



Protecting the Environment During Armed Conflict

An Inventory and Analysis
of International Law



United Nations Environment Programme

About UNEP's Disasters and Conflicts Programme

The United Nations Environment Programme (UNEP) seeks to minimize environmental threats to human well-being from the environmental causes and consequences of conflicts and disasters. Through its Disasters and Conflicts programme, it conducts field-based environmental assessments and strengthens national environmental management capacity in countries affected by conflicts and disasters. Using state-of-the-art science and technology, UNEP deploys teams of environmental experts to assess environmental damage and determine risks for human health, livelihoods and security. Since 1999, UNEP has operated in more than thirty-five countries and published twenty environmental assessment reports. Based on this expertise, UNEP is providing technical assistance to a number of UN and international actors, including the Peacebuilding Support Office (PBSO), the Department of Peacekeeping Operations (DPKO), the Department of Field Support (DFS), the UN Development Programme (UNDP) and the European Commission, in assessing the role of natural resources and the environment in conflict and peacebuilding. The main objective of this technical cooperation is to prevent natural resources and environmental stress from undermining the peacebuilding process while at the same time using environment as a platform for dialogue, cooperation and confidence-building. For more information, see: <http://www.unep.org/conflictsanddisasters>

About this report

This report inventories and analyses the range of international laws that protect the environment during armed conflict. With a view to identifying the current gaps and weaknesses in this system, the authors examine the relevant provisions within four bodies of international law – international humanitarian law (IHL), international criminal law (ICL), international environmental law (IEL), and international human rights law (HRL). The report concludes with twelve concrete recommendations on ways to strengthen this legal framework and its enforcement.

The launch of this report coincides with the **International Day for Preventing the Exploitation of the Environment in War and Armed Conflict**, which is observed annually on 6 November (see <http://www.un.org/en/events/environmentconflictday/>). This day aims to raise awareness of the fact that damage to the environment during armed conflict impairs ecosystems and natural resources long after the period of the conflict, and extends beyond the limits of national territories and the present generation. Because the environment and natural resources are crucial for building and consolidating peace, it is urgent that their protection in times of armed conflict be strengthened. There can be no durable peace if the natural resources that sustain livelihoods are damaged or destroyed. This report provides a basis upon which Member States can draw upon to clarify, expand and enforce international law on environmental protection in times of war.

A joint product of UNEP and the Environmental Law Institute, this report was co-authored by Elizabeth Maruma Mrema of UNEP's Division of Environmental Law and Conventions, together with Carl Bruch and Jordan Diamond of the Environmental Law Institute. It is also based on the outcomes of an expert meeting of 20 leading international legal specialists held by UNEP and the International Committee of the Red Cross in March 2009 in Nairobi, Kenya (see Annex 5). The report was produced and coordinated by the Post-Conflict and Disaster Management Branch (PCDMB) of UNEP's Disasters and Conflicts Programme, and co-financed by the Government of Finland.

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An inventory and analysis of
international law

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Executive summary

Despite the protection afforded by several important legal instruments, the environment continues to be the silent victim of armed conflicts worldwide. The United Nations Environment Programme (UNEP) has conducted over twenty post-conflict assessments since 1999, using state-of-the-art science to determine the environmental impacts of war. From Kosovo to Afghanistan, Sudan and the Gaza Strip, UNEP has found that armed conflict causes significant harm to the environment and the communities that depend on natural resources. Direct and indirect environmental damage, coupled with the collapse of institutions, lead to environmental risks that can threaten people's health, livelihoods and security, and ultimately undermine post-conflict peacebuilding.

Findings from these assessments also show that the exploitation and illegal trade of natural resources frequently fuel and prolong armed conflict, particularly in countries where laws and institutions have been weakened or have collapsed. As peacebuilding often addresses the allocation, access and ownership of natural resources, there is an urgent need to strengthen their protection during armed conflict. There can be no durable peace if the natural resources that sustain livelihoods are damaged, degraded, and destroyed.

The existing international legal framework contains many provisions that either directly or indirectly protect the environment and govern the use of natural resources during armed conflict. In practice, however, these provisions have not always been effectively implemented or enforced. Where the international community has sought to hold States and individuals responsible for environmental harm caused during armed conflict, results have largely been poor, with one notable exception: holding Iraq accountable for damages caused during the 1990-1991 Gulf War, including for billions of dollars worth of compensation for environmental damage.

With a view to identifying the current gaps and weaknesses within the existing legal framework and making recommendations on how they can be addressed, this report reviews the provisions within the four main bodies of international law that provide protection for environment during armed conflict. These include international humanitarian law (IHL), international criminal law (ICL), international environmental law (IEL), and international human rights law (IHRL). Each body of law is inventoried and analysed as per the treaties, customary law, soft law and case law it contains on the topic

This legal assessment was jointly conducted by experts from UNEP and the Environmental Law Institute (ELI). It is also based on the outcomes of an expert meeting of twenty leading specialists in international law that was held by UNEP and the International Committee of the Red Cross (ICRC) in March 2009. The report culminates in a number of key findings and recommendations explaining why the environment continues to lack effective protection during armed conflict, and how

these challenges can be addressed to ensure that the legal framework is strengthened and better enforced.

Findings

- Articles 35 and 55 of Additional Protocol I to the 1949 Geneva Conventions do not effectively protect the environment during armed conflict due to the stringent and imprecise threshold required to demonstrate damage:** While these two articles prohibit "widespread, long-term and severe" damage to the environment, all three conditions must be proven for a violation to occur. In practice, this triple cumulative standard is nearly impossible to achieve, particularly given the imprecise definitions for the terms "widespread," "long-term" and "severe."
- Provisions in humanitarian law that regulate the means and methods of warfare or protect civilian property and objects provide indirect protection of the environment:** Restrictions on the means of warfare (in particular weapons) and the methods of warfare (such as military tactics) provide indirect protection to the environment, although new technologies, such as the use of depleted uranium, are not yet addressed – except by the general principles of the law of war. Provisions that protect civilian property and objects, including industrial installations and cultural/natural sites, also provide indirect protection to the environment. However, these protections have rarely been effectively implemented or enforced.
- The majority of international legal provisions protecting the environment during armed conflict were designed for international armed conflicts and do not necessarily apply to internal conflicts:** Given that most armed conflicts today are non-international or civil wars, much of the existing legal framework does not necessarily apply. This legal vacuum is a major obstacle for preventing the often serious environmental damage inflicted during internal conflicts. There are also no institutionalized mechanisms to prevent the looting of natural resources during armed conflict or to restrict the granting of concessions by combatants that may lack legitimacy or legal authority. In addition, there are no systematic mechanisms to prevent States or corporations from aiding and abetting civil war parties in causing environmental damage or looting natural resources.
- There is a lack of case law on protecting the environment during armed conflict because of the limited number of cases brought before the courts:** The provisions for protecting the environment during conflict under the four bodies of international law have not yet been seriously applied in international or national jurisdictions. To date, only a very limited number of cases have been brought before national, regional, and international courts and tribunals in this context. Moreover, in cases where decisions were handed down, procedural rather than merit-based reasoning has predominated. This lack of case law contributes to the sense that there is a reluctance or difficulties in enforcing the applicable law.

5. **There is no permanent international mechanism to monitor legal infringements and address compensation claims for environmental damage sustained during international armed conflicts:** The international community is inadequately equipped to monitor legal violations, determine liability and support compensation processes on a systematic basis for environmental damage caused by international armed conflicts. The existence and implementation of such a mechanism could act as a standing deterrent to prevent environmental damage, as well as redress wartime infringements. While an investigative body exists for violations of Additional Protocol I to the 1949 Geneva Conventions, investigations can only be carried out with the consent of countries, are not systematic and do not address violations of other instruments.
6. **The general humanitarian principles of distinction, necessity, and proportionality may not be sufficient to limit damage to the environment:** The practical difficulty of establishing the threshold of these principles, which lack internationally agreed standards, makes it easier to justify almost any environmental damage if the military necessity is considered to be sufficiently high. This limits the practical effectiveness of these principles for preventing damage to the environment. The ICRC emphasizes the importance of taking a precautionary approach in the absence of scientific certainty about the likely effects of a particular weapon on the environment.
7. **Environmental damage that contributes to war crimes, crimes against humanity and genocide is a criminal offence under international law:** Destruction of the environment and depletion of natural resources may be a material element or underlying act of other crimes contained within the Rome Statute. It is therefore subject to criminal liability and prosecution by the International Criminal Court (ICC) and national criminal jurisdictions of Parties to the ICC. This applies to both internal armed conflicts within State Parties and international conflicts between State Parties. Acts of pillage as a war crime are of particular interest and could be used to prosecute the practice of looting natural resources during conflicts.
8. **Unless otherwise stated, international environmental law continues to apply during armed conflicts and could be used as a basis for protection:** The provisions of multilateral environment agreements (MEAs) should be regarded as continuing to apply during both international and non-international armed conflict, unless they specifically stipulate otherwise. The notion that international humanitarian law replaces international environmental law as the operational body of law during armed conflict is no longer the prevailing opinion of legal experts, including the International Law Commission. In addition, international environmental law could be used in the interpretation of incomplete or insufficiently clear norms of international humanitarian law.
9. **Human rights law, commissions and tribunals can be used to investigate and sanction environmental damage caused during international and non-international armed conflicts:** Linking environmental damage to the violation of fundamental human rights offers a new way to investigate and sanction environmental damages, particularly in the context of non-international armed conflicts. A variety of human rights fact-finding missions, including that led by Judge Goldstone in the Gaza Strip in 2009, have investigated environmental damages that have contributed to human rights violations. This approach could provide an interim solution to address environmental damages until international humanitarian law and associated enforcement institutions are strengthened.
10. **There is no standard UN definition of what constitutes a “conflict resource” and when sanctions should be applied to stop illegal exploitation and trade of such resources:** Considering the frequent role of high-value natural resources, such as diamonds, oil and timber, in providing revenue streams for the purchase of weapons and hiring of combatants, a standard definition by the UN is required for identifying “conflict resources.” Such a definition would facilitate a more consistent and effective international approach to sanctions.

Recommendations

1. **The terms *widespread, long-term and severe* within Articles 35 and 55 of Additional Protocol I to the 1949 Geneva Conventions should be clearly defined:** To improve the effectiveness of Articles 35 and 55, clear definitions are needed for “widespread,” “long-term,” and “severe.” As a starting point in developing these definitions, the precedents set by the 1976 ENMOD convention should serve as the minimum basis, namely that “widespread” encompasses an area on the scale of several hundred square kilometers; “long-term” is for a period of months, or approximately a season; and “severe” involves serious or significant disruption or harm to human life, natural economic resources or other assets.
2. **The ICRC *Guidelines on the Protection of the Environment during Armed Conflict (1994)* require updating and subsequent consideration by the UN General Assembly for adoption, as appropriate:** In view of the rapid transformations in the methods and means of warfare, as well as the increase in non-international armed conflicts, updating of the 1994 ICRC *Guidelines* is necessary. In particular, the guidelines should define key terms in Additional Protocol I, address the continued application of international environmental law during armed conflict, explain how damage to the environment can be a criminal offence, and examine protection of the environment during non-international armed conflicts. States would be in a position to adopt and reflect these guidelines in national legislation and

military manuals, as well as to integrate them into the training of their armed forces.

3. **The International Law Commission (ILC) should examine the existing international law for protecting the environment during armed conflict and recommend how it can be clarified, codified and expanded:** As the leading UN body with expertise in international law, the International Law Commission (ILC) should be called upon to examine the effectiveness of the legal framework, to identify the gaps and barriers to enforcement, and to explore possibilities for clarifying and codifying this body of law. Clarification is urgently needed, for example, for extending applicable rules to non-international armed conflicts, as well as for the applicability of MEAs during armed conflict. Definitions for the terms “widespread,” “long-term,” and “severe” should also be addressed. The ILC should also consider how international environmental law could be used to help clarify gaps and ambiguities in international humanitarian law.
4. **International legal practitioners should be trained on enforcing the existing international law protecting the environment during armed conflict:** In order to enrich the corpus of case law available, international judges, prosecutors and legal practitioners should be trained on the content of the international law that can be used to prosecute environmental violations during armed conflict. The subsequent development of case law would help bring clarity to existing provisions and increase deterrence by adding a credible threat of prosecution for violations.
5. **Countries that wish to protect the environment during armed conflict should consider reflecting the relevant provisions of international law in national legislation:** In order to ensure that environmental violations committed during warfare are prosecuted, the provisions of international law that protect the environment in times of conflict should be fully reflected at the national level. This will require targeted capacity-building programmes for legal drafters and practitioners. The content should address options for reflecting, implementing and enforcing the relevant provisions of international law in existing or new national legislation, including holding individuals and corporations accountable for environmental damages committed abroad as underlying acts of war crimes.
6. **A permanent UN body to monitor violations and address compensation for environmental damage should be considered:** Even though the UN Compensation Commission (UNCC) was established by the Security Council to process compensation claims relating to the 1990-1991 Gulf War, Member States of the United Nations may want to consider how a similar structure could be established as a permanent body, either under the General Assembly or under the Security Council. Such a body could investigate and decide on alleged violations of international law during international and non-international armed conflicts, as well as handle and process compensation claims related to environmental damage and loss of economic opportunities.
7. **The international community should consider strengthening the role of the Permanent Court of Arbitration (PCA) to address disputes related to environmental damage during armed conflict:** In 2002, the PCA adopted the “Optional Rules for Conciliation of Disputes Relating to the Environment and/or Natural Resources.” These rules provide the most comprehensive set of environmentally tailored dispute resolution procedural rules presently available and could be extended to disputes arising from environmental damage during armed conflict.
8. **The United Nations should define “conflict resources,” articulate triggers for sanctions and monitor their enforcement:** The UN should consider defining “conflict resources” and articulating the extent to which the misuse of certain natural resources (e.g. for financing conflict) constitutes a “threat to peace and security.” Conflict resources could be defined as natural resources whose systematic exploitation and trade in a context of conflict contribute to, benefit from or result in the commission of serious violations of human rights, violations of international humanitarian law, or violations amounting to crimes under international law. Once conflict resources are identified and international sanctions are issued, a new mechanism will be needed for monitoring and enforcement. One option could be to review and expand as appropriate the mandate of peacekeeping operations for monitoring the illegal exploitation and trade of natural resources fuelling conflict as well as protecting sensitive areas covered by international environmental conventions.
9. **A new legal instrument is needed for place-based protection of critical natural resources and areas of ecological importance during armed conflicts:** A new legal instrument granting place-based protection for critical natural resources and areas of ecological importance during international and non-international armed conflicts should be developed. This could include protection for watersheds, groundwater aquifers, agricultural and grazing lands, parks, national forests, and the habitat of endangered species. At the outset of any conflict, critical natural resources and areas of ecological importance would be delineated and designated as “demilitarized zones,” and parties to the conflict would be prohibited from conducting military operations within their boundaries.
10. **Legal agreements and concessions covering natural resources issued by conflict parties often lack legitimacy and should be reviewed at the outset of the post-conflict period:** Concessions over na-

tural resources issued during conflicts often lack legitimacy and may not reflect best practice in terms of transparency, benefit-sharing, public participation, and environmental impact assessment. Disagreements over these concessions can destabilize post-conflict peacebuilding. Steps taken by many countries to review and re-issue concessions over high-value natural resources as part of the peacebuilding process should be encouraged. Efforts undertaken by international organizations to help build capacity for reviewing and issuing post-conflict concessions should be expanded.

11. **Environmental protection should be considered during the First Review Conference of the International Criminal Court (ICC) Statute in 2010:** States that will participate in the First Review Conference of the ICC Statute scheduled for 2010 should consider the adequacy of the existing rules regarding the protection of the environment in armed conflict. In particular, they should consider how best to extend provisions for protecting the environment

during non-international armed conflicts. They should also consider how to build national capacity to adopt, implement and enforce international criminal law in the legislation of State parties.

12. **A summary report on the environmental impacts of armed conflicts should be presented on an annual basis to the UN General Assembly, in conjunction with the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict:** The UN General Assembly should consider requesting the Secretary-General to submit a report annually on 6 November on the environmental impacts of armed conflicts. The report should detail the direct, indirect and institutional environmental impacts caused by ongoing and new international and non-international armed conflicts in the reporting year. The report should also recommend how the environmental threats to human life, health and security can be addressed as well as how natural resources and the environment in each can be used to support recovery and peacebuilding.

1 Introduction

The toll of warfare today reaches far beyond human suffering, displacement and damage to homes and infrastructure. Modern conflicts also cause extensive destruction and degradation of the environment. In turn environmental damage, which often extends beyond the borders of conflict-affected countries, can threaten the lives and livelihoods of people well after peace agreements are signed.

This report aims to understand how natural resources and the environment can be better protected during armed conflict by examining the status of existing international law and making recommendations on concrete ways to strengthen this legal framework and its enforcement.

Public concern regarding the targeting and use of the environment during wartime first peaked during the Viet Nam War. The use of the toxic herbicide Agent Orange, and the resulting massive deforestation and chemical contamination it caused, sparked an international outcry leading to the creation of two new international legal instruments. The Environmental Modification Convention (ENMOD) was adopted in 1976 to prohibit the use of environmental modification techniques as a means of warfare. Additional Protocol I to the Geneva Conventions, adopted in the following year, included two articles (35 and 55) prohibiting warfare that may cause “widespread, long-term and severe damage to the natural environment.”

The adequacy of these two instruments, however, was called into question during the 1990-1991 Gulf War. The extensive pollution caused by the intentional destruction of over 600 oil wells in Kuwait by the retreating Iraqi army and the subsequent claims for USD 85 billion in environmental damages led to further calls to strengthen legal protection of the environment during armed conflict. While some advocated a “fifth” Geneva Convention focusing on the environment, many scholars, organizations and States also considered whether and to what extent the emerging body of international environmental law might apply.

In 1992, the UN General Assembly held an important debate on the protection of the environment in times of armed conflict. While it did not call for a new convention, the resulting resolution (RES 47/37) urged Member States to take all measures to ensure compliance with existing international law on the protection of the environment during armed conflict. It also recommended that States take steps to incorporate the relevant provisions of international

law into their military manuals and ensure that they are effectively disseminated.

As an outcome of the UN debate, the International Committee of the Red Cross (ICRC) issued a set of guidelines in 1994 that summarized the existing applicable international rules for protecting the environment during armed conflict. These guidelines were meant to be reflected in military manuals and national legislation as a means to raise awareness and help limit damage to the environment in times of war. Despite this important step international momentum to address the issue – particularly through a formal binding instrument – slowed by the end of the 20th century.

Yet armed conflicts have continued to cause significant damage to the environment – directly, indirectly and as a result of a lack of governance and institutional collapse. For instance, dozens of industrial sites were bombed during the Kosovo conflict in 1999, leading to toxic chemical contamination at several hotspots. In another example, an estimated 12,000 to 15,000 tons of fuel oil were released into the Mediterranean Sea following the bombing of the Jiyeh power station during the conflict between Israel and Lebanon in 2006.

In recent years, concern has also been raised about the role of natural resources – particularly “high-value” resources – in generating revenue for financing armed forces and the acquisition of weapons. Indeed, easily captured and exploitable resources often prolong and alter the dynamics of conflict, transforming war into an economic rather than purely political activity. Since 1990, at least eighteen civil wars have been fuelled by natural resources: diamonds, timber, oil, minerals and cocoa have been exploited in internal conflicts in countries such as the Democratic Republic of Congo, Côte d’Ivoire, Liberia, Sierra Leone, Angola, Somalia, Sudan, Indonesia and Cambodia.

In addition to direct and indirect impacts on the environment, armed conflict often weakens already fragile governance structures and causes a disruption of state institutions, initiatives and mechanisms of policy coordination. This in turn creates space for poor management, lack of investment, illegality and the collapse of positive environmental practices. For example, according to national review processes, concessions over “high-value” natural resources granted during conflicts in countries like Liberia and the Democratic Republic of Congo have lacked legitimacy and often failed to consider



Agent Orange was sprayed over large areas during the Viet Nam War

the broader interests of the State as well as the sharing of benefits with local communities.

Given that natural resources such as water, soil, trees, and wildlife are the “wealth of the poor,” their damage and destruction during armed conflict can undermine livelihoods, act as a driver of poverty and forced migration, and even trigger local conflict. As a result, successful peacebuilding – from re-establishing safety, security and basic services to core government functions and the economy – fundamentally depends on the natural resource base and its governance structure. Natural resources themselves can either unite or divide post-conflict countries depending on how they are managed and restored. It is thus paramount that they be protected from damage, degradation and destruction during armed conflict.

The fact that the environment continues to be the silent victim of modern warfare raises a number of important legal questions. Which international laws directly and indirectly protect the environment and natural resources during armed conflict? Who is responsible for their implementation and enforcement? Who should pay for the damage and under what circumstances? Do multilateral environmental agreements apply during armed conflict? Can environmental damage be a violation of basic human rights? When can damage to the environment be a criminal offence? How can “conflict resources” be better monitored and international sanctions against their illegal exploitation and trade be made more systematic and effective?

To answer these questions, the United Nations Environment Programme (UNEP) and the Environmental Law Institute (ELI) undertook a joint assessment of the state of the existing legal framework protecting natural resources and the

environment during armed conflict. This legal assessment was informed by the outcomes of an expert meeting held by UNEP and the ICRC in Nairobi, Kenya in March 2009, which brought together twenty senior legal experts from international organizations, non-governmental organizations, governments, the military, courts and academia to explore the status and effectiveness of the current instruments.

With a view to identifying the current gaps and weaknesses in this system, this report inventories and analyses the relevant provisions within four bodies of international law – international humanitarian law (IHL), international criminal law (ICL), international environmental law (IEL), and human rights law (HRL).

The launch of this report coincides with the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict,¹ which is observed annually on 6 November and aims to raise awareness of the fact that damage to the environment during armed conflict impairs ecosystems and natural resources long after the period of the conflict, and extends beyond the limits of national territories and the present generation.

This report accordingly provides a comprehensive review and analysis of the legal provisions contained within the four main bodies of international law that can be drawn upon to strengthen the legal protection of the environment in times of war. Specific recommendations are made on steps that should be taken by various international and national actors to ensure the expansion, implementation and enforcement of a more effective legal framework to protect the environment during international and non-international armed conflicts.

2 International humanitarian law

2.1 Introduction

The first body of law to consider in an analysis of the protection of the environment during armed conflict is international humanitarian law (IHL) – the set of laws that seek, for humanitarian reasons, to regulate war and armed conflict. IHL essentially focuses on two issues: the protection of persons who are not, or are no longer, taking part in the hostilities; and restrictions on the means and methods of warfare, including weapons and military tactics.

IHL applies only to armed conflict² and does not cover internal tensions or disturbances, such as isolated acts of violence. In addition, the law applies only after a conflict has begun, and then equally to all sides, regardless of who first engaged in the hostilities.

IHL also distinguishes between international armed conflict (IAC) – in which at least two States are involved – and non-international armed conflict (NIAC), which is restricted to the territory of a single State, involving either regular armed forces and a non-governmental party, or non-governmental armed groups fighting each other. International armed conflict is subject to a wide range of rules, including those set out in the main treaties of IHL, while the laws regulating internal armed conflict are more limited.

This distinction poses a significant challenge to the applicability and enforcement of IHL for environmental protection. Indeed, while IHL was largely developed in an era of interstate conflicts, the overwhelming majority of conflicts today are internal.³ Many laws are therefore inapplicable, or much less restrictive when applied to internal conflicts. Yet internal conflicts are the most strongly linked to the environment, with recent research suggesting that at least forty percent of all intrastate conflicts over the last sixty years have a link to natural resources.

Another challenge is that very few provisions of IHL address environmental issues directly, as most major treaties predate the widespread concern about environmental damage generated by the Viet Nam and Gulf wars. Protection is therefore generally inferred from provisions regulating the means and methods of warfare and the impacts of armed conflict on civilian objects and properties, or recommended through non-binding or soft law, including UN resolutions.

With a view to assessing the extent of the protection afforded to the environment by international humanitarian law, and to better understand the impediments to enforcement within this framework, this chapter provides an inventory and analysis of the provisions contained within the four main sources of IHL:⁴

- a) **Treaty law:** International treaties, protocols and similar instruments that have been negotiated and ratified by participating States, including the four Geneva Conventions of 1949 and Additional Protocols I and II of 1977, the ENMOD convention of 1976 prohibiting environmental modification techniques, and a number of other specific conventions and protocols dealing with various aspects of warfare, such as limiting or prohibiting biological, chemical or nuclear weapons.
- b) **Customary law:** Shared international rules established through widespread and uniform State practice, under the general belief that particular obligations bind all States, in contrast with treaty law, which applies only to those States that expressly consent to the respective treaties. In this context, customary law includes the norms of *jus cogens* from which no derogation is permitted, and grave breaches of IHL as defined in the Geneva Conventions and Additional Protocol I.
- c) **Soft law:** Norms that arise from action taken by international bodies such as the United Nations, including resolutions, decisions, codes of conduct and guidelines. By nature, soft law is not legally binding, though principles articulated in UN General Assembly or Security Council resolutions with widespread acceptance may be recognized as customary international law.⁵ To the extent that they are recognized as such, their provisions are binding on all States.
- d) **Case law:** Decisions taken by judicial bodies at national or international levels, which are helpful for treaty interpretation or as evidence of customary law, as well as for assessing the practical gaps in the existing provisions of IHL governing environmental protection during armed conflict.

2.2 Treaty law

The relevant provisions of IHL treaty law for the protection of the environment during armed conflict can be divided



Additional Protocol I to the Geneva Conventions was adopted on 8 June 1977 by the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law applicable in Armed Conflicts

into three main categories: those that directly address the issue of environmental protection, the general principles of IHL that are applicable to environmental protection, and the provisions that can be considered to provide indirect protection to the environment during times of conflict.⁶

Provisions specifically aimed at protecting the environment during armed conflict

Additional Protocol I to the 1949 Geneva Conventions, Article 35(3) and Article 55(1) (1977)

The negotiations of Additional Protocols I and II to the Geneva Conventions took place against the backdrop of various wars of national liberation – including the Viet Nam War – that raised serious questions regarding the protection of civilian populations and the environment. Growing environmental awareness, as well as concern over military tactics employed during these wars, led to the inclusion of two provisions in Additional Protocol I that explicitly addressed environmental harm: Articles 35(3) and 55.

Article 35 concerns basic rules regarding the means and methods of warfare. Paragraph 3 stipulates that “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.” The Article thus protects the natural environment *per se* – which had never been done before⁷ – and applies not

only to intentional damage, but also to expected collateral damage. Importantly, specific intent is not necessary.

Article 55 provides specific protection for the environment within the context of the protection granted to civilian objects. It also explicitly prohibits attacks on the environment by way of reprisals.

The common core of these two Articles is the prohibition of warfare that may cause “widespread, long-term and severe damage to the natural environment.” The scope of these provisions initially appears extensive. However, important questions remain with regard to the threshold at which the damaging activity violates international law. Indeed, this triple standard is a cumulative requirement, meaning that to qualify as prohibited “damage,” the impact must be widespread *and* long-term *and* severe. The Protocol fails to define these terms, resulting in a high, uncertain and imprecise threshold.⁸

One commentary on Article 35(3) has accordingly noted that it would “not impose any significant limitation on combatants waging conventional warfare. It seems primarily directed instead to high-level decision-makers and would affect such unconventional means of warfare as the massive use of herbicides and chemical agents which could produce widespread, long-term and severe damage to the natural environment.”⁹

The relevance of these two provisions and the effectiveness of the protection they provide in practice, therefore, seem limited.

UN Convention on the Prohibition of Military or Any Other Use of Environmental Modification Techniques (ENMOD) (1976)

The ENMOD Convention was established as a reaction to the military tactics employed by the United States during the Viet Nam War. 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 – what some commentators have called “geophysical warfare.” The Convention was also a reaction to the use of large quantities of chemical defoliants (known as Agents Orange, White and Blue),¹⁰ which resulted in extensive human suffering (death, cancer and other illnesses, mutations, and birth defects) and long-term environmental contamination, as well as very significant destruction of forests and wildlife.¹¹

ENMOD’s objective was to prohibit the use of environmental modification techniques as a means of warfare. Article (1) requires that “each State Party to this Convention undertakes 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.” Hence, while Article 35(3) of Additional Protocol I aims to protect the natural environment *per se*, ENMOD prohibits the use of techniques that turn the environment into a “weapon.” Although UNEP helped convene the negotiations that led to the ENMOD Convention, it has not had a systematic role in monitoring its implementation and enforcement.

