February, 2007

The Protection of the Environment During Armed Conflict

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ABSTRACT

The environment is generally not considered to be a serious consideration during armed conflict. However, international law has provided a number of protections for the environment in times of war. This article addresses the various Conventions and Protocols that shield the environment from destructive weapons and discusses the differences between them. The article also considers the national and international enforcement and implementation measures to uphold those protections.

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1.0 Introduction

The International Court of Justice (ICJ) has declared that the “environment is under daily threat” and that it “is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn.” It went on to state that,

The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment.

The impact of climate change has placed increased emphasis on environmental protection. In the highly charged theatre of armed conflict, limitations have been created to stabilize our wheezing climate. According to the ICJ in the Nuclear Weapons Case, States must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives. In light of this Judgement, this paper will outline the extent to which the environment is protected during armed conflict. The direct and indirect laws will be discussed, as well as their implementing mechanisms. Although this article will approach the issue primarily from

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1 The author would like to express his thanks to Professor Nico Schrijver of Leiden University for his assistance with this article.
3 Id., para 30.
the standpoint of environmental law, regard will also be given to the relevant principles of international humanitarian law.

2.0 Direct Treaty Law

2.1 The ENMOD Convention 1976

The Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (hereinafter, the ‘ENMOD Convention’) was adopted by the United Nations General Assembly in 1976 and opened for signature in 1977. This treaty prohibits the use of environmental modification techniques as a weapon during a conflict. It was inspired by the outrage over US defoliation campaigns in the Vietnam War and the fear that technology was reaching a point where it could be used to unleash disastrous environmental changes as a weapon in war.5 Article I of the Convention provides that:

Each State Party to this Convention undertakes not to engage in military or any other hostile use of the environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party.

This Article also requires that Parties undertake not to assist, encourage or induce any State, group of States or international organization to engage in such activities.6

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5 Sunshine Project, ENMOD – Hostile Environmental Modification, see http://www.sunshine-project.org/enmod/
6 1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques Article 1(2).
Article II stipulates that the term ‘environmental modification techniques’ used in Article I:

… refers to 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.

This Article includes a number of important elements. Firstly, the action requires intent. Secondly, it must manipulate a natural process. A non-exhaustive list illustrating the types of natural processes covered by this treaty were outlined in an Understanding that was attached to the ENMOD Convention. These include “earthquakes, tsunamis, an upset in the ecological balance of a region, changes in weather patterns (clouds, precipitation, cyclones of various types 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.”

Thirdly, Article I contains the threshold criteria, requiring that the alleged violation be either “widespread, long-lasting or severe”. If one of these requirements is met, the exception of military necessity cannot be claimed. This will be discussed in further detail below.

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Fourthly, Article I also requires that the environmental modification technique be for military or hostile purposes. Peaceful and non-hostile uses are expressly outside the scope of the Convention.\footnote{1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques Article III(1)} Provided no damage or injury results from such techniques, it would be permitted, for example, to initiate fog dispersal in order to facilitate aircraft takeoffs and landings or clear enemy targets for bombing.\footnote{J. A. Cohan, Modes of Warfare and Evolving Standards of Environmental Protection under the International Law of War, 15 Fla. J. Int’l L 481, at 520 - 521 (2003).}

