade of International Law. Annex, para. 4.

¹³⁶ Louise Doswald-Beck, San Remo Manual on International Law Applicable to Armed Conflicts at Sea, (1995).

¹³⁷ Vojin Joksimovich, 'Militarism and Ecology: NATO Ecocide in Serbia', (2000) 11(4) Mediterranean Quarterly 140, 142.

addressed the principle, stating:

[i]n order to satisfy the requirement of proportionality, attacks against military targets which are known or can reasonably be assumed to cause grave environmental harm may need to confer a very substantial military advantage in order to be considered legitimate.¹³⁹

Finally, the International Court of Justice confirmed in its Advisory Opinion that: States must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives. Respect for the environment is one of the elements that go to assessing whether an action is in conformity with the principles of necessity and proportionality.¹⁴⁰

Having observed these four customary principles, it is arguable that the environment is protected during armed conflict, albeit indirectly, and that these principles may provide significant protection in particular extreme cases of environmental damage during warfare.¹⁴¹ Further, it is crucial to consider that:

Each of these four principles strongly points to the conclusion that actions resulting in massive environmental destruction, especially where they do not serve a clear and important military purpose, would be questionable on many grounds, even in the absence of specific rules of war addressing environmental matters in detail. When the four principles are taken together, such a conclusion would seem inescapable.¹⁴²

In 1992, Simonds also concluded in regard to these four customary principles that: Together, these guidelines outlaw wanton environmental damage by prohibiting widespread destruction disproportionate to an anticipated military goal.¹⁴³

2.2.1.5. Principle of Neutrality

In addition to the four principles above, it is arguable that principle of neu-

¹³⁸ Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia, para. 15. Available from <<http://www.icty.org/>> at 26 October 2009.

¹³⁹ Ibid para. 22.

¹⁴⁰ Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion) [1996] ICJ Rep, para. 29.

¹⁴¹ Tarasofsky, above n 9, 38.

¹⁴² Roberts, above n 9, 228.

¹⁴³ Simonds, above n 9, 169-170.

trality in the law of war provides significant protection to the environment outside belligerents' territories. According to this principle, the environment of a neutral and non-participating country should be protected from any violation during international armed conflict.¹⁴⁴ From this basic rule, rights and duties of neutral States are developed into the law of neutrality as part of *ius in bello* in general. The law of neutrality was codified in the 1907 Hague Convention V in the Case of War on Land¹⁴⁵ and the Hague Convention XIII in the Case of Naval War.¹⁴⁶ Article 1 of the 1907 Hague Convention V provides that "the territory of neutral powers is inviolable". This inviolability includes transboundary damage and in particular to environmental damage.¹⁴⁷

In an international armed conflict, a State is considered as neutral if it declares its neutrality and acts in a neutral manner to all belligerents.¹⁴⁸ This declaration or action of neutrality will protect the population and environment of the neutral State against any attack from the belligerents.¹⁴⁹ Violations to this protection will be regarded as an act of aggression and entail international responsibility.¹⁵⁰ An example of this application was that in World War II, Switzerland as a neutral State successfully invoked compensation from Allied Nations for collateral damage within its territory because of their attacks in neighboring areas of Germany.¹⁵¹

The protection to the environment during international armed conflict afforded by this principle may be seen as promising. This is due to the fact that this principle is reinforced by non-belligerents in taking action to correct breaches of its sovereignty, including its environment.¹⁵² Therefore, it is correct to argue that this principle becomes important in controlling environmental damage re-

¹⁴⁴ Al-Duaij, above n 6, 108.

¹⁴⁵ The 1907 Hague Convention (V) Respecting the Rights and Duties of Neutral Powers in Case of War on Land, signed on 18 October 1907, entered into force on 26 January 1910, (1908) 2(1/2) American Journal of International Law 117.

¹⁴⁶ The 1907 Hague Convention (XIII) Concerning the Rights and Duties of Neutral Powers in Naval War, signed on 18 October 1907, entered into force on 26 January 1910, (1908) 2(1/2) American Journal of International Law 202.

¹⁴⁷ Glen Plant, 'Environmental Damage and the Laws of War: Points Addressed to Military Lawyers', in H. Fox and M. Meyer (eds.), *Armed Conflict and the New Law*, Volume II: Effecting Compliance (1993), 159, 164.

¹⁴⁸ Falk, above n 98, 85.

¹⁴⁹ Adam Roberts, 'Failures in Protecting the Environment in the 1990-91 Gulf War', in Peter Rowe (ed.), *The Gulf War 1990-91 in International and English Law* (1993), 111, 118.

¹⁵⁰ Al-Duaij, above n 6, 108. ¹⁵¹ Michael Bothe, 'The Protection of the Environment in Times of Armed Conflict; Legal Rules, Uncertainty, Deficiencies, and Possible Developments', (1991) 34 German Yearbook of International Law 54, 59-60 as quoted in Al-Duaij, above n x, 85.

sulting from international hostilities in the sense that the level of harm cannot "spill over onto neutrals' environments".¹⁵³ Further, this obligation is in line with customary environmental law in peacetime which prevents States from causing damage to other States' environment.¹⁵⁴

2.2.2. Customary Status of Treaty Provisions

As stated above, there is a possibility that some treaty law obligations in the preceding sections have equivalents of customary status and therefore bind upon States that do not subscribe to the particular treaty. This possibility may result from the fact that these treaty provisions were declaratory of pre-existing norms of customary international law or they have developed into customary international law.¹⁵⁵ This identification is crucial because it will widen the environmental protection during international armed conflict. In this case, States could no longer avoid their liabilities for environmental damage by reasoning that they are not party to the concerned treaty.

In terms of treaty provisions that have attained customary status, it can be argued that environmental protection provisions from the 1907 Hague IV Convention, 1925 Geneva Gas Protocol, 1949 Geneva IV Convention, and 1977 ENMOD Convention have been acknowledged as part of customary international law that bind upon all States without exception. However, unfortunately there are two main treaties, which have specific reference to environmental protection provisions during international armed conflict, but which have not been universally recognised as customary international law. They are the 1977 Additional Protocol I and 1981 Protocol III to the Certain Conventional Weapons Convention.

The recognition of customary status of Article 23(g) of the 1907 Hague IV Convention is found in the International Military Tribunal judgment where it is stated that: The Hague Regulations prohibited "the destruction or seizure of enemy property except in cases where this destruction or seizure is urgently required by the necessities of war". Article 23(g). *The Hague Regulations are mandatory provisions of International Law*.¹⁵⁶ (emphasis added)

¹⁵² Tarasofsky, above n 9, 31.

¹⁵³ Ibid.

¹⁵⁴ Ibid.

¹⁵⁵ Koppe, above n 8, 214.

¹⁵⁶ Trial of Wilhelm List and Others (The Hostages Trial); Case No. 47, in: The United Nations War Crimes Commission, Law Reports of Trials of Major War Criminals, Vol. VIII, (1949) 34, 69; Tarasofsky, above n 9, 24.

Furthermore, the International Court of Justice in its Advisory Opinions confirmed that the Hague Regulations in general have the status of customary international law.¹⁵⁷

In terms of environmental protection from poisonous weapons, provisions of the 1925 Gas Protocol have been "relatively well observed",¹⁵⁸ and the use of poison gas frequently "condemned as a violation of international law".¹⁵⁹ One of the reasons the Protocol has been well observed is the reciprocal basis implementation from the member States.¹⁶⁰ Furthermore, the Protocol's prohibition rules are now accepted as general obligatory rules of international law that impose duties upon all States.¹⁶¹ That the assertion has the support from States as evident from United Nations General Assembly resolutions which have recognised that the 1925 Protocol "embodies the generally recognised rules of international law prohibiting the use in international armed conflicts of all biological and chemical methods of warfare, regardless of any technical developments"¹⁶² and have reaffirmed "the necessity of strict observance by all States of the principles and objectives of the Protocol".¹⁶³

It is important and interesting to note that environmental protection from the Geneva Convention IV had been generally recognised as customary international law.¹⁶⁴ This recognition was based on the fact that virtually all States in the world are State parties to the Geneva Conventions which makes these treaties accepted universally.¹⁶⁵ As of November 2009, the Geneva Conven-

¹⁵⁷ Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion) [1996] ICJ Rep, p. 256, para. 75; Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, (Advisory Opinion) [2004] ICJ Rep, p. 40, para. 89.

¹⁵⁸ Tarasofsky, above n 9, 56.

¹⁵⁹ Schwabach, above n 15, 124.

¹⁶⁰ Ibid.