Another noticeable difference with the article of Additional Protocol I is that ENMOD requires a much lower threshold of damage, with the triple cumulative standard being replaced by an alternative one: “widespread, long-lasting or severe.” In addition, it appears that the terms were interpreted differently. For instance, under ENMOD the term “long-lasting” is defined as lasting for a period of months or approximately a season, while under Additional Protocol I “long-term” is interpreted as a matter of decades.¹²

It could be concluded that ENMOD has to date proven relatively successful and effective, as no other “Viet Nam scenarios” of large-scale environmental modification tactics have been reported since 1976.

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)

The CCW (also known as the Convention on Certain Conventional Weapons and the Inhumane Weapons Convention)¹³ states in its Preamble that “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” (the triple

cumulative standard). An amendment to Article 1 of the Convention introduced in 2001 extends its application to situations referred to in common Article 3 to the 1949 Geneva Conventions – that is, to non-international armed conflict (NIAC).

Article 2(4) of the CCW Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons also directly addresses environmental protection, as it prohibits “mak[ing] forests or other kinds of plant cover the subject of an 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.”

The specific situations where ENMOD and the CCW and its Protocol III would apply and the high threshold of the two provisions protecting the environment *per se* in Additional Protocol I limit the utility of these direct protections in establishing a wide-reaching duty to protect the environment in armed conflict.

General principles of IHL applicable to the protection of the environment during armed conflict

The general principles of IHL are often referred to as a source of law on their own.¹⁴ They complement and underpin the various IHL instruments and apply to all countries. Prior to an analysis of these principles, it is important to note the importance of the Martens Clause, a general provision that was first adopted at the 1899 Hague Conference and thereafter contained in the Preamble of the 1907 Hague Convention IV.

The Martens Clause broadens the range of applicable norms governing conduct during armed conflict beyond those that are laid out in the treaty instruments, by stating: “Until a more complete code of the laws of war has been issued, the high contracting Parties deem it expedient to declare that, in cases not included in the Regulations adopted by them, the inhabitants and the belligerents remain under the 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 conscience.”¹⁵

In essence, therefore, where gaps exist in the international framework governing specific situations (including, for instance, the relationship between armed conflict and the environment), the Martens Clause stipulates that States should respect a minimum standard as established by the standards of “humanity” and the “public conscience.” The Martens Clause is generally considered to constitute a foundational principle of IHL and a core principle protecting the environment in the absence of other provisions in treaty or customary law (see Chapter 4 for a more detailed analysis of the use of the Martens Clause in this capacity).¹⁶

The core principles underpinning IHL include the principles of distinction, military necessity, proportionality, and humanity – all of which can be considered to have a bearing on environmental protection during armed conflict, as detailed below.¹⁷

While these principles are generally accepted, there is no agreement and little discussion to date about how they apply in concrete cases.¹⁸ It will therefore be necessary for judicial bodies and policy forums to work to clarify the acceptable limits of warfare, and ultimately to reinforce the protection of the environment implicitly provided by these general principles.

The principle of distinction

The principle of distinction is a cornerstone of IHL and the first test to be applied in warfare: it distinguishes between military and civilian persons and objects, and prohibits indiscriminate attacks and direct attacks against civilian objects. Article 52(2) of Additional Protocol I 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.” It can therefore be argued that given the non-military nature of most environmentally significant sites and protected areas, targeting such areas would be contrary to the principle of distinction and, subsequently, to Article 52(2).

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?”¹⁹

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?

The difficulties in interpreting the provisions of Article 52(2) highlight the need for a more precise definition of what constitutes a definite (or direct) military advantage, as opposed to a diffuse (or indirect) one.

The principle of military necessity

The principle of military necessity implies that the use of military force is only justified to the extent that it is necessary to achieve a defined military objective. Furthermore, the principle of military necessity seeks to prohibit military actions that do not serve any evident military purpose.

The principle of military necessity is reflected in the 1907 Hague Convention IV, in Article 23(g) on enemy property, which stipulates that it is forbidden “to destroy or seize the enemy’s property, unless such destruction or seizure be imperatively demanded by the necessities of war.”²⁰ This provision has significant environmental relevance as

“enemy property” may well encompass protected areas, environmental goods and high-value natural resources, all of which could therefore be granted indirect protection.

The principle of proportionality

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.

The principle of humanity

The principle of humanity prohibits inflicting unnecessary suffering, injury and destruction.²¹ 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 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.

In this respect, it should be noted that the Martens Clause also refers to the “laws of humanity.”²² The expansion of the Clause to include environmental considerations, as proposed by the International Union for Conservation of Nature (IUCN),²³ clearly seeks to build on the principle of humanity and “public conscience” to protect the environment in the absence of specific treaty law.

IHL treaty provisions that indirectly protect the environment during armed conflict

The rules of IHL treaty law that can be considered to indirectly protect the environment during armed conflict can be clustered into the five following categories: rules limiting or prohibiting certain weapons and methods of warfare; clauses protecting civilian objects and property; clauses protecting cultural heritage sites; rules concerning installations containing dangerous forces; and limitations on certain specifically defined areas.

Limitation on means and methods of warfare

Many weapons have the potential to cause serious and lasting damage to the environment. Limiting the development and use of these weapons can therefore indirectly protect the environment during armed conflict.

The following sources, regulating the use of various types of weapons, are relevant in this context:



Chemical weapons were first used on a large scale during the First World War, as seen here in an aerial view of a German gas attack on the Eastern front

- **The Hague Convention IV (1907)**

As mentioned above, the protection of the natural environment was not explicitly addressed by IHL treaty law before the adoption of Additional Protocol I to the Geneva Conventions in 1977. However, two provisions of the Hague Convention IV of 1907 regulating the means and methods of warfare are relevant for the environment. The first, Article 22, provides that “the right of belligerents to adopt means of injuring the enemy is not unlimited.” Some commentators have referred to this Article as one of the most significant provisions in the regulations²⁴ in so far as a precautionary imperative can be implied from it in the absence of explicit provisions. This first provision should be read in light of the second – the Martens Clause – which is contained in the Preamble of the 1907 Hague Convention IV.

It should be noted that very little has been achieved so far in terms of enforcement of the Hague Law on means and methods of warfare, and that most judicial cases conducted to date have instead focused on violations of the Geneva Law protecting persons and civilian objects.

- **The Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (1925)**

The 1925 Protocol,²⁵ which builds on the generally accepted principles prohibiting the use of particularly inhumane weapons and cruel methods of warfare,²⁶ was adopted as a collective response to the horrors of the use of chemical weapons during the First World War.²⁷ In so far as the use of chemical and biological weapons may cause harm to the environment, the Protocol can be seen to provide some level of environmental protection during armed conflict.

The Protocol, however, suffers from major limitations. First, only the use of chemical and biological means of warfare is prohibited, excluding the research, development, stockpiling and possession of such weapons from control. Second, the Protocol lacks control mechanisms and provisions for establishing responsibility for violations, thereby limiting its ability to serve as a deterrent.

- **The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (BWC) (1972)**

The 1972 BWC²⁸ prohibits, without exception, the development, production, stockpiling or any other possession of microbial agents, toxins and weapons,²⁹ as well as equipment or means of delivery designed to use these agents or toxins for hostile purposes or in armed conflict.³⁰ No later than nine months after its entry into force, all Parties to the BWC undertook to destroy all such agents, weapons and equipment. However, States were only obliged to destroy biological agents above a certain threshold, under which stock levels were deemed to indicate non-peaceful purposes.³¹

The actual use of biological weapons is not prohibited by the BWC, as the drafters of the agreement took the stance that this aspect is regulated by the 1925 Protocol.³² The BWC does prohibit the transfer of biological agents to other States, groups of States, international organizations or “any recipient whatsoever.”³³ Furthermore, Parties are obligated to “facilitate” technical information for peaceful purposes and to cooperate in this respect. The BWC does not create a mechanism of verification, although it does allow complaints to be made to the Security Council.³⁴ This weakness, however, was mitigated to some extent after the Third Review Conference in 1991, which set up VEREX, an *ad hoc* body of governmental experts who were requested to examine potential verification measures from a scientific and technical standpoint.³⁵ In the case of a dispute arising regarding the application of the BWC, the State Parties have agreed to seek solutions through cooperation and negotiations.³⁶

The BWC also addresses a number of the limitations of the 1925 Protocol and creates a comprehensive regime to deal with biological and chemical weapons. By banning the use of these weapons, the BWC and the Protocol protect the environment in armed conflict from weapons that are likely to cause significant environmental degradation, particularly to the natural environment and to fauna and flora.

- **Convention on Certain Conventional Weapons (CCW) (1980)**

As noted above, the Preamble of the 1980 CCW and its Protocol III expressly mention environmental protection. Following a 2001 amendment, the CCW also applies to non-international armed conflict (NIAC).

In addition, Protocol II to the CCW attempts to limit the harmful effect of landmines by requesting States to take protective measures such as recording the location of targets in order to allow for later collection of the unexploded devices, and thereby facilitate substantial restoration to prior environmental conditions. Finally, Protocol V on Explosive Remnants of War, adopted in 2003, is the first international legal instrument dealing with the problem of unexploded and abandoned ordnance, and offers similar guidelines that can serve to indirectly protect the environment from post-conflict threats.

- **Chemical Weapons Convention (CWC) (1993)**

The CWC was adopted in January 1993 and entered into force on 29 April 1997. Its main purpose is to ban the use, development and production of chemical weapons, and it imposes a requirement on States to destroy existing chemical weapons and production facilities. The CWC has three principal objectives. First, it categorically prohibits any use of chemical weapons,³⁷ whether as “first use” or as a reprisal. State Parties must also refrain from engaging in military preparations for such use, including stockpiling.³⁸ Second, the CWC seeks to offer means to verify that State Parties do not initiate or resume chemical weapons production and storage. Situations of non-compliance are to be resolved through peaceful means, including cooperation and negotiations. Third, the CWC requires that existing chemical weapon stockpiles and production facilities be declared and destroyed, beginning within two years and completed not later than ten years after the CWC takes effect. In particularly serious cases, i.e. where a State Party’s actions threaten the objective and purpose of the CWC, collective measures may be undertaken. In such situations, the matter can also be referred to the UN General Assembly or Security Council. The Organization for the Prohibition of Chemical Weapons, an independent international body based in The Hague, monitors the implementation of the CWC by State Parties.³⁹

It is also notable that the CWC specifically prohibits destroying chemical weapons by “dumping in any body of water, land burial and open pit burning,”⁴⁰ thereby ensuring that the human and environmental costs of disposal are minimized.

As is the case for the Biological Weapons Convention, the CWC has an immediate bearing on the protection of the natural environment during armed conflict, as chemical substances may have particularly direct and severe impacts on the environment. In addition, the CWC has effective mechanisms in place that may provide a model for monitoring, verification and non-compliance mechanisms in other treaties.

- **Nuclear weapons**

Nuclear weapons are indiscriminate by nature and the damage they cause to human populations and the environment they live in is immense.

The use of nuclear weapons must be considered in reference to three treaties. The first is the 1963 Partial Test-Ban Treaty, which does not regulate the conduct of warfare as such, but instead prohibits States from undertaking any nuclear test or explosion “at any place under its jurisdiction or control.”⁴¹ Although this treaty is mainly concerned with nuclear testing and restricted to the atmosphere, outer space and the marine environment, it ensures that nuclear testing does not cause harm to the identified areas and, importantly for this report, to marine ecosystems.

The second treaty of interest is the 1968 Nuclear Non-Proliferation Treaty, which does not explicitly prohibit

the use of nuclear weapons in armed conflict *per se*, but does prohibit signatory States from “manufacturing or otherwise acquiring nuclear weapons or other nuclear explosive devices.”⁴² By seeking complete disarmament and non-proliferation, the treaty anticipated that the issue of the use of nuclear weapons would be rendered a moot point.

The third treaty, and the most significant, is the 1996 Comprehensive Nuclear-Test-Ban Treaty, which seeks to secure an end to all nuclear weapons testing and other forms of nuclear explosions. By prohibiting all nuclear explosions, the treaty constitutes a holistic measure of nuclear disarmament and non-proliferation and could, as noted in its Preamble, “contribute to the protection of the environment.” The Comprehensive Nuclear-Test-Ban Treaty has, however, yet to enter into force. Only 35 of the 44 Annex II States⁴³ that are required to ratify it to ensure that it enters into force have done so, and three of the nine countries yet to ratify it have not even become signatories. Nevertheless, a total of 150 UN Member States have ratified the treaty to date, emphasizing widespread worldwide support for banning nuclear explosions, which negatively impact human health and the environment.

It is also important in this respect to mention regional nuclear disarmament treaties. The 1967 Tlatelolco Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean is a key regional instrument ratified by all 33 States in Latin America and the Caribbean. The Treaty entered into force in 1969, and forbids the testing, use, possession, fabrication, production or acquisition by any means of all nuclear weapons in this region. Under the treaty, member States have over the years adopted resolutions addressing radioactive pollution and the environment.⁴⁴ Other regional instruments include the 1985 Treaty of Roratonga (establishing a nuclear free zone in the South Pacific), the 1995 Treaty of Bangkok for South-East Asia, the 1996 Treaty of Pelindaba for Africa, the 2006 Treaty of Semipalatinsk for Central Asia, and the 1959 Antarctic Treaty.

- **Landmines and cluster bombs**

Protocol II to the Convention on Certain Conventional Weapons (CCW) aims to limit the continuing danger of landmines, while Protocol V endeavours to tackle the problem of unexploded and abandoned ordnance. In addition, the 1997 Ottawa Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction prohibits the possession and use of anti-personnel mines. Under Article 5, each State Party is requested to ensure the destruction of all anti-personnel mines in the mined areas under its jurisdiction or control as soon as possible, but no later than ten years after the entry into force of the Convention for that State Party. However, if a Party is unable to ensure the destruction of all anti-personnel mines within that time period, it may submit

a request to a Meeting of the States Parties or a Review Conference for an extension of its deadline. Each request must contain, among other requirements, the “humanitarian, social, economic and environmental implications of the extension.”

In addition, Articles 51(4) and (5) of Additional Protocol I to the Geneva Conventions, which prohibit indiscriminate attacks, can be of particular relevance when encouraging States to refrain from using landmines in warfare, as such weapons are indiscriminate by nature and pose particularly injurious long-term risk to both humans and animals.

Cluster bombs also pose significant human and environmental risks, particularly as unexploded ordnance in the aftermath of conflict. The Convention on Cluster Munitions was adopted by 107 States in May 2008, and thereafter opened for signature. In Article 1, each State Party commits to never “under any circumstances” use, produce, transfer and stockpile cluster munitions. Environmental considerations are briefly referred to in Article 4(6)(h) concerning the clearance of cluster remnants. The treaty, however, is still opposed by nations that count among the main producers of cluster munitions.

In concluding this analysis of IHL treaty law addressing the means and methods of warfare, attention should be given to the absence of treaties explicitly banning or otherwise addressing the use of depleted uranium⁴⁵ munitions and other recently developed weapons. This being said, Article 36 of Additional Protocol I to the Geneva Conventions, which is binding on 168 States, requires them to ensure that any new weapon, or means or method of warfare, does not contravene existing rules of international law. IHL also prohibits weapons and means or methods of warfare that cause superfluous injury or unnecessary suffering, have indiscriminate effects, or cause widespread, long-term and severe damage to the natural environment.

Protection of civilian objects and property

The provisions that govern the protection of civilian objects and property could provide a more effective legal basis for protecting the environment during armed conflict than those protecting the environment *per se*, at least under existing IHL treaty law. Relevant provisions are as follows:

- **The Hague Regulations (1907)**

The Hague Regulations attached to the 1907 Hague Convention IV on the Laws and Customs of War on Land stipulate that it is forbidden “to destroy or seize the enemy’s property, unless such destruction or seizure be imperatively demanded by the necessities of war.” As noted earlier, this “enemy property” could include protected areas, environmental goods and natural resources, which would as such be indirectly protected by the Hague Regulations.



A UN Mine Action Group expert inspects a cluster bomb in the village of Ouazaiyeh in southern Lebanon

- **The Geneva Convention IV (1949)**

The Geneva Convention IV (1949) relates to the treatment of civilians and property during armed conflict and occupation, declaring non-combatants “protected persons” whose lives and livelihoods shall be kept safe. In a reiteration of the Hague Regulations rule on enemy property, Article 147 lists “extensive destruction and appropriation of property not justified by military necessity and carried out unlawfully and wantonly” among the acts constituting “grave breaches” of the Convention.

Furthermore, in the specific context of occupation, Article 53 states that “any destruction by the Occupying Power of real or personal property belonging individually or collectively to individuals, or to the State, or to other public authorities, or to social or cooperative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operations.”

As natural resources are generally considered civilian property, belonging collectively to private persons, their destruction could be considered to violate Articles 147 and 53 of the Geneva Convention IV, if not justified by imperative military necessity.

- **Additional Protocol I to the 1949 Geneva Conventions (1977)**

The “basic rule” for the protection of civilian objects against the effects of hostilities is enunciated under Article 48 of Additional Protocol I to the Geneva Conventions. Article 48 provides indirect protection for the environment by stating that “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.” This basic rule is an explicit affirmation of the general principle of distinction. This principle is re-emphasized within the rule contained in Article 52, which explains what constitutes a military objective as opposed to a civilian object.

Article 54(2) of Additional Protocol I also indirectly protects the environment by prohibiting attacks against “objects indispensable to the survival of the civilian population,” meaning objects that are of basic importance to the population’s livelihood.⁴⁶ Natural resources such as agricultural land, cattle, and drinking water could in many instances be seen as such means

of survival. This provision is generally considered to reflect customary international law as its violation would constitute a grave breach of IHL if it amounted to any of the acts enumerated within Article 147 of Geneva Convention IV. In addition, Article 54(3)(b) applies even when farmlands and foodstuffs are used in direct support of military action, if their destruction were to cause starvation or forced relocation of the civilian population. The effect of this provision is also to exclude, except in defence of a State's own territory, recourse to scorched-earth policies that cause severe environmental destruction.

Finally, the precautionary measures contained within Article 57, which also recall the proportionality principle, add protection for the environment by discouraging acts that could possibly impact the environment.

- **Additional Protocol II to the 1949 Geneva Conventions (1977)**

Additional Protocol II specifically addresses issues of protection during non-international armed conflict (NIAC). This Protocol is significantly less substantive than Additional Protocol I, not least because it does not contain the basic rule that strongly articulates the principle of distinction enunciated in Article 48 of Additional Protocol I. The provisions that indirectly address environmental protection are Article 14 on civilian objects, Article 15 on installations containing dangerous forces and Article 16 on cultural objects and places of worship. Article 14 prohibits attacks on objects indispensable to civilian populations, including foodstuffs, agricultural land, crops, livestock, drinking water installations and irrigation works. It thus replicates for internal conflicts the protection provided by Article 54 of Protocol I applicable to international armed conflict (IAC). Articles 15 and 16 are discussed in more detail below.

Protection of cultural objects

- **The Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict and its two Protocols (1954 and 1999)**

Protection for environmental resources may be provided, under certain circumstances, by the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict and its 1954 and 1999 Protocols, to the extent that such resources fall within the definition of cultural property under Article 1 of the Hague Convention. This convention additionally prohibits the use of cultural property for any military purpose that is likely to expose it to destruction or damage in the event of armed conflict, and forbids directing any act of hostility against such property. It must be noted, however, that the convention contains a waiver for imperative military necessity.⁴⁷

The 1999 Second Protocol introduces a new system of "enhanced protection" by clarifying the precautionary measures to be taken, by better defining serious violations that require punishment by criminal sanctions, and

by requiring States to establish their jurisdiction over those violations. This provision could be of particular relevance to the current 176 natural sites on the United Nations Education, Scientific and Cultural Organization (UNESCO) World Heritage List (especially the 15 categorized as "in danger"⁴⁸) and to the sites that will be registered under the UNESCO 2003 Convention for the Safeguarding of Intangible Cultural Heritage, provided that they fall within the definition of cultural property under Article 1 of the Hague Convention. In addition, the Second Protocol extends the Hague Convention's protection to NIAC.⁴⁹

Moreover, the Second Protocol also contains some innovative provisions that could serve to protect environmental resources, including the requirement for early warning systems, a clarification of the principle of necessity in relation to cultural objects, and the establishment of individual criminal responsibility. These provisions highlight the potential capacity of the Second Protocol to protect natural resources during armed conflict to the extent that such resources fall within the definition of cultural property under Article 1 of the 1954 Hague Convention.

- **Additional Protocols I and II to the 1949 Geneva Conventions (1977)**

The protection of cultural property is reinforced by provisions contained in the two 1977 Additional Protocols to the 1949 Geneva Conventions, namely Articles 38, 53 and 85 of Additional Protocol I and Article 16 of Additional Protocol II. Though they do not mention the environment *per se*, these provisions could be useful in providing legal protection for the natural environment during armed conflict.

Protection of industrial installations containing dangerous forces

- **Additional Protocol I to the 1949 Geneva Conventions, Article 56**

Article 56 prohibits attacks against works and installations containing dangerous forces, such as dams, dykes and nuclear electrical generating stations. Oil fields and petrochemical plants are not explicitly addressed here⁵⁰ (and may even have been intentionally excluded). As a result, the provision does not cover the attacks on oil fields and petrochemical facilities that occurred, for instance, during the 1990-1991 Gulf War, the 1999 Kosovo conflict, or the 2006 Israel-Lebanon conflict. It should be noted, however, that oil fields and petrochemical plants can be protected by the general principle of distinction comprised within the *chapeau* rule under Article 52.

As is the case under Article 54(2), the prohibition set forth in Article 56 applies even when the target (dams, dykes and nuclear electrical generating stations) constitutes a military objective,⁵¹ except in the restricted cases referred to under Paragraph 2.



About 73,000 tons of crude oil and oil products are reported to have burned or leaked into wastewater collection canals or into the ground from the bombing of the oil refinery at Novi Sad, in Serbia

- **Additional Protocol II to the 1949 Geneva Conventions, Article 15**

Article 15 of Additional Protocol II extends the protections contained in Article 56 of Protocol I to non-international armed conflicts, thereby protecting dams, dykes and nuclear electrical generating stations from being targeted in these conflicts as well.

Limitations based on targeted areas

- **Territories under occupation**

Regulations for occupied territories were first established in the Hague 1899/1907 Regulations. Certain aspects were then further developed by the Geneva Convention IV.

Article 55 of the 1907 Hague Convention IV sets forth the rules of *usufruct* for the occupying power. It clarifies that the occupying power has the right to “use” the occupied property, but not the right to damage or destroy it, except in the circumstances of military necessity. Similarly, Article 53 of the 1949 Geneva Convention IV prohibits destruction by the occupying power of property individually or collectively owned by inhabitants of the occupied territories, except in the circumstances of absolute military necessity.

The special status of occupation and the regulations attached to it, such as those provisions qualifying the occupants as “usufructuary,” may offer some guiding principles for dealing with similar situations in the context of non-international armed conflict (NIAC). The over-extraction and depletion of valuable natural resources

has become an all too common feature of NIACs, with revenue generated from this often illegal exploitation serving to finance armed forces and their weaponry. Recent research shows that over the last twenty years, at least eighteen civil wars have been fuelled by natural resources such as diamonds, timber, minerals and cocoa, which have been exploited by armed groups in Liberia, Angola and the Democratic Republic of Congo, for example.⁵²

- **Neutral territories**

The law of neutrality has a customary basis, but it was to a large extent codified in the 1907 Hague Conventions V and XIII. More recent treaties have not added to this codification, other than a few details. The central requirement of the law of neutrality is the duty of abstention and impartiality and the fact that, as a matter of principle, the relations between belligerents and neutrals are determined by the law applicable in times of peace. Thus, the occurrence of an international armed conflict does not relieve belligerents from honouring their peacetime duties with respect to neutral States.⁵³

With respect to the environment, this customary principle is articulated in the ICRC *Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict*,⁵⁴ where it is stipulated that “obligations relating to the protection of the environment towards States not party to an armed conflict are not affected by the existence of the armed conflict to the extent that they are not inconsistent with the applicable law of armed conflict.”

- **Demilitarized zones**

Formally identified “neutralized” or “demilitarized” zones between belligerents are also subject to dedicated protection under Article 15 of the Geneva Convention IV and Article 60 of Additional Protocol I.⁵⁵ Violation of this obligation constitutes a grave breach of IHL if it is carried out under the circumstances set forth in the *chapeau* requirements under Article 85 of Protocol I.

A few other areas are specifically protected from warfare and its impacts, including Antarctica – by the 1959 Antarctic Treaty – and outer space – by the 1967 Outer Space Treaty.

It thus follows that one option to enhance the protection of particularly valuable protected areas or dangerous environmental hotspots would be to formally classify them as “demilitarized zones.” To this end, IUCN has strongly advocated for the adoption of a Draft Convention on the Prohibition of Hostile Military Activities in Protected Areas,⁵⁶ which was developed following the 1990-1991 Gulf War, in response to intensifying concerns about environmental and ecosystem damages during armed conflict.⁵⁷ The Draft Convention would require the UN Security Council to designate protected areas that would be marked “non-target” or demilitarized areas during conflicts, while the listing process would set up the criteria to demarcate an “international protected area.” To date, however, the Draft Convention has not been supported by the UN Security Council, nor has it received the international diplomatic support needed for its adoption.⁵⁸

2.3 Customary international humanitarian law

As elements of customary international humanitarian law, the four principles of distinction, military necessity, proportionality and humanity discussed above complement and underpin the various international humanitarian instruments and apply to all States, except to those that persistently object to them.⁵⁹ Thus, actions resulting in environmental destruction – especially where they do not serve a clear and imperative military purpose – and the use of “inhumane” weapons (such as landmines or cluster bombs) could be considered questionable, even without specific rules of war addressing environmental issues in detail (per the Martens Clause⁶⁰).

Beyond these general principles are the grave breaches of IHL as defined in the 1949 Geneva Conventions and their Additional Protocol I, which enjoy a particularly high level of protection and form the core of IHL customary law. These grave breaches do not include causing “widespread, long-term and severe damage to the environment,”⁶¹ but do include the “extensive destruction of property, not justified by military necessity and carried out unlawfully and wantonly,”⁶² the “launching of an indiscriminate attack affecting civilian objects in the knowledge that such attack will cause excessive damage to civilian objects,”⁶³ and attacks against works and installations containing dangerous forces.⁶⁴

Though the definition of grave breaches pertains primarily to treaty law and refers to IAC, the Rome Statute, which established the International Criminal Court (ICC), demonstrates that there are corresponding rules for NIAC in customary law.⁶⁵ As these rules originate in the general practice of States accepted as law, they are binding on all States.

Although the 1949 Geneva Conventions have been universally ratified and many of their provisions are considered to constitute an integral part of customary IHL, the situation is a bit more nuanced for Additional Protocols I and II. Indeed, a significant number of States are not Parties to the Additional Protocols, with the result that Additional Protocols have not been formally applicable in many recent international conflicts (including the 1990-1991 Gulf War). While uncertainty remains with regard to which provisions of Additional Protocol I represent customary international law, several States have recognized that many provisions do indeed reflect customary law.

The ICRC 2005 multi-volume explanation of customary IHL discusses 161 “rules” that the authors consider to represent customary international humanitarian law. Three of these rules relate particularly to natural resources, and specify the implications of the general principles of IHL for environmental protection during armed conflicts. These are:

Rule 43. 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.
- 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 (applicable in IAC and NIAC).

Rule 44. 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 (applicable in IAC and arguably in NIAC).