It is undisputed that the Convention applies to armed conflicts between States Parties. However, its application to the situation in which a State Party attacks a non-State Party is still unclear. Various interpretations exist, including the restrictive view that the ENMOD’s applicability should only be amongst State Parties in order to be an incentive for ratification and avoid the situation in which a State would gain the benefits of ENMOD without having to abide by its rules.\footnote{See Chamorro & Hammond, supra note 6. See also Dinstein for such a view, supra note 5.} To support this view, it is argued that proposals were rejected during drafting that the Convention apply as an \textit{erga omnes} obligation.\footnote{See Dinstein, supra note 5, 180 – 181.} An alternative interpretation allows limited protection to non-States Parties in situations where they have been encouraged or assisted by States Parties to undertake actions that contravene the Convention. Such a situation would be a violation of Article I(2) of the Convention and could result in action being brought against the State Party. Areas outside the jurisdiction of all States such as the high seas, are generally considered to be outside the scope of the Convention unless there is an affect on a State Party’s activities (e.g., shipping).\footnote{Id., at 180.}
It is likely that the ENMOD provisions have reached the status of customary international law. The military manuals of some States\textsuperscript{14} indicate that it applies to States Parties.\textsuperscript{15} Indonesia, which is not party to the Convention, applies the treaty principles in its military manual.\textsuperscript{16} Furthermore, the ENMOD rule has been included in the \textit{Guidelines on the Protection of the Environment in Times of Armed Conflict}, a document that the United Nations General Assembly invited all States to disseminate widely.\textsuperscript{17} The US has stated that the Convention reflected “the international community’s consensus that the environment itself should not be used as an instrument of war.”\textsuperscript{18} State practice has also supported this.\textsuperscript{19} In addition, during a debate at the meeting of the General Assembly’s Sixth Committee in 1991, Sweden referred to the destruction of the environment by the Iraqi forces in the First Gulf War as being “an unacceptable form of warfare in the future”.\textsuperscript{20} Canada supported this view, stating that “the environment as such should not form the object of direct attack”.\textsuperscript{21}

Regardless of whether the ENMOD provisions have achieved official customary status, it is clear that there is a broad consensus against the use of the environment as a weapon.\textsuperscript{22}

\textit{2.2 Additional Protocol I 1977}

\textsuperscript{14} See Israel, South Korea and New Zealand.
\textsuperscript{16} Id., at 155.
\textsuperscript{17} Id., at 155.
\textsuperscript{18} Id., at 155.
\textsuperscript{19} See Estonia’s Penal code.
\textsuperscript{20} See Henckaerts & Doswald-Beck, \textit{supra} note 13, at 156.
\textsuperscript{21} Id., 156.
\textsuperscript{22} Id., 156.
This Protocol to the Geneva Conventions 1949 also came into force in 1977. As with the ENMOD Convention, these rules were inspired by the environmental devastation of the Vietnam War. The Protocol provides direct protection for the environment during armed conflict in two provisions.

This first is Article 35(3) which prohibits States Parties to use methods or means of warfare causing “widespread, long-term and severe damage to the natural environment”. This Article deals with situations in which such damage to the natural environment is produced by the intentional use of method or means of warfare and where such consequences are foreseeable.\(^{23}\)

The second provision builds on this. Article 55(1) provides that:

> 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 and survival of the population.

This Article is more of a governing principle that requires that the effects or repercussions of permitted actions do not result in escalating or otherwise producing the prohibited “widespread, long-term and severe damage to the natural environment”.\(^{24}\)

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\(^{23}\) See Cohan, *supra* note 8, at 503 - 504.

\(^{24}\) *Id.*, 504.
Article 55(2) further stipulates the protection by prohibiting attacks against the natural environment by way of reprisals.

These provisions are binding on States Parties to the Protocol. However, it is unclear whether these provisions are considered to be part of customary international law. There is ample evidence showing that it has reached such status, as causing such damage to the environment has been expressly prohibited in many state military manuals and legislated as an offence in a number of States. Before the ICJ in the Nuclear Weapons Cases, States argued that they considered Articles 35(3) and 55 to be customary, and that any party to a conflict must observe them, or must avoid using methods or means of warfare that would destroy or could have disastrous effects on the environment. The United States also stated that “US practice does not involve methods of warfare that would constitute widespread, long-term and severe damage to the environment.” The three criteria in Article 35(3) were also reflected in the war crimes provisions of the Rome Statute (please see below for more detail).