¹⁶¹ George Bunn, 'Banning Poison Gas and Germ Warfare: Should the United States Agree?', (1969) 1969(2) Wisconsin Law Review 375, 381; R. R. Baxter and Thomas Buergenthal, 'Legal Aspects of the Geneva Protocol of 1925', (1970) 64(4) American Journal of International Law, 853, 853; Schmitt, above n 267, 286; United Nations, Yearbook on Disarmament, Vol. 5 (1980), 283; Espiell, above n 23, 423; Schafer, above n 157, 302.

¹⁶² A/Res/2603 (XXIV), adopted on 16 December 1969; Question of chemical and bacteriological (biological) weapons.

¹⁶³ A/Res/3465 (XXX), adopted on 11 December 1975; Chemical and bacteriological (biological) weapons.

¹⁶⁴ Schmitt, above n 9, 66.

¹⁶⁵ Theodor Meron, 'The Geneva Conventions as Customary Law', (1987) 81(2) American Journal of International Law 348, 348; Schmitt, above n 9, 68.

tions have 194 State parties.¹⁶⁶ This figure of adherence even outnumbers State adherence to the United Nations Charter with 192 States.¹⁶⁷ Therefore, it is correct to argue that provisions in Geneva Conventions including environmental protection have attained the status of customary international law.¹⁶⁸ Moreover, the International Court of Justice has confirmed that this convention has customary status.¹⁶⁹

In regards to the ENMOD Convention, even though the drafter of this convention deemed it as continuing innovative rules and therefore limited their application to State Parties only, the current legal position suggests otherwise. It has been argued by some scholars that the ENMOD convention is likely achieving as status of customary international law.¹⁷⁰ This position is based on the fact that since its adoption, there has been no change to its rules.¹⁷¹ The two Review Conferences of the Parties in 1984 and 1992 also noted that to date there had been no treaty violation and generally supported by the facts that no complaint and proposal to change the rules of the convention.¹⁷² Further, many States, not only State Parties but also by non State Parties, incorporated ENMOD rules into their military manuals.¹⁷³ It is also crucial to note that the United Nations General Assembly invites all States to disseminate a document of Guidelines on the Protection of the Environment in Times of Armed Conflict where ENMOD rules were included.¹⁷⁴ Interestingly, the United States at the Second ENMOD Review Conference in 1992 stated that the ENMOD convention mirrored "the international community's consensus that the environment itself should not be used as an instrument of war".¹⁷⁵ Finally, it should be stressed that general and uniform practice from States reflects consensus on prohibition of environmental destruction as a weapon in international armed conflict.¹⁷⁶

Until today, environmental protection provisions in the 1977 Additional

¹⁶⁶ Available at <<http://www.icrc.org/ihl.nsf/INTRO?OpenView>>, 16 November 2009.

¹⁶⁷ Available at <<http://www.un.org/en/members/growth.shtml>>, 16 November 2009.

¹⁶⁸ Caggiano, above n 16, 493.

¹⁶⁹ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States of America)*, Merits, Judgment, 27 June 1986, ICJ Reports 1986, 113.

¹⁷⁰ Reyhani, above n 50, 327; Dinstein, above n 52, 181.

¹⁷¹ Dinstein, *ibid*; Tarasofsky, above n 9, 47.

¹⁷² Tarasofsky, above n 9, 47.

¹⁷³ Henckaerts and Doswald-Beck, above n 117, 155-156.

¹⁷⁴ UNGA/Res/49/50, adopted without a vote on 9 December 1994, on the United Nations Decade of International Law.¹⁷⁵ Henckaerts and Doswald-Beck, above n 117, 155.

¹⁷⁶ *Ibid* 156.

Protocol I are unclear as to whether or not they have achieved customary law status.¹⁷⁷ Practices in international community shows there is no general acceptance of this matter. There is a significant practice which is opposing the achievement of customary status of these provisions. France and the United States reserved upon their ratification to the 1981 Certain Conventional Weapons Convention¹⁷⁸ that the general prohibition in its fourth preamble¹⁷⁹ does not reflect customary international law and therefore only applies to those who subscribed to it.¹⁸⁰ In the Nuclear Weapons Case, the United Kingdom and the United States argued before the court that these articles were not customary.¹⁸¹ The International Court of Justice in its conclusion agreed with this proposition by referring the applicability of these provisions only to "States having subscribed to these provisions".¹⁸² In addition, France, the United Kingdom and the United States have persistently argued that rules in Protocol I only apply to conventional weapons and not to Nuclear Weapons.¹⁸³

In contrast to the above, a number of facts support the idea that a prohibition on causing widespread, long-term and severe damage to the natural environment has attained customary international law status¹⁸⁴ or at least that Articles 35(3) and 55 are in the process of developing into rules of customary law.¹⁸⁵ A prohibition on causing damage to the environment has been expressly stipulated in many States' military manuals¹⁸⁶ and the action is criminalized un-

¹⁷⁷ Falk, above n 98, 89; Reyhani, above n 50, 328-329;

¹⁷⁸ Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects and Protocols, opened for signature 10 April 1981, 1342 UNTS 22495 (entered into force 2 December 1983).

¹⁷⁹ The Preamble in fourth paragraph states: "[t]hat it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment". Ibid.

¹⁸⁰ France reservation available at <<http://www.icrc.org/ihl.nsf/NORM/74BDA0CA0843495FC1256402003FBC95?OpenDocument>>; the United States understanding available at <http://www.icrc.org/ihl.nsf/NORM/C1C4BFCF736BF820C1256402003FBE82?OpenDocument>, at 17 October 2009.

¹⁸¹ Henckaerts and Doswald-Beck, above n 117, 153.

¹⁸² Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion) [1996] ICJ Rep, para. 31.

¹⁸³ Henckaerts and Doswald-Beck, above n 117, 154.

¹⁸⁴ Ibid 152.

¹⁸⁵ Koppe, above n 8, 235.

¹⁸⁶ The States are Argentina, Australia, Belgium, Benin, Canada, Colombia, France, Germany, Italy, Kenya, Netherlands, New Zealand, Russia, Spain, Sweden, Switzerland, Togo, United Kingdom, the United States and Yugoslavia. Henckaerts and Doswald-Beck, above n 117, 152, footnote 52.

der the legislation in some States.¹⁸⁷ In the International Court of Justice's proceeding on the Nuclear Weapons Case, a number of States recognised Articles 35(3) and 55 as customary rules.¹⁸⁸ Furthermore, though neither Israel nor the United States were State Parties to Protocol I, both declared that their military practice does not use or involve methods or means of war which are intended or would constitute widespread, long-term and severe to the environment.¹⁸⁹ States also expressly condemned actions that devastated the environment in cases of 1991 Persian Gulf War and 1999 Kosovo conflict as violation to this prohibition or to Articles 35(3) and 55.¹⁹⁰ It also crucial to note that violation of this prohibition is considered as one of international crimes within the jurisdiction of the International Criminal Court.¹⁹¹

It is therefore reasonable to accept the ICRC's conclusion that Articles 35(3) and 55 attained their customary status in regards only to conventional weapons and not to nuclear weapons.¹⁹²

Lastly, note that in regards to Article 2(4) Protocol III to the 1981 Convention on Conventional Weapons, this provision is not yet regarded as a customary provision in international law.¹⁹³

2.2.3. Direct Customary Rules Since 1970s

Since the 1970s, a novel basic principle in the law of war has begun to emerge: the principle of environmental protection or responsibility.¹⁹⁴ The principle has its roots in a global concern for the need to protect the environment. It was drawn formally for the first time in the 1972 Stockholm Declaration¹⁹⁵ and

¹⁸⁷ The States are Australia, Azerbaijan, Belarus, Bosnia and Herzegovina, Canada, Colombia, Congo, Croatia, Georgia, Germany, Ireland, Mali, Netherlands, New Zealand, Norway, Slovenia, Spain, United Kingdom, and Yugoslavia. Ibid footnote 53.

¹⁸⁸ The States are Australia, Azerbaijan, Belarus, Bosnia and Herzegovina, Canada, Colombia, Congo, Croatia, Georgia, Germany, Ireland, Mali, Netherlands, New Zealand, Norway, Slovenia, Spain, United Kingdom, and Yugoslavia. Ibid footnote 55 and 56.

¹⁸⁹ Ibid 152-153.

¹⁹⁰ Ibid 153.

¹⁹¹ Article 8(2)(b)(iv), Statute of the International Criminal Court, opened for signature 16 March 1998, 2187 UNTS 38544 (entered into force 1 July 2002).

¹⁹² Henckaerts and Doswald-Beck, above n 117, 154.

