

Environmental Protection In International Humanitarian Law (The environment has always been a silent casualty of conflict (UNEP))

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ABSTRACT

Environment, whether directly or indirectly is a casualty of armed conflict. As occurred in Vietnam War 1961-1975, Gulf War 1991, Cosovo Conflct 1999, Iraqi War 2003 and Israel-Lebanon War 2006. UNEP concluded that armed conflict arise dangerous consequences to the environment. Environmental damage after warfare is often irreversible because the states think that environmental damage is an unavoidable consequence in order to achieve military targets.

This research aims are to search international treaty and general principles in international humanitarian law that regulated environment protection during the armed conflict. Based on the research result it can be known that environment protection during the armed conflict has already regulated completely in international humanitarian law, not only in general agreement of humanitarian law (hag laws and geneva laws) but also in special agreement on environment protection during armed conflict, in the form of restriction on means and weapons that can be used in armed conflict. The regulation and enforcement of environment protection can be rely on general principles of international humanitarian law.

Keywords: *Environment, Humanitarian, International Law*

INTRODUCTION

Environment is a unity of space with all things, power, circumstances, and living things, including human beings, and their behavior, which affects the viability of the life.¹ On 1968, General Assembly of the United Nations for the first time recognize casualty relations between the environmental quality and the fundamental rights of human rights. Stockholm Declaration stated that environmental is major unsure to enjoy such rights, event for the rights of life itself. In the Stockholm Declaration there is a responsibility to protect the environment for the future generation.² So, eventhough in the middle of the warfare environmental protection must be enforced.³

¹ NHT Siahaan,(2004),*HukumLingkungan Dan Ekologi Pembangunan*, Jakarta, Erlangga , p. 4

² Sri Wartini, (2003), *PerlindunganLingkungandalamHukumHumaniter, JurnalHukum, Nomor 24, Volume 10*, p 150-163.

³ See further, the Advisory Opinion of International Court of Justice on the Legality of the Threat or Use of Nuclear Weapons. It is stated that : “the environment is not an abstraction but represents the living space, the quality of life and th very health of human beings, including generations unborn” (241, paragraph 29)

Environment, whether directly or indirectly is casualty of armed conflict. As occurred in Vietnam War 1961-1975, Gulf War 1991, Cosovo Conflict 1999, Iraqi War 2003 and Israel-Lebanon War 2006. Environmental damage as a consequences of war or armed conflict generally caused by means and weapons error. However, technology and weapon can be affect or event determined the course of armed conflict, affect combatant and civilian, affect the environment and determined the result of warfare. Weapon and technology play a major role in warfare.⁴

Along with the new technology, potential impact of used technology become wider. Chemical weapons, nuclear and biological weapons, have giant capacity to the environmental damages. Many fight and war by the end of 20th century and the first years of 21th century clearly verify such facts. How those wars, have serious damage to the manlife, environment and natural resources.⁵

Principle 24 Rio's Declaration implicitly stated 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 developement, as necessary".⁶ Has be understood that, the problems related to the environmental damages, whether in peace time or war time, is a transboundary problems. Thus, this issue deserves the attention of all members of international community.

United Nations Environmental Programme (UNEP) reported that environmental is also a casualty of armed conflict. Armed conflict will cause significant impact to the environment. UNEP concluded that armed conflict have dangerous impact to the environment.⁷ Environmental damage after warfare is often irreversible because the states think that environmental damage is an unavoidable consequence in order to achieve military targets.⁸

Military activities have a significant impact to the environment. Experiments, manufactures, maintenance and using conventional weapons in war, chemical weapons, biologic weapons and nuclear resulted the hazardous toxic and radioactive substances. Wastes

⁴ ICRC Review, (September 2005), *Means of Warfare*, Volume 87 Number 859, p. 419.

⁵ Parstoday Indonesian, Antisipasi Perusakan Lingkungan Akibat Perang, accessed via www.parstoday.com September, 30 2017.

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.