Rule 45. The use of methods or means of warfare that are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment is prohibited. Destruction of the natural environment may not be used as a weapon (applicable in IAC and arguably in NIAC).⁶⁶

The ICRC rules offer an articulation of the principles of distinction, proportionality and military necessity in relation to the natural environment, and emphasize the importance

of taking a precautionary approach in the absence of scientific certainty about the likely effects of a particular weapon on the environment. In addition, the rules expressly prohibit the use of means of warfare that are intended or can be expected to cause significant damage to the environment, requiring Member States to consider the likely environmental repercussions of their military methods.

The difference in applicability of these rules in IAC versus NIAC remains to a large extent open to interpretation. Due to the differences of scholarly opinion, some experts have noted that codifying the existing customary law on this topic could clarify some of the outstanding questions and, in the process, create more definite measures to protect the environment in armed conflict.

2.4 Soft law related to the corpus of international humanitarian law

The sources of so-called soft law related to the corpus of IHL constitute a large body of policy tools that have significantly contributed to framing international law in relation to environment and armed conflict. Some open new avenues for stronger implementation and enforcement of existing law on the protection of the environment and natural resources during armed conflict, for example by suggesting new means of enforcement, such as mandating peacekeeping missions to address natural resource issues.

UNGA Resolution 47/37 (9 February 1993)

In its Resolution 47/37 of 9 February 1993, the UN General Assembly stated in the Preamble that “destruction of the environment, not justified by military necessity and carried out wantonly is clearly contrary to existing international law.” The resolution then expressed concern that the relevant provisions of international law on the matter “may not be widely disseminated and applied.” Accordingly, the resolution “urges States to take all measures to ensure compliance with the existing international law” on this issue, including by “becoming Parties to the relevant international conventions” and “incorporating these provisions of international law into their military manuals.” The resolution did not, however, identify specific gaps in the existing international legal framework, and consequently did not recommend developing or strengthening particular measures.

UNGA Resolution 49/50 (17 February 1995)

In 1994, the ICRC submitted a proposal to the UN General Assembly in the form of *Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict*.⁶⁷ At its 49th Session, the General Assembly, without formally approving them, invited all States to disseminate the guidelines widely and to “give due consideration to the possibility of incorporating them” into their national military manuals. These guidelines have also been published as an annex to the Secretary-General Report A/49/323 *United Nations decade of international law* (1994).

UNGA resolutions considering nuclear disarmament

Through the forum of the UN General Assembly, the international community has made considerable efforts to frame processes of nuclear disarmament and regulate nuclear testing. While most of these instruments⁶⁸ do not specifically address environmental damage, their provisions are implicit in terms of conflict damage to a State’s territory. Among the most significant UNGA decisions on these matters are resolutions adopted on the *Final Document of the General Assembly Special Session “S-10/2”*⁶⁹ of 1978 and A/RES/50/70(M) of 1995.⁷⁰

In the Resolution on the *Final Document of the Tenth Special Session of the General Assembly S-10/2*, the General Assembly stated: “In order to promote the peaceful use of and to avoid an arms race on the seabed and the ocean floor and the subsoil thereof, the Committee on Disarmament is requested (...) to proceed promptly with the consideration of the further measures in the field of disarmament for the prevention of an arms race in that environment.”

Resolution A/RES/50/7(M) *Observance of environmental norms in the drafting and implementation of agreements on disarmament and arms control*, which was adopted in 1995, directly addresses armed conflict and environmental degradation and is one of eighteen resolutions under an omnibus resolution dealing with general and complete disarmament. Resolution A/RES/50/7(M) specifically recognizes the importance of considering environmental safeguards in treaties and agreements regarding disarmament, and further highlights the detrimental environmental effects of the use of nuclear weapons, as well as “the positive potential implications for the environment of a future comprehensive nuclear-test-ban treaty.” Together with other efforts, the work of the General Assembly on nuclear disarmament culminated in the adoption, in September 1996, of the Comprehensive Nuclear-Test-ban Treaty described above.

UNGA resolutions concerning regional efforts

In addition to the resolutions concerning nuclear disarmament, it is worthwhile to note the designation of several nuclear-free zones around the world.

In Resolution 2832 (XXVI) *Declaration of the Indian Ocean as a zone of peace*, the General Assembly declared that “the Indian Ocean, within limits to be determined, together with the air space above and the ocean floor subjacent thereto, is hereby designated for all time as a zone of peace.” The resolution thereafter called on the great powers to eliminate all bases, military installations and logistical supply facilities from the Indian Ocean, and to ensure the disposition of all nuclear weapons and weapons of mass destruction.

Similarly, in its 1963 Resolution 1911 (XVIII) *Denuclearization of Latin America*, the General Assembly encouraged the adoption of a treaty to make the region a nuclear-free zone. The resolution led to the 1967 Tlatelolco Treaty mentioned in the treaty law section above.



Depleted uranium penetrators can completely corrode in the soil over 25-35 years, potentially contaminating groundwater

UNGA resolutions addressing depleted uranium-related issues

Guided by the purposes and principles enshrined in the Charter of the United Nations and the rules of IHL, the General Assembly has started addressing the issue of depleted uranium. Since 2007, it has adopted two resolutions aimed at assessing both the human and environmental impacts of depleted uranium armaments. UNGA Resolutions 62/30 of December 2007 and 63/54 of January 2009 request the Secretary-General to produce reports on the issue.

UNGA Resolution 63/54 clearly acknowledges the importance of protecting the environment and reads, in part, that because “humankind is more aware of the need to take immediate measures to protect the environment, any event that could jeopardize such efforts requires urgent attention to implement the required measures.” The resolution also recognizes “the potential harmful effects of the use of armaments and ammunitions containing depleted uranium on human health and the environment.”

These two resolutions could eventually lead to the codification in treaty law of norms protecting both human health and the environment from depleted uranium armaments, thus addressing the current major gap in treaty law regarding the use of such weapons.

UNGA Resolution 63/211 (19 December 2008)

Among the recent objects under consideration by the General Assembly in relation to armed conflict and the environment was Resolution 63/211 on the oil slick on Lebanese shores caused by the bombing of the El-Jiyeh power plant during the 2006 war. The resolution emphasizes “the need to protect and preserve the marine environment in accordance with international law.”⁷¹

Statement of the President of the Security Council (25 June 2007)

In a statement dated 25 June 2007,⁷² the President of the UN Security Council recognized “the role that natural resources can play in armed conflict and post-conflict situations.” He noted that “in specific armed conflict situations, the exploitation, trafficking and illicit trade of natural resources have played a role in areas where they have contributed to the outbreak, escalation or continuation of armed conflict.” The statement then recalled that the Security Council had previously taken measures and sanctions to condemn these practices and to encourage a more transparent and lawful system for the management of natural resources (diamonds and timber in particular).

Furthermore, the President of the Security Council appreciated that “UN missions and peacekeeping operations deployed in resource-endowed countries experiencing armed conflict could play a role in helping the governments concerned, with full respect of their sovereignty over their natural resources, to prevent the illegal exploitation of those resources from further fuelling the conflict.” The statement underlined “the importance of taking this dimension of conflict into account, where appropriate, in the mandates of UN and regional peacekeeping operations, within their capabilities, including by making provisions for assisting governments, upon their request, in preventing the illegal exploitation of natural resources by the parties to the conflict, in particular, where appropriate, by developing adequate observation and policing capacities to that end.” This acknowledgement of the role of natural resources in fuelling conflicts, and of the potential implication of peacekeepers in mitigating this threat is an important indication of the increasing awareness of the complex and important linkages between the environment and armed conflict at the international policy level.⁷³

UNSC Resolution 1856 on the Situation concerning the Democratic Republic of the Congo (22 December 2008)

In Resolution 1856, the UN Security Council strongly and explicitly recognized “the link between the illegal exploitation of natural resources, the illicit trade in such resources and the proliferation and trafficking of arms as one of the major factors fuelling and exacerbating conflicts in the Great Lakes region of Africa, and in particular in the Democratic Republic of Congo.” Consequently, the Council decided that MONUC⁷⁴ should have the mandate to “use its monitoring and inspection capacities to curtail the provision of support to illegal armed groups derived from illicit trade in natural resources.” It also urged States in the region to “establish a plan for an effective and transparent control over the exploitation of natural resources.”

This resolution appears to open a new avenue for stronger implementation and enforcement of existing law on the protection of the environment and natural resources during armed conflict. By suggesting new means of enforcement, it implicitly recognizes the weakness of



Smoke rises from the fuel tanks at Jiyeh power plant on 16 July 2006. An estimated 12,000 to 15,000 tons of burning fuel oil were released into the Mediterranean Sea

existing enforcement mechanisms and the relevance of mandating peacekeeping missions, whose primary objective is the preservation of peace and security, to address natural resource issues.

UNSC Resolution 1509 (15 September 2003)

When establishing the UN Mission in Liberia, the Security Council mandated it “to assist the transitional government in restoring proper administration of natural resources.” This created an interesting precedent for UNSC Resolution 1856 above.

The San Remo Manual (1994) and UNGA Resolution 2749

The San Remo Manual, which codifies the law of naval warfare and includes provisions for environmental protection in warfare, constitutes an instrument of soft law in relation to the marine environment. Relevant provisions include:

Paragraph 11: The Parties to the conflict are encouraged to agree that no hostile actions will be conducted in marine areas containing rare or fragile ecosystems or the habitat of depleted, threatened or endangered species or other forms of marine life.

Paragraph 44: Methods and means of warfare should be employed with due regard for the natural environment taking into account the relevant rules of international law. Damage to or destruction of the natural environment not justified by military necessity and carried out wantonly is prohibited.

Paragraph 47(h): Vessels designated or adapted exclusively for responding to pollution incidents in the marine environment are exempt from attack.

UNGA Resolution 2749 (XXV) *Declaration of principles governing the sea-bed and the ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction of 1970* is also relevant to the marine environment, in so far as it recognizes the legal existence of the seabed and ocean floor beyond any national jurisdiction and expresses the conviction that these areas can be preserved exclusively for peaceful purposes. In addition, it emphasizes that the exploration of these areas and their resources shall be carried out for the benefit of mankind as a whole.

The General Assembly and Security Council decisions highlighted above provide a strong foundation for the further development of appropriate treaties and conventions. The codification of this body of soft law would certainly facilitate enforcement and compliance with the norms that they enshrine. Forums such as the General Assembly Sixth Committee, the International Law Commission, the Disarmament Commission, the UN Peacebuilding Commission and the UNEP Governing Council could all provide opportunities for debate by the international community on these issues.

2.5 Case law

Generally speaking, cases addressing the responsibility and liability of States for violations of international humanitarian law (IHL) have been extremely rare. Similarly, there have

been very few interpretations by authoritative judicial bodies of international humanitarian law and international criminal law norms relating to environmental protection.

However, several international cases provide relevant guidance and clarification in relation to the protection of the environment during armed conflict. Indeed, judicial decisions are helpful for treaty interpretation and as evidence of customary law. In addition, case law reveals a number of practical gaps in the existing international legal framework governing environmental protection during armed conflict.

Case law of the International Court of Justice (ICJ)

The International Court of Justice’s decisions are binding only on the parties to the dispute. However, in so far as they constitute persuasive evidence of international norms, they are also relevant for non-parties. Significant ICJ decisions for environmental protection during armed conflict include:

ICJ Decision Nicaragua v. United States (1986) on the customary nature of UN resolutions

In its judgement in the case of *Nicaragua v. United States*,⁷⁵ the ICJ based part of its decision on the Parties’ adherence to a UN resolution and stated that its opinion was based on customary international law. Commentary on this decision suggests that the conclusion of this reasoning is that UN resolutions may, if they enjoy sufficiently wide acceptance, constitute customary international law.⁷⁶ If these so-called soft law documents are indeed considered customary international law, it ensues that their provisions become binding on all States.

ICJ Decision on New Zealand v. France (1995) on nuclear testing

In 1995, Australia and New Zealand requested examination by the ICJ of a situation relating to the legality of nuclear testing by France in the Pacific Ocean.⁷⁷ Before ultimately dismissing the case as moot due to France’s voluntary cessation of its activities, the Court issued interim relief. It is possible that the granting of interim relief was based on recognition of the plaintiffs’ right to environmental protection. Scholarship has suggested, however, that the best interpretation of the granting of interim relief is that it “was merely standard injunctive relief designed to foreclose the possibility of irreparable harm.”⁷⁸

ICJ Advisory Opinion on Nuclear Weapons (1996)

Initiated from a request emanating from the UN General Assembly, the ICJ 1996 *Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons* highlighted the uncertainties in applying international law – especially IHL – to nuclear weapons, which can profoundly affect human health, society and the environment. First, the court recognized “[t]hat the general obligation of States to ensure that activities within their jurisdiction or control respect the environment of other States or of areas beyond national



Smoke plumes rise above food crops from the bombing of the Pancevo industrial complex in April 1999

control is now part of the corpus of international law relating to the environment.⁷⁹ This principle, known as the Trail Smelter Principle, was also reiterated in the 1972 Stockholm Declaration and 1992 Rio Declaration (see Chapter 4 for a detailed discussion). The ICJ acknowledged that the principle now constitutes customary international law. Second, the Court instructed States to account for environmental considerations when determining what constituted necessary and proportionate levels of military action.⁸⁰ Third, the Court concluded that the threat or use of nuclear weapons “would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law,”⁸¹ as such weapons were considered to be indiscriminate and non-proportional in application. Finally, the ICJ handed down a *non-liquet*⁸² on the question of the use of the nuclear weapon in self-defence (put forward by the United Kingdom), due to gaps in the law.

Thus, the decision in the Nuclear Weapons Case suggests a framework for the application of International Environmental Law during armed conflict. At a minimum, the Trail Smelter Principle should apply as customary international law, and States should ensure that actions in areas where they have control do not prejudice the environment of other States or of areas outside their control. The maximum limit, however, is much less certain, as in this regard the gaps in the law seem to prevent a decision on the question of the use of weapons of mass destruction in extreme scenarios of self-defence.

ICJ Decision on Yugoslavia v. NATO (1999)

On 29 April 1999, the Federal Republic of Yugoslavia filed complaints before the ICJ against the ten countries involved in the North Atlantic Treaty Organization (NATO) bombing campaign that same year.⁸³ In its application, the Federal Republic of Yugoslavia contended that the States, *inter alia*, had: (i) by taking part in the bombing of oil refineries and chemical plants, acted in breach of the IHL obligation not to cause considerable environmental damage; and (ii) by taking part in the use of weapons containing depleted uranium, acted in breach of the obligation not to use prohibited weapons and not to cause far-reaching health and environmental damage.⁸⁴

The ICJ handed down its admissibility decision on 2 June 1999, whereby it dismissed the cases filed against Spain and the United States, as those States do not recognize the compulsory jurisdiction of the Court. In the other eight cases, the ICJ found that it lacked *prima facie* jurisdiction, as the applicant (Serbia and Montenegro) “had no access to the Court,” and that, therefore, it could not indicate provisional measures as requested by the Federal Republic of Yugoslavia. However, the ICJ added that it remained seized of those cases and stressed that its findings, at that stage, “in no way prejudged the question of the jurisdiction of the Court to deal with the merits” of the cases and left “unaffected the rights of the Government of Yugoslavia (and of the respondent States) to submit arguments regarding those questions.”⁸⁵

This articulation on the *ratione materiae* competence of the ICJ in this case suggests that the Court views cases related to environmental degradation in armed conflicts to be within its purview. As such, the decision indicates that the ICJ could be an appropriate forum for litigating such issues, noting that it only hears cases concerning State responsibility or those related to international organizations, and it does not have competence for individual criminal prosecution.

ICJ Decision on Armed Activities on the Territory of the Congo (DRC v. Uganda) (2005)

In this case, the ICJ found that the Republic of Uganda had failed to comply with its obligations as an occupying Power in Ituri district to prevent acts of looting, plundering and exploitation of Congolese natural resources, and therefore had violated its obligations of vigilance under international law (particularly stated in Article 43 of the Hague Regulations of 1907), which resulted in a duty of reparation. This case therefore recognized that acts of looting, plundering and exploitation by occupying powers are illegal, that there exists a State duty of vigilance for preventing such acts from occurring, and that reparations are due for damage to natural resources in the context of an armed conflict.

Decisions of international tribunals and the United Nations Compensation Commission (UNCC)

Case law from international criminal tribunals, such as the International Criminal Tribunal for the former Yugoslavia (ICTY), can also be instructive in assessing the status of the existing international legal framework and identifying gaps in the protection of the environment during armed conflict. In addition, the work of the United Nations Compensation Commission (UNCC) relating to environmental degradation during the 1990-1991 Gulf War provides an important baseline for future judicial, quasi-judicial and administrative forums tasked with similar responsibilities.

ICTY Decision on Yugoslavia v. NATO (1999)

In addition to filing suit before the International Court of Justice (ICJ), Yugoslavia brought the issue of environmental damage during the 1999 Kosovo conflict before the International Criminal Tribunal for the former Yugoslavia (ICTY), which examined its claims against NATO forces. Although the prosecutor ultimately found no basis for opening a criminal investigation into any aspects of the NATO air campaign, the ICTY did examine the question of responsibility for environmental damage and use of depleted uranium from an environmental perspective, thereby establishing a precedent that merits attention.

The report of the Special Committee established to study the case stated that “the NATO bombing campaign did cause some damage to the environment,”⁸⁶ mentioning the bombings of chemical plants and oil installations. Second, it observed that Article 55 of Additional Protocol I “may reflect current customary law”⁸⁷ and, therefore,

may be applicable to non-Parties to the Protocol (such as France⁸⁸ and the United States). With regard to the substance of the legal provisions contained in this Protocol, the committee held that: “Articles 35(3) and 55 have a very high threshold of application. Their conditions for application are extremely stringent and their scope and contents imprecise. Consequently, it would appear extremely difficult to develop a *prima facie* case upon the basis of these provisions, even assuming they were applicable.”⁸⁹ The Special Committee report maintained that the NATO air campaign did not reach the threshold of Additional Protocol I.⁹⁰

The report then analysed the question of environmental damage in light of the customary principles of military necessity and proportionality, stating that: “[E]ven 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.”⁹¹

With respect to the principle of proportionality, the report stressed that the importance of the target must be assessed and weighed against the incidental damage expected; the more important the target, the greater the degree of risk to the environment that may be justified.⁹² After analysing Article 8(2)(b)(iv) of the ICC Rome Statute, the report stated that: “In 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. At a minimum, actions resulting in massive environmental destruction, especially when they do not serve a clear and important military purpose, would be questionable. The targeting by NATO of Serbian petrochemical industries may well have served a clear and important military purpose.”⁹³

After dwelling upon the imprecise nature of the notion of “excessive” environmental destruction and the fact that the present and long-term environmental impact of NATO actions was “unknown and difficult to measure,” the report set forth a detailed list of points that it considered necessary to clarify in order to evaluate claims of intentional excessive environmental damage: “It would be necessary to know the extent of the knowledge possessed by NATO as to the nature of Serbian military-industrial targets (and thus the likelihood of environmental damage flowing from their destruction), the extent to which NATO could reasonably have anticipated such environmental damage (for instance, could NATO have reasonably expected that toxic chemicals of the sort allegedly released into the environment by the bombing campaign would be stored alongside that military target?), and whether NATO could reasonably have resorted to other (and

less environmentally damaging) methods for achieving its military objective of disabling the Serbian military-industrial infrastructure."⁹⁴

On the basis of these considerations, the report concluded that an investigation into the collateral environmental damage caused by the NATO bombing campaign should not be initiated.⁹⁵ Concerning the use of depleted uranium projectiles by NATO aircraft, the report observed that there is currently no specific treaty banning the use of such projectiles, but that principles such as proportionality are also applicable in this context. Referring to the information available regarding environmental damage from depleted uranium, the report recommended that the Office of the prosecutor should not commence investigations into the use of depleted uranium projectiles by NATO.⁹⁶

Based on the findings of the Special Committee, the ICTY prosecutor highlighted the insufficient development and clarity, as well as the inapplicability of existing international norms for protecting the environment during armed conflict. This decision was therefore not based on an assessment of the merits of the case, and as such did not assign liability to any Party; it simply acknowledged that the available evidence and the status of existing international law did not allow judgement on the merits.

This case thus set an important case law precedent, while also highlighting the limitations of the current international legal framework for prosecuting environmental damages resulting from armed conflict. The assertion that such tribunals have the appropriate authority and competence to investigate this type of situation should be considered an important outcome in itself.

ICTY Tadic Case (1994)

In the *Tadic Case*, the ICTY held that international humanitarian law on the means and methods of warfare was a part of customary law and therefore also applied to non-international armed conflicts (NIAC). In particular, the ICTY focused on the rules regulating the use of chemical weapons and argued that the violations of these norms of customary law in the *Tadic Case* entailed individual criminal responsibility.⁹⁷ This ruling created an important precedent that can support the application to NIAC of treaty law focused primarily on IAC, to the extent that the provisions can be considered to be part of customary international law.

The United Nations Compensation Commission (UNCC)

The decisions taken by the UNCC, which was established for adjudicating claims of compensation related to the 1990-1991 Gulf War, are also significant for interpreting and applying international law to protect the environment during armed conflict.

During the war, the extensive environmental damage caused by Iraq was widely condemned by the international

community. In addition, the damage caused outside the territory of Iraq was declared to have violated Article 23(g) of the Hague Regulations regarding the destruction of enemy property. As a result, UNSC Resolution 687 stated in Paragraph 16 that "Iraq is liable under international law for any [...] damage, including environmental damage and the depletion of natural resources [...] as a result of Iraq's unlawful invasion and occupation of Kuwait."⁹⁸ Paragraph 18 of the Resolution created a fund to provide compensation for claims that came under Paragraph 16, and established the UNCC to administer it.

Under the International Law of State Responsibility, a State is required to make reparations (which may include compensation, restitution or satisfaction) for damage caused by a wrongful act.⁹⁹ In the case of the UNCC, the UN Security Council premised liability for environmental damage on Iraq's use of aggressive force (in violation of Article 2(4) of the UN Charter), and not specifically as a violation of international humanitarian or environmental law.

With the Security Council establishing the illegality of Iraq's invasion and occupation of Kuwait, the UNCC presumed Iraq's liability for all damages (including those resulting from the Allies response) and thus focused exclusively on assessing, valuing and providing compensation for these damages. As such, the UNCC differed from most other international tribunals, which are also tasked with determining the fact of liability. The context of the UNCC was also different in that the economic situation of the defendant made it practical to provide compensation for the damage.

The claims relating to environmental damage and depletion of natural resources fell into two broad groups under Category F4:¹⁰⁰

- Claims for environmental damage and the depletion of natural resources in the Persian Gulf region, including those resulting from oil-well fires and the discharge of oil into the sea; and
- Claims for costs incurred by governments outside of the region in providing assistance to countries that were directly affected by the environmental damage. This assistance included the alleviation of the damage caused by the oil-well fires, the prevention and clean-up of pollution, and the provision of manpower and supplies.

Of the 168 claims brought within the F4 category, which totalled nearly USD 85 billion, 109 were awarded compensation, for a total of USD 5.3 billion.

Even though the UNCC is a fact-finding organ rather than a judicial body,¹⁰¹ the specific methodologies and standards that the UNCC adopted in analysing, assessing, valuing and deciding whether to award compensation for environmental harm during armed conflict provide a baseline for future judicial, quasi-judicial and administrative forums tasked with similar responsibilities. In particular, the UNCC F4 Panel

decided that “the general rule is to restore what has been damaged to integrity or, if this is not possible, to provide an equivalent for it.”¹⁰² The UNCC also made awards for environmental monitoring and assessment costs amounting to USD 243 million. This decision recognized the need for sound scientific data to inform the substantive claim review and acknowledged the precautionary need to identify potential risks to inform necessary future action especially for human health.

One way to strengthen the international legal framework governing environmental protection during armed conflict would be to broaden the principles and approach taken by UNSC Resolution 687 creating the UNCC, by establishing a permanent body in charge of evaluating and possibly compensating for wartime environmental damage. Such an approach would be more effective and legally sound if it were grounded in the clear legal basis that environmental damages are illegal *per se*, and directly breed State or criminal liability.

2.6 Conclusions on international humanitarian law

The provisions of IHL governing environmental protection during armed conflicts constitute a disparate body of treaty law, customary law, soft law and general principles that have developed over decades to respond to a wide range of practical problems and moral concerns. A number of significant gaps and difficulties remain to be reconciled if the protection of the environment is to be enhanced within the IHL framework.

First, while most recent and ongoing conflicts are internal, the body of IHL treaty and customary law governing non-international armed conflict (NIAC) is relatively limited. There is no treaty norm that explicitly addresses the issue of environmental damage during NIAC, and obligations applicable in this context are generally far less restrictive than for international armed conflicts (IAC). The principle treaty law regulations for NIAC are contained within Common Article 3 to the four Geneva Conventions and Additional Protocol II. Common Article 3 merely restates basic protections for persons *hors de combat*, and is of little direct relevance to environmental protection, while Protocol II does not provide detailed limitations regarding methods and means of warfare. In addition, as noted by one expert, “instances of Protocol II’s application have been rare,”¹⁰³ mainly due to the fact that few States ratified it before the late 1980s or 1990s. Protocol II could not, therefore, be applied as a source of treaty law in the many internal conflicts that occurred during that period, including in Angola, Haiti, Somalia and Sri Lanka.¹⁰⁴ General principles of IHL and customary law may be of assistance in filling this gap of applicable law to internal conflicts.

That being said, the ICJ and ICTY case law suggests that to the extent that a provision of law can be said to have assumed the status of customary international law, it is applicable equally to IAC and NIAC. Indeed, in the *Tadic Case*, the ICTY held that IHL governing the use of chemical weapons had entered customary international law and the violation of these rules entailed criminal liability, even in the case of NIAC. Unfortunately, the case law of international bodies on these IHL issues is not comprehensive. It is subsequently unclear which provisions of IHL protecting the environment (directly or indirectly) have entered into customary law and may, therefore, be applicable to NIAC.

Second, many rules contained within treaties are not universally applicable to all States (particularly to those States that are not a Party to them) unless they have entered the corpus of customary international law. This is a major limitation for the practical relevance and effectiveness of the treaties highlighted above, particularly in light of the fact that many have not been ratified by some of the major military powers, resulting in disagreement regarding their implementation and enforcement. It is therefore essential that all States be encouraged to become signatories to the major treaties and to ratify them with haste to ensure that IHL protection for the environment is real and effective.

Third, few norms of IHL explicitly address the issue of environmental protection, and in most cases the environment is better protected indirectly by other norms regulating the means and methods of warfare or protecting civilian persons and objects. The analysis has shown that the indirect means provide significantly more comprehensive protection than the norms of IHL that protect the environment *per se*.

Fourth, a significant criticism of the entire IHL framework centres on the lack of State adherence to IHL norms even where they are signatories to the relevant treaties. It has all too often been observed that even where applicable environmental provisions do exist, States decide not to enforce them for political or military reasons. The ICRC *Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict* (1994) provide guidance for implementation of these norms of IHL in military education.

Finally, aside from the International Criminal Court (see Chapter 3), and ad hoc criminal tribunals, there are few effective mechanisms for enforcing provisions of IHL, particularly relating to damage to the environment.

A key solution to these issues involves the codification of environmental protection into a coherent and practical instrument that considers both IAC and NIAC. Such an instrument could be developed on the basis of updated ICRC guidelines on protecting the environment during armed conflict, and with the expertise of the International Law Commission (ILC). In the absence of such a practical instrument, the protection of the environment remains governed by a disparate body of law that requires elaboration and consolidation.

3 International criminal law

3.1 Introduction

International criminal law (ICL) is the body of law charged with adjudicating cases in which individuals have incurred international criminal responsibility. In this respect, it can be viewed as a subset of international humanitarian law (IHL) with the intent to sanction individuals' liability against IHL protections. As such, it differs significantly from the traditional view of international law, which focuses mainly on State responsibility for wrongful acts that violate international obligations.

Despite significant progress in operationalizing IHL in recent decades, responsibility for implementing and enforcing its provisions, including ICL provisions, rests primarily with States and their legal and judicial systems.¹⁰⁵ However, recent international case law suggests that a number of avenues are emerging for prosecuting environmental damages under ICL.