¹⁹³ Bruce A. Harlow and Michael E. McGregor, 'International Environmental Law Considerations During Military Operations Other Than War', in: Richard J. Grunawalt, John E. King, Ronald S. McClain (Eds.), *Protection of the Environment During Armed Conflict*, (1996), 315, 318; Yoram Dinstein, 'Protection of the Environment in International Armed Conflict', (2001) 5 *Max Planck Yearbook of United Nations Law* 523, 537; Koppe, above n 8, 245-246.

¹⁹⁴ Koppe, above n 8, 246.

subsequently inspired some innovative provisions in the law of war that specifically protect the environment.¹⁹⁶ It is argued that this development served not only to enhance written treaty provision but also to generate the development of customary international law.¹⁹⁷

Stemming from the principle of environmental protection or responsibility, Koppe argued that there are three emerging norms of customary international law that directly protect the environment during international armed conflict. These norms are a general customary duty of care for the environmental protection; a prohibition on causing wanton or wilful damage to the environment that is not justified by military necessity; and a prohibition to cause excessive collateral damage to the environment.¹⁹⁸ It is observed that the first rule was a result of the development of international regulations protecting the environment in general and from repeated expressions of concern.¹⁹⁹ The rest are derived from numerous references to the principles of necessity, distinction and proportionality for environmental protection during international hostilities.²⁰⁰

2.2.3.1. General Duty of Care

It has been observed that this customary rule emerged from repeated conventional obligations within the law of armed conflict which has been adopted since 1977.²⁰¹ It is the first sentence of Article 55(1) of Additional Protocol I has the most explicit expression of this rule. It states that: *Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage*.²⁰²

¹⁹⁵ Stockholm Declaration, A/CONF.48/14/Rev1, Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972. The Report was adopted by the United Nations General Assembly on 15 December 1972.

¹⁹⁶ Examples of the treaties are the 1977 Additional Protocol I, 1977 ENMOD Convention, 1981 Certain Conventional Weapons Convention and its third Protocol, and 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction.

¹⁹⁷ Koppe, above n 8, 246.

¹⁹⁸ Ibid 246-247. See also Christopher Greenwood, 'State Responsibility and Civil Liability for Environmental Damage Caused by Military Operations', in: Richard J. Grunawalt, John E. King, Ronald S. McClain (Eds.), *Protection of the Environment During Armed Conflict*, (1996), 397, 399.

¹⁹⁹ Koppe, *ibid*, 246.

²⁰⁰ Ibid 247.

²⁰¹ Ibid 248-249.

A general duty of care for the environment during international armed conflict is also evident in highly recognised principles in the four declarations emanating from the United Nations conferences on the environment that have been held every decade since 1972. Even though these declarations are not legally binding documents to States, they eventually reflect important authoritative values because they were supported by the majority of States which attended those conferences.

In the first declaration, the result of the United Nations Conference of the Human Environment, it is stated in Principle 26 that "[m]an and his environment must be spared the effects of nuclear weapons and all other means of mass destruction".²⁰³ A decade later, the World Charter of Nature was adopted by the United Nations General Assembly with 111 in favour, just one against and 18 States abstaining.²⁰⁴ This Charter declares in paragraph five that "[n]ature shall be secured against degradation caused by warfare or other hostile activities"²⁰⁵ and further proclaims in paragraph 20 that "[m]ilitary activities damaging to nature shall be avoided".²⁰⁶

In 1992, the United Nations Conference on Environment and Development (UNCED) took place in Rio de Janeiro and resulted in a Rio Declaration which consists of 27 principles.²⁰⁷ Principle 24 implicitly refers to a general duty of care by stating that: Warfare is inherently destructive of sustainable development. States shall therefore *respect* international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.²⁰⁸

²⁰² Article 55(1), Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

²⁰³ Principle 26, Stockholm Declaration, A/CONF.48/14/Rev.1, Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972. The Report was adopted by the United Nations General Assembly on 15 December 1972.

²⁰⁴ United Nations General Assembly, A/Res/37/7, adopted on 28 October 1982. Annex: World Charter for Nature

²⁰⁵ Paragraph 5, *ibid.*

²⁰⁶ Paragraph 20, *ibid.*

²⁰⁷ Rio Declaration, A/CONF.151/26 (Vol. I), Report of the United Nations Conference on the Environment and Development, Rio de Janeiro, 3-14 June 1992. Annex I, Rio Declaration on Environment and Development. The Report was adopted by the United Nations General Assembly on 12 December 1992.

²⁰⁸ Principle 24, *ibid.*

In addition to this principle, the Conference's program of action or commonly called the Agenda 21 stated that: Measures in accordance with international law should be considered to address, in times of armed conflict, large-scale destruction of the environment that cannot be justified under international law. The general Assembly and its Sixth Committee are the appropriate forums to deal with this subject. The specific competence and role of the International Committee of the Red Cross should be taken into account.²⁰⁹

The most recent United Nations conference on the environment was the World Summit on Sustainable Development held in Johannesburg in 2002. The conference resulted in the Johannesburg Declaration on Sustainable Development where it has reference to the existence of a general duty of care. It stated in paragraph 19 that: We reaffirm our pledge to place particular focus on, and give priority attention to, the fight against the worldwide conditions that pose severe threats to the sustainable development of our people, which include[s]: ... armed conflict.²¹⁰

Another international concern for environmental protection during armed conflict was declared by the General Assembly resolution in 2001.²¹¹ In this resolution, the General Assembly, by referring to the Millennium Declaration of 8 September 2000, confirms that: [d]amage to the environment in times of armed conflict impairs ecosystems and natural resources long beyond the period of conflict, and often extends beyond the limits of national territories and the present generation.²¹²

It then designated 6 November each year as the "International Day for Preventing the Exploitation of the Environment in War and Armed Conflict".²¹³

The ICRC, in its influential study on customary humanitarian law, concluded

²⁰⁹ Paragraph 39.6, Rio Declaration, A/CONF.151/26 (Vol. I), Report of the United Nations Conference on the Environment and Development, Rio de Janeiro, 3-14 June 1992. Annex II, Agenda 21. The Report was adopted by the United Nations General Assembly on 12 December 1992.

²¹⁰ Paragraph 19, Johannesburg Declaration, A/CONF.199/20, Report of the World Summit on Sustainable Development.

²¹¹ United Nations General Assembly, A/Res/56/4, adopted without a vote on 5 November 2001; Observance of the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict.

²¹² Ibid.

²¹³ It is noted that this date was chosen to mark the 10th anniversary of the extinguishing of the last oil well fire in Kuwait. Koppe, above n 8, 251, footnote no 675.

that this duty to care for the environment exists as one of the limitations to the employment of methods and means of warfare. This finding is placed in Rule 44 reads:

Methods and means of warfare must be employed with *due regard* to the protection and preservation of the natural environment. In the conduct of military operations, all feasible precautions must be taken to avoid, and in any event to minimize, incidental damage to the environment. Lack of scientific certainty as to the effects on the environment of certain military operations does not absolve a party to the conflict from taking such precautions.²¹⁴ (emphasis added)

Finally, the International Court of Justice in its Advisory Opinion on the use of nuclear weapons confirmed that this duty of care to the environment during armed conflict has eventually well established. The Court stated that:

States must *take environmental considerations into account* when assessing what is necessary and proportionate in the pursuit of legitimate military objectives. Respect for the environment is one of the elements that go to assessing whether an action is in conformity with the principles of necessity and proportionality.²¹⁵ (emphasis added)

It then found that: [w]hile the existing international law relating to the protection and safeguarding of the environment does not specifically prohibit the use of nuclear weapons, it indicates important environmental factors that are properly to be taken into account in the context of the implementation of the principles and rules of the law applicable in armed conflict.²¹⁶

Alongside the international level, concerns for environmental protection during armed conflict at national level manifest from references in States' military manuals, endorsed model manuals and official statements of State representatives.²¹⁷ The notable military manuals are from the United States, the United Kingdom, the Netherlands and Germany. The last two States explicitly reproduce their treaty obligations under ENMOD and Additional Protocol I where this can be considered as awareness of a duty of care for the environment.²¹⁸

²¹⁴ Rule 44, Henckaerts and Doswald-Beck, above n 117, 147.

²¹⁵ Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion) [1996] ICJ Rep, para. 30.

²¹⁶ Ibid para. 33.

²¹⁷ Koppe, above n 8, 251.