⁷ Phillippe Sands, 2012, *Principles of Environmental Law*, Cambridge University Press, p 790

⁸ Arie Afriansyah (2010), "Environmental Protection and State Responsibility in International Humanitarian Law", *Indonesian Journal of International Law*, Volume 7 Number, p 242-299.

of such activities have contribution to the environmental damages.⁹ One of the military activities that had an adverse impact on the environment was the bombing of Hiroshima and Nagasaki cities by the allied forces in August 1945. As a result of the bombing, of 320,081 residents of Hiroshima City, 118,661 were killed, 30,524 were seriously injured, 48,806 minor injuries and 3,667 missing persons.¹⁰ They also suffered many kinds of disease because of nuclear radiation such as internal bleeding, cancer and leukemia. Three days after that, Nagasaki bombing also caused the same damage as Hiroshima.¹¹ And, it turns out, many years after the bombing, it still causes prolonged suffering for the residents of Hiroshima and Nagasaki. The number of disabled babies born due to radiation, disruption of reproductive function and trauma left behind.¹²

METHOD

To analyze the issue in this article, I used normative method. Which use several approaches, are conceptual and statute approaches. This study only use literature as research data. Data collected by searching literature in different library as well as electronic literature with the internet.¹³ The legal material collected further processed through the structuring phase, describe and systematize of legal material and analyzing as a legal research, which is through the legal reasoning stage that is logic, systemic and coherent.

ANALYSIS AND DISCUSSION

Principally, any weapons technology development or means of the war is legal under international humanitarian law, as long as not contrary to the basic principles of international humanitarian law such as principle of proportionality and principle of distinction. As stated in the Advisory Opinion of the International Court of Justice, that states responsible to respect and consider the environmental aspects in their country or other countries when determine the chosen military activity. Based on description above, important to examine those principles further.

⁹ Sri Wartini, *Op.cit*

¹⁰ Hiroshima City Council Survey in FrancoiusBugnion, *The International Committe of the Red Cross and Nuclear Weapons : From Hiroshima to the Dawn of the 21st Century*, ICRC Journal : Humanitarian Debate :Law, Policy and Action Means of Warfare, Volume 87 Number 859 September 2005. page. 512.

¹¹ *Ibid.*

¹² Sri SetianingsihSuwardi, *Op.Cit.*

¹³ SupardanMansyur. (2017)“The New Development Of Subject Of International Law”, *UNRAM Law Review*, Volume 1 Number, p. 4.

General Principle of International Humanitarian Law on Environment Protection

One of the most important principles of Den Haag Law and had considered as legal protection towards the injured state in warfare and protect the civilian and environment effectively against the development of technology and means of war, is Martens Clause. Martens Clause concluded in the Preamble of Den Haag Convention, that :

“Until a more complete code of the laws of wars has been issued, the High Contracting parties deem it expedient to declare that, in cases not included in the Regulations adopt by them, the inhabitants and the belligerents remain under protection and the rule of the principles of the law of nations, as they result from the usages established among civilized peoples, from the laws of humanity and the dictates of the public consciences”.

Martens Clause is an important clause, due to the importance of principles of law and international customary which recognize by the civilized nations, the regulations of international armed conflict not only based on written international law in terms of international agreement. This clause stressed out in humanity principles and public conscious, especially in face and regulated the new development and military technology.¹⁴

Martens Clause regulated in Additional Protocol I 1977 of Geneva Conventions, Article 1 paragraph 2, stated that in cases not covered by this protocol or by other international agreements, civilians and combatants remains under the protection and authority of the principles of international law derived from established custom, from the principle of humanity and from dictates of public conscious.

If there is a gap in framework of international relations which regulated certain situations (relations of armed conflict and environment), Martens Clause stated that state have to respect the minimum standard which set by humanity and public conscious. Martens Clause generally considered to generate basic principle of international humanitarian law and core principle which protect the environment if there is no any regulations in agreement or custom.

The basic principles of international humanitarian law are principle of distinction, military necessity, proportionality and humanity. All of principles are have relations with the environment protection during the armed conflict, as describe below.¹⁵

¹⁴Erlis Septiana Nurbani, (2017),“Perkembangan Teknologi Senjata dan Prinsip Proporsionalitas”, *JurnalIus (Kajian Hukum dan Keadilan)* Volume 5 Nomor 1 Tahun2017,p 24-29

¹⁵ UNEP, (2009),*Protecting the Environment during Armed Conflict (An Inventory and Analysis of International Law)*, UNEP, Kenya, p. 17.