With a view to evaluating the relevance of ICL for preventing, limiting or redressing environmental harm caused by individuals in conflict situations, this chapter provides an overview of:

- a) **Treaty law and recent ICC case law:** Relevant treaty law, namely the so-called grave breaches of IHL and the provisions of the Rome Statute, as well as recent ICC case law in relation to environmental protection, including the ICC prosecutor's Application for a Warrant of Arrest against President Omar Al-Bashir of Sudan.
- b) **International political mechanisms:** Non-convention-based means to criminalize acts resulting in environmental degradation or depletion of natural resources, such as sanctions and condemnations, which can play an important role in pressuring States and individuals to protect the environment during warfare.

3.2 Treaty law and recent ICC case law

Grave breaches of international humanitarian law

The law of war imposes individual criminal responsibility for serious violations known as war crimes, including the

grave breaches under the 1949 Geneva Conventions and their Additional Protocol I. The Conventions call on States to prosecute or extradite suspected war criminals liable for grave breaches on the basis of universal jurisdiction.

Violations of Articles 35 and 55 of Additional Protocol I (protecting the natural environment *per se*) do not appear on the list of grave breaches and do not therefore entail individual criminal liability. Nonetheless, a number of other actions that cause environmental damage may give rise to individual criminal liability. These include:

- extensive destruction and appropriation of property not justified by military necessity and carried out unlawfully and wantonly (Geneva Convention IV, Article 147);
- launching an indiscriminate attack affecting the civilian population or civilian objects in the knowledge that such attack will cause excessive loss of life, injury to civilians or damage to civilian objects (Additional Protocol I, Article 85(3)(b)); and
- launching an attack against works or installations containing dangerous forces in the knowledge that such attack will cause excessive loss of life, injury to civilians or damage to civilian objects (Additional Protocol I, Article 85(3)(c)).

These grave breaches are only identified in the law applicable to international armed conflict (IAC). Neither common Article 3 nor Additional Protocol II, which relate to non-international armed conflicts (NIAC), contain any provision on grave breaches or entail individual criminal responsibility. As a result, the question that needs to be addressed is whether the penalization of acts resembling these grave breaches in the context of NIAC is possible. Indeed, in the *Tadic* Case (see Section 2.5), the International Criminal Tribunal for the former Yugoslavia (ICTY) ruled that it had jurisdiction to prosecute all violations of customary rules of humanitarian law, including those that occurred in the context of internal armed conflict.

The 1998 International Criminal Court Statute (Rome Statute)

The 1998 Rome Statute establishing the International Criminal Court (ICC), which provides a broad framework for enforcing the primary norms of IHL, contains provisions

that both explicitly and inferably protect the environment in armed conflict. That is to say, the Statute not only protects the environment *per se*, but also makes it a criminal offense to cause environmental damage, which is seen as an underlying cause of a grave breach of IHL. Indeed, destruction of the environment could be prosecuted under various categories of crimes contained within the Rome Statute, including war crimes, crimes against humanity and genocide.

Protection of the natural environment per se

According to Article 8 of the Rome Statute, the ICC has jurisdiction over war crimes, including grave breaches of the 1949 Geneva Conventions and their 1977 Protocols. Article 8(2)(b)(iv) explicitly prohibits damage to the natural environment, stipulating that it is prohibited to “intentionally launch 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.”

Article 8 adds the tests of proportionality and military necessity to the triple cumulative standard “widespread, long-term and severe.” It also adds the adjective “overall” to qualify the military advantage. Moreover, it incorporates the need to prove both the *actus reus* (the actual physical act of inflicting damage) and the *mens rea* (the requirement that the damage must be done intentionally and with the knowledge that the attack will create the resulting harm). Finally, Article 8 classifies the crime against the environment under Section (b) instead of Section (a), which contains the grave breaches of the Geneva Conventions, with the consequence that States are not under a formal “duty” to prosecute these crimes.¹⁰⁶

Article 8(2)(b)(iv) only applies to IAC, thereby maintaining the existing legal gap for NIAC. In addition, environmental protection is not one of the IHL violations listed under Article 8(2)(e) that apply in the context of NIAC. The Article does, however, provide protection for cultural goods and enemy property,¹⁰⁷ and can thereby be said to protect the environment to the extent that the environment is an element of such cultural goods or property.

Some experts have stated that the Rome Statute constitutes a step back from earlier protections provided by IHL, especially Additional Protocol I, which is considered as the “primary norm.”¹⁰⁸ Others, however, note that States are still bound by the existing provisions of IHL, and that the Rome Statute – on the contrary – constitutes an important first step to operationalizing these provisions by creating a standing institution empowered to prosecute individuals for the most serious offences of ICL (including IHL).

Environmental damage as the “underlying act” of an international crime

While the Rome Statute does not provide significant direct environmental protection, particularly in the context of NIAC, it does provide other avenues for addressing damage to the natural environment from both

IAC and NIAC. In particular, environmental damage may constitute a material element of other crimes – for instance, burning a forest may constitute the basis for the crime of destruction of property. In addition, the consequences of environmental damage may also be considered as the material elements of a crime – for example, scorched-earth practices resulting in forced displacement. This causal linkage has been successfully used in the past, particularly for prosecuting rapes as underlying acts of the crime of genocide (e.g. the *Akayesu* Case by the International Criminal Tribunal for Rwanda) or of torture (in various ICTY cases).

As noted above, destruction of the environment and depletion of natural resources could be prosecuted under various categories of crimes contained within the Rome Statute, including war crimes, crimes against humanity and genocide. Specific relevant provisions are as follows:

- **War crimes**

Applicable to IAC:

- extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly (Article 8(2)(a)(iv));
- intentionally directing attacks against civilian objects (Article 8(2)(b)(ii));
- intentionally launching an attack in the knowledge that such an 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 that would be clearly excessive in relation to the concrete and direct overall military advantage anticipated (Article 8(2)(b)(iv));
- employing poison or poisonous weapons (Article 8(2)(b)(xvii));
- pillaging a town or place, even when taken by assault (Article 8(2)(b)(xvi));
- employing asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices (Article 8(2)(b)(xviii)); and
- intentionally using starvation of civilians as a method of warfare by depriving them of objects indispensable to their survival, including wilfully impeding relief (Article 8(2)(b)(xxv)).

Applicable to NIAC:

- pillaging a town or place, even when taken by assault (Article 8(2)(e)(v));
- ordering the displacement of the civilian population for reasons related to the conflict, unless the security of the civilian involved or imperative military reasons so demand (Article 8(2)(e)(viii)); and
- destroying or seizing the property of an adversary unless such destruction or seizure be imperatively demanded by the necessities of conflict (Article 8(2)(e)(xii)).

Acts of “pillaging” prohibited in the context of both IAC and NIAC are of particular interest when considering the destruction of the environment (see *DR Congo v. Uganda Case* in Chapter 2). The practice of looting natural resources, which has become an increasingly frequent feature of armed conflicts, has been repeatedly denounced by the international community.¹⁰⁹

Pillage was already explicitly condemned by the 1907 Hague Regulations.¹¹⁰ It is worth noting that in the *Revolutionary United Front (Liberia) Case*, the Special Court of Sierra Leone condemned the indicted for, *inter alia*, the war crime of “pillaging and burning”¹¹¹ and thereby violating common Article 3 of the Geneva Conventions and Additional Protocol II (Article 4(2)(g)). This judgement also noted that in the case of pillage, in addition to the extractors, those involved in the trading process may also be prosecuted for “participating in a joint criminal enterprise.”

- **Crimes against humanity**

The crimes listed under Article 7 have a *chapeau* requirement stipulating that they have to be committed as “part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack.” Crimes against humanity are not necessarily linked to armed conflicts. The main crime of relevance here would be the “deportation or forcible transfer of population” (Article 7(1)(d)), which may arise from severe environmental degradation and depletion of natural resources that are essential to people’s survival.

- **Genocide**

The most significant difficulty in prosecuting the crime of “genocide” is the *chapeau* requirement of proving the *mens rea* element of genocidal intent. However, environmental degradation could be considered to constitute the underlying act of:

- deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part (Article 6 (c)); or
- causing serious bodily or mental harm to members of the group (Article 6 (b)).

Case law: The ICC prosecutor’s Application for a Warrant of Arrest against President Omar Al-Bashir

The case brought before the International Criminal Court (ICC) against President Omar Al-Bashir of Sudan has explored using environmental damages as an underlying act of an international crime. It is therefore of utmost interest to examine how the linkages were established by the prosecution and appreciated by the judges.

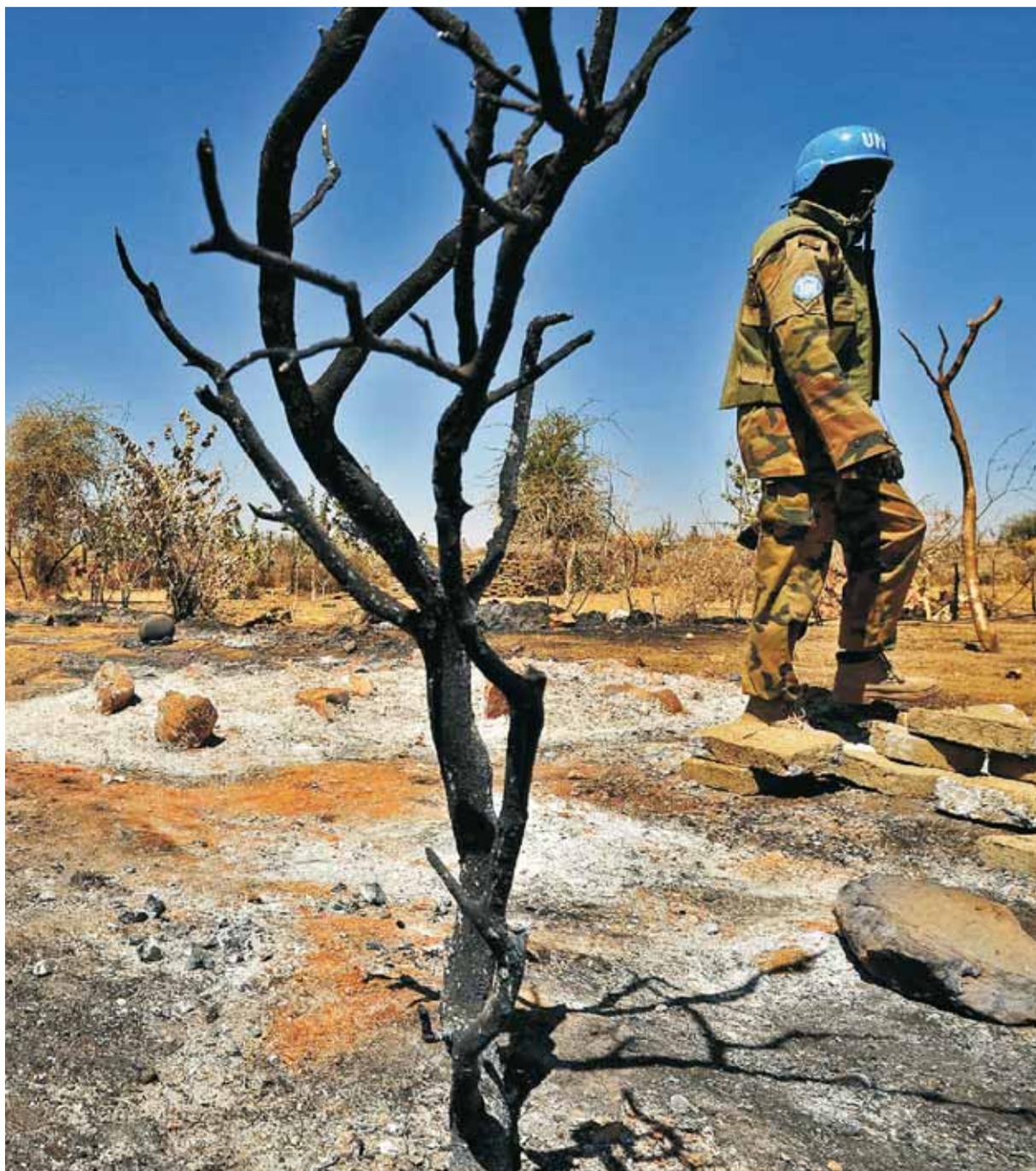
Among other charges, the ICC Prosecutor indicted and charged President Omar Al-Bashir with the act of genocide under Article 6(c), for deliberately inflicting on the Fur,

Masalit and Zaghawa ethnic groups conditions of life calculated to bring about their physical destruction. These conditions of life resulted from severe environmental degradation and depletion of natural resources, as related in the prosecutor’s application: “[The attackers] destroy all the target groups’ means of survival, poison sources of water including communal wells, destroy water pumps, steal livestock and strip the towns and villages of household and community assets. As a result of the attacks, at least 2,700,000 people, including a very substantial part of the target groups attacked in their villages, have been forcibly expelled from their homes.”¹¹²

The application went on to say: “[The attacks were designed to] destroy the very means of survival of the groups as such. The goal was to ensure that those inhabitants not killed outright would not be able to survive without assistance. Ensuring adequate access to water has long been an essential component of livelihood strategies in Darfur. To facilitate access to water by both humans and animals, many villagers dug communal wells or maintained other communal water sources. Militia/Janjaweed and the Armed Forces repeatedly destroyed, polluted or poisoned these wells so as to deprive the villagers of water needed for survival.”¹¹³ The prosecutor thus invited the judges to recognize that environmental degradation in Darfur constituted an underlying act of genocide.

In the decision of the Pre-Trial Chamber on 4 March 2009, which issued an arrest warrant against President Omar Al-Bashir, a majority of the judges dismissed the charge of genocide. In relation to the prosecutor’s assertion, the judges found that “[although] there are reasonable grounds to believe that [Government of Sudan] forces at times contaminated the wells and water pumps of the towns and villages primarily inhabited by members of the Fur, Masalit and Zaghawa groups that they attacked, there are no reasonable grounds to believe that such a contamination was a core feature of their attacks.”¹¹⁴ Importantly, the judges did not deny the nexus between the environmental degradation and the crime of genocide, but rather challenged the systematic or “core feature” of these damages. The judges did, however, leave the door open for the prosecutor to submit new evidence in support of amending the arrest warrant to include the crime of genocide.¹¹⁵

In a dissenting opinion, which was attached to the arrest warrant,¹¹⁶ Judge Usacka concluded that “the ‘African tribes’ were subjected to conditions calculated to bring about the destruction of the group.”¹¹⁷ She suggested that the charge of genocide “must be analysed in the context of Darfur’s harsh terrain, in which water and food sources are naturally scarce.” She also highlighted that in addition to the destruction of water sources, the Court should recognize the more general destruction of the “means of survival” which include “food supplies, food sources and shelter.”¹¹⁸ As a result, she found that “in light of the harshness of the surrounding terrain, [...the] evidence provides reasonable grounds to believe that the groups’ means of survival were systematically destroyed,”¹¹⁹ and



A Nigerian soldier from the UN African Mission in Darfur patrols a bombed village

accordingly stated that she would recognize the charge of genocide based on Article 6(c) of the Rome Statute.

Judge Usacka's opinion thus accepts the argument put forward by the Prosecutor stipulating that environmental degradation and the resulting deprivation of the population's means of survival was an act underlying the crime of genocide, and as such constitutes an important addition to international criminal case law. President Omar Al-Bashir rejects all the charges listed above.

3.3 International political mechanisms

International sanctions and condemnations also provide options for addressing the behaviour of persons and States participating in the illegal exploitation, pillaging, trade and depletion of natural resources.¹²⁰ In addition to targeted sanctions such as asset freezes and travel bans,¹²¹ the following avenues may be considered:

Sanctions under Chapter VII of the UN Charter

The UN Security Council can impose sanctions under Article 41 of the UN Charter, which are immediately binding on all UN Member States, notwithstanding any rights or obligations that they may have under any other international agreement, contract, license or permit. To issue a resolution under Chapter VII, the Security Council has to determine under Article 39 that there is a threat to or a breach of the peace, or an act of aggression.

Considering the well-recognized role of the exploitation of high-value natural resources (such as diamonds and timber) in generating revenue for armed groups in a wide range of recent and ongoing conflicts, establishing a clear link between illegal trade in "conflict resources" and a threat to peace and security could be relatively straightforward.

In addition to conflict-specific sanctions, the UN Security Council could also adopt a globally applicable resolution condemning severe environmental degradation and depletion of natural resources in all conflicts. Such a resolution could be modelled on UNSC Resolution 1820, which condemns rape during armed conflict and elevates it to the level of an underlying act of the three major international crimes (war crimes, crimes against humanity and genocide). Unanimously adopted by the Members of the UN Security Council, Resolution 1820 states that "rape and other forms of sexual violence can constitute war crimes, crimes against humanity or a constitutive act with respect to genocide."¹²²

Recognition by the Security Council that rape constitutes an international crime elevates the seriousness of the crime, reinforces the expectation that national and international jurisdictions will prosecute it and enhances the legitimacy of such prosecutions. A similar procedural pathway for recognizing the seriousness of violations of environmental protections during armed conflict – particularly for those that could be deemed to constitute grave breaches – would consolidate and reinforce the protection of the environment during armed conflict.

Sanctions under Chapter VI of the UN Charter

Sanctions can also be "recommended" by the UN Security Council under Chapter VI (Article 36) of the UN Charter. However, the binding nature of such resolutions is uncertain. The UN General Assembly could also pass resolutions in this regard, though they would not be legally binding.

UN Security Council referral to the International Criminal Court (ICC)

The UN Security Council can refer a situation – where, for instance, large-scale and serious environmental impacts from conflicts threatened international peace and security – to the ICC, as per Article 13 of the Rome Statute.

Applicability to UN or other peacekeepers

Although the United Nations is not a Party to any international agreement, the rules of international humanitarian law apply to UN military operations as a matter of customary

international law if they are involved in a situation of armed conflict.¹²³ In general, UN military personnel must also respect the national laws of the host country, including any environmental laws. They also remain subject to the law, in particular the criminal law, of their country of origin. Peacekeepers can, therefore, be prosecuted for pillage of natural resources if they are nationals of a State Party to the ICC or if they commit the crime on the territory of a State Party (except in cases where their mandate given by the Security Council or a deferral of an ICC investigation by the Security Council grants them immunity).

These principles are also applicable to other types of peace support operations undertaken by international and regional organizations, such as NATO, the African Union, the European Union, the Economic Community of West African States, the Organization for Security and Cooperation in Europe, and the Commonwealth of Independent States.¹²⁴ In addition, international humanitarian organizations are bound by domestic and international environmental law and should, therefore, ensure that their operations during or after the conflict do not damage the natural environment in which they operate.

3.4 Conclusions on international criminal law

Despite initial fears that the Rome Statute embodies a conservative interpretation of IHL – particularly as it relates to environmental protection – a number of avenues exist for prosecuting environmental damage caused during armed conflict. In addition to an explicit prohibition of environmental harm in the context of international armed conflict, emerging case law suggests that environmental damage occasioned during both international and localized armed conflict may be prosecuted, *inter alia*, as an element of other crimes.

It is clear that ICL and the judicial bodies set up to enforce the law have means to address the impacts that conflicts have on the environment and natural resources. The fact that courts have jurisdiction, acknowledge it and start using it offers a positive perspective for enhanced protection of the environment during armed conflicts. It will be important to analyse future cases to ascertain how the courts develop the case law relating to environmental damages, which will no doubt become the object of greater scrutiny following the dissenting opinion delivered in the *Al-Bashir Case*. The main constraints will lay on firmly establishing the linkages between proven acts of environmental degradation and the material and contextual elements contained in the definitions of the major international crimes.

In parallel, international political mechanisms, including sanctions and condemnations, could play an increasingly important role in pressuring States and individuals not to harm the environment during armed conflict, although most international sanctions have to date proven weak in their implementation and suffered from inadequacies in the international support structures.

4 International environmental law

4.1 Introduction

International environmental law (IEL) covers numerous cases of environmental damage that give rise to responsibility and potential liability during times of peace. The question is whether and to what extent these liability principles may apply for similar damage resulting from armed conflict. For example, if a power station is destroyed during a war or other military operation, should the subsequent oil spill trigger the liability regime of the International Convention for the Prevention of Pollution of the Sea by Oil? Would a regional seas agreement, such as the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean apply, and if so, how? In another example, where rebels detonated an oil pipeline that spilled oil into a river that then spread to a neighbouring country, would the Trail Smelter Principle apply? In this scenario, would there be any practical way for the affected country to enforce IEL against the responsible internal rebel forces?

Similarly, the World Heritage Convention protects sites of cultural and natural heritage, but does it apply during wartime? Would the Convention prohibit the burning of a national park containing a World Heritage site during the course of military activities? Or consider the unpermitted trade of endangered species, such as elephant ivory, that certain rebel forces have been rumoured to have engaged in to fund purchases of artillery and supplies. The Convention on the International Trade of Endangered Species of Fauna and Flora (CITES) prohibits unpermitted trading, but has yet to be applied to insurgent forces. Could or should it be applied? And would the application depend on whether it was rebel forces or sovereign entities that were engaged in the illegal trading?

The question of the potential application of IEL during armed conflict is complicated by the fact that environmental law is still maturing at both the domestic and international levels, and States are still in the process of determining how it relates to IHL (as well as other bodies of law, such as international trade law).

In the place of formal actions, recent changes in the international perspective of whether IEL applies during armed conflict have occurred largely through scholarship

and commentary on the subject. Since the early 1990s, many of the numerous articles that have analysed the topic have noted a shift in the historic belief that laws designed to apply during peace and the law of war were mutually exclusive, and that only one could apply at any given time. Instead, it has become widely accepted that it is not a stark choice between the two legal regimes; rather, there are areas where the two overlap, times when the law of war applies *as well as* some peacetime law. This view is supported by a select few international environmental agreements that specifically state that they continue to apply during times of war.

This chapter accordingly provides an overview and analysis of the law and commentary that addresses the applicability of IEL during armed conflict. It is organized in three main sections:

- a) **Multilateral environmental agreements and principles of IEL:** Relevant provisions of contemporary international environmental law, including multilateral environmental agreements (MEAs), that directly or indirectly provide for their application – or suspension – during armed conflict.
- b) **Customary international environmental law and soft law instruments:** Relevant provisions of customary international environmental law, including the Trail Smelter Principle, and important non-binding documents, such as the Rio Declaration.
- c) **Commentary on the applicability of IEL during armed conflict:** Recent scholarly commentary that attempts to answer whether, when and to what extent a specific provision of IEL continues to apply once military operations commence.

4.2 Multilateral Environmental Agreements and principles of IEL

There is substantial variation in how international environmental law (IEL) addresses the question of applicability during times of armed conflict. Some MEAs directly or indirectly address the question of their continuance during hostilities, either by inference or by express statement.



Every year, large heavily armed groups enter the Central African Republic from neighbouring areas to plunder its wildlife resources, in particular elephant ivory

Other MEAs specifically state that they are automatically suspended, terminated or inapplicable once armed conflict has begun. Still others remain silent on the issue. Of the MEAs analysed below, a small number (less than 20 percent) clearly state their discontinuance during armed conflict. The remaining 80 percent are roughly evenly divided between those containing language that might directly or indirectly bear on their continuance and those that contain no such language at all. It is important to note, however, that in most cases, whether the provisions apply depends largely on the methodology adopted to determine when IEL remains in force during armed conflict.

MEAs that directly or indirectly provide for their application during armed conflict

MEAs are binding international instruments to which more than two States are a Party. The breach of an MEA gives rise to State responsibility. In addition, a growing number of compliance mechanisms provide means to facilitate (or compell, if necessary) States to comply with MEA provisions. The following section identifies and describes the MEA provisions that may be relevant to armed conflict, as well as those that directly or indirectly bear on whether the agreement as a whole continues in force after the commencement of hostilities.

UN Convention on the Law of the Sea (UNCLOS) (1982)

The UN Convention on the Law of the Sea (UNCLOS) was concluded in 1982 and entered into force in 1994.¹²⁵ Intended to serve as a “Constitution for the Oceans,” UNCLOS establishes a framework for marine governance designed to foster international peace and security.¹²⁶ UNCLOS provides for freedom of the high seas,¹²⁷ which are explicitly reserved for “peaceful purposes.”¹²⁸ Article 192 commands that “States have the obligation to protect and preserve the marine environment,” while Article 194 requires States to take measures to prevent, reduce and control marine pollution. Articles 207, 208 and 212 impose the same requirement with regard to pollution from land-based sources, from seabed activities, and through the atmosphere. These seemingly broad provisions are limited by Article 236, however: “The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service.” The Article continues to require such vessels or aircraft to comply with the protective provisions “as far as is reasonable and practicable.”

Commentary has noted that Article 88, which states that “[t]he high seas shall be reserved for peaceful purposes,” appears to prohibit even normal maritime warfare activities, regardless of the extent of harm to the environment, beyond areas of national jurisdiction. This limitation is thought to be mitigated, however, by the fact that UNCLOS is *lex generalis* that would yield to the *lex specialis* law of war.¹²⁹ Many have argued, though, that this is not a reasonable interpretation of Article 88, while yet another commentator has observed that the requirement embodied in Articles 192 and 194 – that a State not pollute outside its jurisdiction – is a principle of general international law that may indeed continue during wartime. Although the duty may be limited or suspended with regard to belligerents, another commentator has argued that “[i]t seems clear that the duty is not suspended as between a belligerent nation and a neutral or non-participating State.”¹³⁰

One scholarly article observed that when several provisions of UNCLOS are read in combination they suggest that the environmental protection provisions may not apply during times of armed conflict. Indeed, article 236 exempts warships, and the Preamble implies that application was only contemplated during peacetime.¹³¹ On the other hand, the exemption of warships and other non-commercial vessels or aircrafts owned or operated by the government may not entirely prevent UNCLOS from applying during armed conflict. As another observer noted, there may be vessels involved in hostilities that do not fall within the exemption. In addition, pollution may originate from sources other than vessels, for example, from an oil platform or a shore-based facility.¹³² Although it is not entirely clear to what extent UNCLOS offers protection during armed conflict, it is important to consider its potential applicability to situations akin to the example cited in the introduction, such as when a near-shore oil facility is destroyed by military activities and the pollution affects the territorial waters of both the originating State and a neutral neighbouring sovereign State.

International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL) (1954)

The International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL), which was concluded in 1954, prohibits ships from discharging oil within 50 miles of the shore. OILPOL directly addresses the question of its applicability during times of armed conflict: Article XIX declares that “[i]n case of war or other hostilities, a Contracting Government which considers that it is affected, whether as a belligerent or as a neutral, may suspend the operation of the whole or any part of the present Convention in respect of all or any of its territories.”¹³³ This provision was not contested.¹³⁴ Thus, it appears that the default condition is that OILPOL continues to apply during armed conflict, although it is up to the affected Parties to decide whether or not that is the case in any given situation.

International Convention for the Prevention of Pollution from Ships (MARPOL) (1973/1978)

The International Convention for the Prevention of Pollution from Ships (MARPOL) was signed in 1973, and

amended five years later to its final adopted form.¹³⁵ MARPOL expands on the prohibitions on discharges of oil contained within OILPOL (the majority of which appear in an annex) to include other harmful substances. The agreement aims to eliminate all intentional pollution and to minimize accidental discharge of harmful substances.¹³⁶ The provisions relating to oil, chemicals and other harmful substances, sewage, garbage, and air pollution are contained within separate annexes, with only the acceptance of the oil pollution annex required for ratification.

With respect to the applicability of the treaty during wartime, MARPOL simply exempts State military vessels and aircraft by a sovereign immunity clause: “The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service.”¹³⁷ This provision further requires Parties to make sure that such vessels and aircraft comply with the obligations of the treaty to the extent possible.¹³⁸ This is almost precisely the language adopted in UNCLOS the following decade. The resulting presumption is that whichever annexes a Party has ratified, they continue to apply to all vessels other than State military watercraft and aircraft during armed conflict.

Regional seas conventions

Many regional seas conventions have been adopted around the world. Two are examined below to provide a sample of the types of provisions they contain.