Mean while, military manuals from the United States and the United Kingdom provide explicit indication of a duty of care. The 1995 United States Naval Handbook stipulates that: [a]s far as military requirements permit, methods or means of warfare should be employed with *due regard* to the protection and preservation of the natural environment.²¹⁹ (emphasis added)

The United Kingdom's military manual recognises a duty of care in aerial operations that: [m]ethods and means of warfare should be employed with *due regard* for the natural environment, taking into account the relevant rules of international law.²²⁰ (emphasis added)

Besides these military manuals, environmental concern is also reflected in two influential proposed model manuals which are the 1994 San Remo Manual on International Law Applicable to Armed Conflicts at Sea and the 1999 ICRC Model Military Manual.²²¹ It is noteworthy that the former is believed to mirror "the law which is currently applicable"²²² and has its explicit reference in paragraph 44 which stated that: Methods and means of warfare should be employed with *due regard* for the natural environment taking into account the relevant rules of international law.²²³

The 1999 ICRC Model Military Manual refers to this duty by stating, "[i]n the conduct of military operations, care must taken to spare the environment".²²⁴

Besides the two above model manuals, it is very important to take account the 1994 Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict.²²⁵ This document is crucial because it gives solid recognition to States' current legal obligations in protecting the environment during armed conflict. It is not only based on a wide range of

²¹⁸ Ibid 252.

²¹⁹ NWP 1-14M, The Commander's Handbook on the Law of Naval Operations, 8-12. Quoted in Koppe, above n 8, 252, footnote no 677.

²²⁰ UK Ministry of Defence, The Manual of the Law of Armed Conflict, (2004), para. 12.24, 315.

²²¹ Koppe, above n 8, 252.

²²² Introductory Note, San Remo Manual on International Law Applicable to Armed Conflicts at Sea. Reprinted in Roberts and Guelff, above n 53, 574.

²²³ Paragraph 44, San Remo Manual on International Law Applicable to Armed Conflicts at Sea.

²²⁴ ICRC, Fight it Right; Model Manual on the Law of Armed Conflict for Armed Forces, 37.

²²⁵ A/49/323, Report of the Secretary General on the United Nations Decade of International Law, 19 August 1994. Annex: Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict.

treaty rules but also on customary rules in the law of war.²²⁶ It is clear that eventually belligerent States have a duty to observe these obligations during hostilities at all time in respect with the environment. Further, the General Assembly in its resolution in 1994 invited all States: [t]o disseminate widely the revised guidelines for military manuals and instructions on the protection of the environment in times of armed conflict received from the International Committee of the Red Cross and to give due consideration to the possibility of incorporating them into their military manuals and other instructions addressed to their military personnel.²²⁷

The importance of take into account environmental protection during armed conflict also appears in a number of official statements from States especially before the International Court of Justice proceeding in the context of Advisory Opinion on the use of nuclear weapons. These States are Costa Rica, Egypt, Iran, Malaysia, Mexico, New Zealand, Qatar, the Solomon Islands, Sri Lanka and Sweden.²²⁸

2.2.3.2. Prohibition of Wanton Destruction of the Environment

This prohibition is evident in the resolution of the General Assembly in 1992 which stated that "[d]estruction of the environment, not justified by military necessity and carried out wantonly, is clearly contrary to existing international law".²²⁹ This statement was quoted by the International Court of Justice in its Advisory Opinion which further stated that: [the General Assembly resolution] affirms the general view according to which environmental considerations constitute one of the elements to be taken into account in the implementation of the principles of the law applicable in armed conflict.²³⁰

Recognition from the General Assembly resolution also inspired the International Law Commission to consider this prohibition into its Final Draft Code of Crimes against the Peace and Security of Mankind by including the following action as a war crime if it is committed in a systematic manner or on a large-

²²⁶ Roberts and Guelff, above n 53, 608.

²²⁷ United Nations General Assembly, A/Res/49/50, adopted without a vote on 9 December 1994, on the United Nations Decade of International Law.

²²⁸ Henckaerts and Doswald-Beck, above n 117, 148; Koppe, above n 8, 253-254.

²²⁹ United Nations General Assembly, A/Res/47/37, adopted without a vote on 25 November 1992, on the protection of the environment in times of armed conflict.

²³⁰ Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion) [1996] ICJ Rep, para. 32.

scale use of: methods or means of warfare not justified by military necessity with the intent to cause widespread, long-term and severe damage to the natural environment and thereby gravely prejudice the health or survival of the population and such damage occurs.²³¹

At national level, this customary rule can be found in the military manuals of some big military power States such as the United States and the United Kingdom.²³² In the former State, its military manual of Naval Operations states that: "destruction of the natural environment not necessitated by mission accomplishment and carried out wantonly is prohibited".²³³ In the mean time, the United Kingdom stipulates in its Military Manual that: "damage to or destruction of the natural environment not justified by military necessity and carried out wantonly is prohibited".²³⁴

The existence of this customary rule can also be found in leading model manuals or guidelines which have been prepared or have special reference to the environment during armed conflict. First, the 1994 San Remo Manual stated in paragraph 44 that: "damage to or destruction of the natural environment not justified by military necessity and carried out wantonly is prohibited".²³⁵ Second, the 1994 Guidelines for Military Manuals confirms that "destruction of the environment not justified by military necessity violates international humanitarian law".²³⁶ Last, the 1999 ICRC's Model Military Manual states in paragraphs 702 (b) and (d) that "the environment as such may not be attacked" and "damage which is not militarily necessary may not be inflicted".²³⁷

²³¹ Article 20(g), the 1996 Final Draft Code of Crimes against the Peace and Security of Mankind, A/51/10, Report of the International Law Commission to the General Assembly on the work of its forty-eighth session; Vol. II, Part II, Yearbook of the International Law Commission, 1996.

²³² Koppe, above n 8, 259.

²³³ Section 8.1.3, NWP 1-14M, The Commander's Handbook on the Law of Naval Operations, 8-12. Quoted in Koppe, above n 8, 259, footnote no 712.

²³⁴ UK Ministry of Defence, The Manual of the Law of Armed Conflict, (2004), para. 12.24, 315.

²³⁵ Paragraph 44, San Remo Manual on International Law Applicable to Armed Conflicts at Sea. Reprinted in Roberts and Guelff, above n 53, 574.

²³⁶ Principle 8, Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict, A/49/323, Report of the Secretary General on the United Nations Decade of International Law, 19 August 1994. Annex: Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict.

²³⁷ ICRC, *Fight it Right*; Model Manual on the Law of Armed Conflict for Armed Forces, 37.

In terms of States' opinions, it is important to note that the Final Declaration, adopted by the International Conference for the Protection of War Victims in 1993, urged States to: Reaffirm and ensure respect for the rules of international humanitarian law applicable during armed conflicts protecting ... the natural environment, either against attacks on the environment as such or against wanton destruction causing serious environmental damage and continue to examine the opportunity of strengthening them.²³⁸

In line with this adoption, the ICRC found in its prominent study in 2005 that this customary rule exists as evidenced in various treaties, national practice, inter-governmental organizations practices and conferences, and other important practices. This evidence leads to the conclusion in rule 43 which states: The general principles on the conduct of hostilities apply to the natural environment. A. No part of the natural environment may be attacked, unless it is a military objective. B. Destruction of any part of the natural environment is prohibited, unless required by imperative military necessity.²³⁹

2.2.3.3. Prohibition of Excessive Collateral Damage to the Environment

It is arguable that strong evidence showing the existence of this customary rule is manifested in Article 8(2)(b)(iv) of the International Criminal Court Statute. This article includes the following as war crimes under the International Criminal Court jurisdiction:

[o]ther serious violations of the laws and customs applicable in international armed conflict, *within the established framework of international law*, namely ... intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe *damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated*.²⁴⁰ (emphasis added)

It is important to note that the phrase of "within the established framework of international law" includes not only conventional law but also customary in-

²³⁸ International Conference for the Protection of War Victims, Geneva 1993, Final Declaration, para. 10. Available from <<http://www.icrc.org/web/eng/siteeng0.nsf/html/57JMS8>>, at 26 October 2009.

²³⁹ Henckaerts and Doswald-Beck, above n 117, 143.

²⁴⁰ Article 8(2)(b)(iv), Statute of the International Criminal Court, opened for signature 16 March 1998, 2187 UNTS 38544 (entered into force 1 July 2002). (emphasis added)

international law.²⁴¹ This is confirmed by the United Kingdom in its declaration upon ratifying this Statute that:

The United Kingdom understands the term “the established framework of international law”, used in Article 8(2)(b) and (e), to *include customary international law as established by State practice and opinio iuris*. In that context the United Kingdom confirms and draws to the attention of the Court its views as expressed, *inter alia*, in its statements made on ratification of relevant instruments of international law, including the Protocol Additional to the Geneva Conventions of 12th August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I) of 8th June 1977.²⁴² (emphasis added)

It shows that the rule in Article 8(2)(b)(iv) is deemed as customary international law where violation to it would be treated as war crime. Further, it is equally crucial to note that all of the current 110 State parties of this treaty²⁴³ do not submit any declaration to question the legal validity of this environmental war crime.²⁴⁴

In finding this customary rule from national practice, it is interesting to observe the United States practice in its military manual.²⁴⁵ Even though the United States does not subscribe to the Additional Protocol I and the Statute of the International Criminal Court, its Navy Handbook stipulated in section 8.1.3 that:

[i]t is not unlawful to cause collateral damage to the natural environment during an attack upon a legitimate military objective. However, the commander has an affirmative obligation to avoid unnecessary damage to the environment to the extent that it is practicable to do so consistent with mission accomplishment.²⁴⁶

²⁴¹ Koppe, above n 8, 261.