There is also considerable practice negating the customary status of these Protocol provisions. In the Nuclear Weapons case, the United Kingdom and the United States both argued against the customary status of the Articles and the Court itself appeared to

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25 See, for example, Argentina, Australia, Canada, Germany Kenya, New Zealand, Russia, Togo, United Kingdom, United States.
26 See, for example, the legislation of Australia, Azerbaijan, Belarus, Canada, Congo, Croatia, Germany, Netherlands, New Zealand, United Kingdom.
27 See Henckaerts & Doswald-Beck, supra note 13, at 152.
28 United States, Letter from the Department of the Army to the legal adviser of the US Army forces deployed in the Gulf region. See Henckaerts & Doswald-Beck, supra note 13, at 153.
consider the rule not being of customary law. Furthermore, the Final Report of the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia stated that Article 55 of Additional Protocol I “may… reflect current customary law”.31

A major difficulty in establishing the customary status of these Protocol provisions are the positions of the French, United Kingdom and United States. They have persistently objected to these rules forming customary law as they apply to nuclear weapons. They have each indicated through military manuals or reservations to the Protocol upon ratification that the rules apply to them only in regards to conventional weapons, but not nuclear weapons.32 It seems most likely therefore that the position of the ICRC in the Study on Customary International Humanitarian Law is the correct approach. It concluded that in light of such statements and practice, Article 35(3) and 55 are of customary nature only in regards to conventional weapons, but not nuclear weapons.33

2.3 Comparing and Contrasting ENMOD and Additional Protocol I

It is important to be aware that these two treaty regimes have different applications, purposes and thresholds, with no substantive overlap.

The Protocol focuses on the natural environment regardless of the weapon that is used.

The ENMOD Convention, on the other hand, aims to prevent hostile use of

31 Id., at 154.
32 Id., at 154.
33 Id., at 154-155.
environmental modification techniques. The Protocol can be said to be protecting the environment (‘environment as the victim’), whereas the ENMOD Convention protects the manipulation of the environment (‘environment as a weapon’). Furthermore, the Protocol protects the environment from unintentional and incidental damage, whereas the ENMOD Convention only protects against deliberate damage inflicted during the course of warfare.

Secondly, the threshold of the two treaties differs. The Protocol takes a cumulative approach, requiring that the affect on the environment is “widespread, long-term, and severe”. The ENMOD Convention, however, provides that either of those three criteria are satisfied, requiring only that the affect on the environment be ‘widespread, long-term, or severe’. The Convention therefore has a broader application.

Thirdly, the two treaties apply different meanings to the three threshold requirements. The meaning of these terms in the ENMOD Convention were expanded in an Understanding adopted in 1984 during the Convention’s First Review Conference. ‘Widespread’ referred to a geographic area of several hundred square kilometres; ‘long-lasting’ required the effect to last for a period of months, or over a season; ‘severe’ meant serious or significant disruption or harm to human life, natural and economic resources or other assets. In contrast to the ENMOD Convention, no definitions were provided for

35 See Dinstein, supra note 5, at 189.
36 Id., at 189.
37 See Chamorro & Hammond, supra note 6.
38 Id.
the terms in the Protocol. Commentaries, however, have stated that it is generally understood that ‘widespread’ referred to less than several hundred square kilometres, ‘long-term’ referred to ten years or more and ‘severe’ required damage that would be likely to prejudice, over a long term, the continued survival of the civilian population or would risk causing it major health problems.\(^\text{39}\) Such differences in meaning are a reflection of the distinct purpose, nature and application of both treaties.

Lastly, it is important to note that the Protocol applies only during armed conflict, whereas the ENMOD Convention applies during peacetime and/or armed conflict.

Despite such differences in these treaties, they are generally viewed as complementary and dealing with different areas of the law.

### 3.0 Indirect Treaty Law

A number of supplementary provisions provide indirect protection of the environment during armed conflict.

#### 3.1 Additional Protocol I

Article 51 prohibits indiscriminate attacks, including such attacks “which employ a method or means of combat the effects of which cannot be limited as required by this Protocol.”\(^\text{40}\)

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\(^{40}\) 1977 Additional Protocol I to the 1949 Geneva Conventions, Article 51(4)(c)
Article 54 protects objects indispensable to the survival of the civilian population, such as ‘foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works.\(^{41}\)

Article 56 provides for the protection of works and installations containing dangerous forces, in particular “dams, dykes and nuclear electrical generating stations”. These are prohibited to be the object of attack, even when they are military objectives, if such an attack may cause the release of dangerous forces and consequent severe losses among the civilian population. The Article does, however, provide narrow circumstances in which those named protected sites may legitimately be attacked. This provision was adopted in response to accusations that during the Vietnam War US forces had attacked dykes in order to induce catastrophic floods.\(^{42}\)

3.2 Protocol III annexed to the Convention on Conventional Weapons

Article 2(4) states 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.