The Principle Of Distinction

Principle of distinction is a foundation of international humanitarian law and firstly examined in warfare : differentiate between civilian and combatant, and prohibit indiscriminated attacks and direct attacks to the civilian and civilian object. Article 52 paragraph (2) of Additional Protocol I 1977 on Geneva Conventions 1949 defines military objectives as those that “by nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.”

Nevertheless, the application of this principle may be difficult in practice, for instance when considering the targeting of industrial facilities such as power plants or chemical factories, which could have important environmental impacts but would be seen as a direct contribution to ongoing military action. In such circumstances, a relevant question regarding the meaning of Protocol I would be: “Does undermining a country’s morale and political resilience constitute a sufficiently definite military advantage?”¹⁶

Similar questions arise for example when a protected area is affected by the illegal exploitation of high-value natural resources (whether by rebels, government troops or foreign occupying forces). In this scenario, would the protected area be considered an acceptable target, considering that revenue from this illegal trade was contributing to the war effort?¹⁷

In that manners, there are some difficulties in the applicability of principle of distinction in the warfare. Combatant should measure an attacks with related principles. Not only the distinction principle but also military necessity principle, proportionality principle and the others principle.

The Principle Of Military Necessity

Principle of military necessity requires that used of force are only justified to expand that is important to achieve certain military objectives. Furthermore, principle of military necessity intended to prohibit military activities which not generate military objection proof.

This principle regulated in Haag Convention IV 1907, in Article 23 paragraph (g) on enemy properties, stated that it is forbidden to to destroy or seize the enemy’s property, unless such destruction or seizure be imperatively demanded by the necessities of war. This provision has significant environmental relevance as “enemy property” may well encompass

¹⁶Bodansky in UNEP, *Ibid.*

¹⁷*Ibid.*

protected areas, environmental goods and high-value natural resources, all of which could therefore be granted indirect protection.¹⁸

The Principle Of Proportionality

Prosecutor in *International Criminal Tribunal for the Former Yugoslavia* menyatakan bahwa “*it is much easier to formulate the principle of proportionality in general terms than it is to apply it to a particular set of circumstances*”¹⁹. Therefore, parties of armed conflict must be able to compare objectively between the military objective and the possibility of civilian damages in the used of particular method or weapon. Military objective and the civilian damages must be proportional.

The parties obliged to seizures the damages that could be generate by chosen methode or weapons. So, an attacks or weapons considered proportional if the civilian’s damage or loss possibility is not excecusive in regards to achieve military neccesity on such attacks or weapons.²⁰

Based on the principle of proportionality codified in Article 57 of Additional Protocol I, disproportionate attacks are those in which the “collateral damage” would be regarded as excessive in relation to the anticipated direct military advantage gained. Destroying an entire village or burning an entire forest to reach a single minor target, for example, would be considered a disproportionate strategy in relation to the military gain. Many instances of environmental damage could be seen as a “disproportionate” response to a perceived threat and therefore considered illegal. This was the opinion shared by most experts in the case of the massive pollution resulting from the burning of oil fields and the millions of gallons of oil deliberately spilled into the Gulf Sea during the 1990-1991 Gulf War.²¹

The Principle Of Humanity

The principle of humanity prohibits inflicting unnecessary suffering, injury and destruction. Thus a Party cannot use starvation as a method of warfare, or attack, destroy, remove or render useless such objects indispensable to the survival of the civilian population. According to this principle, the poisoning of water wells and the destruction of agricultural

¹⁸ *Ibid.*

¹⁹ David Akerson, (2014), “Applying Jus in Bello Proportionality in Drone Warfare,” *Oregon Review of International Law*, Volume 16, p. 178

²⁰ Erlis Septiana Nurbani, *Op.Cit*

²¹ UNEP, *Op.Cit*

land and timber resources that contribute to the sustenance of the population, as seen in the ongoing conflict in Darfur, could be considered “inhumane” means of warfare.²²

In this manner, should be noted that Martens Clause also refer to “humanity law”. Extention of the clause to consider environment, as proposed by the International Union for Conservation of Nature, clearly to set the humanity principle as “common awareness” to protect environment in terms the absence of special agreement.²³

Principle of Limitation

Principle of limitation proposed the limitation of means, tools and also war method that can be conducted by the conflicted parties. This principles concludes the regulations on use of weapos which could generate massive impact, without diffrentiate the civilian and military object.