²⁴² Declaration upon ratification by the United Kingdom of Great Britain and Northern Ireland of the Statute of the International Criminal Court. Available from <<http://www.icrc.org/>>, at 28 October 2009.

²⁴³ State Parties to the Statute of the International Criminal Court. Available from <<http://www.icrc.org/>>, at 29 October 2009.

²⁴⁴ Koppe, above n 8, 262.

²⁴⁵ Ibid.

²⁴⁶ Section 8.1.3, NWP 1-14M, The Commander's Handbook on the Law of Naval Operations, 8-12. Quoted in Koppe, above n 8, 262, footnote no 712.

²⁴⁷ Ibid.

In supporting development of this customary law, the 1994 San Remo Manual, 1994 Guidelines and the 1999 ICRC Military Manual Model contain some confirmation of this rule.²⁴⁷ In the 1994 San Remo Manual, it declared that:

[a]n attack shall not be launched if it may be expected to cause collateral casualties or damage which would be excessive in relation to the concrete and direct military advantage anticipated from the attack as a whole; an attack shall be cancelled or suspended as soon as it becomes apparent that the collateral casualties or damage would be excessive.²⁴⁸

It also further explains that collateral damage includes "damage to or destruction of the natural environment".²⁴⁹

The 1994 Guidelines provides an inspiration for development of this customary rule based on the principle of proportionality. It stated that:

In addition to the specific rules set out below, the general principles of international law applicable in armed conflict – such as the principle of distinction and the principle of proportionality – provide protection to the environment. In particular, only military objectives may be attacked and no methods or means of warfare which cause excessive damage shall be employed. Precautions shall be taken in military operations as required by international law.²⁵⁰

The later 1999 ICRC Model Manual includes two clauses that refer to proscription of excessive damage to the environment. It stipulates that "when attacking a military objective, methods and means should be chosen which, commensurate with military success, cause the least environmental damage"²⁵¹ and further that "any environmental damage caused must be proportionate to the military objective to be attained".²⁵²

²⁴⁸ Paragraph 46(d), San Remo Manual on International Law Applicable to Armed Conflicts at Sea. Reprinted in Roberts and Guelff, above n 53, 574.

²⁴⁹ Paragraph 13(c), *ibid.*

²⁵⁰ Paragraph 4, Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict, A/49/323, Report of the Secretary General on the United Nations Decade of International Law, 19 August 1994. Annex: Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict.

²⁵¹ ICRC, *Fight it Right*; Model Manual on the Law of Armed Conflict for Armed Forces, 37, para. 702(e).

²⁵² *Ibid* para. 702(f).

It is noted that confirmation of the prohibition of excessive collateral damage to the environment is also provided by the Report of the Committee to review NATO bombing campaign in 1999 which confirmed that:

Even when targeting admittedly legitimate military objectives, there is a need to avoid excessive long-term damage to the economic infrastructure and natural environment with a consequential adverse effect on the civilian population. Indeed, military objectives should not be targeted if the attack is likely to cause collateral environmental damage which would be excessive in relation to the direct military advantage which the attack is expected to produce.²⁵³

Finally, in 2005, the ICRC in its study on customary international humanitarian law concluded in Rule 43 that:

The general principles on the conduct of hostilities apply to the natural environment: ... C. Launching an attack against a military objective which may be expected to cause incidental damage to the environment which would be excessive in relation to the concrete and direct military advantage anticipated is prohibited.²⁵⁴

In establishing customary status of the last two rules, Koppe comprehensively examined relevant official public statements from States and experts opinions. He observed States' opinions in favour of these rules from both individual and collective statements. The latter statements came from international forums such as the United Nations and the International Court of Justice proceedings.²⁵⁵ As for expert opinions, he widely scanned relevant works of notable experts which were written mostly in the aftermath of the 1991 Persian Gulf War.²⁵⁶ From this observation, he concluded that both States' statements and experts' opinions confirmed that customary rules which directly protect the environment by prohibiting the willful and wanton destruction of the environment as well as excessive damage to the environment have existed.²⁵⁷

In evaluating these three customary rules, Koppe argued that they have important legal status for three reasons. Firstly, they bind all States. Secondly,

²⁵³ Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia, para. 18. Available from <<http://www.icty.org/>> at 26 October 2009.

²⁵⁴ Henckaerts and Doswald-Beck, above n 117, 143.

²⁵⁵ Koppe, above n 8, 264-268.

²⁵⁶ *Ibid* 269-273.

²⁵⁷ *Ibid* 257.

they emphasize existing legal protection to the environment during international hostilities. Thirdly, separate from written treaties, on one side, they emerge from general worldwide concern for environmental protection during armed conflict and on the other side, from two fundamental principles in the law of war, i.e. military necessity and humanity.²⁵⁸ Koppe's attempt to identify these emerging customary rules that have directly protected the environment since the 1970s should be most welcomed. These important findings will play their crucial role in the future for judicial examination of relevant laws not only written law but also unwritten customary rules.

From all relevant States' legal obligations to protect the environment during international armed conflict both from treaty and customary laws, it can be concluded that international humanitarian law does provide adequate protection to the environment alongside with human protection in general. Therefore, States can no longer turn their back away to these obligations to protect the environment during and after international armed conflicts. Violations to them will incur international responsibility to repair all environmental damage.

3. State Responsibility For Environmental Damage In International Humanitarian Law

Having examined all relevant obligations to protect the environment during international armed conflict from *ius in bello*, it is imperative to discuss how this regime deals with violations to these obligations in particular to hold liability from States as the main actors as belligerents. In this matter, it can be argued that rules on State Responsibility as secondary rules in international law²⁵⁹ play an important role in order to determine whether such environmental damages could be attributed to the concerned States.

It is well established as a general principle of international law that any wrongful act or any violation to obligation under international law incurs international responsibility.²⁶⁰ International humanitarian law or *ius in bello*, as the law governing international armed conflicts, attributes violations primarily to States. However, as one of its unique characters, it also attributes violations to individuals.²⁶¹ Attribution of violations to a State is known as the traditional or

²⁵⁸ Ibid 273.

²⁵⁹ Marco Sassòli, 'State Responsibility for Violations of International Humanitarian Law', (2002) 84(846) International Review of the Red Cross 401, 402.

primary structure in international law that governs inter-State relations.²⁶² Attribution of legal consequences to States is extremely important because in some cases, where violations are committed by individuals, only States that have the capabilities and resources to stop and repress violations and repair damage that might result from those violations. The situation is most relevant to environmental damages since reparation of the damaged environment requires a huge amount of money to afford the human resources and technology necessary to bring back or at least maintain a reasonable condition of the environment for its survivability.

In some cases, if the violation fails to be attributed to a State then it may still give rise to individual criminal responsibility.²⁶³ This mechanism has been practiced and developed since the end of World War II as evident in the establishment of many ad hoc international tribunals for war criminals together with their final judgments. Article 146 of the Geneva IV Convention requires State parties to pass domestic legislation in order to prosecute those who commit or order action amounting to such proscribed actions and to prosecute such offenders before their courts regardless of their nationality.²⁶⁴ The convention also provides that States may hand over offenders to other States subject to any extradition agreement that exist between them.²⁶⁵ Further, Article 88 of the Additional Protocol I necessitates State parties to have mutual cooperation in terms of criminal proceedings for grave breaches of the Conventions and the Protocol.²⁶⁶

²⁶⁰ Case of the S.S. "Wimbledon" [1923] PCIJ (Ser. A) No. 1, 30; Case Concerning the Factory at Chorzów (Claim for Indemnity) [1928] PCIJ (Ser. A) No. 17, 28-29. Draft Article 1 on State Responsibility states "Every internationally wrongful act of a State entails the international responsibility of that State". Draft Articles on Responsibility of States for Internationally Wrongful Acts and Commentaries. A/56/10, Report of the International Law Commission to the General Assembly on the work of its Fifty-third session; Vol. II, Part II, Yearbook of the International Law Commission 2001, 32.

²⁶¹ Sassòli, above n 259, 404.

²⁶² Greenwood notes "individual responsibility is additional to, and not exclusive of, the responsibility of the government concerned". Greenwood, above n 198, 399 including authorities cited therein.