- ***Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (Barcelona Convention) (1976/1995)***

The Barcelona Convention was adopted to ensure the protection and sustainable development of the Mediterranean, recognizing the dangers posed by marine pollution and that existing international agreements did not “entirely meet the special requirements” of the region. Among other things, Parties are obligated to act to eliminate marine pollution, promote marine protection, implement the Mediterranean Action Plan, and apply the precautionary and polluter pays principles in development.¹³⁹ The Convention expressly provides that nothing within it shall prejudice the application of UNCLOS.¹⁴⁰ In addition, it contains the same type of exemption clause as UNCLOS and MARPOL, recognizing the sovereign immunity of warships and ships owned or operated by a Party that are engaged in government non-commercial service.¹⁴¹ The Parties are simply required to ensure that such vessels and aircraft “act in a manner consistent with” the agreement. Notwithstanding the exemptions for ships, the provisions of the Barcelona Convention arguably continue to apply during armed conflict. This is illustrated by the International Maritime Organization invoking the Barcelona Convention as a basis for providing assistance to Lebanon following the bombing of the facility at Jiyeh during the 2006 conflict, which caused an oil spill into the Mediterranean.

- **Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention) (1983)**

The operative provisions of the Cartagena Convention¹⁴² are comparable to those contained in the Barcelona Convention, though there are differences in the level of generality of some of the provisions.¹⁴³ The primary relevant distinction, however, is that the Cartagena Convention does not include any exceptions to or exemptions from its requirements. It is noteworthy that neither did the 1976 version of the Barcelona Convention; the exemption for warships was added by the 1995 amendments.

Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) (1971)

The Convention on Wetlands of International Importance especially as Waterfowl Habitat was adopted in 1971.¹⁴⁴ Often referred to as the “Ramsar Convention,” it was amended by a Protocol in 1982 and by a series of amendments in 1987. UNESCO serves as its depository. The Convention creates a general obligation for Parties to include at least one wetland within their territory on the List of Wetlands of International Importance,¹⁴⁵ and then “to promote the conservation of the wetlands included on the List, and as far as possible the wise use of wetlands in their territory.”¹⁴⁶

The Ramsar Convention does not expressly clarify its application to belligerents. Intent may be inferred from the Convention’s specification that a Party to the agreement has the right “because of its urgent national interests, to delete or restrict the boundaries of wetlands already included by it on the List.”¹⁴⁷ Situations of “urgent national interests” could include national security and armed conflict, which may suggest that the Convention is designed and intended to continue to apply during such times, albeit in a potentially altered manner.

Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention) (1972)

The World Heritage Convention was adopted by UNESCO Member States in 1972. Through the Convention, State Parties recognize their duty to identify and safeguard for present and future generations certain places that constitute part of the heritage of humankind.¹⁴⁸ The Convention states that “the outbreak or the threat of an armed conflict” is sufficient to place a property on the World Heritage in Danger list.¹⁴⁹ Since 2007,¹⁵⁰ a threatened site can also benefit from a reinforced monitoring mechanism if it is at risk of losing the values for which it was inscribed on the World Heritage List. The inclusion of a provision specifically triggered by armed conflict indicates that the Convention continues to apply during hostilities.



Armed wildlife guards protect Silverback gorillas from poachers in Virunga National Park, in DR Congo. This World Heritage Site has been threatened by decades of conflict in the region

UNESCO has been running a pilot project in the Democratic Republic of Congo since 2000 to try to use the Convention as an instrument to improve the conservation of World Heritage sites in regions affected by armed conflict. One conclusion of this project is that while it might not be possible to avoid damage to the ecosystem during conflict, it is possible to actively use the Convention to sensitize the warring factions and to limit the damage. An important provision of the Convention in this respect is Article 6.3, which indirectly provides for continuance during hostilities by mandating that each Party “undertakes not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage” of another Party (i.e. the objects and sites defined earlier in the Convention).¹⁵¹

Some scholars have suggested that World Heritage sites and Ramsar wetlands are the only two areas under IEL where the obligations are sufficiently concrete and clear that they may provide “real guidance to commanders on the battlefield or to be enforced after the event.”¹⁵² As such, it may be easier to apply these two particular MEAs during an armed conflict than it would be to apply others.

Convention on Long-Range Transboundary Air Pollution (LRTAP) (1979)

The Convention on Long-Range Transboundary Air Pollution (LRTAP) was designed to reduce transboundary air pollution when the sources of the pollution are inseparable.¹⁵³ Thus, the array of pollution covered by the LRTAP is broader than that encompassed by the Trail Smelter Principle (see description below).¹⁵⁴ In its narrow sense, the Trail Smelter Principle addresses situations where one country is acting in such a way as to cause harm to its neighbour. In contrast, the LRTAP includes situations where an individual country’s contribution – and thus the extent of its responsibility – cannot be determined. Despite the expansion in coverage, LRTAP mandates are often phrased in aspirational terms and do not impose liability, but rather rely on tactics such as negotiation. The lack of certainty and direct responsibility in the LRTAP provisions make them difficult to enforce.¹⁵⁵ For example, States are required to “endeavour to limit and, as far as possible, gradually reduce and prevent air pollution.”¹⁵⁶ Such narrative standards make it challenging to determine State responsibility in any given situation. These limitations are due largely to the fact that the LRTAP is a framework convention.

African Convention on the Conservation of Nature and Natural Resources (Revised) (2003)

The African Convention on the Conservation of Nature and Natural Resources was originally signed in 1968, and amended in 2003.¹⁵⁷ The Convention articulates the need for Parties to ensure that Africa’s nature and natural resources are conserved, utilized and developed “in accordance with scientific principles and with due regard to the best interests of the people.”¹⁵⁸ It contains separate provisions relating to soil, water, flora, fauna, protected species, trade of specimens and trophies, and conservation areas. The 1968 Convention entered into force in 1969, while the 2003

Convention will enter into force 30 days after a fifteenth Party ratifies it – to date the 2003 Convention has been signed by 36 parties, and ratified by eight.¹⁵⁹

Both the 1968 and 2003 versions of the Convention delineate exceptions.¹⁶⁰ The 1968 text contained variances for three types of activities and in three types of situations: (i) in circumstances involving “the paramount interest of the State,” *force majeure*, or the defence of human life; (ii) in times of famine, to protect public health; or (iii) in defence of property.¹⁶¹ The exception for circumstances involving the paramount interest of the State appears to have been an express derogation clause that could be applied during armed conflict.¹⁶² The 2003 version, however, deleted the exception for the paramount interest of the State, and omitted the exemptions for actions in defence of property and in times of famine. Instead, the amended Convention cites an exception for actions in time of declared emergencies arising from disasters.¹⁶³ In short, the 2003 iteration appears to have eradicated the prior version’s express derogation clause.

However, the 2003 version also added a provision that directly implements rules to control military and hostile activities. Indeed, Article XV(1) requires Parties to:

- take every practical measure, during periods of armed conflict, to protect the environment against harm;
- refrain from employing or threatening to employ methods or means of combat that are intended or may be expected to cause widespread, long-term or severe harm to the environment and ensure that such means and methods of warfare are not developed, produced, tested or transferred;
- refrain from using the destruction or modification of the environment as a means of combat or reprisal; and
- undertake to restore and rehabilitate areas damaged in the course of armed conflicts.¹⁶⁴

These provisions reiterate and expand upon the foundational IHL protections. Parties are also required to collaborate in the formation and implementation of more extensive rules to protect the environment during armed conflict.¹⁶⁵

Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) (1972)

The London Convention aims to protect the marine environment from the dumping of harmful waste. It prohibits the dumping of certain substances, while requiring a specific or general permit to dump others. It also mandates that Parties strive to implement regulations to protect the marine environment from, among other things, chemical and biological warfare agents.¹⁶⁶

The Convention allows deviation from its requirements in two situations. First, dumping is allowed when the dumping would otherwise be prohibited, but is required to ensure the safety of human life or vessels, aircrafts or

man-made structures, when weather has created a case of *force majeure* or if dumping is the only way to avert a real danger and the damage caused by dumping would probably be less than would be incurred otherwise.¹⁶⁷ Second, a special permit can be issued in emergencies that pose an “unacceptable risk relating to human health and admitting no other feasible solution.”¹⁶⁸ It is possible that, potentially under either exception but more likely under the second, a State could argue that military dumping was necessary to protect human life. However, it is unlikely that a persuasive situation would arise often.

UN Convention on the Law of the Non-Navigational Uses of International Watercourses (1997)

Better known as the International Watercourses Convention, the UN Convention on the Law of the Non-Navigational Uses of International Watercourses recognizes the problems caused by increasing demand and pollution and seeks to provide a framework for the use, development, conservation, management and protection of international watercourses that would promote their optimal and sustainable use.¹⁶⁹ Among other things, the Convention requires States to engage in the equitable and reasonable utilization of such waterways, to endeavour to prevent significant harm to them and to engage in notification measures if one State’s actions were adversely affecting another.¹⁷⁰ The agreement will enter into force after 35 States ratify or accept it; to date 17 have done so.

The International Watercourses Convention is one of the few MEAs that specifically address which categories of law apply during armed conflict. The relevant provision states that the watercourses and related installations, facilities or other works are subject to the protection of the “principles and rules of international law applicable in international and non-international armed conflict.”¹⁷¹ The precise meaning of this provision is ambiguous – it may stand for the proposition that both the Convention and the laws of war protect international watercourses during armed conflict, or simply that the latter does.

MEAs that specifically provide for suspension, derogation or termination during armed conflict

The MEAs listed below contain provisions that, at face value, appear to call for the suspension, derogation or termination of the agreement between belligerents during armed conflict. Though not as common in MEAs, these exceptions are a common feature of treaties, as well as of private law contracts relating to private law liability.

Even when an MEA contains such seemingly clear language, however, its provisions may still affect environmental protection during armed conflict. For example, in cases where the Law of State Responsibility calls for liability for damages caused by a military operation, an MEA could provide substantive guidance regarding the scope and nature of such decisions even if it does not directly apply.

Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment (1993)

The Convention specifically exempts liability for harm “caused by an act of war, hostilities, civil war, insurrection or a natural phenomenon of an exceptional, inevitable and irresistible character.”¹⁷²

Convention on Third Party Liability in the Field of Nuclear Energy (1960)

The Convention exempts operators for damage that directly results from armed conflict or a similar activity.¹⁷³ However, Austria and Germany made reservations to this provision, explicitly declaring their right to hold an operator liable for such damage.¹⁷⁴

Vienna Convention on Civil Liability for Nuclear Damage (1963)

The Convention exempts any operator from liability for nuclear damage resulting from armed conflict, hostilities, civil war or insurrection.¹⁷⁵

International Convention on Civil Liability for Oil Pollution Damage (1971)

The Convention expressly provides that its liability obligations will not apply to an owner that can demonstrate that the violations occurred as a result of war or other armed hostilities.¹⁷⁶ Furthermore, the requirements of the Convention generally do not apply to warships or other government vessels used for non-commercial purposes.¹⁷⁷ Similarly, the International Fund for Oil Pollution Compensation, which was established in 1992, will not compensate for damages resulting from war or armed conflict.¹⁷⁸ This limitation prevented the use of the Fund in responding to the oil spill at Jiyeh, Lebanon in 2006.

MEAs that neither directly nor indirectly address their application during armed conflict

Many MEAs contain no reference at all to the question of their applicability during armed conflict. These include:

Convention on Early Notification of a Nuclear Accident (1986)

The list of activities within the scope of the Convention does not explicitly include any related to armed conflict or other military activities.¹⁷⁹ However, India ratified the treaty in 1988 subject to a reservation specifically addressing this issue: the reservation stated India’s belief that the scope of the convention should include applicability to nuclear weapons or any nuclear devices used for military purposes.¹⁸⁰ Mauritius and Saudi Arabia enacted similar reservations.¹⁸¹

Convention on Biological Diversity (1992)

Nowhere within the Convention is an answer to the question of whether it continues to apply during armed

conflict. Some scholars have argued that the Convention should continue to apply to belligerents since it is sufficiently analogous to a human rights treaty that it should not be considered to automatically terminate when hostilities begin.¹⁸²

Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention) (1989)

The Convention contains a general provision stating that it is not intended to override other international instruments governing the ocean.¹⁸³

UN Convention to Combat Desertification (1994)

The Convention states that it does not affect the rights or obligations contained in any prior international agreement.¹⁸⁴

The following multilateral environmental agreements also do not address the question of their applicability in times of war:

- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1973);
- Vienna Convention for the Protection of the Ozone Layer (1985);
- Montreal Protocol on Substances that Deplete the Ozone Layer (1987);
- United Nations Framework Convention on Climate Change (1992);
- Stockholm Convention on Persistent Organic Pollutants (2001);
- Convention on the Conservation of Migratory Species of Wild Animals (CMS) (1979); and
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998).

4.3 Customary international environmental law and soft law instruments

A much higher percentage of the principles and soft law instruments of IEL reviewed in this section explicitly discuss armed conflict than do the MEAs reviewed above. Indeed, the majority contain principles that directly address State action during armed conflict or the protection of the environment during armed conflict generally. However, these frameworks are not legally binding, including during times of peace, unless they rise to the level of customary international law. While scholars continue to debate the scope of customary IEL, many argue that the precautionary principle, the principle of pollution prevention and the right to a healthy environment either are or are emerging as principles of customary international law.¹⁸⁵

The Trail Smelter Principle

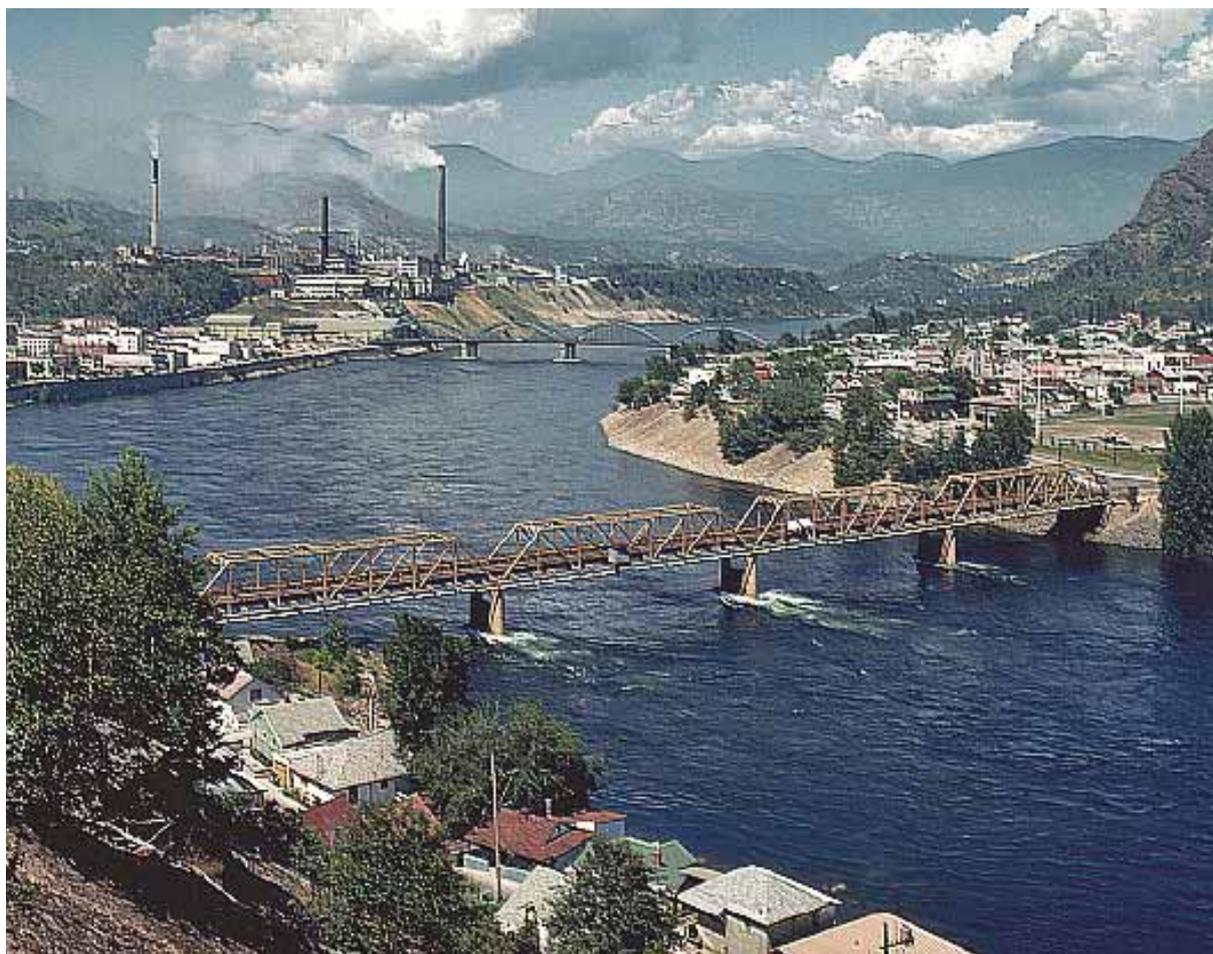
In 1941, an arbitration panel settled a dispute between the United States and Canada regarding transboundary air pollution.¹⁸⁶ A Canadian iron and zinc smelter in the town of Trail, located just a few miles north of the boundary between the two countries, emitted air pollution that harmed the crops of farmers downwind of the smelter in the US state of Washington. The arbitrators determined that Canada should prevent harmful transboundary air emissions from the Trail smelter and was liable for any damages if such emissions incurred in the future. The *Trail Smelter Case* decision was based on a fundamental property right *sic utere tuo ut alienum non laedas* – that one must use one’s property in such a way as not to cause harm to that of another.

This seminal environmental principle has been repeated, referenced and incorporated in numerous judicial opinions and international documents, including binding instruments such as UNCLOS¹⁸⁷ and non-binding agreements such as the Stockholm and Rio Declarations. It is also related to one of the underlying principles of the *Corfu Channel* decision by the International Court of Justice (ICJ) in 1949, in which two British ships were damaged by sea mines while passing through the Corfu Channel off the coast of Albania. Although the Court believed the mines had not been planted by Albanians, it found the State liable for the damages caused to the British ships, acknowledging “every State’s obligation not to knowingly allow its territory to be used for acts contrary to the rights of other States.”¹⁸⁸

It has been argued that although the basic requirement of good neighbourliness renders the Trail Smelter Principle seemingly inapposite with regard to belligerents, the principle may still afford protection to the territories of non-belligerents by allocating state responsibility for environmental damage unless the belligerent interests involved outweigh the harm to the victim State’s interests.¹⁸⁹ Others would argue that under the international law of neutrality, belligerents are not permitted to damage neutral territory even when belligerent interests outweigh the harm to the victim State’s interest – that is to say that the law of neutrality does not include the principle of proportionality that applies only between belligerents. Still other commentary has suggested that the frequent reiteration of the Trail Smelter Principle could indicate rapid, widespread emergence of a State’s right to the protection of its environment – without exception.¹⁹⁰

Declaration of the UN Conference on the Human Environment (Stockholm Declaration) (1972)

In 1972, the UN Conference on the Human Environment convened in Stockholm, culminating in the issuance of 26 principles regarding humans and their environment.¹⁹¹ Two of these principles could bear on the question of whether IEL applies during armed conflict. First, Principle 21 provides the foundational principle of the conference, that: “States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their



In the early 1940s, sulfur dioxide emissions from the iron and zinc smelter in the town of Trail, Canada, affected logging, farming, and cattle grazing in the US Columbia River Valley

own resources pursuant to their own environmental policies, and the responsibility 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.”¹⁹²

The final clause is a reformulation and expansion of the Trail Smelter Principle in the context of environmental protection, as well as the law of neutrality. One commentator, however, has noted that the Trail Smelter Principle arose in the bilateral context, while Principle 21 of the Stockholm Declaration was extended to form a general obligation to all.¹⁹³ Thus, the question remains regarding its applicability to hostile acts.

More directly related to armed conflict is Principle 26, which in the interest of protecting the world from nuclear weapons and other methods of mass destruction, instructs States to “strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of such weapons.”¹⁹⁴ However, while the principle addresses means of mass destruction, it does not speak to other belligerent acts of a more focused or limited nature.

World Charter for Nature, UNGA Resolution 37/7 (1982)

Developed by IUCN,¹⁹⁵ the World Charter for Nature was adopted through a UNGA Resolution in 1982.¹⁹⁶ The resolution directly addresses the need to prohibit environmental harm resulting from armed conflict. Principle 5, which is one of the document’s general principles, mandates that “[n]ature shall be secured against degradation caused by warfare or other hostile activities.”¹⁹⁷ Principle 11 then states that “[a]ctivities which might have an impact on nature shall be controlled, and the best available technologies that minimize significant risks to nature or other adverse effects shall be used,” with subheadings covering specific types of harm and the need to rehabilitate degraded areas.¹⁹⁸ Finally, regarding implementation, Principle 20 declares that “[m]ilitary activities damaging to nature shall be avoided.”¹⁹⁹ These provisions are clearly intended to prohibit environmental harm during armed conflict – the question is whether that directive is limited to the principles contained within the resolution, or whether they could provide a bootstrapping argument for broader applicability of IEL.

Although non-binding, the resolution bears weight as a normative expression.²⁰⁰ It has been observed, however, that although the Charter is phrased in mandatory terms, the language used is imprecise and there is no framework by which to clarify its ambiguities.²⁰¹

Declaration on Environment and Development (Rio Declaration) (1992)

In 1992, shortly after the 1990-1991 Gulf War reignited international concern about the treatment of the environment during armed conflict, the UN Conference on Environment and Development convened in Rio de Janeiro, Brazil.²⁰² Among the numerous results of the conference was the Rio Declaration, which delineates principles of sustainable development and recognizes that environmental protection is integral to long-term social and economic welfare.

The Rio Declaration confirmed and revised Principle 21 of the Stockholm Declaration, altering the emphasis of the sovereign right of exploitation “pursuant to their own environmental policies” to a right limited by “their own environmental and developmental policies.” This right is not overtly limited to times of peace. In addition, the Rio Declaration increased the perceived relative weight of the principle by making it Principle 2 in the Declaration, preceded only by a declaration that human health and productivity are the primary focus of sustainable development.²⁰³ Commentators have noted that a direct interpretation of the principle “imposes responsibility for environmental damage during armed conflict even when such damage is justified under the law of armed conflict and humanitarian law,” in addition to responsibility for any incidental harm to areas of non-national jurisdiction.²⁰⁴

In other principles, the Rio Declaration stresses that States are to cooperate in the development of international law “regarding liability and compensation for adverse effects of environmental damage caused by activities within (State) jurisdiction or control to areas beyond their jurisdiction.”²⁰⁵ Furthermore, States should employ the precautionary approach and undertake environmental impact assessments for activities that are likely to have a significant adverse impact on the environment.²⁰⁶ It is also worth noting that Principle 23 generally states that “[t]he environment and natural resources of people under oppression, domination and occupation shall be protected,” echoing similar IHL provisions.

As to the question of environmental protection during armed conflict, Principle 24 declares 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.”²⁰⁷ The precise meaning of Principle 24 is not clear. It may be interpreted as referring to the continued application of IEL during warfare. Alternatively, it may be interpreted as simply restating the requirement that States must adhere to the provisions of IHL that specifically address environmental protection during armed conflict (such as ENMOD and Additional Protocol I), and must contribute to the strengthening of the international legal framework.

However, even if the former interpretation were to prevail, the Rio Declaration is a non-binding international document²⁰⁸ – the only way for Principle 24 to become binding would be for the principles contained in the Rio Declaration to rise to the level of acceptance and practice of customary international law. While much commentary suggests that many Rio principles may be customary international law or are emerging provisions of customary international law – such as the provisions on public participation and on the precautionary principle – there continues to be sufficient disagreement that the matter cannot be considered settled.

Programme of Action for Sustainable Development (Agenda 21) (1992)

Another important document adopted at the 1992 Rio Conference was Agenda 21, a plan of action to implement sustainable development across all levels of national and international governance. The vast majority of the document focuses on peacetime issues and does not mention environmental protection during armed conflict. However, within the section detailing the means of implementation, Article 39.6 states that “[m]easures 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 article then specifies that the UN General Assembly and Sixth Committee, taking into consideration the expertise and duties of the ICRC, should handle such efforts.²⁰⁹

UNGA Resolutions 47/37 Protection of the environment in times of armed conflict (1993), and 49/50 United Nations decade of international law (1995)

In 1993, the UN General Assembly passed a resolution directly addressing protection of the environment during armed conflict (see also the previous discussion on Resolutions 47/37 and 49/50 in Chapter 2).²¹⁰ The Preamble recognizes “the importance of the provisions of international law applicable to the protection of the environment in times of armed conflict,” and Paragraph 1 urges States to take measures to comply with such law. Furthermore, Paragraph 3 “[u]rges States to take steps to incorporate the provisions of international law applicable to the protection of the environment into their military manuals and to ensure that they are effectively disseminated.” The precise import of these provisions remains unclear due to their ambiguous phrasing – it is possible to interpret the “provisions of international law applicable to the protection of the environment” as referring to either the law of war that pertains to environmental protection, or to IEL that continues to apply during war.

Paragraph 3 was revised and reiterated in the 1995 UNGA Resolution 49/50 *United Nations decade of international law*.²¹¹ This was the culmination of a decade in which the UN aimed to encourage progress in the acceptance of and education in international law, as well as to promote peaceful dispute resolution between States. In Paragraph 11, the resolution invites States to “disseminate widely” and consider incorporating into their military manuals the revised guidelines that the ICRC drafted regarding environmental



UNEP's Post-Conflict and Disaster Management Branch deploys teams of international and national experts to assess the environmental causes and consequences of conflicts. Over 20 field based assessments have been conducted to identify environmental risks to human health, livelihoods and security

protection during armed conflict. The first military manuals specifically requiring environmental protection during hostilities are thought to have appeared in the US Navy and Marine Corps rules of engagement in the *Commander's Handbook on the Law of Naval Operations*.²¹²

World Summit on Sustainable Development (2002)

In 2002, the World Summit on Sustainable Development was held in Johannesburg, South Africa. The Summit affirmed the principles of the Rio Declaration and Agenda 21, but did not issue any additional recommendations, resolutions or declarations directly related to environmental protection during armed conflict.²¹³

UNEP Governing Council Decision 23/1/IV (2005)

At UNEP's 23rd Governing Council, it was recommended that the organization strengthen its capacity to address post-conflict environmental concerns, particularly by undertaking post-conflict assessments, promoting clean-up of environmental hotspots and mainstreaming environmental concerns into the humanitarian and recovery assistance of the UN.

4.4 Commentary on the applicability of IEL during armed conflict

Numerous noted scholars in the fields of public international law, IEL and IHL have written about when and how at least some IEL might remain in effect during armed conflict. Two preliminary factors are important to consider with regard to the nature of the armed conflict involved, however.

First, it is important to note the distinction between IEL that applies to international conflicts and that which applies to internal conflicts. Indeed, a State experiencing an internal armed conflict remains bound by IEL. If it does not respect those obligations, the question arises whether this failure is justified by a state of necessity. In addition, the obligation of non-State Parties is problematic. They are bound by relevant rules of IHL, but generally IEL does not apply to them. Although it might be beneficial to apply IEL to belligerents within a State, it is unclear whether that can be done or whether IEL can only apply to international conflicts.²¹⁴

Second, there may be a difference in the applicability of international law during armed conflict between two belligerents, as opposed to between a belligerent and a neutral party. Both explored this distinction in the early 1990s, proposing that the effect of IEL was significantly affected by whether the environmental damage caused by a belligerent was inflicted upon another belligerent or upon a neutral party. Both posited that the relationship between a belligerent State and a neutral State regarding the neutral State's environment is governed by standard peacetime rules, while international environmental law does not apply between belligerents, leaving only the environmental protections of the law of war.²¹⁵

Commentary on the continued applicability of MEAs in times of conflict

A number of methodologies have been developed to ascertain whether and to what extent a multilateral environmental agreement (MEA) continues to apply during armed conflict. These include classification theory, intention theory, the context and nature of the MEA, and the sliding scale.