\(^{41}\) Id., Article 54(2).
\(^{42}\) See Antoine, supra note 32. See Sanajoaba, supra note 37, at 193.
This is a very limited provision, applying only to “forests or other kinds of plant cover” and granting protection not against attacks in general but only those by incendiary weapons. Furthermore, the protection terminates upon the enemy’s utilization of the forest for cover, concealment or camouflage. Consequently, provided the forest is used in military operations, it is a legitimate target. Even though this provision has a very narrow application, it is significant because it protects a specific portion of the environment from a particular type of weapon. It is an extension to the ENMOD Convention and Protocol I standards.

3. The Chemical Weapons Convention 1993 (CWC)

The seventh preambular paragraph of the CWC recognizes the prohibition of the use of herbicides, as embodied in agreements and relevant principles of international law. Although the definition of a chemical weapon under the CWC does not include herbicides, the United States has “formally renounced the first use of herbicides in time of armed conflict”, except within US installations or around their defensive perimeters. The reference to the prohibition of herbicides in agreements has been assumed to be an allusion to the ENMOD Convention and Protocol I. What is of greater importance however, according to Dinstein, is the reference to ‘relevant principles of international

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43 See Dinstein, supra note 5, at 187.
46 Annotated Supplement 477, See Dinstein, supra note 5, at 188.
47 Id., at 188.
law’ as this creates an “inescapable connotation” that the prohibition of herbicide use in armed conflict is now embodied in customary international law.48

3.5 Convention on the Law of the Sea 1982

Despite containing no provision expressly protecting the marine environment against the consequences of an armed conflict, it can be assumed that such protection exists in the context of the provisions with regard to pollution of the sea.49

3.6 General Statements

A further protection of the environment can be found in broad statements issued at international conferences. These uphold the high aims the international community has for environmental protection. Principle 21 of the Stockholm Declaration of 1972 and Principle 2 of the Rio Declaration 1992 express the common conviction of States concerned that they have a duty “to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”50

Furthermore, principle 23 of the Rio Declaration states:

48 Id., at 188.
The environment and natural resources of people under oppression, domination and occupation shall be protected.\textsuperscript{51}

Principle 24 states:

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.\textsuperscript{52}

According to Jensen, these statements are a clear challenge for those States willing to embrace them, and are often quoted as authority for requiring compliance with various peacetime environmental rules during armed conflict.\textsuperscript{53}

The ICJ in the \textit{Nuclear Weapons Case} made special note of the UN General Assembly Resolution on the Protection of the Environment in Times of Armed Conflict\textsuperscript{54}, which affirms that 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. The Resolution also upholds that “destruction of the environment, not justified by military necessity and carried out wantonly, is clearly contrary to existing international law”.\textsuperscript{55}

\textsuperscript{51} Rio Declaration, Principle 23.
\textsuperscript{52} Rio Declaration, Principle 24.
\textsuperscript{53} See Jensen, \textit{supra} note 42, at 163.
\textsuperscript{54} UN Doc. A/RES/47/37 (1992).
\textsuperscript{55} The ICJ Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of 8 July 1996, \url{http://www.icj-cij.org/icjwww/icases/iunan/iunanframe.htm}, para 32.
4.0 Enforcement and Implementation

4.1 Existing Machinery

The existing machinery is primarily concerned with issues of state responsibility. Under the Additional Protocol I, Article 90 provides for the establishment of an international fact-finding commission with the competencies to enquire into serious violations and grave breaches of the Geneva Conventions and the Protocol as well as facilitating through its good offices the restoration of the attitude of respect for the Conventions and Protocol. The commission has, however, never been utilized, largely because it has lacked support from States Parties.

Despite the ENMOD Convention not having any enforcement or remedial mechanisms, a possible means for resolution of disputes arising out of the Convention is for a State to make a formal complaint before the UN Security Council, which can in turn investigate and issue a report condemning the matter.