²⁶³ Sassòli, above n 259, 404.

²⁶⁴ Article 146, 1949 Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War, opened for signature 12 August 1949, 75 UNTS 973 (entered into force 21 October 1950).

²⁶⁵ Ibid.

²⁶⁶ Article 88, Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978).

In terms of environmental damage during international armed conflict, in addition to national criminal proceeding, it is important to note that the "war crime to the environment" is categorised as international crime which was included in the 1998 International Criminal Court Statute. The Statute stated that the Court has jurisdiction in respect of war crimes that consist of "intentionally launching an attack in the knowledge that such attack will cause incidental ... widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated".²⁶⁷ From this point, it opens the future possibility of bringing an individual, who commits a war crime that result a severe damage to the environment, before the international court.

In addressing breaches of law by States, the four Geneva Conventions stipulated in their common articles entitled "Responsibilities of the Contracting Parties" that: No High Contracting Party shall be allowed to absolve itself or any other High Contracting Party of any liability incurred by itself or by another High Contracting Party in respect of breaches referred to in the preceding Article.²⁶⁸

As legal consequences of violating the rules, Article 3 of the 1907 Hague IV Convention and Article 91 of the 1977 Additional Protocol I provide principal and similar mechanisms for this matter. The former provision reads: A belligerent party which violates the provisions of the said Regulations shall, if the case demands, be liable to pay compensation. It shall be responsible for all acts committed by persons forming part of its armed forces.²⁶⁹

While Article 91 Additional Protocol I stipulates: A Party to the conflict which violates the provisions of the Conventions or of this Protocol shall, if the case demands, be liable to pay compensation. It shall be responsible for all acts

²⁶⁷ Article 8(2) [b, iv] the Rome Statute of International Criminal Court, U.N. Doc. A/CONF.183/9.

²⁶⁸ Articles 51/52/131/148 respectively of the four 1949 Geneva Conventions: Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field; Convention (II) for the Amelioration of the Condition of the Wounded, Sick and Shipwrecked Members of Armed Forces at Sea; Convention (III) relative to the Treatment of Prisoners of War; and Convention (IV) relative to the Protection of Civilian Persons in Time of War, opened for signature 12 August 1949, 75 UNTS 970-973 (entered into force 21 October 1950).

²⁶⁹ Article 3, the 1907 Hague Convention (IV) Respecting the Laws and Customs of War on Land, with annexed Regulations, signed on 18 October 1907, entered into force on 26 January 1910, (1908) 2(1/2) American Journal of International Law 90.

committed by persons forming part of its armed forces.²⁷⁰

It is clear from these provisions that international humanitarian law provides its own rules to address violations. That is the reason why one author includes this regime as a “self-contained system”.²⁷¹ However, the application of only these basic provisions will raise some concerns in terms of their implementation. First, it is clear that these provisions mention only conducts of members of armed conflict may be attributed to a State. However, it is arguable that in the event of armed conflict, States may also bear responsibility for conducts other than its armed forces. Second, both Article 3 of the Hague Convention and Article 91 Additional Protocol only oblige States to pay compensation financially as a legal consequence without further state any obligation that may be required to redress the violation. Third, this law does not provide parameters on which party that can legitimately invoke responsibility to a responsible State in particular to environmental damage that become global concerns. In addressing these concerns, it is arguable that rules on State Responsibility remain important of application within this framework of law. Moreover, this application was evident in decisions of some international tribunals.²⁷²

3.1. Attribution

According to rules on State Responsibility as understood within the framework of international humanitarian law, there are a number of relevant parameters in determining whether or not an action is attributable to State. They are: conduct of members of armed forces, *de facto* agents, *levée en masse*, insurrectional movements and lack of due diligence.²⁷³

3.1.1. Conduct of member of armed forces

First, since members of armed forces factually commit unlawful action it should be determined whether or not the action is attributable to a State. As

²⁷⁰ Article 91, Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978). This provision was re-enacted from Article 3 of the 1907 Hague Convention IV.

²⁷¹ Tihomir Kamenov, ‘The Origin of State and Entity Responsibility for Violations of International Humanitarian Law in Armed Conflicts’, in Frits Kalshoven and Yves Sandoz (eds.), *Implementation of International Humanitarian Law* (1989), 169, 170.

²⁷² *Military and Paramilitary Activities in and Against Nicaragua* (Nicaragua v United States of America) (Merits) [1986] ICJ Rep 4, para 115 and *Prosecutor v. Tadic*, T-94-1-A, Judgement, 15 July 1999, para. 116-144.

²⁷³ Sassòli, above n 259, 405-412.

stated in Article 3 of Hague Convention IV and Article 91 of Additional Protocol I, a State is responsible "for all acts committed by persons forming part of its armed forces".²⁷⁴ Meanwhile, Draft Article 7 stipulates that "the conduct of an organ of a State [...] shall be considered an act of the State under international law if the organ [...] acts in that capacity...".²⁷⁵ This attribution of unlawful acts of individuals to a State may be considered broader than those in Draft Articles. According to the former provision, all unlawful acts of members of armed forces are including conducts as private individual or wholly unofficial and therefore made State fully responsible. Whereas the general rules on State Responsibility maintain that a State is not responsible for those private or unofficial acts.

The *travaux préparatoires* of Article 3 of Hague Convention seems to indicate this broad coverage was intended to modify general rules on State Responsibility.²⁷⁶ It was noted that this sentence was proposed by the German delegation which stated that:

The case most frequently occurring will be that in which no negligence is chargeable to the Government itself. If in this case persons injured as a consequence of violation of the Regulations could not demand reparation from the Government and were obliged to look to the officer or soldier at fault, they would fail in the majority of cases to obtain the indemnification due them. We think, therefore, that the responsibility for every unlawful act committed in violation of the Regulations by persons forming part of the armed forces should rest with the Governments to which they belong.²⁷⁷

It was also noted that the members of the conference deemed holding a State itself responsible for violations of the provisions by its soldiers would be the best way to ensure compliance to the Convention.²⁷⁸ In addition to this provision, Article 91 of Additional Protocol I has the same broad coverage of

²⁷⁴ Article 3, the 1907 Hague Convention (IV) Respecting the Laws and Customs of War on Land, with annexed Regulations, signed on 18 October 1907, entered into force on 26 January 1910, (1908) 2(1/2) American Journal of International Law 90; Article 91, Additional Protocol to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, opened for signature 12 December 1977, 1125 UNTS 17512 (entered into force 7 December 1978). This provision was re-enacted from Article 3 of the 1907 Hague Convention IV.

²⁷⁵ Article 7, ILC Draft Articles on States Responsibility.

²⁷⁶ Greenwood, above n 198, 401.

²⁷⁷ The Proceedings of the Hague Peace Conferences, Volume III (2000), 140.

State responsibility that includes unlawful acts committed as private individuals. With these specific intentions, therefore, it is correct to state that these broad coverage responsibility provisions are regarded as *lex specialis* to general rules on State Responsibility.²⁷⁹

It follows from the above that a belligerent State will be responsible internationally for environmental damage caused by unlawful acts of its troops that violate one or more rules that protects the environment during international armed conflicts.²⁸⁰ However, it should be noted that it is debatable whether extended responsibility of private actions for violations of rules outside the Hague Convention IV and Additional Protocol I can be attributed to States.²⁸¹ Nevertheless, in principle, the rule of responsibility of State for violations of the law of war committed by members of its armed forces has been acknowledged as part of customary law and applies to all violations of rules regardless of their sources.²⁸²

3.1.2. *De facto* agents

Responsibility of State may also incur to the situation in which an armed group fighting against governmental armed forces in internal armed conflict allegedly acting as the *de facto* agents of the foreign State. Draft Article 8 stipulated that:

The conduct of a person or group of persons shall be considered an act of a State under international law if the person or group of persons is in fact acting on the instructions of, or under the direction or control of, that State in carrying out the conduct.

It is not impossible that devastating cross-border environmental damage could result from unlawful acts of warfare in an intense internal armed conflict. If the conducts of armed groups can be attributed to a foreign State, it follows that the concerned State will be responsible and rules of international armed conflicts shall apply.

This possible attribution to a foreign State of the conduct an armed group was addressed in the decision of the ICJ in the Nicaragua Case. In this case,

²⁷⁸ Alwyn V. Freeman, 'Responsibility of States for Unlawful Acts of Their Armed Forces', (1955) 88(II) *Collected Courses of the Hague Academy of International Law* 267, 332.

²⁷⁹ Sassòli, above n 259, 405-406.

²⁸⁰ Greenwood, above n 198, 402.