Although they vary in nature and scope, two general trends can be extracted. First, it appears to be generally accepted that IEL does not automatically terminate with the onset of hostilities, although the extent and parameters of continued application are debated. Second, potential factors influencing whether and how an MEA remains in force include the original intent of the signatories, the type (category or nature) of MEA being considered and the context in which the agreement was reached. The ongoing debate focuses on which factors are relevant and how much weight to accord them.

It is worth bearing in mind that the conceptual landscape is quite dynamic, and that views articulated by a scholar at one point may have evolved in the intervening period. The arguments articulated below reflect those as cited, illustrating the diversity of opinion as scholars seek to determine the full scope of implications of the relatively new body of IEL during times of conflict.

Classification theory

One of the predominant approaches for determining whether peacetime laws continue to apply to belligerents is known as “classification theory.” Its premise is that environmental laws can fit into a variety of categories, and that the category type determines whether the law should continue to apply during armed conflict. In 2000, Vöneky analysed the current methodologies for determining the continuation of general international law during hostilities.²¹⁶ She found that the predominant approach was a classification system, composed of five dominant categories of treaties that, at least to some extent, continue to apply during armed conflict: (i) treaties expressly providing whether they continue during wartime; (ii) treaties that are compatible with the maintenance of war; (iii) treaties that create an international regime or status; (iv) human rights treaties; and (v) *jus cogens* and *erga omnes* obligations.²¹⁷

Vöneky then considered whether there were any environmental treaties sufficiently analogous to any of the five general categories that they could be argued to continue to apply during armed conflict.²¹⁸ She first concluded that environmental treaties that create an “objective regime,” such as UNCLOS, qualify as an international regime or status and “continue to have force during armed conflict because they seek to serve the interests of the state community as a whole.”²¹⁹ She then determined that if a treaty that protects a common good or global environmental resource has the protection of the environment as its primary aim, rather than as a secondary effect – such as the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity²²⁰ – then it is comparable to a human rights law and should likewise continue to apply during armed conflict.²²¹

On the other hand, Vöneky found that treaties for the use and protection of shared natural resources would only continue to apply if their goal was environmental protection “in the common interest of the state co-

munity as a whole,” rather than for their own limited interest in the resource.²²² She also noted four major exceptions to the above categories of international environmental treaties that continue to apply during international hostilities, namely treaties with: (i) express derogation clauses; (ii) inherent limitations such as a reasonableness clause; (iii) excuse by the Law of State Responsibility (e.g. self-defence); or (iv) excuse by general treaty suspension and termination principles (e.g. material breach).²²³

In sum, Vöneky found that the current categorization methodology assumes that IEL applies during both times of peace and armed conflict if it expressly states that it is to continue, is compatible with armed conflict or is a *jus cogens* or *erga omnes* obligation. She then proposed that an additional category of international law should be included on this list: those agreements and customary international laws that mandate environmental protection *for the community of States as a whole*. Because they are comparable to both human rights treaties and treaties that create objective regimes, Vöneky posited that their continuance should be presumed.

Combining classification theory and intention theory

In 1997, in an effort to identify to what extent IEL applies during armed conflict, Boelaert-Suominen analysed the general applicability of public international law during hostilities.²²⁴ She then used this analysis as a basis for assessing the specific applicability of IEL during armed conflict. Her conclusions were founded upon two principles: that public international law has demonstrated a trend to uphold treaties to the extent possible, while remaining compatible with domestic policies and UN Security Council decisions;²²⁵ and that the laws of war are *lex specialis* over more general international laws, thus treaties cannot be construed in such a way that they constrain the right of a State to use force in self-defence. However, it should be noted that IEL is also considered *lex specialis* and it is, therefore, unclear who would resolve a dispute between two bodies of *lex specialis*, and how they would do so.

At the time, Boelaert-Suominen found the contemporary approach to determining whether an international law applied was a combination of traditional classification techniques and intention theory.²²⁶ The classification system had been criticized as being too simplistic for the complex affairs that comprise international relations. Intention theory, on the other hand, attempted to hold as closely as possible to the original intent of the Parties at the time the treaty was formed,²²⁷ assuming that there was a clear and consistent original intention that could be ascertained.²²⁸ She concluded that the strength of the interaction of the two approaches is that intention theory provides a method for assessing the applicability of a treaty in those instances where the agreement does not clearly fit into one of the pre-defined categories.²²⁹

After analysing the International Law Commission’s prior codification efforts, Boelaert-Suominen used her analysis

of the general applicability of public international law as the foundation for proposing an appropriate methodology for determining whether MEAs continue to be in effect during armed conflicts. Finding that “no sweeping generalization can be made regarding the application or non-application of multilateral environmental agreements during international armed conflict,” she advised examining each MEA independently.²³⁰ The initial step in her combined approach is to analyse the terms of the treaty as there is no clear rule as to whether a treaty continues to operate during times of armed conflict.²³¹ If the terms suggest continued application or are ambiguous there are four further assessments to make:

- The inquirer should consider any explicit provisions on the treaty’s continued operation, and determine whether any *jus cogens*, humanitarian laws or UN Security Council decisions suggest that they should not be taken at face value.²³²
- The inquirer should determine whether armed conflict could be considered a basis for suspension or abrogation of the treaty, pursuant to the Vienna Convention on the Law of Treaties.
- The same should then be undertaken for the Law of State Responsibility, to see if a State might be relieved of responsibility for a breach of a treaty that is not excused under the Law of Treaties, for a reason such as necessity or consent.²³³
- Finally, the inquirer should consider whether any customary international laws or principles might affect the application of the law.²³⁴

The context and nature of the agreement

In a 1997 article, Schmitt noted two polar views on the continuation of MEAs during armed conflict: that the application of all such treaties immediately ceases with the outbreak of hostilities, or that such treaties survive to the point of inconsistency with armed conflict.²³⁵ However, Schmitt also identified an intermediate stance, which he referred to as the “theory of differentiation,” which holds that whether a treaty continues to be in effect depends on whether continuance is consistent with the context of the agreement.²³⁶ First, one must consider whether the treaty regulates private or public interests. Second, it is more likely that a bilateral treaty will be abrogated, suspended or terminated than a multilateral treaty. Third, bilateral treaties between non-belligerents are far less likely to be abrogated, suspended or terminated than a bilateral treaty between belligerents. Fourth, the finality of a treaty affects whether it should be maintained or altered. And fifth, the extent of the hostilities should be considered, and military operations other than war should not affect a treaty’s applicability as much as war itself.²³⁷

In short, Schmitt saw the optimal methodology as a rebuttable presumption that, in the absence of express termination language or clear inconsistency, MEAs

continue during armed conflict. During a particular conflict, treaties should be analysed individually to assess whether the presumption is overcome under the criteria delineated above.²³⁸ Sharp published a related theory in the early 1990s, focusing on the express statement within the Vienna Convention on the Law of Treaties related to whether a treaty containing no termination clause may be denounced or withdrawn from depends on “the nature of the treaty.”²³⁹ Sharp suggested that if the treaty is directed at sovereign relations – for example, if it concerns commercial transactions – then it would be suspended or terminated during armed conflict. Conversely, a treaty regulating conduct unrelated to the military or the direct interactions of States would not automatically conflict with a state of hostilities and could be said to continue.²⁴⁰

The sliding scale

US Navy Captains John P. Quinn, Richard T. Evans and Lieutenant Commander Michael J. Boock approached the question of the continued applicability of MEAs during armed conflict from the perspective of a military unit seeking clarification on which requirements it must follow. Explaining the range in the type and extent of military operations possibly required in a given situation, they emphasized the difficulty of balancing environmental protection against mission success. They posited that this complexity was triggering a proliferation of military manuals with instructions for which and to what extent MEAs applied during different types of hostilities.²⁴¹ Such manuals are beneficial because it is easier to prevent environmental degradation than to remedy it. In the near term, it is likely that more nations will be engaged in military operations other than war than in warfare itself, with the result that such manuals will likely receive substantial use. Furthermore, if militaries follow environmental protection procedures when they train, they are more likely to keep adhering to them when they actually fight. Finally, Quinn, Evans and Boock believed that manuals may help hasten the evolution of the relevant laws themselves.²⁴² One of the primary challenges to issuing such military manuals is what they described as a “sliding scale” theory of military involvement. Although there is always at least some IEL that remains in effect and some degree of military necessity, the sliding scale refers to an inverse relationship between the two, whereby the effect of IEL decreases with increasing military necessity.

Essentially, the sliding scale results in the conclusion that IEL continues to apply to the point it becomes inconsistent with the law of armed conflict.²⁴³ Although this approach provides a useful explanation of the relationship between IEL and the law of war, it does not necessarily provide concrete explanations or criteria for which rules bind a military entity during different types and phases of engagement. At present, the various entities within the United States military have adopted guidelines that attempt to delineate the requirements that must be adhered to at various stages of armed conflict,²⁴⁴ ranging from training manoeuvres

to deployed military operations.²⁴⁵ Similarly, NATO has issued policy,²⁴⁶ doctrine,²⁴⁷ and instructions²⁴⁸ for environmental protection during NATO-led military operations. Quinn, Evans and Book hypothesized that these and similar efforts around the world would stimulate legal development in this field.²⁴⁹

International Law Commission findings on the effects of armed conflict on treaties

In 2000, the International Law Commission, with the support of the General Assembly, proposed to add work on the “effects of armed conflict on treaties” to its long-term programme. In 2004, the General Assembly approved the International Law Commission’s decision to include it on its current agenda. Since then, the Commission has reviewed several reports prepared on the topic,²⁵⁰ most recently considering and commenting upon a set of draft articles prepared by the Drafting Committee on the effects of armed conflicts on treaties.²⁵¹ The draft articles are an attempt to codify the applicability of treaties during times of armed conflict.

At present, the draft articles state that the instigation of armed conflict “does not necessarily terminate or suspend the operation of treaties,” either between belligerents or between belligerents and neutral parties.²⁵² Whether a treaty can be terminated, withdrawn from or suspended is to be determined in reference to the Vienna Convention on the Law of Treaties Articles 31 and 32, the nature of the armed conflict, the extent of the armed conflict, the effect of the armed conflict on the treaty, the treaty subject matter and the number of Parties to the treaty.²⁵³ Treaties whose subject matter “involves the implication that they continue in operation” indeed continue in effect during armed conflict.²⁵⁴ Among numerous others, the list of sample subject matter includes IHL, treaties relating to a permanent regime or status and treaties relating to the protection of the environment.²⁵⁵ The summarized debate of the categories included discussion of whether treaties that embodied *jus cogens* should be added, but it was ultimately decided that they should not and that “principles and rules having the character of *jus cogens* are not prejudiced.”²⁵⁶

Commentary on the continued applicability of customary IEL in times of conflict

Although customary international law is just as binding as MEAs are, it is important to consider the possibility that the two types of law may not be applied in identical ways. This distinction may in part stem from the fact that it is more difficult to determine the precise character of customary international law. There has been extensive commentary regarding which international environmental principles might constitute customary IEL or even potentially *jus cogens*. There is less commentary regarding whether and how customary IEL applies during armed conflict. Most commentators, however, posit that customary IEL continues to apply during armed conflict in a similar way to MEAs.

Jus cogens

Sharp has observed that although the Statute establishing the International Court of Justice (ICJ) does not address the relative weight of various types of legal instruments, the Vienna Convention on the Law of Treaties states that treaties pre-empt conflicting customary international laws unless the customary obligation is a *jus cogens*.²⁵⁷ Parsons has separately argued that “[i]t is premature to assert that any customary norms of IEL have achieved the status of *jus cogens*.”²⁵⁸ However, Parsons has also emphasized that simply because environmental norms have yet to become *jus cogens* does not mean that they are irrelevant during armed conflict. Rather, citing the Statute of the ICJ as support, Parsons finds that provisions of customary international law “enjoy equal status with convention-based norms” – and thus would remain equally applicable to belligerents.²⁵⁹

In a similar vein, Vöneky has determined that in addition to any environmental rules that rise to the level of *jus cogens*, customary international environmental legal provisions that “oblige States to protect the environment in the interest of the State community as a whole” or that are compatible with armed conflict also bind belligerent States. Vöneky has posited that whether a provision of customary international law applies during hostilities depends on whether it “entail[s] the same or similar material obligations as rules of environmental treaties.” If the obligations are the same or similar, then the customary provision should have equal precedential effect with regard to the law of war as would a peacetime treaty.²⁶⁰ Vöneky based her conclusion on the finding that there is as yet insufficient State practice to make all customary IEL universally apply during armed conflict.

Martens Clause

Appearing first in the Preamble to the 1899 Hague Convention II, then again in the 1907 Hague Convention IV and the 1949 Geneva Conventions, and finally in the substantive portion of the latter’s 1977 Additional Protocols I and II, the Martens Clause addresses the role of norms, custom and practice as the law of war develops.²⁶¹ As noted earlier, the Clause provides that “[u]ntil 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.”²⁶²

Although it is widely agreed that the Martens Clause is relevant to the law of armed conflict – indeed it is a basic IHL provision – there is great disparity as to how it has been interpreted. At one extreme is the view that it simply stands for the principle that customary international law is not automatically replaced by codified laws of war; on the other end is the opinion that in addition to the law of war, international treaties, and customary international law, belligerents are also bound by *principles* of international law.²⁶³

Sands has argued that there is no reason to believe environmental protection should be excluded from the principles referred to in the Martens Clause.²⁶⁴ Vöneky and Bothe have echoed similar sentiments,²⁶⁵ and Australian scholars Low and Hodgkinson have explained that “[i]nternational concern for the environment expressed through IEL has resulted in environmental protection becoming a factor which the military must take into account in determining the means and methods of warfare.”²⁶⁶ Low and Hodgkinson view the process as having been compounded by the development of Additional Protocol I and ENMOD, which expressly create “an emerging norm of environmental protection in wartime.”²⁶⁷ Finally, IUCN recommended the adoption of a “Martens Clause for Environmental Protection” at the Second World Conservation Congress in Amman in 2000.²⁶⁸ The recommendation was an articulation of the Martens Clause focused on protecting “the biosphere and all of its constituent elements and processes” until a “more complete international code” was adopted.

Contemporary customary IEL

Some observers have noted the possibility that particular international environmental principles may already, or may soon, constitute customary IEL. One article on the Trail Smelter Principle argues that although the “prohibition of transfrontier pollution” is not part of international agreements, through references in declarations and decisions it has become “generally acknowledged as part of customary law.”²⁶⁹ Another notes that the United States was the only State actively opposed to the passage of the World Charter for Nature when the resolution was brought before the United Nations,²⁷⁰ and proposes that “since it was adopted by a significant number of States, at the very least the Charter is incorporated in customary international law.”²⁷¹

This reasoning on the World Charter for Nature suggests that resolutions passed by the UN General Assembly may constitute customary international law. Indeed, as one article has noted, “[s]everal law theorists are concluding that the unanimous or near-unanimous passage of resolutions and declarations by an international organization such as the UN General Assembly constitutes a basis for customary international law.”²⁷² The impact of such an approach could be quite significant, as it could convert provisions contained within documents currently considered non-binding soft law into hard law.

4.5 Conclusions on international environmental law

Scholarship has provided a range of approaches to determine when and how IEL might continue to apply during armed conflict. However, the majority of the commentary occurred in the 1990s, following the 1990-1991 Gulf War. There has been less commentary on the subject in recent years, even though IEL has continued to grow and become more robust and easier to enforce. In addition, many countries have elaborated or updated

military manuals to incorporate environmental provisions. It would thus be useful for the international community to provide further research, analysis and clarification regarding which, if any, of the various approaches should be used.

Clarifying when and how IEL applies during armed conflict could have far-reaching consequences. One potentially significant implication would be the clear application of IEL to non-international armed conflicts. As noted above, most provisions of IHL apply only to international armed conflicts; to the extent that they apply to internal armed conflicts, those provisions – including the environmental provisions – are fewer and weaker. IEL, however, makes no such overt distinction, and could potentially be applied to all situations regardless of the type of conflict involved. Alternatively, depending on the theory of application, IEL may continue to apply with the same or greater force during internal conflicts than during international conflicts.

Establishing a foundational methodology for determining if IEL continues to apply during armed conflict is a substantial first step. Nevertheless, there are other complexities that likewise warrant consideration by the international community.

First, there are similar but distinct approaches to assessing the extent to which MEAs apply as compared to customary IEL. The primary differences stem from difficulties in determining which provisions constitute customary IEL, and then answering questions such as which of those customary provisions are comparable to those contained in MEAs.

Second, it should be considered whether it is desirable to attach liability for violations of IEL to State Parties and/or to individuals. Applying international law directly to individuals often increases the efficacy and deterrence effect of a given provision. Such direct application may apply in a couple of circumstances – for example, when a norm of IEL is self-executing and when a non-State actor has reached the point where it can be considered a subject of international law. International criminal law (ICL), reviewed in Chapter 3, is a special case: to the extent that ICL provides for individual criminal responsibility, the individual in question becomes a subject of international law for violations of the norms provided in ICL.

Third, the relationship between related international environmental treaties should be clarified. For instance, the Convention on Biological Diversity is an overarching conservation agreement that encompasses resources that are also more specifically addressed by other instruments. Thus, if the Convention on Biological Diversity is deemed not to apply, does the more specific agreement regulating the resource at issue (e.g. CITES or CMS) automatically apply in its place?

And fourth, it should be decided whether military operations are to be included in global attainment standards and requirements under MEAs. For example, should carbon dioxide emissions from military activities be added to national emission limits under the Kyoto Protocol (or its successor, currently under negotiation)?

5 Human rights law

5.1 Introduction

Human Rights Law (HRL) may provide additional guidance about State conduct affecting the environment and natural resources during armed conflict. Both treaty law and customary international law contain rules that ensure that the basic social and political rights of individuals are respected, including several that have been linked to environmental protection.

However, difficult questions arise when determining whether and to what extent HRL is applicable during armed conflicts. Some argue that in times of conflict, HRL is superseded and displaced by IHL, which is specifically designed for armed conflict. There has been significant difficulty in resolving this perceived incompatibility, particularly when it is unclear whether armed conflict is actually taking place. Besides, while States continue to have HRL duties, it is questionable whether non-State actors reach the level at which they would have similar HRL obligations.

International legal bodies, such as the International Court of Justice (ICJ), have regularly stated that HRL continues to apply in conflict situations. In other cases, they make reference to the customary law principle of *lex specialis*, which states that when two bodies of law could apply in a given situation, the body of law that is more specific in its provisions displaces the other – or, at least, that the more general law should be interpreted in the light of the more specific. This would indicate that when there are divergences between IHL and HRL in conflict situations, IHL supersedes HRL as the legal framework more specifically designed for armed conflict.²⁷³ However, it should be noted that the *lex specialis* principle was specifically questioned in the ICJ *DR Congo v. Uganda Case* (2005), when the court applied HRL in the context of occupation, stating that both bodies of law (IHL and HRL) were relevant and would be taken into consideration.²⁷⁴

This chapter identifies which express environmental human rights could apply to protect the environment during armed conflict through an analysis of the HRL framework. In addition, it examines whether there are more general HRL guarantees that may have an environmental bearing (for instance, the right to life or the right to health).

5.2 The legal framework

Several HRL instruments establish the link between human rights and environmental protection, but very few contain provisions on their application in times of conflict. A few major HRL texts are regularly cited as relevant to environmental issues and may directly or indirectly offer protection for the environment in times of armed conflict. In addition, regional convention law and national legislation concerning human rights and the environment should be considered.

Universal Declaration of Human Rights (1948)

“Environment” and “environmental protection” are not mentioned explicitly in the Universal Declaration of Human Rights. However, a contemporary reading of the Declaration could make several provisions relevant to environmental protection. These include, for example, Article 3 on the “right to life,” Article 25 on adequate standards of living and Article 30 reflecting the “do no harm” principle. The Universal Declaration of Human Rights, however, belongs to the corpus of soft law and is subsequently not legally binding, except to the extent that its provisions have been accepted as customary international law.

International Covenant on Civil and Political Rights (1966)

Two articles of the International Covenant on Civil and Political Rights could help protect the environment during armed conflict. Article 27,²⁷⁵ providing minority groups with protection for their culture and their traditional practices, has a long history of case law behind it. Decisions by the UN Human Rights Committee, which oversees compliance with the Covenant, regularly support self-determination and consultation regarding natural resource access and utilization.²⁷⁶ This could indicate that during conflict situations, occupying States could be required to let local groups control resources, when those resources are not considered a legitimate military objective.

Article 17 has frequently been interpreted as prohibiting environmental damage that negatively affects family and home life. The *Temeharo v. France Case* in 1995-1996, which concerned nuclear tests in the South

Pacific, was ultimately dismissed by the Human Rights Committee because the applicants were unable to adequately demonstrate that they were victims of the environmental damage.²⁷⁷ However, the Committee implicitly conceded that if the claim for environmental damage was supported by clear scientific data and there were clear victims of this damage, it could be considered a violation of Article 17. Such analysis and application of Article 17 could apply in conflict circumstances as well, particularly where IHL did not have more specific provisions (i.e. as a “gap filler” in international law).

International Covenant on Economic, Social and Cultural Rights (1966)

The UN Covenant on Economic, Social and Cultural Rights has also addressed the role of HRL in protecting the environment. Article 1 of the Covenant states that “in no case may a people be deprived of its own means of subsistence.” Since so many people depend on natural resources and the environment for subsistence, Article 1 establishes a clear link between human rights and the protection of natural resources that are essential to the survival of a people. General Comments issued by the Committee on Economic, Social and Cultural Rights have addressed the important role that environment has for housing and family, as well as for health, asserting that Articles 11 and 12 ensure access to a “healthy environment.”

Other instruments of international HRL

A number of additional instruments of HRL can be mentioned in this context:

- The UN General Comments regarding the Convention on the Elimination of Discrimination against Women (1979)²⁷⁸ and the Convention on the Rights of the Child (1989)²⁷⁹ have described environmental degradation as an infringement of relevant human rights.
- UNGA Resolution 55/2 *The United Nations Millennium Declaration* of 8 September 2000 promotes the “respect for nature” as a fundamental value and dedicates a full chapter to “protecting our common environment.”
- The 2007 Declaration on the Rights of Indigenous Peoples and the 1989 Indigenous and Tribal Peoples Convention, respectively, in their Articles 29 and 15 make reference to environmental protection.
- UNGA Resolution XXIV 2542 *Declaration on social progress and development* of 11 December 1969 (in Articles 9 and 25) and the 1986 *Declaration on the right to development* both make reference to the sovereignty of the people over their natural resources.
- Some resolutions by the Human Rights Commission (e.g. Resolution 2003/71 and Resolution 2004/119) encourage cooperation between UNEP and the

Office for the High Commissioner for Human Rights in capacity-building activities and the promotion of the linkages between human rights and the environment.

- The 2005 UN Secretary-General’s report on Human Rights and Environment as part of Sustainable Development acknowledges that the work carried out by human rights treaty bodies and the special procedures of the Commission on Human Rights, as well as several MEAs adopted in the recent past years, provide several examples of the connection between environmental protection and human rights.

Regional convention law

In addition to global treaties, regional agreements often provide more concrete texts defining and protecting human rights. As a result, conflicts in the Americas, Africa or Europe may have additional environmental protection offered by the regional judicial bodies overseeing these regional human rights instruments.

The Inter-American Human Rights System, for example, specifically protects the “right to a healthy environment.”²⁸⁰ Several cases and reports have affirmed and reaffirmed this right, particularly for indigenous populations, including cases in Nicaragua (2001),²⁸¹ Ecuador (1997)²⁸² and Brazil (1985).²⁸³ However, although these rights have been tested against government intrusion, they have not yet been tested against damage attributable to non-State actors (guerrillas or paramilitary).

The African Charter on Human and Peoples’ Rights takes a similar approach for the African continent. Article 24 of the Charter guarantees the “right to a generally satisfactory environment.” The most important case regarding environmental damage filed to date was in 1996, concerning degradation due to oil extraction and conflict in Ogoniland, Nigeria. The case was decided on its merits and the African Commission on Human and Peoples’ Rights found violations of Article 24, among several others.

Finally, the European Court of Human Rights has issued several decisions concerning pollution and its injurious effect on people’s homes and privacy. Article 8 of the 1950 European Convention on Human Rights intends to (8.1) balance the needs of the individual and (8.2) the needs of the public by ensuring protection of home life and privacy, but with the caveat that it can be violated for activities that are highly beneficial to the community. There has been little discussion regarding its applicability during conflict.

National legislation and enforcement

At the national level, the right to a healthy environment has been officially recognized in most national constitutions adopted after 1992 (the Rio Conference).²⁸⁴ This is where environmental protection is often stated



UN investigator Richard Goldstone visits a destroyed house in Gaza City

with the highest standard as an essential independent human right. Application and enforcement of these norms has grown significantly in recent years, as has the body of case law at the national level, which could inspire international jurisdictions.²⁸⁵

5.3 Conclusions on human rights law

The fundamental question of applicability of HRL during internal conflicts is contentious. The current literature indicates that when IHL treaties, as *lex specialis*, do not provide clear guidance, HRL may mandate more stringent protections of the environment and natural resources.

Furthermore, if significant damage were done to the environment or natural resources during an internal conflict, HRL would suggest that an affected person or community could seek relief with the UN and regional human rights organs, rather than rely only on grave breaches of IHL and war crimes proceedings. This is where the complementarity between IHL and HRL seems to enhance protection, by strengthening the means of enforcement of the law.

Finally, the 2009 *United Nations Fact Finding Mission on the Gaza Conflict*, appointed by the President of the Human Rights Council, further demonstrated that the human rights approach and its investigatory mechanisms can offer effective remediation avenues for environmental damages during armed conflicts.

6 Conclusions and recommendations

The existing international legal framework – including international humanitarian law, international criminal law, international environmental law, and human rights law – contains many provisions that either directly or indirectly protect the environment and govern the use of natural resources during armed conflict.

In practice, however, these provisions have not always been effectively implemented or enforced. Where the international community has sought to hold States and individuals responsible for environmental harm caused during armed conflict, results have largely been poor, with one notable exception: holding Iraq accountable for damages caused during the 1990-1991 Gulf War, including for billions of dollars worth of compensation for environmental damage.

This analysis of international law protecting the environment during armed conflict – supplemented by the inputs of the 20 leading experts who participated in the joint ICRC/ UNEP meeting on the protection of the environment during armed conflict in Nairobi in March 2009 – culminates in a number of key findings and recommendations, explaining why the environment continues to lack effective protection during armed conflict, and how these challenges can be addressed to ensure that the legal framework is strengthened and better enforced.

Key findings

1. **Articles 35 and 55 of Additional Protocol I to the 1949 Geneva Conventions do not effectively protect the environment during armed conflict due to the stringent and imprecise threshold required to demonstrate damage:** While these two articles prohibit “widespread, long-term and severe” damage to the environment, all three conditions must be proven for a violation to occur. In practice, this triple cumulative standard is nearly impossible to achieve, particularly given the imprecise definitions for the terms “widespread,” “long-term” and “severe.”
2. **Provisions in humanitarian law that regulate the means and methods of warfare or protect civilian property and objects provide indirect protection of the environment:** Restrictions on the means of warfare (in particular weapons) and the methods of warfare (such as military tactics) provide indirect protection to the environment, although new technologies, such as the use of depleted uranium, are not yet addressed – except by the general principles of the law of war. Provisions that protect civilian property and objects, including industrial installations and cultural/natural sites, also provide indirect protection to the environment. However, these protections have rarely been effectively implemented or enforced.
3. **The majority of international legal provisions protecting the environment during armed conflict were designed for international armed conflicts and do not necessarily apply to internal conflicts:** Given that most armed conflicts today are non-international or civil wars, much of the existing legal framework does not necessarily apply. This legal vacuum is a major obstacle for preventing the often serious environmental damage inflicted during internal conflicts. There are also no institutionalized mechanisms to prevent the looting of natural resources during armed conflict or to restrict the granting of concessions by combatants that may lack legitimacy or legal authority. In addition, there are no systematic mechanisms to prevent States or corporations from aiding and abetting civil war parties in causing environmental damage or looting natural resources.
4. **There is a lack of case law on protecting the environment during armed conflict because of the limited number of cases brought before the courts:** The provisions for protecting the environment during conflict under the four bodies of international law have not yet been seriously applied in international or national jurisdictions. To date, only a very limited number of cases have been brought before national, regional, and international courts and tribunals in this context. Moreover, in cases where decisions were handed down, procedural rather than merit-based reasoning has predominated. This lack of case law contributes to the sense that there is a reluctance or difficulties in enforcing the applicable law.
5. **There is no permanent international mechanism to monitor legal infringements and address compensation claims for environmental damage sustained during international armed conflicts:** The international community is inadequately equipped to monitor legal violations, determine liability and support compensation processes on a systematic basis for environmental damage caused by international armed conflicts. The existence and implementation of such a mechanism could act as a standing deterrent

to prevent environmental damage, as well as redress wartime infringements. While an investigative body exists for violations of Additional Protocol I to the 1949 Geneva Conventions, investigations can only be carried out with the consent of countries, are not systematic and do not address violations of other instruments.