The weapons would harm the principle of limitation are poisoned weapons, nuclear weapons, land mines, chemical weapons, expanding bullet, blinding laser, and other weapons that can cause unnecessary suffering for war victims. As well as weapons that have impact of long-term damage to the environment.²⁴

International Agreements on Environmental Protection in time of War

The very first principle on Haag Laws, stated that : “*the rights of belligerents to adopt means of injuring the enemy is not unlimited*”. It means that there is any methods and special tools which prohibited. General obligation that limit methods and means of war have been added by special international agreements which contained obligations to prohit certain weapons would generate environmental damages. Such as, *Geneva Protocol of 1925 Prohibited the Use of Gas and Bacteriological Warfare*, *Convention on the Prohibition of Military or Any other Hostile Use of Environment Modification Techniques* (ENMOD Convention 1977) dan *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* (CCW), and its *Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons* (1980). Although such provisions are primarily intended for human protection, it is also indirectly to protect the environment.

²² Ibid.

²³ Ibid.

²⁴ ICRC, *Weapon* (online), (2011), aced by <http://www.icrc.org/eng/war-andlaw/weapons/overviewweapons.htm>, on September, 30 2017.

Additional Protocol of the Geneva Convention of 12 August 1949, And Relating to the Protections of Victims of International Armed Conflict/Additional Protocol I

Additional Protocol I regulated that the rights of belligerents to adopt the means and tools of the warfare is not unlimited. Additional Protocol I also prohibit use of weapons or projectile will causedsuperfluos injury or unnecessary suffering. Beside that, in this protocol consisted of some core regulations such as, prohibition on indiscriminate attacks, reprisal against civilian, important objects to the manlife, cultural object and place of worship, building and dangerous instalation, and environment.

Article 35²⁵ 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.

Related to the limitation of used methods in war, article 35 paragraph (3) principally consisted of three rules, are²⁶ :

1. Methods or means of war is not unlimited, the limitation of certain menthods and means clearly regulated in Article 3 paragrap (1), Section I “Methods and means of warfare” Additional Protocol I : “*In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited.*” Also added in Article 51 on prohibition *indiscriminate attack* which one of stated that: “*those which employ a method or means of combat the effect of which cannot be limited as required by this Protocol.*” This limitation expected that in the warfare, the used of methods and means have to give an attention to the natural environment. The parties obliged to not adopt means or methods which caused environmental damages.
2. The use of methods and means of war must seizure the impactt to the natural environment. The important section that must be considered by the parties is the regulation in Article 35 paragraph (3) obligation odiferentiate the attacks against environment, whether intended or not. The impacts is widespread, long-term and severe damage to the natural environment : all of this is a cumulative standard which give

²⁵ Article 35, section of “Methods and Means of Warfare”, stated that:

1. In any armed conflict, the right of the Parties to the conflict to choose methods and means of warfare is not unlimited.
2. It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.
3. 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

²⁶ ICRC, *Op.Cit.*

definition on “damages” as prohibit in Article 35 paragraph (3) Additional Protocol I. It means, an attacks to the natural environment whether directly or not, is forbid in Additional Protocol I, if cause widespread, long-term and severe damage to the natural environment.

Article 55 in title of Protection of the Natural Environment stated that:

1. Care shall be taken in warfare to protect natural environment against widespread, long term and severe damages. This protection includes a prohibition of the use of methods or 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 natural environment by way of reprisals are prohibited.