²⁸¹ *Ibid.*

²⁸² *Ibid.*

however, the Court released the US's responsibility of allegation that it had effective control over *contras*, armed group that fighting Nicaragua's armed forces. The Court required a high degree of parameters so that a foreign State may be held responsible for conducts of an armed group outside its jurisdiction in fighting another State by stating that:

[d]espite the heavy subsidies and other support provided to them by the United States, there is no clear evidence of the United States having actually exercised such a degree of control in all fields as to justify treating the *contras* as acting on its behalf. ... All the forms of United States participation mentioned above, and even the general control by the respondent State over a force with a high degree of dependency on it, would not in themselves mean, without further evidence, that the United States directed or enforced the perpetration of the acts contrary to human rights and humanitarian law alleged by the applicant State. Such acts could well be committed by members of the *contras* without the control of the United States. For this conduct to give rise to legal responsibility of the United States, it would in principle have to be proved that that State had effective control of the military or paramilitary operations in the course of which the alleged violations were committed.²⁸³

However, this decision was not held again in a later case. In the Tadic case, the Appeals Chambers of the ICTY considered that test of State Responsibility in the Nicaragua case was "unpersuasive".²⁸⁴ According to this Tribunal, in determining responsibility for a military organization to a State, it is sufficient to present an *overall control* of the particular armed group by a foreign State in order to render responsibility for all acts committed by that group and accordingly make international humanitarian law governing international armed conflicts applicable.²⁸⁵

In a recent development, it is most interesting to observe that this standard of attribution has been lowered in the wake of war against terrorism by the United States. It was the United Nations Security Council's resolution that approved the United States' self defense against Afghanistan where the latter State was allegedly held by the former to be responsible for the terrorist attacks of 11

²⁸³ Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v United States of America) (Merits) [1986] ICJ Rep 4, paras. 109 and 115.

²⁸⁴ Prosecutor v. Tadic, T-94-1-A, International Criminal Tribunal for Yugoslavia, Judgement, 15 July 1999, para. 124.

²⁸⁵ Ibid para 116-144; Sassòli, above n 259, 408.

September 2001 committed by the Al-Qaeda.²⁸⁶ This attribution was made by the United States simply because Afghanistan Government, the Taliban, harboured and supported this action even there is no strong evidence if Afghanistan had real overall control over Al-Qaeda.²⁸⁷ This development may bring significant effect in invoking State's responsibility for international unlawful conducts of an armed group.

From the observation above, it is arguable that the threshold for attributing unlawful acts of armed groups as *de facto* agents of a State is increasingly being lowered. Therefore, it is much easier to establish attribution of illegal conducts of an armed group to a State as long as the latter had overall control or simply harboured and supported the former.

3.1.3. Levée en masse

In an armed conflict, there is a possibility for civilian to spontaneously engage in hostility by using arms where their survivability is threatened because of enemy's attack and the absence of regular forces that have combatant status. This situation is a classic circumstance known in international humanitarian law as *levée en masse*.²⁸⁸ This civilian conduct can be attributed to a State if the civilian committed unlawful acts under the law of armed conflict because they actually performed the duty of regular forces that is an organ of a State. This rule is recognised by the ILC in Draft Article 9 which reads:

The conduct of a person or group of persons shall be considered an act of a State under international law if the person or group of persons is in fact exercising elements of the governmental authority in the absence or default of the official authorities and in circumstances such as to call for the exercise of those elements of authority.²⁸⁹

In terms of environmental damage, spontaneous and unorganised civilian conducts that might be unlawful seems unlikely to cause significant damage to the environment because they may not have the capability to cause such devastating destructions. However, it is remotely possible that these civilian conducts

²⁸⁶ UNSC Resolutions no. 1368 and 1373 (2001); Sassoli, *ibid*, 409.

²⁸⁷ Sassoli, *ibid*.

²⁸⁸ This situation is recognized by article 4, paragraph A (6), of the 1949 Geneva (III) Convention: Jean S. Pictet (ed.), *Commentary of the Geneva Conventions relative to the Treatment of Prisoners of War* (1960), 67-68.

²⁸⁹ Article 9, ILC Draft Articles on States Responsibility.

will cause significant damage to the environment if they have access to high technology weapons or weapons of mass destructions.

3.1.4. Insurrectional movements

In addition to attribution of non-State entities or individuals' actions to a State, conduct of insurrectional or other movements are attributable to the State if the movement becomes the new government of the State, or to a new State if the group succeeds in establishing a new State.²⁹⁰ It is noted that the legitimacy or illegitimacy of this movement is not a crucial concern for either international humanitarian law or rules on State responsibility but "[r]ather, the focus must be on the particular conduct in question, and on its lawfulness or otherwise under the applicable rules of international law".²⁹¹ This provision is important because these movements usually occur in an internal armed conflict in which their conduct of warfare is against their governmental armed forces and may have significant destructive effects to the environment not only within their own territory but also other States' territories.

3.1.5. Lack of due diligence

Finally, it is worth mentioning that attribution of responsibility to a State may come from its omissions.²⁹² States have an obligation to exercise due diligence to prevent any acts against international humanitarian law. Common Article 1 of the 1949 Geneva Conventions stated that States have the obligation to "to respect and to ensure respect" of these Conventions in any circumstances.²⁹³ Following from this obligation, States are required to disseminate international humanitarian law to their military forces and populations both in times of peace and war.²⁹⁴ These mean that States have the obligation to supervise conducts of their military forces in executing orders or directions in warfare to prevent any unlawful acts.²⁹⁵ Even if these acts occur, States have an obliga-

²⁹⁰ Article 10, ILC Draft Articles on States Responsibility; Sassòli, above n 259, 410.

²⁹¹ Paragraph 11, commentary Draft Article 10, ILC Draft Articles on States Responsibility.

²⁹² Paragraph 4, commentary Draft Article 2, ILC Draft Articles on States Responsibility.

²⁹³ Common Article 1, the four 1949 Geneva Conventions: Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field; Convention (II) for the Amelioration of the Condition of the Wounded, Sick and Shipwrecked Members of Armed Forces at Sea; Convention (III) relative to the Treatment of Prisoners of War; and Convention (IV) relative to the Protection of Civilian Persons in Time of War, opened for signature 12 August 1949, 75 UNTS 970-973 (entered into force 21 October 1950).

²⁹⁴ Articles 47/48/127/144 respectively of the four 1949 Geneva Conventions, *ibid*.

²⁹⁵ Pictet, above n 288, 18.

²⁹⁶ Sassoli, above n 259, 411.

tion to prosecute and punish the perpetrator.²⁹⁶ Therefore, any consequences resulting from State's inaction to take appropriate steps to prevent and/or redress violations to international humanitarian law will be attributed to the concerned State.

3.2. Legal Consequences

As stated above, international humanitarian law stipulates legal consequences of violations to its rules in Article 3 of the Hague IV Convention and Article 91 of the Additional Protocol I. These provisions specifically mention only financial compensation. Therefore, a State is only responsible for damage that is assessable financially. As a tradition and as a matter of fact, obligation to pay compensation for violations is directed to the injured State²⁹⁷ i.e. State which suffers (environmental) damage that results from unlawful acts of the violating State. Meanwhile, according to State Responsibility rules, a violating State has wider obligations of not only compensating the injured State but also ceasing the unlawful act and ensuring non-repetition of this act.²⁹⁸ If injuries occur, the responsible State has an obligation to make full reparation of those injuries including any damage, whether material or moral.²⁹⁹ Full reparation of injuries may take the forms of restitution, compensation or satisfaction where they can be performed individually or in combination thereof.³⁰⁰

In terms of environmental damage, financial compensation is extremely important since reparation of the damaged environment may require huge amounts of money to afford the human resources and technology necessary to bring back or at least to maintain reasonable condition of the environment for its survivability. However, paying the compensation alone is not sufficient enough if the violating State has not refrained itself from performing the same action that so harmed the environment. Therefore, obligation to cease and ensure non-repetition is equally important to protect the environment during international armed conflict.

3.3. Invoking State Responsibility

Under common Article 1 of the Geneva Conventions, State parties are required "to respect and ensure respect" of these Conventions "in all circum-

²⁹⁷ Sassoli, *ibid*, 418.

²⁹⁸ Article 30, ILC Draft Articles on States Responsibility.

²⁹⁹ Article 31, ILC Draft Articles on States Responsibility.

³⁰⁰ Article 34, ILC Draft Articles on States Responsibility.

stances". This means that States are not only obliged to fulfil their own obligations under these conventions but also to make sure other State parties are fulfilling their obligations as well. The latter obligation is considered correction to any violation of the Conventions.³⁰¹ As the commentary of the Conventions stated that:

[i]n the event of a Power failing to fulfil its obligations, each of the other Contracting Parties (neutral, allied or enemy) should endeavour to bring it back to an attitude of respect for the Convention.³⁰²

Further, in order to fulfil obligation to "ensure respect", Article 89 of Additional Protocol I provides that:

In situations of serious violations of the Conventions or of this Protocol, the High Contracting Parties undertake to act, jointly or individually, in co-operation with the United Nations and in conformity with the United Nations Charter.