6. **The general humanitarian principles of distinction, necessity, and proportionality may not be sufficient to limit damage to the environment:** The practical difficulty of establishing the threshold of these principles, which lack internationally agreed standards, makes it easier to justify almost any environmental damage if the military necessity is considered to be sufficiently high. This limits the practical effectiveness of these principles for preventing damage to the environment. The ICRC emphasizes the importance of taking a precautionary approach in the absence of scientific certainty about the likely effects of a particular weapon on the environment.
7. **Environmental damage that contributes to war crimes, crimes against humanity and genocide is a criminal offence under international law:** Destruction of the environment and depletion of natural resources may be a material element or underlying act of other crimes contained within the Rome Statute. It is therefore subject to criminal liability and prosecution by the International Criminal Court (ICC) and national criminal jurisdictions of Parties to the ICC. This applies to both internal armed conflicts within State Parties and international conflicts between State Parties. Acts of pillage as a war crime are of particular interest and could be used to prosecute the practice of looting natural resources during conflicts.
8. **Unless otherwise stated, international environmental law continues to apply during armed conflicts and could be used as a basis for protection:** The provisions of multilateral environment agreements (MEAs) should be regarded as continuing to apply during both international and non-international armed conflict, unless they specifically stipulate otherwise. The notion that international humanitarian law replaces international environmental law as the operational body of law during armed conflict is no longer the prevailing opinion of legal experts, including the International Law Commission. In addition, international environmental law could be used in the interpretation of incomplete or insufficiently clear norms of international humanitarian law.
9. **Human rights law, commissions and tribunals can be used to investigate and sanction environmental damage caused during international and non-international armed conflicts:** Linking environmental damage to the violation of fundamental human rights offers a new way to investigate and sanction environmental damages, particularly in the context of non-international armed conflicts. A variety of human rights fact-finding missions, including that led by Judge

Goldstone in the Gaza Strip in 2009, have investigated environmental damages that have contributed to human rights violations. This approach could provide an interim solution to address environmental damages until international humanitarian law and associated enforcement institutions are strengthened.

10. **There is no standard UN definition of what constitutes a “conflict resource” and when sanctions should be applied to stop illegal exploitation and trade of such resources:** Considering the frequent role of high-value natural resources, such as diamonds, oil and timber, in providing revenue streams for the purchase of weapons and hiring of combatants, a standard definition by the UN is required for identifying “conflict resources.” Such a definition would facilitate a more consistent and effective international approach to sanctions.

Recommendations

1. **The terms *widespread*, *long-term* and *severe* within Articles 35 and 55 of Additional Protocol 1 to the 1949 Geneva Conventions should be clearly defined:** To improve the effectiveness of Articles 35 and 55, clear definitions are needed for “widespread,” “long-term,” and “severe.” As a starting point in developing these definitions, the precedents set by the 1976 ENMOD convention should serve as the minimum basis, namely:
 - “Widespread” encompasses an area on the scale of several hundred square kilometres;
 - “Long-term” is a period of months, or approximately a season; and
 - “Severe” involves serious or significant disruption or harm to human life, natural economic resources or other assets.
2. **The ICRC *Guidelines on the Protection of the Environment during Armed Conflict* (1994) require updating and subsequent consideration by the UN General Assembly for adoption, as appropriate:** In view of the rapid transformations in the methods and means of warfare, as well as the increase in non-international armed conflicts, updating of the 1994 ICRC *Guidelines* is necessary. Once endorsed by the General Assembly, States would be in a position to adopt and reflect these guidelines in national legislation and military manuals as appropriate, as well as to integrate them into the training of their armed forces. In particular, the revised guidelines should:
 - Explain how damage to the environment affects human health, livelihoods and security, and undermines effective peacebuilding;
 - Define key terms such as “widespread,” “long-lasting,” and “severe” as suggested above;
 - Address the continued application of international environmental law during armed conflict;

- Explain how damage to the environment can be considered a criminal offense under international criminal law, enforceable in both international and national courts; and
 - Examine protection for the environment and natural resources in the context of non-international armed conflicts.
3. **The International Law Commission (ILC) should examine the existing international law for protecting the environment during armed conflict and recommend how it can be clarified, codified and expanded:** As the leading UN body with expertise in international law, the UN General Assembly may request the ILC to examine the effectiveness of existing international law for protecting the environment during armed conflict. This examination should include:
- An inventory of the legal provisions and the identification of gaps and barriers to enforcement;
 - An exploration of options for clarifying and codifying this body of law;
 - The definition of key terms such as “widespread,” “long-term,” and “severe,” as suggested above;
 - The consideration of the applicability of multilateral environmental agreements during armed conflicts as part of its ongoing analysis of the “effect of armed conflicts on treaties;”
 - Extending protection of the environment and natural resources in the context of non-international armed conflict; and
 - Considering how the detailed standards, practice and case law of international environment law could be used to help clarify gaps and ambiguities in international humanitarian law.
4. **International legal practitioners should be trained on enforcing the existing international law protecting the environment during armed conflict:** In order to enrich the corpus of case law available, international judges, prosecutors and legal practitioners should be trained on the content of the international law that can be used to prosecute environmental violations during armed conflict. The subsequent development of case law would help bring clarity to existing provisions and increase deterrence by adding a credible threat of prosecution for violations. Training should include:
- Direct and indirect provisions from all four bodies of international law, as well as those contained in the various sources of treaty law, customary law, soft law and case law; and
 - Options for incorporating the provisions of international law directly into national legislation.
5. **Countries that wish to protect the environment during armed conflict should consider reflecting the relevant provisions of international law in national legislation:**
- In order to ensure that environmental violations committed during warfare are prosecuted, the provisions of international law that protect the environment in times of conflict should be fully reflected at the national level. This will require targeted capacity-building programmes for legal drafters and practitioners addressing the following issues:
- Ways to reflect the relevant provisions of international law in existing or new national legislation;
 - Options for implementing and enforcing legal provisions protecting the environment in times of armed conflict; and
 - Options for using national legislation for holding individuals and corporations accountable for environmental damages committed abroad as underlying acts of war crimes.
6. **A permanent UN body to monitor violations and address compensation for environmental damage should be considered:** Even though the UN Compensation Commission (UNCC) was established by the Security Council to process compensation claims relating to the 1990-1991 Gulf War, UN Member States may want to consider how a similar structure could be established as a permanent body, either under the General Assembly or under the Security Council. The following functions should be considered within the mandate of such a body:
- Investigate and decide on alleged violations of international law during international and non-international armed conflicts;
 - Handle and process compensation claims related to environmental damage and loss of economic opportunities as well as remediation activities; and
 - Develop norms and mechanisms on victim assistance, international assistance and cooperation to assess and redress the environmental consequences of armed conflict.
7. **The international community should consider strengthening the role of the Permanent Court of Arbitration (PCA) to address disputes related to environmental damage during armed conflict:** In 2002, the PCA adopted the “Optional Rules for Conciliation of Disputes Relating to the Environment and/or Natural Resources.” These rules provide the most comprehensive set of environmentally tailored dispute resolution procedural rules presently available and could be extended to disputes arising from environmental damage during armed conflict. With an expanded role, the PCA could perform the following functions:
- Establish a comprehensive list of scientific and technical experts who may be appointed as expert assessors and/or witnesses in assessing environmental damage and compensation levels:

- Work in close cooperation with permanent or ad hoc compensation mechanisms that are established; and
 - Ensure that the environmental rules contained in the dispute resolution clauses are incorporated as amendments in existing multilateral environmental agreements or as new ones.
8. **The United Nations should define “conflict resources,” articulate triggers for sanctions and monitor their enforcement:** The UN should consider defining “conflict resources” and articulating the extent to which the misuse of certain natural resources (e.g. for financing conflict) constitutes a “threat to peace and security.” In particular:
- Conflict resources could be defined as natural resources whose systematic exploitation and trade in a context of conflict contribute to, benefit from or result in the commission of serious violations of human rights, violations of international humanitarian law, or violations amounting to crimes under international law;
 - Once conflict resources are identified and international sanctions are issued, a new mechanism is needed for monitoring and enforcement;
 - The mandate of peacekeeping operations for monitoring the illegal exploitation and trade of natural resources fuelling conflict as well as for protecting sensitive areas covered by international environmental conventions should be reviewed and expanded as necessary; and
 - Conflict resources often need special management provisions in post-conflict settings to minimize their potential contribution to conflict relapse. Where resource exploitation has driven war, or could serve to undermine peace, improving governance capacity to control natural resources is an important element of peacebuilding.
9. **A new legal instrument is needed for place-based protection of critical natural resources and areas of ecological importance during armed conflicts:** A new legal instrument granting place-based protection for critical natural resources and areas of ecological importance during international and non-international armed conflicts should be developed:
- At the outset of any conflict, critical natural resources and areas of ecological importance would be delineated and designated as “demilitarized zones;”
 - Parties to the conflict would be prohibited from conducting military operations within their boundaries; and
 - This could include protection for watersheds, groundwater aquifers, agricultural and grazing lands, parks, national forests, and the habitat of endangered species.
10. **Legal agreements and concessions covering natural resources issued by conflict parties often lack legitimacy and should be reviewed at the outset of the post-conflict period:** Concessions over natural resources issued during conflicts often lack legitimacy and may not reflect best practice in terms of transparency, benefit-sharing, public participation, and environmental impact assessment. Disagreements over these concessions can destabilize post-conflict peacebuilding. Accordingly:
- Steps taken by many countries to review and re-issue concessions over high-value natural resources as part of the peacebuilding process should be encouraged; and
 - Efforts undertaken by international organizations to help build capacity for reviewing and issuing post-conflict concessions should be expanded.
11. **Environmental protection should be considered during the First Review Conference of the International Criminal Court (ICC) Statute in 2010:** States that will participate in the First Review Conference of the ICC Statute in 2010 should consider the adequacy of the existing rules regarding the protection of the environment in armed conflict. In particular, they should:
- Consider how best to extend provisions for protecting the environment during non-international armed conflicts; and
 - Consider how to build capacity to adopt, implement and enforce international criminal law in the national legislation of State Parties.
12. **A summary report on the environmental impacts of armed conflicts should be presented on an annual basis to the UN General Assembly, in conjunction with the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict:** The UN General Assembly should consider requesting the Secretary-General to submit a report annually on 6 November on the environmental impacts of armed conflicts. The report should:
- Detail the direct, indirect and institutional environmental impacts caused by ongoing and new international and non-international armed conflicts in the reporting year;
 - Recommend how the various threats to human life, health and security from damage to natural resources and the environment in each country can be addressed; and
 - Recommend in each case how natural resources and the environment can be used to support recovery and peacebuilding.

Annex 1

Glossary of terms used in this report

Actus reus: Latin for “guilty act,” *actus reus* is sometimes called the external or objective element of a crime. As an element of criminal responsibility, *actus reus* is the wrongful act or omission that comprises the physical components of a crime. *Actus reus*, when proved beyond a reasonable doubt in combination with *mens rea*, “guilty mind,” produces criminal liability in common-law based criminal law jurisdictions.

Ad hoc: Latin for “this purpose only.”

Armed conflict: A dispute involving the use of armed force between two or more parties. International humanitarian law distinguishes between international armed conflict and non-international armed conflict.

Article: A paragraph or section of any writing, such as a legal agreement or statute.

Biological weapons: A weapon of mass destruction based on pathogenic biological agents that infect their victims, causing incapacitation and often death. Biological weapons may include ammunition loaded with biological agents (e.g. missile warheads, bombs, tube or rocket artillery ammunition) and their delivery systems.

Case law: A source of law constituted of reported decisions of courts and judicial mechanisms, which make new interpretations of the law and can therefore be cited as precedents.

Chapeau requirement: Refers to the text that is comprised at the beginning of an article and that is applicable to all the sub-sections of the article.

Chemical weapons: The “active” components of chemical weapons are substances known as chemical agents. Chemical weapons agents are defined as any chemical substance intended to kill, seriously injure or incapacitate humans due to its physiological effects. Some of these poisons and poisoned weapons cause severe damage and destruction to the natural environment, ecosystems and groundwater supplies, which takes decades to recover from.

Civil war: A war between factions, organized groups or regions of the same country; also referred to as a non-international armed conflict.

Code: A collection of written laws gathered together, usually covering one specific subject matter.

Conflict resources: Natural resources whose systematic exploitation and trade in a context of conflict contribute to, benefit from or result in the commission of serious violations of human rights, violations of international humanitarian law, or violations amounting to crimes under international law.

Convention: In the legal sense, a convention is a set of agreed, stipulated, generally accepted standards, and norms, taking the form of a treaty in international law.

Conventional weapons: Weapons that are not strictly forbidden according to conventions, such as the Convention on Cluster Munitions or the Ottawa Treaty. Although the term “conventional weapons” is primarily used to refer to explosive weapons, the UN Convention on Conventional Weapons and its Protocols also include controls on blinding laser, incendiary weapons and cluster munitions.

Customary international law: International norms derived from a general and consistent practice of States and followed by them out of a sense of legal obligation (*opinio juris*), rather than from formal expression in a treaty or legal text. Such norms are legally binding on all States, with the exception of those States that are “persistent objectors.”

Depleted uranium: The main by-product of uranium enrichment, depleted uranium is a chemically and radiologically toxic heavy metal. This dense metal is used in munitions for its penetrating ability and as a protective material in armoured vehicles.

Glossary of terms used in this report

Environment: The sum of all external conditions affecting the life, development and survival of an organism. In the context of this report, environment refers to the physical conditions that affect natural resources (climate, geology, hazards) and the ecosystem services that sustain them (e.g. carbon, nutrient and hydrological cycles).

Erga omnes obligation: Latin for “a universal obligation that applies towards all.” Such obligations exist because of the universal interest in preventing their breach.

Geophysical warfare: Refers to military tactics that turn the geophysical patterns of the earth into weapons, for instance, by provoking earthquakes, tsunamis, and changes in weather patterns (prohibited by the 1976 ENMOD Convention).

Human rights law: The body of law that guarantees protection of individual and collective rights of human beings, including fundamental human rights and rights associated with civil, political, and socio-economic human activities.

Inter alia: Latin term for “among other things.” Legal drafters often use this term to precede a list of examples or samples covered by a more general descriptive statement.

International criminal law: The body of laws, norms and rules governing international crimes and their repression, as well as rules addressing conflict and cooperation between national criminal law systems. ICL operationalizes other bodies of law, including international humanitarian law and human rights law, as it adjudicates cases where individuals have incurred international criminal responsibility.

International Committee of the Red Cross: Established in 1863, the ICRC is an impartial, neutral and independent organization whose humanitarian mission is to protect the lives and dignity of victims of armed conflict and other situations of violence and to provide them with assistance. The ICRC also endeavours to prevent suffering by promoting and strengthening humanitarian law and universal humanitarian principles.

International environmental law: The body of international law that concerns the protection of the global environment. It is mainly constituted of multilateral environmental agreements (MEAs) dealing with various areas and subjects of protection.

International humanitarian law: The body of international law that seeks, for humanitarian reasons, to regulate war and armed conflict. IHL mainly focuses on two issues: protecting persons who are not or are no longer participating in the hostilities, and restricting the means and methods of warfare by prohibiting weapons that make no distinction between combatants and civilians or weapons and methods of warfare which cause unnecessary injury, suffering and/or damage. The principal instruments of International Humanitarian Law are the four Geneva Conventions of 1949 and their two Additional Protocols of 1977. International Humanitarian Law is also known as the law of war or the law of armed conflicts.

International Law Commission: Established in 1948, the ILC is the UN body in charge of promoting the progressive development and codification of international law.

Interim relief: Relief obtained by one of the parties to a case and corresponding to a temporary order of the court pending a hearing, trial, a final order or while awaiting an act by one of the parties.

International armed conflict: A conflict involving two or more States, regardless of whether a declaration of war has been made or whether the parties recognize that there is a state of war. Parties engaged in an international armed conflict are subject to a wide range of rules, including those set out in the four Geneva Conventions and Additional Protocol I.

Jurisdiction: The authority given by law to a court to try cases and rule on legal matters within a particular geographic area and/or over certain types of legal matters. Decision on jurisdiction is necessary before a court may take a decision on the merits or substance of a case.

Jurisprudence: The law emanating from courts’ decisions and which creates precedents; also referred to as case law.

Jus cogens: Latin expression referring to a principle or norm of international law that is based on values taken to be fundamental to the international community and that cannot be disregarded (as erga omnes obligations).

Law of war: Is synonymous with international humanitarian law.

Lex generalis: Latin referring to “a law governing general matters.”

Lex specialis: Latin referring to “a law governing a specific subject matter.” The *lex specialis* principle states that a law governing a specific subject matter overrides a law which only governs general matters (*lex generalis*).

Livelihood: A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. It is considered sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

Martens Clause: A general provision that was first adopted at the 1899 Hague Conference and thereafter contained in the Preamble of the 1907 Hague Convention IV and the 1949 Geneva Conventions, the Martens Clause is widely considered to constitute a foundational principle of international humanitarian law. The Martens Clause broadens the range of applicable norms governing conduct during armed conflict beyond those that are laid out in the treaty instruments and states that “[u]ntil a more complete code of the laws of war has been issued, the High Contracting Parties deem it expedient to declare that, in cases not included in the Regulations adopted by them, the inhabitants and the belligerents remain under the 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 conscience.”

Mens rea: Latin for a “guilty mind,” it designates the criminal intent in committing an illegal act.

Natural resources: Natural resources are actual or potential sources of wealth that occur in a natural state, such as timber, water, fertile land, wildlife, minerals, metals, stones, and hydrocarbons. A natural resource qualifies as a renewable resource if it is replenished by natural processes at a rate comparable to its rate of consumption by humans or other users. A natural resource is considered non-renewable when it exists in a fixed amount, or when it cannot be regenerated on a scale comparative to its consumption.

Non-international armed conflict: A conflict which is restricted to the territory of a single State, and involves either regular government armed forces and a non-governmental party/insurgency, or non-governmental armed groups fighting each other. A more limited range of rules applies to non-international or internal armed conflict. These are covered under Article 3 common to the four Geneva Conventions, as well as in Additional Protocol II; also referred to as civil war.

Non-liquet: Latin for “it is not clear.” A *non-liquet* is a situation where there is no applicable law.

Norm: A rule or standard of behaviour shared by members of a social group

Omnibus resolution: A resolution assembling various other resolutions (decisions), taken on the same topic, by the same decision-making body.

Opinio juris: Derived from the Latin phrase *opinio juris sive necessitatis* (“an opinion of law or necessity”). In customary international law, *opinio juris* is the second element (along with state practice) necessary to establish a legally binding custom. *Opinio juris* denotes a subjective obligation, which is used to judge whether the practice of a state is due to a belief that it is legally obliged to do a particular act.

Peacebuilding: Comprises the identification and support of measures needed for transformation toward more sustainable, peaceful relationships and structures of governance, in order to avoid a relapse into conflict. The four dimensions of peacebuilding are: socio-economic development, good governance, reform of justice and security institutions, and the culture of justice, truth and reconciliation. Peacebuilding involves a full range of approaches, processes, and stages needed for transformation toward more sustainable, peaceful relationships and governance modes and structures.

Peacekeeping: Is both a political and a military activity involving a presence in the field, with the consent of the parties, to implement or monitor arrangements relating to the control of conflicts (cease-fires, separation of forces), and their resolution (partial or comprehensive settlements), as well as to protect the delivery of humanitarian aid.

Per se: Qualifies something that directly addresses the subject matter of attention.

Peremptory norm: A norm accepted and recognized by the international community of States as a whole as a norm from which no derogation is permitted and which can be modified only by a subsequent norm of general international law having the same character.

Persons hors de combat: French expression qualifying persons who are not or no longer making a direct contribution to the military activities.

Prima facie jurisdiction: Latin term expressing the preliminary assessment of a court on the question of admissibility of a case – literally “at first sight.”

Principle: A norm acknowledged and recurrent across a large variety of legal instruments, which provides normative guidance in the interpretation of more specialized provisions.

Protocol: In international law, a protocol is generally an international agreement or treaty which supplements a previous international agreement or treaty. A protocol can amend a previous treaty, or add additional provisions. Parties to the earlier agreement are not required to adopt the protocol.

Glossary of terms used in this report

Ratio decidendi: Latin for “the reason” or “the rationale for the decision,” *ratio decidendi* refers to the legal, moral, political and social principles used by a court to compose the rationale of a particular judgement, and which forms the binding judicial precedent. The *ratio decidendi* is “the point in a case that determines the judgement” or “the principle that the case establishes.”

Ratione materiae competence: Latin expression meaning the competence of a court to judge a case based on its merits (the substance of the legal question).

Sanctions: Penalties or other means of enforcement used to provide incentives for obedience with the law, or with rules and regulations. Economic sanctions typically involve a ban on trade, possibly limited to certain sectors such as armaments, or with certain exceptions (such as food and medicine). International sanctions are coercive measures adopted by a country or group of countries against another state or individual(s) in order to elicit a change in their behaviour.

Sic utere tuo principle: From the latin phrase *sic utere tuo ut alienum non laedas*, a fundamental property right/principle which states that persons must use their property so as not to cause harm to that of others.

Soft law: Refers to quasi-legal instruments that do not have any legally binding force, or whose binding force is somewhat “weaker” than the binding force of traditional “hard law.” In the context of international law, soft law includes elements such as resolutions, decisions, declarations, statements, principles, codes of conduct and practice, which are often found as part of framework treaties, as well as other non-treaty obligations.

Treaty law: Contains all written norms emanating from legal instruments, such as international treaties and protocols that have been negotiated, adopted and ratified by participating States.

Triple cumulative standard: Is a standard that contains three criteria that all have to be verified for a violation to be qualified.

Usufruct: The legal right to use and derive benefit from property that belongs to another person, as long as the property is not damaged.

Annex 2

Acronyms

BWC	Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction
CCW	Convention on Certain Conventional Weapons
CITES	Convention on the International Trade of Endangered Species of Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CWC	Chemical Weapons Convention
ELI	Environmental Law Institute
ENMOD	United Nations Convention on the Prohibition of Military or Any Other Use of Environmental Modification Techniques/Environmental Modification Convention
GAOR	General Assembly Official Records
HRL	Human rights law
IAC	International armed conflict
ICC	International Criminal Court
ICJ	International Court of Justice
ICL	International criminal law
ICRC	International Committee of the Red Cross
ICTY	International Criminal Tribunal for the former Yugoslavia
ILC	International Law Commission
IEL	International environmental law
IHL	International humanitarian law
IUCN	International Union for the Conservation of Nature
LRTAP	Convention on Long-Range Transboundary Air Pollution
MARPOL	International Convention for the Prevention of Pollution from Ships
MEA	Multilateral environmental agreement
MONUC	Mission des Nations Unies au Congo (United Nations Mission in the Democratic Republic of Congo)
NATO	North Atlantic Treaty Organization
NIAC	Non-international armed conflict
OILPOL	International Convention for the Prevention of Pollution of the Sea by Oil
PCA	Permanent Court of Arbitration
PCDMB	UNEP Post-Conflict and Disaster Management Branch
RES	Resolution
UN	United Nations
UNCC	United Nations Compensation Commission
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNESCO	United Nations Education, Scientific and Cultural Organization
UNGA	United Nations General Assembly
UNSC	United Nations Security Council
UNTS	United Nations Treaty Series
US	United States
USD	United States dollar
VEREX	Verification Experts Group (for the BWC)

Annex 3

Endnotes

- 1 Established by the General Assembly in Resolution 56/4 on 5 November 2001.
- 2 The Uppsala University Conflict Data Program defines “armed conflict” as “a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in one calendar year.”
- 3 Uppsala Conflict Data Program Database: <http://www.pcr.uu.se/gpdatabase/search.php>
- 4 ICJ Statute, Article 38.
- 5 Anderson and Grewell (2000:11), citing Kelly (2000:470-476).
- 6 This summary discussion focuses on the core treaty law provisions. For a more thorough analysis, see e.g. Roberts (2000:47–86); Schmitt (2000:87-136); Falk (2000:137-155).
- 7 Bouvier (1999:599); Antoine (1992:540).
- 8 Lijnzaad and Tanja (1993:180); Verwey (1994:36).
- 9 Bothe et al. (1982).
- 10 Over 55,000 tonnes of chemical defoliants have been targeted to forests and crops in Viet Nam, see Westing (1980:79).
- 11 Karen Hulme (2004:5).
- 12 See official commentary on the 1977 Additional Protocol I, Article 35, <http://www.icrc.org/ihl.nsf/COM/470-750044?OpenDocument>
- 13 CCW, adopted on 10 October 1980, UN Document A/CONF.95/15.
- 14 ICJ Statute, Article 38.
- 15 Verwey (1994:44); Schmitt (2000:33).
- 16 Schmitt (2000).
- 17 Certain commentators hold that the two legal regimes of IHL and environmental protection law have much in common, sharing the same basis in practice and philosophy. See, e.g. Malviya (2001).
- 18 Fenrick (2000:80).
- 19 Bodansky (2003:34).
- 20 Bouvier (1999). A number of scholars observed that Iraq’s actions during the 1990-1991 Gulf War violated Article 23(g), e.g. Schmitt (2000:33).
- 21 1907 Hague Regulations, Article 23(e).
- 22 Hague Convention IV, Preamble; see also Geneva Conventions Additional Protocol I, Article 1(2).
- 23 IUCN, *A Martens Clause for Environmental Protection*, World Conservation Congress Resolution 2.97, October 2000; for a detailed discussion, see its Chapter 5.3 (ii) 2.
- 24 Lijnzaad and Tanja (1993:175).
- 25 Protocol adopted on 17 June 1925.
- 26 Buchta (1997).
- 27 The “active” components of chemical weapons are substances known as chemical agents. Chemical weapons agents are defined as any chemical substance intended to kill, seriously injure or incapacitate humans due to its physiological effects. Some of these poisons and poisoned weapons are also highly damaging to the natural environment, damaging ecosystems and groundwater supplies, and can cause damage that takes decades to recover from.