Those two articles in Additional Protocol I, are basic rules on environmental protection in international humanitarian law perspective. Besides regulated in the principles of general international humanitarian law, Geneva Conventions and its additional protocol, the development of weapons technology has be responded by international law, which agreed in international agreements on prohibition of certain weapons. As common understanding, basically the methods and means of war is allowed, unless it violated the principles of international humanitarian law, such as principle of proportionality and principle of military necessity. The prohibited weapons, are

- a. Exploding bullets²⁷
- b. Toxic weapons²⁸
- c. Biological weapons²⁹
- d. Chemical weapons³⁰
- e. Non detectable fragments weapons³¹
- f. Mines³²
- g. Land mines³³

²⁷ICRC Customary Study Rule 77

²⁸Denhag Convention IV 1907 on Law and Customs of War on Land

²⁹*Convention on Prohibition of Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction* (accepted on 16 December 1971, entered into force 26 March 1975)

³⁰*Convention on Prohibition of Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction* (accepted on 3 September 1992, entered into force 29 April 1997)

³¹*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 (CCW), Protocol I on Non-Detectable Fragments* (accepted on 10 October 1980, entered into force 2 December 1983)

³²*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 (CCW), Protocol II on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices* (accepted on 10 October 1980, entered into force 2 December 1983)

h. Blinding Laser Weapons.³⁴

Convention on the Prohibition of Military or Any other Hostile Use of Environmental Modification Techniques (ENMOD Convention 1977)

Fact on the consequences of the used of methods and means of warfare occurred in Vietnam 1961-1974 and Persian Gulf 1991, give a major impacts to the environment. The Vietnam War has give long terms and severe environmental damages, because during the War, United States of America (USA) used a war methods named “Environmental Modification Technique”³⁵. Those technique used to modify the weather in purpose, resulting an excessive rainfall at the time, which this situation exacerbated the state of forests in Vietnam that previously had been bombed with high-powered ammunition (producing giant craters).³⁶ The action caused damage to the environment by spreading Herbicides such as Agent Orange (containing harmful dioxin substances) by US troops to destroy rural trees leaving the toxic food chain and an estimated 4 million people affected by the disease, children born without limbs and other defects.³⁷

The first international treaty that specifically regulates environmental protection as a consequence of military activity is the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention 1977). The Convention prohibits parties of armed conflict to use methods and weapons and techniques of environmental modification aimed at causing damage or injury or intense suffering to others. These included plans for large-scale environmental modification techniques that had the ability to turn the environment into a weapon, for instance by provoking earthquakes, tsunamis, or changes in weather patterns.

The purpose of ENMOD is to prohibit the use of environmental modification techniques as a means of war. States Parties to the ENMOD Convention agree not to engage in environmental modification and make it as weapon of war, explicitly mentioned in Article 1 paragraph (1) “... *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*

³³ *Ibid.*

³⁴ *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 (CCW), Protocol IV on Blinding Laser Weapons*

³⁵ The environmental modification techniques covered are those intended to change “through the deliberate manipulation of natural processes, the dynamics, composition or structure of the Earth.

³⁶ Triyana Yohanes and Hyronimus Rhiti, (2006), *Laporan Penelitian Perlindungan Lingkungan Alam Melalui Ketentuan-Ketentuan Hukum Humaniter Internasional*, p. 3.

³⁷ Maulana accessed via <http://e-journal.uajy.ac.id/2084/2/1HK10132.pdf> on September, 24 2017

destruction, damage or injury to any other State Party.” The ability of state parties not to engage, is not questioning the used of environmental modification as weapons, whether the aims to attacks or as self defences, as long as military activites or hostilities, then such actions should not be performed.