Taken together of the above provisions, in the event of breaches of law, international humanitarian law provides mechanism for all States to address it by collective or individual action within the scheme of the United Nations. However, these provisions do not provide a clear description of what measures and which States may take in accordance with this procedure. It is arguable that rules on State responsibility are again most relevant to address these concerns and also to identify possible reactions by State(s) that have individually or collectively suffered from injuries as a result of law violation.³⁰³

To begin with, it is important to determine which State(s) are injured by violations of international humanitarian law. According to Draft Article 42, a "State is entitled as an injured State to invoke the responsibility of another State" if the obligation breached is owed to "that State individually". If the violation is owed to a group of States or the international community as a whole, only specifically affected States may invoke responsibility unless the violation of law "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".³⁰⁴

As an individual injured State, it is self evident that responsibility can be

³⁰¹ Sassoli, above n 259, 421.

³⁰² Pictet, above n 288, 18.

³⁰³ Sassoli, above n 259, 422.

³⁰⁴ Article 42, ILC Draft Articles on States Responsibility.

directly invoked upon the responsible State. However, it is somewhat contentious to determine to what extent third State or other States may invoke responsibility besides the specifically affected State. Under common Article 1 of the Geneva Conventions, it may be considered that obligation to “ensure respect” gives the right to all State parties other than the specifically affected State to invoke responsibility from the violating State in order to “to bring it back to an attitude of respect for the Convention”.³⁰⁵ The right of invocation from all States other than those specifically affected may also come from the interpretation of Article 89 of Additional Protocol I. In order to provide clearer parameter for these States, the Draft Article introduces a special rule on “invocation of responsibility by a State other than an injured State. According to this provision, any State other than an injured State is entitled to such invocation if the violation affects a group of States including that State or the violation is “owed to the international community as a whole”.³⁰⁶ If a State can justify its inclusion in this category, it then is entitled to appeal to the responsible State for cessation and non-repetition of unlawful acts and performance of the obligation of reparation.³⁰⁷

Right of invocation from States other than injured States is of importance in relation to environmental damage that results from unlawful acts during international armed conflict. It has been acknowledged that environmental issues have become a global concern where the international community has focused their attention on maintaining or even improving the global environment as part of its effort to safeguard humans’ survival. Therefore, it is correct to conclude that any damage to the environment as a result of unlawful acts during armed conflict is a violation “owed to the international community as a whole” and responsibility flowing from that act can be invoked by any States to the responsible State.

As previously discussed, an individual injured State, belligerent or third State during international armed conflict, may invoke responsibility from the responsible belligerent not only to do reparation but also to cease and to guarantee non-repetition of its unlawful acts. Besides these rights, according to rules on State responsibility, an injured State may take countermeasures to induce the responsible State to comply with its obligations of cessation and repara-

³⁰⁵ Sassoli, above n 259, 423.

³⁰⁶ Article 48(1), ILC Draft Articles on States Responsibility.

³⁰⁷ Article 48(2), ILC Draft Articles on States Responsibility.

tion.³⁰⁸ It is noteworthy that countermeasures may be taken only if international wrongful act had taken place. This proposition was confirmed by the International Court of Justice in the *Gabčíkovo-Nagymaros Project* case by stating that: In order to be justifiable, a countermeasure must meet certain conditions... In the first place it must be taken in response to a previous international wrongful act of another State and must be directed against that State.³⁰⁹

As stipulated in Draft Article 49, countermeasures are restricted to "the non-performance for the time being of international obligations" of the injured State towards the responsible State³¹⁰ and must be terminated once the responsible State complies with its obligations.³¹¹ These measures must also be "commensurate with the injury suffered, taking into account the gravity of the internationally wrongful act and the rights in question".³¹² According to ILC's commentary, the term "countermeasures" is a modern term of reprisals, at least outside the context of international armed conflicts and these measures are in the opposite of retorsion i.e. "unfriendly" conduct which is consistent with any international obligation of the State taken the measures even though it may be a response to an internationally wrongful act.³¹³ Examples of unfriendly conduct are the prohibition of or limitations of diplomatic relations, embargos of various kinds or withdrawal of voluntary aid programs.³¹⁴ Countermeasures may involve acts contrary to existing treaty obligations of the injured State but justify as a necessary and proportionate response to an internationally wrongful act of the responsible State.³¹⁵

Even though countermeasures are conducts that are contrary to existing treaty obligations, there are a number of rules that should not be affected. In other words, States taking countermeasures should respect these rules at all times. Such rules are the obligations to refrain from the threat or use of force, to protect fundamental human rights, to observe a humanitarian character prohibiting reprisals and to respect obligations under peremptory norms of general

³⁰⁸ Article 49(1), ILC Draft Articles on States Responsibility.

³⁰⁹ *Gabčíkovo-Nagymaros Project* (Hungary/Slovakia) [1997] ICJ Rep., p. 55, para. 83.

³¹⁰ Article 49(2)(3), ILC Draft Articles on States Responsibility.

³¹¹ Article 53, ILC Draft Articles on States Responsibility.

³¹² Article 51, ILC Draft Articles on States Responsibility.

³¹³ Paragraph 3, commentary Chapter Two Part Three, ILC Draft Articles on States Responsibility.

³¹⁴ *Ibid.*

³¹⁵ Paragraph 4, commentary Chapter Two Part Three, ILC Draft Articles on States Responsibility.

international law.³¹⁶ Besides these rules, while taking countermeasures, the State is not relieved from fulfilling its obligations “under any dispute settlement procedure applicable between it and the responsible State” and “to respect the inviolability of diplomatic or consular agents, premises, archives and documents”.³¹⁷

It is worth emphasising that countermeasures should not affect “obligations of a humanitarian character prohibiting reprisals” and this obligation is important in relation to environmental protection during armed conflict. As stipulated in 1949 Geneva Conventions and Additional Protocol I of 1977, reprisals are prohibited against specifically categories of protected persons.³¹⁸ Since the environment is acknowledged as indispensable support for human’s survival, therefore it is arguable that reprisals or countermeasures that directed to cause harm to the environment are prohibited as well.

In terms of actions that may be taken by States other than the injured State, Draft Article 54 provides that rules on countermeasures do not prejudice the right of any State to invoke responsibility of the responsible State entitled under article 48 (1).³¹⁹ In addition, these States have the right to take lawful measures against the responsible State to ensure cessation of the breach and reparation in the interest of the injured State or the beneficiaries of the obligation breached.³²⁰ This Article does not mention specifically term “countermeasures” but rather refers to “lawful measures” that are available to these States. In other words, only the injured State may take actions contrary to treaty obligations as a response to unlawful acts. In contrast, States other than the injured State may only take measures that are not inconsistent to their international obligations in responding to violations to obligations for the protection of the collective interest or those owed to the international community as a whole.³²¹ The latter acts may include those of unfriendly conducts as a numerous forms of pressure to the responsible State that were exemplified above.

³¹⁶ Article 50(1), ILC Draft Articles on States Responsibility.

³¹⁷ Article 50(2), ILC Draft Articles on States Responsibility.

³¹⁸ Arts 46/47/13 (3)/33 (3), respectively of the four 1949 Geneva Conventions and Arts 20, 51(6), 52(1), 53(c), 54(4), 55(2) and 56(4) of Additional Protocol I.

³¹⁹ Article 54, ILC Draft Articles on States Responsibility.

³²⁰ Ibid.

³²¹ Paragraph 7, commentary Draft Article 54, ILC Draft Articles on States Responsibility.

4. Conclusion

It is clear that environment has always been the victims of international armed conflict. Furthermore, damages to the environment after the hostilities frequently unrestored because States think that they are unavoidable consequences to pursue legitimate military targets. This preposition can no longer be sustained because the law of armed conflict itself does provide comprehensive legal protection to the environment. Consequently, any damage to the environment as a result of violating these provisions will incur international responsibility of the responsible State(s).

As the best protection to the environment is prevention, however, once the armed conflict occurs, it is arguable that the concept of State responsibility plays pivotal role to enhance environmental protection during and after the armed conflict. The Draft Articles on State responsibility as applied to international humanitarian law regime provide that all States can respond lawfully to unlawful actions by belligerents during international armed conflict that cause devastating environmental consequences. Despite this application will heavily on other States' political will, "the need to respect and ensure respect for international humanitarian law is not a matter of politics, but rather a matter of law".³²²

³²² Sassoli, above n 259, 433.