- 28 Cf UNGA Resolution 2826 (XXVI) 1971; the BWC entered into force on 23 March 1975.
- 29 Biological weapons may be defined as living organisms that infect their victims, causing incapacitation and often death. Some can spread to other living entities, even those not initially attacked. Measured by their capability to contaminate soil and water and hence despoil an ecosystem for a prolonged period, the environmental harms caused by chemical and biological weapons may exceed the damage caused by most explosive munitions, though with various degrees of extent and gravity; see Kellman (2000:579).
- 30 Fleck (1996).
- 31 Article I. This limit is not specified in the BWC.
- 32 Buchta (1997:51).
- 33 BWC, Article III.
- 34 BWC, Article VI.
- 35 *Id.*, at 261.
- 36 BWC, Articles III and V.
- 37 Article II, paragraph 1, defines “chemical weapons” as toxic chemicals and their precursors, except where intended for non-prohibited purposes, as long as the types and quantities are consistent with such purposes; munitions and devices specifically designed to cause death or other harm through the toxic properties of toxic chemicals that would be released as a result of employing such munitions and devices; and any equipment specifically designed for use directly in connection with the employment of munitions and devices.
- 38 CWC, Article I, paragraph 1(b). This prohibition cannot be subject to reservations. *Id.*, Article XXII; see also Kellman (2000:582).
- 39 The principal organ of the Organisation for the Prohibition of Chemical Weapons is the Conference of Parties that, *inter alia*, supervises CWC operation and assesses compliance. The Organisation Executive Council administers day-to-day activities; the Technical Secretariat carries out verification measures and inspects facilities that could relate to illegal chemical weapons production. See Kellman (2000:583).
- 40 CWC, Verification Annex Part IV (A).
- 41 1963 Partial Test-Ban Treaty, Article 1 (1(a)).
- 42 1968 Nuclear Non-Proliferation Treaty, Article 1.
- 43 The treaty will enter into force 180 days after the 44 states listed in Annex 2 of the treaty have ratified it. These “Annex 2 states” are states that participated in the CTBT’s negotiations between 1994 and 1996 and possessed nuclear power reactors or research reactors at that time. As of April 2009, nine Annex 2 states have not ratified the treaty: China, Egypt, Indonesia, Iran, Israel and the United States have already signed the Treaty, whereas India, North Korea and Pakistan have not yet signed it.
- 44 These include: OPANAL Resolution 223 of the 1987 Prevention of Radioactive Pollution in the Adjacent Seas to the Continental and Insular Territories of Latin America and the Caribbean; OPANAL Resolution 299 of the 1993 Prevention of Radioactive Pollution of the Marine Environment within the Framework of the Treaty of Tlatelolco.
- 45 See the soft law section regarding the UNGA resolutions addressing the issue of potential harmful effects of the use of armaments and ammunitions containing depleted uranium on human health and the environment.
- 46 ICRC Commentary on Additional Protocol I to the Geneva Conventions: <http://www.icrc.org/ihl.nsf/COM>
- 47 Article 4(11)(2).
- 48 See <http://whc.unesco.org/en/danger/>; Article 11(4) of the UNESCO World Heritage Convention. Among the 15 natural sites currently classified as in danger on the World Heritage List, approximately 10 are located in countries that have experienced open or latent armed conflict over the past decades (for instance, in the Democratic Republic of Congo or Côte d’Ivoire).
- 49 Articles 3(1) and 22(1).
- 50 M. Schmitt (2000:37).
- 51 Dan Bodansky (2003:40).
- 52 See *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*, UNEP, 2009.
- 53 Bodansky (2003:50).
- 54 Fifth Guideline, ICRC Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict, 1996.

- 55 Article 56(7) of Additional Protocol I also advises visually marking industrial hotspots as non-target zones.
- 56 Draft Convention on The Prohibition of Hostile Military Activities in Protected Areas, International Council of Environmental Law, IUCN, 1995.
- 57 See Tarasofsky (2000:567).
- 58 The lack of necessary international diplomatic support for the Draft Convention may be attributed to opposition by some prominent States that in principle resist the approach of absolute protection, as they insist on their right of self-defence in every circumstance, including against enemies that would disregard the “demilitarized” status of the protected areas and would make a military use of these zones.
- 59 Bodansky (2003:22).
- 60 The first appearance of the Martens Clause is in the Preamble to the 1899 Hague Convention (II) with respect to the laws and customs of war on land.
- 61 See Geneva Convention IV, Article 147; Additional Protocol I, Article 85.
- 62 Geneva Convention I, Article 50; Geneva Convention II, Article 51; Geneva Convention IV, Article 147.
- 63 Additional Protocol I, Article 85(3)(b).
- 64 Additional Protocol I, Article 85(3)(c).
- 65 ICC Statute, Article 8(2)(b) and (e).
- 66 Customary International Humanitarian Law, ICRC, 2005. Some States and commentators have questioned the expansiveness of the ICRC assessment regarding what constitutes customary IHL.
- 67 See <http://www.icrc.org/web/eng/siteeng0.nsf/html/57JN38>
- 68 1961 UNGA Resolution 1653 (XVI); 1970 UNGA Resolution 2734 (XXV); 1974 UNGA Resolution 3314 (XXIX) on aggression.
- 69 Final Document of the Tenth Special Session of the General Assembly S-10/2, 1978.
- 70 Resolution A/RES/50/70 (M) on *General and complete disarmament: A nuclear testing* (1995).
- 71 UNGA Resolution 63/211 *Oil slick on Lebanese shores*, Preamble (10 February 2009).
- 72 Statement of the UN Security Council President on 25 June 2007, S/PRST/2007/22.
- 73 For more information, see *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*, UNEP, 2009.
- 74 Mission des Nations Unies au Congo /United Nations Mission in the Democratic Republic of Congo.
- 75 Military and Paramilitary Activities in and against Nicaragua (*Nicaragua v. United States*), Merits, ICJ 14, 27 June 1986. In this case the International Court of Justice found that the U.S. had violated international law by supporting Contra guerrillas in their war against the Nicaraguan government and by mining Nicaragua’s harbors. For our subject, the finding of main interest in this case is the one on the customary nature of certain UN resolutions.
- 76 Anderson and Grewell (2000:11), citing Kelly (2000:450-476).
- 77 Request for an Examination of the Situation in Accordance with paragraph 63 of the ICJ judgement of 20 December 1974 in the Nuclear Tests (*New Zealand v. France*) Case, ICJ 288, 22 September 1995.
- 78 Schmitt (2000:45).
- 79 *Id.*, paragraph 29; see Bunker (2004:210).
- 80 Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, ICJ., paragraph 30, 1996; see Bunker (2004:210).
- 81 Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, ICJ, paragraph 105 E, 1996.
- 82 See, for example, non-liquet in *Corfu Channel Case (United Kingdom v. Albania)*, Merits, 1949 ICJ 4, 22, 9 April 1949; see also Boelart-Suominen (1997:119-120).
- 83 The Former Republic of Yugoslavia could not file a case directly against NATO since the ICJ only has jurisdiction over nations. The ten nations involved were: Belgium, Canada, France, Germany, Italy, Netherlands, Portugal, Spain, United Kingdom and United States. ICJ Press release, May 2001. For all relevant documents, see <http://www.icj-cij.org/icjwww/idocket/iyus/iyusframe.html>
- 84 See *The Work of the ICJ 1999-2000* (2000:182).
- 85 ICJ Press release, May 2001.
- 86 Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia, 13 June 2000, Paragraph 14.

- 87 *Id.*, Paragraph 15.
- 88 France ratified the Additional Protocol shortly after the decision in April 2001.
- 89 Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia, 13 June 2000, Paragraph 15.
- 90 However, Austin comments that “the jury is still out” since the norms of Additional Protocol I are seen as “very malleable” and some argue that the Pancevo bombing “could be an outright breach of Protocol I norms,” see Austin (1999).
- 91 Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia, 13 June 2000, Paragraph 18.
- 92 *Id.*, Paragraph 19.
- 93 *Id.*, Paragraph 22.
- 94 *Id.*, Paragraph 24.
- 95 *Id.*, Paragraph 25.
- 96 *Id.*, Paragraph 26.
- 97 *Tadic Case*, ICTY, 1999, Paragraphs 119 and 126.
- 98 UNSC Resolution 687, UN SCOR, 46th Session, 2981st meeting, Paragraph 16, UN Document S/RES/687 (1991).
- 99 Sands (1999:4).
- 100 The UNCC categorized the claims it received into six categories. Category “F” claims are filed by governments and international organizations for losses incurred in evacuating citizens; providing relief to citizens; damage to diplomatic premises and loss of, and damage to, other government property; and damage to the environment (“F4”).
- 101 Statement by the UN Secretary-General in his report to the Security Council of 2 May 1991 (S22559 paragraph 20).
- 102 Fifth Instalment “F4” report, para. 80. Payne, C.R. 2005. UN Commission Awards Compensation for Environmental and Public Health Damage from 1990-91 Gulf War. American Society of International Law: Insights.
- 103 Moir (2002; 274)
- 104 Bodansky (2003; 52)
- 105 1949 Geneva Convention IV, Article 1; Additional Protocol I, Article 1(1); 1949 Geneva Convention IV, Articles 146 and 147; Additional Protocol I, Articles 86 and 87.
- 106 Some States have adopted legislation to prosecute these crimes on the basis of universal jurisdiction.
- 107 Article 8(2)(e)(iv) and (xii).
- 108 Based on discussions held between experts at the ICRC/UNEP technical seminar organized in March 2009 in Nairobi.
- 109 In addition to the Statement of the UN Security Council President on 25 June 2007, S/PRST/2007/22, see the work of Global Witness on “conflict resources” (timber, diamonds and minerals): http://www.globalwitness.org/pages/en/natural_resources_in_conflict.html
- 110 1907 Hague Regulations, Articles 28 and 47.
- 111 *In the case of the Prosecutor v. Sesay, Kallon and Bbao*, Count 14 Case SCSL-04-15-T.
- 112 *Situation in Darfur*, ICC-02/05-157-AnxA, Public Redacted Version of the Prosecutor’s Application under Article 58, 14 July 2008, paragraphs 14 and 15, <http://www.icc-cpi.int/iccdocs/doc/doc559999.pdf>
- 113 *Id.*, paragraph 31.
- 114 *Prosecutor v. Omar Al-Bashir*, ICC-02/05-01/09-3, Decision on the Prosecution’s Application for a Warrant of Arrest against Omar Hassan Ahmad Al-Bashir, 4 March 2009, paragraph 93, <http://www.icc-cpi.int/iccdocs/doc/doc639096.pdf>
- 115 *Id.*, paragraph 207.
- 116 Judge Usacka found that there are reasonable grounds to believe that “Omar Al-Bashir possessed the genocidal intent and is criminally responsible for genocide.” Separate and Partly Dissenting Opinion of Judge Anita Usacka, paragraph 1, <http://www.icc-cpi.int/iccdocs/doc/doc639096.pdf>

- 117 *Id.*, paragraph 102.
- 118 *Id.*, paragraph 98.
- 119 *Id.*, paragraph 99.
- 120 This has been widely advocated by various non-governmental organizations, including Global Witness, to bring accountability for crimes committed using a political platform.
- 121 Targeted sanctions have been used to address cases of resource looting financing conflict in preference to commodity-specific sanctions (in relation to the Democratic Republic of Congo or Liberia, for example).
- 122 UNSC Resolution 1820, Paragraph 4.
- 123 See also UN Secretary-General's Bulletin, *Observation by UN Forces of IHL*, Document ST/SGB/1999/13, 6 August 1999.
- 124 List extracted from the UN Capstone Doctrine, p.85.
- 125 United Nations Convention on the Law of the Sea (UNCLOS), 10 December 1982, 1833 UNTS 3.
- 126 Koh (1982).
- 127 UNCLOS, *supra* note 147, Article 87.
- 128 *Id.*, Article 88.
- 129 Green (1991:221-226). If UNCLOS is deemed – as part of IEL – to be *lex specialis*, this argument loses its force. The question remains, though, how the two bodies of *lex specialis* relate to one another.
- 130 Feliciano (1992:496-497).
- 131 Low and Hodgkinson (1995:405), citing UNCLOS Preamble, Articles 198, 199 and 236.
- 132 Schmitt (1997).
- 133 OILPOL, Article XIX, 12 May 1954, 327 UNTS 3.
- 134 See Vöneky (2000b); Tarasofsky (1993:61).
- 135 MARPOL, 2 November 1973, 1340 UNTS 184, as amended by the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 17 February 1978, 1340 UNTS 61.
- 136 *Id.*, Preamble.
- 137 *Id.*, Article 3(3).
- 138 *Id.*, Article 3(3).
- 139 *Id.*, Article 4(1).
- 140 Convention for the Protection of the Mediterranean Sea against Pollution, Article III(3), 16 February 1976, 1102 UNTS 27, *amended and renamed* Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, 10 June 1995.
- 141 *Id.*, Article III(5).
- 142 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, 24 March 1983, 1506 UNTS 157.
- 143 For example, the Cartagena Convention does not contain the same requirement that the precautionary and polluter pays principles be used in development, see Barcelona Convention, *supra* note 165, Article IV(3)(a)(b); however, the Cartagena Convention requires that any actions undertaken to prevent marine pollution within the Convention area also apply to preventing such pollution outside of it, see Cartagena Convention, Article IV(2).
- 144 Convention on Wetlands of International Importance especially as Waterfowl Habitat, 2 February 1971, 996 UNTS 245.
- 145 *Id.*, Article 2.
- 146 *Id.*, Article 3(1).
- 147 *Id.*, Article 3. Article IV then requires that when urgent national interests cause a Party to make such a deletion or restriction, they should attempt to compensate for that loss of wetlands. *Id.*, Article 4.
- 148 Convention Concerning the Protection of the World Cultural and Natural Heritage Convention, Preamble, 23 November 1972, 1037 UNTS 151.
- 149 *Id.*, Article 11(4).
- 150 Decision of the World Heritage Committee 31COM 5.2 (New Zealand, 2007).

- 151 See <http://whc.unesco.org/en/danger/>; Article 6(3) of the World Heritage Convention (emphasis added); Tarasofsky (1993:65), “without specifically mentioning war, this wording does seem to anticipate it.”
- 152 Bunker (2004:201-211).
- 153 Convention on Long-Range Transboundary Air Pollution (1979), Article 1(b), 13 November 1979, 1302 UNTS 217.
- 154 *Id.*, see definition in its Part 5.2.ii.1.a.
- 155 Schmitt (1977:49-50).
- 156 LRTAP, *supra* note 153, Article 2.
- 157 African Convention on the Conservation of Nature and Natural Resources, 11 July 2003, 1001 UNTS.
- 158 *Id.*, Article II.
- 159 The countries that have ratified the 2003 African Convention are Burundi, Comoros, Ghana, Lesotho, Libyan Arab Jamahiriya, Mali, Niger and Rwanda.
- 160 African Convention on the Conservation of Nature and Natural Resources, Article XVII, 15 September 1968, 1001 UNTS 3; African Convention 2003, Articles XV and XXV.
- 161 *Id.*, Article XVII.
- 162 See Vöneky (2000b:219).
- 163 African Convention 2003, *supra* note 184, Article XXV.
- 164 *Id.*, Article XV(1).
- 165 *Id.*, Article XV(2).
- 166 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, Article XII, 29 December 1972, 1046 UNTS 120.
- 167 *Id.*, Article V(1).
- 168 *Id.*, Article V(2).
- 169 Convention on the Law of the Non-Navigational Uses of International Watercourses, UN GAOR, 51st Session, Preamble, 99th meeting, UN Doc A/RES/51/229, 21 May 1997.
- 170 *Id.*, Articles 5, 7 and 11 to 19.
- 171 *Id.*, Article 29.
- 172 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, Article 8(a), 1993, 32 I.L.M. 1228.
- 173 Convention on Third Party Liability in the Field of Nuclear Energy, Article 9, 29 July 1960, *amended* 28 January 1964, 956 UNTS 264.
- 174 *Id.*, Annex I, Paragraph 4.
- 175 Vienna Convention on Civil Liability for Nuclear Damage, Article IV(3)(a), 21 May 1963, 1063 UNTS 266.
- 176 Convention on Civil Liability for Oil Pollution Damages, Article III, 29 November 1969, 973 UNTS 4.
- 177 *Id.*, Article XI.
- 178 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution, Article IV(2), 18 December 1971, *amended* 19 November 1976 and 27 November, 1992, 1110 UNTS 58.
- 179 Convention on the Early Notification of a Nuclear Accident, Article 1, 26 September 1986, 1439 UNTS 276.
- 180 *Id.* Status list, India–Reservations 1 and 2, made 28 January 1988 (India previously expressed the same sentiment at the signing of the convention).
- 181 *Id.* Mauritius–Reservation (a), made 17 August 1992; *Id.* Saudi Arabia–Reservation 1, made 3 November 1989.
- 182 See Vöneky (2000b:213).
- 183 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Article IV(12), 22 March 1989, 1673 UNTS 126.
- 184 United Nations Convention to Combat Desertification, Article 8, 17 June 1994, 1954 UNTS 3.
- 185 A potential complication when analysing what may constitute customary IEL is that there have been few State-by-State assessments to ascertain State practice and *opinio juris*; most assessments rely on international declarations and on isolated samples of practice.
- 186 *Trail Smelter Case (United States v. Canada)*, 3 R.I.A.A. 1905 (1938/1941).

- 187 See Schmitt (1997:44-45).
- 188 *Corfu Channel Case* (United Kingdom v. Albania), Merits, ICJ. 4, 22, 9 April 1949; see also Boelart-Suominen (1997).
- 189 See Schmitt (1997:46-47).
- 190 Okorodudu-Fubara (1992:2004-2006).
- 191 Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), 16 June 1972, UN Document A/CONF.48/14/Rev. 1 (1973).
- 192 *Id.*, Principle 21 (emphasis added).
- 193 Tarasofsky (1993:67-68).
- 194 Stockholm Declaration, *supra* note 214, Principle 26.
- 195 Formerly known as the World Conservation Union.
- 196 *World Charter for Nature*, UNGA Resolution 37/7, UN Document A/RES/37/7, 28 October 1982.
- 197 *Id.*, Principle 5.
- 198 *Id.*, Principle 11.
- 199 *Id.*, Principle 20.
- 200 See Tarasofsky (1997:40), citing Birnie and Boyle (1992: 431 *et seq*)
- 201 *Id.* at 40.
- 202 Rio Declaration on Environment and Development, UN Document A/CONF.151/26, vol. I, 13 June 1992.
- 203 *Id.*, Principles 1 and 2.
- 204 Parsons (1998:441-456).
- 205 Rio Declaration, *supra* note 225, Principle 13.
- 206 *Id.*, Principles 15 and 17.
- 207 *Id.*, Principle 24.
- 208 See, e.g. Schmitt (1997:43-44).
- 209 Agenda 21: Programme of Action for Sustainable Development, UN GAOR, 46th Session, Article 39.6, Agenda Item 21, UN Doc A/Conf.151/26, 14 June 1992.
- 210 *Protection of the environment in times of armed conflict*, UNGA Resolution 47/37, UN Document A/RES/47/37, 9 February 1993.
- 211 *United Nations decade of international law*, UNGA Resolution 49/50, UN Document A/RES/49/50, 17 February 1995.
- 212 Westing (2000:175-178); see also Parsons (1998:478); see generally Quinn et al. (2000:161-165).
- 213 Report of the World Summit on Sustainable Development, UN Document A/CONF.199/20, 26 August-4 September 2002.
- 214 See, e.g. Gasser (1995:637-640), noting an ICRC report that mentioned the “the unsatisfactory state of the law relative to the protection of the natural environment in non-international armed conflicts.” Hourcle (2000:653-681) argued that outside of IHL, the only environmental protections applicable to internal armed conflicts are those found in domestic law. Hourcle raised an additional line of inquiry by questioning whether the deployment of peacekeeping forces was enough to make a conflict international and thus trigger both the law of war and other international law.
- 215 Bothe (1991: 54, 60).
- 216 See Vöneky (2000a, 2000b).
- 217 Vöneky (2000b:198-202).
- 218 *Id.* at 204.
- 219 *Id.* at 205, 207-208.
- 220 *Id.* at 212-214.
- 221 *Id.* at 210-211.
- 222 *Id.* at 215. Vöneky did not identify a specific representative agreement, but mentioned the common perception that treaties governing access to shared natural resources such as international watercourses are not primarily intended to conserve the resource generally, but rather to provide for equal access between the interested parties.

- 223 *Id.* at 218-223.
- 224 Boelart-Suominen (1997).
- 225 *Id.* at 236-238.
- 226 *Id.* at 124.
- 227 See Low and Hodgkinson (1995:443-44) for further discussion of intention theory. The authors extensively reviewed variations such as analysing the nature of the treaty, the treaty's compatibility with war or the number of parties to the treaty as simply different ways to assess intention.
- 228 *Id.* at 124-225.
- 229 *Id.* at 125-226.
- 230 *Id.* at 133.
- 231 *Id.* at 133.
- 232 *Id.* at 133-134, 138.
- 233 *Id.* at 134-135, 138.
- 234 *Id.* at 136, 138.
- 235 Schmitt (1997).
- 236 *Id.* at 37-38.
- 237 *Id.* at 39-41.
- 238 *Id.* at 41.
- 239 Vienna Convention on the Law of Treaties, Article 56, 23 May 1969, 1155 UNTS 331; see Sharp (1992:23).
- 240 *Id.* at 23-25.
- 241 Quinn et al. (2000:161-165).
- 242 *Id.* at 156-158.
- 243 *Id.* at 163-165.
- 244 See *Id.* at 166 (discussing forthcoming US Navy and US Marine Corps publications, and the US Air Force, Environmental Guide for Contingency Operations, 2007).
- 245 See, e.g. US Army and US Marine Corps, Environmental Considerations in Military Operations, FM 3-100.4/MCRP 4-11B, 2000; US Air Force, Environmental Guide for Contingency Operations, Air Force Handbook 10-222, Vol. 4, 2007.
- 246 North Atlantic Treaty Organization Military Committee (MC) 469 NATO Military Principles and Policies for Environmental Protection (EP).
- 247 North Atlantic Treaty Organization, Standardization Agreement–Joint NATO Doctrine for Environmental Protection During NATO-led Military Activities, Ed 5, February 2008, <http://www.nato.int/docu/stanag/7141/7141-e-ed05.pdf>
- 248 NATO STANAG 2510, Ed 1, Joint NATO Waste Management Requirements during NATO-led Military Activities; NATO STANAG 7102, Ed 1, Environmental Protection Requirements for Petroleum Facilities and Equipment; NATO STANAG 2982, Ed 1, Essential Field Sanitary Requirements.
- 249 Quinn et al. (2000:169-170).
- 250 Report of the International Law Commission, 59th Session, 7 May-5 June 2007 and 9 July-10 August 2007, UNGA Supp. A/62/10.
- 251 International Law Commission, Effects of Armed Conflicts on Treaties, UNGA Document A/CN.4/L.727/Rev.1, 6 June 2008; International Law Commission, Effects of Armed Conflicts on Treaties, Addendum, UNGA Document A/CN.4/L.727/Rev.1/Add.1, 11 July 2008.
- 252 International Law Commission, Effects of Armed Conflict on Treaties, *supra* note 277, Article 3.
- 253 *Id.* Article 4.
- 254 *Id.* Article 5.
- 255 *Id.* Annex.
- 256 International Law Commission, Statement of the Chairman of the Drafting Committee, Pedro Comissário Afonso, Effects of Armed Conflicts on Treaties, 17 July 2008.

- 257 Sharp, *supra* note 265, at 5–6 n.16, also citing Sweeney et al. (1981) “in the last century the situation has changed and it (customary international law) has been relegated to second place by the treaty.”
- 258 Parsons (1998:483).
- 259 *Id.* at 482 (citations omitted).
- 260 Vöneky (2000b:223).
- 261 Ticehurst (1997:125). <http://www.icrc.org/Web/Eng/siteeng0.nsf/html/57JNHY>; Sands P. (1994: 311). The Martens Clause was also revised for the 1980 Convention on the Prohibition or Restriction on the Use of Certain Convention Weapons and the IUCN Second World Conservation Congress in Amman, Jordan.
- 262 Laws and Customs of War on Land (Hague II), 29 July 1899, 32 Stat. 1803.
- 263 Ticehurst (1997:125).
- 264 Sands, *supra* note 261.
- 265 Vöneky (2000b:218); Bothe et al. (1991:56), “In our time, the ‘dictates of public conscience’ certainly include environmental concern.”
- 266 Low and Hodgkinson (1995:445-446).
- 267 *Id.*, at 481. However, Low and Hodgkinson stressed that there would be limited utility to applying IEL during armed conflict in light of the need to integrate implied notions of military necessity. Due to the vague boundaries of what constitutes “military necessity,” they asserted that in most cases it would be challenging, if not impossible, to establish liability.
- 268 IUCN, Second World Conservation Congress: Resolutions and Recommendations, Recommendation 2.97, 4-11 October 2000. The recommendation provides that: “Until a more complete international code of environmental protection has been adopted, in cases not covered by international agreements and regulations, the biosphere and all its constituent elements and processes remain under the protection and authority of the principles of international law derived from established custom, from dictates of the public conscience, and from the principles and fundamental values of humanity acting as steward for present and future generations.”
- 269 Von Heinegg and Donner (1994: 300) (discussing the *sic utere tuo* principle in the context of UNCLOS).
- 270 See Ross (1992:515–534), citing the UN documents and the results of the General Assembly vote. The results of the General Assembly vote were 103 in favour, 18 abstentions and one vote against (provided by the United States). *Id.* Every UN Member State has a seat in the General Assembly, and in 1982 the UN had 157 members.
- 271 *Id.* at 534.
- 272 Anderson and Grewell (2000:11).
- 273 Lubell (2005:737-754).
- 274 International Court of Justice, Armed Activities on the territory of the Congo (*Democratic Republic of Congo v. Uganda*), ICJ reports, 19 December 2005.
- 275 Article 27: “In those States in which ethnic, religious or linguistic minorities exist, persons belonging to such minorities shall not be denied the right, in community with the other members of their group, to enjoy their own culture, to profess and practise their own religion, or to use their own language.”
- 276 See, for instance, *Lubicon Band v. Canada* 1994; *Ilmari Lansman et al. v. Finland* 1992/1996; *Apirana Mauika et al v. New Zealand* 1992/2000.
- 277 *Temeharo v. France* 1995/1996.
- 278 Report on Romania (2000).
- 279 Convention of the Rights of the Child observations about Article 24 (2000).
- 280 Additional Protocol to the American Convention on Human Rights, Article 11.
- 281 *Awas Tingni Indigeneous Community v. Nicaragua* 2001.
- 282 Inter-American Commission, *Report on Situation of Human Rights in Ecuador*, chapter 9, 1997.
- 283 *Yanomami Indigeneous Comm. v. Brazil* 1985.
- 284 See, Bruch et al. (2007), for example.
- 285 *Id.*

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UNSC Resolution 1509 *The situation in Liberia* (2003)

UNSC Resolution 1820 *Women and peace and security* (2008)

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“More than thirty years since the massive defoliation campaigns of the Viet Nam War, and nearly twenty since the extensive pollution caused by the destruction of 600 oil wells in Kuwait at the end of the first Gulf War, the environment continues to fall victim to armed conflict worldwide. Decades of protracted conflict in the Gaza Strip, for example, have so severely affected groundwater supplies upon which 1.5 million Palestinians depend for drinking and agriculture that those supplies are in danger of imminent collapse.

Furthermore, in at least 18 conflicts since 1990, natural resources have played a significant role. In Liberia and the Democratic Republic of Congo, diamonds, timber and gold have been exploited by armed groups to finance and prolong conflicts. The consequences for the environment and development have been devastating.

While the environment and natural resources enjoy protection under several important international legal instruments – such as the Geneva Conventions – the implementation and enforcement of these instruments remains very weak. There are few international mechanisms to monitor infringements or address claims for environmental damage sustained during warfare.

Because the environment and natural resources are crucial for building and consolidating peace, it is urgent that their protection in times of armed conflict be strengthened. There can be no durable peace if the natural resources that sustain livelihoods are damaged or destroyed.

I call on Member States to clarify and expand international law on environmental protection in times of war. Existing legal instruments should be adapted to reflect the predominantly internal nature of today’s armed conflicts. We need also to consider mechanisms for monitoring violations and recommending sanctions and actions for enforcement, recovery and compensation. Furthermore, national legislation must fully reflect provisions of international criminal law that allow for the prosecution of environmental violations during armed conflict.

On this International Day, let us renew our commitment to preventing the exploitation of the environment in times of conflict and to protecting the environment as a pillar of our work for global peace and sustainable development.”

Message of the UN Secretary-General, Ban Ki-moon
on the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict
6 November 2009

Despite the protection afforded by several important instruments of international law, the environment continues to be the silent victim of armed conflicts worldwide. With a view to identifying the gaps and weaknesses in the existing system, this report provides a comprehensive inventory and analysis of the provisions that protect the environment during armed conflict. Four main bodies of international law are examined: international humanitarian law (IHL), international criminal law (ICL), international environmental law (IEL), and human rights law (HRL). The report culminates in twelve concrete recommendations that aim to provide a basis upon which Member States can draw to clarify, expand and better enforce international law on environmental protection in times of war.

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