The phrase of “environmental modification” clearly explained further in Article 2 of ENMOD Convention, that :”...refers to any technique for changing – through the deliberate manipulation of natural processess – the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere, and atmoshpere, or of outer space.” The Understandings of ENMOD Convention stated that environmental modification also include a non-exhaustive list of phenomena that could result from the use of environmental modification techniques: earthquakes and tsunamis; an upset in the ecological balance of a region; changes in weather patterns (clouds, precipitation, cyclones and tornadic storms); changes in climate patterns; changes in ocean currents; changes in the state of the ozone layer and changes in the state of the ionosphere.³⁸

Furthermore the elements in Articles 1 and 2 of the ENMOD Convention require that the impacts resulting from environmental modification are widespread, long-lasting, severe. The three benchmarks used indicate that Article 1 paragraph (1) ENMOD Convention uses alternative clauses (or), not cumulative (and). Thus, if any of the above criteria are fulfilled, either widespread or long-term or severe then the prohibition in Article 1 paragraph (1) ENMOD Convention has been fulfilled.

The definition of the extent to which the criteria of time duration, limits and severity, can be found in the Explanatory Conventions section of ENMOD (the Understandings), as follows³⁹:

- a. Widespread : encompassing an area of several hundred square kilometres;
- b. Long-lasting : lasting for a period of months, or approximately a season;
- c. Severe : involving serious or significant disruption or harm to human life, natural and economic resources or other assets.

Important unsure to measure whether an actions could be categorized as responsible environmental modification based on ENMOD Convention, Article 1 paragraph (1) clearly stated that : the damages, injury or destruction must be addressed *to any other state party* of the convention. Irrespective of whether or not it is a party to the conflict or as a neutral state.

³⁸Yoram Dinstein, (2004), *The Conduct of Hostilities under the Law of International Armed Conflict*, Cambridge University Press, United Kingdom, p.178

³⁹ The Understanding of ENMOD Convention

This is conducted to encourage countries to ratify this convention.

Article 1 paragraph (2) ENMOD Convention added that: “*each State Party to this Convention undertakes 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.*” Effective protection of the environment during armed conflict is possible only if the participation in the ENMOD Convention and Additional Protocol I is universal. While the feared new means of warfare that the Convention seeks to prevent have not emerged, the threat has not been eliminated. The widest possible adherence to the Convention plays an essential preventive role.

Statute of Rome on the International Criminal Court 1998

The Rome Statute of the International Criminal Court (often referred to as the International Criminal Court Statute or the Rome Statute) is the treaty that established the International Criminal Court (ICC). ICC have four jurisdictions are crimes against humanity, genocide, war crimes and aggression.

The Court may exercise its jurisdiction, if the State on the territory of which the act or omission occurred or the State of nationality of the suspect is Party to the Statute or has accepted the jurisdiction of the Court. The Prosecutor can refer cases *proprio motu* (on his/her own initiative).

War Crimes, as regulated in Article 8 ICC Statute as follows ⁴⁰:

- a. Grave breaches of the Geneva Conventions of 12 August 1949,
- b. Other serious violations of the laws and customs applicable in international armed conflict, within the established framework of international law,
- c. In the case of an armed conflict not of an international character, serious violations of article 3 common to the four Geneva Conventions of 12 August 1949

War crimes are an acts that is seriously contrary to international humanitarian law and customary of international law. Any violation of the laws of war and international humanitarian law leads to individual⁴¹ criminal liability regarded as a war crime. Furthermore, Article 8 paragraph (2) stated that “*other serious violations of the laws and customs applicable in international armed conflict, within the established framework of international*

⁴⁰ Article 8 Paragraph 2, sections a, b and c. RomeStatute 1998

⁴¹ Article 25 Statuta Roma 1998 :

1. The Court shall have jurisdiction over natural persons pursuant to this Statute.
2. A person who commits a crime within the jurisdiction of the Court shall be individually responsible and liable for punishment in accordance with this Statute.

law, namely...:

(iv) *intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilians 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,*
 (ix) *intentionally directing attacks against buildings dedicated to religion, education, art, science or charitable purposes, historic monuments, hospitals and places where the sick and wounded are collected, provided they are not military objectives.*

An attack that will cause 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. We have to noted that, the attacks to the natural environment will qualify as war crimes should meet : widespread, long term and severe damages elements and it must be unproportional *vis a vis* military necessity.