Although Iraq and Kuwait were not States Parties to the ENMOD Convention, the environmental damage committed by Iraq during the First Gulf War was addressed by the United Nations Security Council. Iraq had deliberately spilled between seven and nine million barrels of Kuwaiti oil into the Persian Gulf and set 508 oil well heads ablaze, 82 of which were damaged in a manner that caused oil to freely flow from them. In Resolution 687 the Security Council held Iraq to be liable for “any direct loss, damage,
including environmental damage, and the depletion of natural resources” inflicted during the invasion of Kuwait.\textsuperscript{59} The delegates, despite agreeing that international law was applicable, were unable to agree which law should apply.\textsuperscript{60} The UN Compensation Commission was established by the Security Council to administer any claims against Iraq. Resolution 687 sets the precedent for future wars and acts as a deterrent for States in order to take environmental factors seriously when engaging in armed conflict.\textsuperscript{61}

A further existing machinery is the International Court of Justice. Relying on the \textit{si omnes} clause (which provides for ‘respect and ensuring respect for’ Geneva Law), Rakate and McDonald argue that it could be construed as giving any third State an interest in environmental damage done during armed conflict.\textsuperscript{62} Utilizing such judicial mechanisms would provide for the strengthening of the various existing provisions.

\textbf{4.2 Individual Criminal Responsibility}

Article 8(2)(b)(iv) of the Rome Statute of the International Criminal Court (ICC) includes as a war crime:

\begin{quote}
Intentionally launching an attack in the knowledge that such attack will cause […] widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to concrete and direct overall military advantage anticipated.
\end{quote}

\textsuperscript{60} See Cohan, \textit{supra} note 8, at 520 - 521.
\textsuperscript{61} \textit{Id.}, at 488-489.
\textsuperscript{62} See Rakate & Mcdonald, \textit{supra} note 55, at 141.
Although much of this provision is modelled off Article 35(3) Additional Protocol I, there are a number of important differences which further limit the application of the ICC’s provision. Firstly, the Statute requires both intention and knowledge of the outcome, instead of either intention or expectation as required by the Protocol. This is an expected requirement as the crime is concerned with individual criminal responsibility. The mens rea of intent and knowledge must be proven, which, coupled with the subjectivity of the prohibition, would make the prosecution quite difficult. Secondly, the damage to the natural environment must be clearly excessive in relation to the military advantage anticipated. This requires a consideration of the international humanitarian law principle of proportionality in which a balance must be struck between the military advantage anticipated and the damage to the natural environment as a civilian object (unless an element of the environment, such as a forest, is considered to be a military objective). This provision has the same difficulty as the Protocol in that it could prove very difficult to substantiate that the three required criteria of “widespread, long-term and severe damage” have indeed been met.

4.3 National Implementation

Arguably, the most effective means of addressing the protection of the environment during armed conflict is through the national implementation of such rules. International non-governmental organizations, such as the International Committee of the Red Cross (ICRC) and Green Cross International, have made proposals for the implementation of existing rules of international humanitarian law be promoted through military manuals of

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63 See Dinstein, supra note 5.
64 See Rakate & Mcdonald, supra note 55 at 141.
65 See Dinstein, supra note 55, 186.
the armed forces. Green Cross International, which has advocated the dangers the environment faces including during armed conflict, argued that a ‘culture of compliance’ with humanitarian law is the best hope of its successful implementation. It is far more effective if States themselves change their attitude and approach towards the environment, rather than ex post facto condemnation, political pressure and prosecution of violations.

5.0 Conclusion

The demands of protecting our fragile environment will be one of the greatest challenges our society will meet in the coming centuries. The needs of the natural world must be considered in all aspects of human activity, including armed conflict and national security. These are not always competing interests, and in many ways are complementary and inter-dependent. Nevertheless, a fair balance must be drawn between the reality of military necessity and the need to ensure the survival of the human race and the other forms of life entrusted to us. The numerous conventions, protocols, conference statements and resolutions provide a starting point for drawing the limits of armed conflict. However, if we are to seriously address environmental protection, it must come from a genuine desire within each individual State to actively ensure compliance with the rules of war as they relate to safeguarding the planet.

See Rakate & Mcdonald, supra note 55, at 142.
Id., at 142-143.
Id., at 143.