Dinstein argues that the norms of environmental protection in the Rome Statute 1998 had modification of norms if compared to the Additional Protocol I, as follows :⁴²

1. Rome Statute 1998 requires intention and knowledge by the state or parties to the conflict, that the attacks will cause damage to the environment. While the Additional Protocol I 1977 only requires one of intention or expectation.
2. To declare an act as a war crime, the environmental damages had been occurred not only have widespread, long term and severe damages and but must also fulfill the element of “clearly exaggerated when compared to the military advantage it will achieve”.

To qualify a crime as a war crime based on the Rome Statute 1998, it must be assessed whether an action or attack fulfills the element of intent and knowledge of the subject of war (state or belligerents) and the consequences arising in addition to widespread, long-term and severe damages which violate proportionality and military interests.

CONCLUSION

The regulation of environmental protection in international humanitarian law has been completely and thoroughly condoned. Both in the form of general agreements on international humanitarian law as well as in specific agreements in individual conventions. In addition to written law, environmental protection when fighting can also be provided under the principles of international humanitarian law. The enforcement of environmental regulations under humanitarian law may be a preventive measure, i.e. special precautions, such as special arrangements on the permitted means and methods in the warfare, and repressive measures

⁴²Yoram Dinstein, Op.Cit.

directed against states, legal entities, belligerents, and individuals.

Bibliography

- ArieAfriansyah, (January 2010), “Environmental Protection and State Responsibility in International Humanitarian Law”, *Indonesian Journal of International Law, Volume 7 Number 2*.
- David Akerson, (2014), “Applying Jus in Bello Proportionality in Drone Warfare”, , Volume 16.
- ErlisSeptianaNurbani,(2017), PerkembanganTeknologiSenjatadanPrinsipProporsionalitas, *JurnalIus (KajianHukumdanKeadilan)* Volume 5 Nomor 1.
- FrancoiusBugnion, (2005), “The International Committe of the Red Cross and Nuclear Weapons : From Hiroshima to the Dawn of the 21st Century”, *ICRC Journal : Humanitarian Debate :Law, Policy and Action Means of Warfare*,Volume 87 Number 859.
- ICRC Review, (September 2005), *Means of Warfare*, Volume 87 Number 859.
- ICRC, *Weapon* (online), (2011), aceded by <http://www.icrc.org/eng/war-andlaw/weapons/overviewweapons.htm>
- NHT Siahaan, (2004), *HukumLingkungan Dan Ekologi Pembangunan*, Erlangga :Jakarta.
- Phillipe Sands, (2012), *Principles of Environmental Law*, Cambridge University Press
- Parstoday Indonesian, AntisipasiPerusakanLingkunganHidupAkibatPerang, accessed via www.parstoday.com on September, 30 2017.
- Sri Wartini, (2003), PerlindunganLingkungandalamHukumHumaniter, *JurnalHukum, Nomor 24, Volume 10*.
- SupardanMansyur, (2017) “The New Development Of Subject Of International Law”, *UNRAM Law Review*, Volume 1 Number 1.
- TriyanaYohanesdanHyronimusRhiti, (2006), *LaporanPenelitianPerlindunganLingkunganAlamMelaluiKetentuan-KetentuanHukumHumaniterInternasional*
- YoramDinstein, (2004), *The Conduct of Hostilities under the Law of International Armed Conflict*, United Kingdom: Cambridge University Press.
- UNEP, (2009), *Protecting the Environment during Armed Conflict (An Inventory and Analysis of International Law)*, UNEP, Kenya.

Convention, Statute, Customary Law

- Additional Protocol of the Geneva Convention of 12 August 1949, And Relating to the Protections of Victims of International Armed Conflict/Additional Protocol I 1977
- Convention on Prohibition of Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction
- Convention on Prohibition of Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction
- Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weaponswhich May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (CCW), Protokol I on Non-Detectable Fragments
- 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 (CCW), Protocol II on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices
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 (CCW), Protocol IV on Blinding Laser Weapons
Convention on the Prohibition of Military or Any other Hostile Use of Environment Modification Techniques (ENMOD Convention 1977)
Denhag Convention IV 1907 tentang Law and Customs of War on Land
ICRC Customary Study Rule
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.
Statute of Rome on International Criminal Court 1998
The Understanding of ENMOD Convention