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Environmental Protections During Armed Conflict as Supportive Mechanisms for the Prevention of Atrocity Crimes

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Abstract

The potential exacerbating impact of environmental damage incurred during armed conflict has gained increasing attention in regional and international fora. The links between conflict and the environment are indirect, but irrefutable. Environmental damage further has the potential to adversely affect risk factors associated with atrocity crimes. It is necessary to consider adequate environmental protections to avoid serious and negative long-lasting effects, and to prevent the exacerbation of conflicts into atrocity crimes. The vulnerability of the population generally and the environment is evident in armed conflict. This article explores the nexus between environmental damage and atrocity crimes generally before considering existing environmental protections during armed conflict and opportunities for progressive development. It argues that the enhancement of existing international legal obligations either through additional protections or improved implementation measures is necessary to protect the environment and contribute to the reduction of the risk of atrocity crimes.

Keywords

environmental protection – atrocity prevention – armed conflict – environmental damage – environment – draft principles on the protection of the environment in relation to armed conflict – ecocide

1 Introduction

From indiscriminate attacks causing environmental damage and degradation, to the launching of direct attacks against the environment and even to its weaponization, the environment frequently incurs severe, but less immediately noticeable harm as a result of armed conflict.¹ The vulnerability of the environment is evident.² Ongoing armed conflicts in Syria, Yemen, and Mali, to name a few, demonstrate the exacerbated impact environmental damage can have on affected and already vulnerable populations.³ In Mali, for example, a State accustomed to environmental uncertainties, the population has been faced with newly emerging and exacerbated environmental concerns as it has been engulfed in a volatile political-military crisis since 2012, marked by intercommunal violence, the commission of atrocity crimes both by State and non-State actors, and climate change. Environmental degradation including periods of drought and famine, compounded by climate change, has further exacerbated the crisis' root causes and violence.⁴ While the (potential) impact of violence and armed conflict on the environment is frequently acknowledged, the scale of its impact remains largely underestimated.⁵

The International Court of Justice ('ICJ') has previously recognised that 'the environment is under daily threat' and affirmed that the 'environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn'.⁶ It further confirmed that 'the

1 The term 'natural environment' is used within international humanitarian law. However, this paper predominantly utilises the term 'environment' in line with terminology employed in other areas of international law including international environmental law.

2 Hans-Peter Gasser, 'For Better Protection of the Natural Environment in Armed Conflict: A Proposal for Action' (1995) 89(3) *American Journal of International Law* 637.

3 See eg Joseph Hincks, 'How Syria's Decade-Long War Has Left a Toxic Environmental Legacy' (*Time*, 15 March 2019) <<https://time.com/5946800/syrian-war-environmental-impact/>>; CIVIC, *Risking the Future: Climate Change, Environmental Destruction, and Conflict in Yemen* (Washington, October 2022); ICRC, 'Climate change in Mali: "We drilled deep but found nothing"' (*ICRC*, 16 November 2022) <<https://www.icrc.org/en/document/climate-change-mali-we-drilled-deep-found-nothing#:~:text=Two%20thirds%20of%20Mali%27s,communities%20are%20the%20worst%20affected>>.

4 Eg Chris Arsenault, 'Climate change, food shortages, and conflict in Mali' (*Aljazeera*, 27 April 2005) <<https://www.aljazeera.com/indepth/features/2015/04/climate-change-food-shortages-conflict-mali-150426105617725.html>>; Kheira Tarif and Anab O Grand, 'Climate change and violent conflict in Mali' (*ACCORD*, 10 June 2021) <<https://www.accord.org.za/analysis/climate-change-and-violent-conflict-in-mali/>>.

5 ICRC, 'Natural environment: Neglected victim of armed conflict' (*ICRC*, 5 June 2019) <<https://www.icrc.org/en/document/natural-environment-neglected-victim-armed-conflict>>.

6 *Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion)* [1996] ICJ Rep 226.

general obligation of States' to ensure protection of the environment forms part of international law.⁷ However, existing international legal obligations to protect the environment during armed conflict appear to be lacking not only in scope and content, but also in implementation and compliance. Multiple studies and reports suggest that environmental degradation and climate change have the potential to adversely affect conflict situations and exacerbate risk factors for genocide, war crimes and crimes against humanity (which, in combination, are also known as 'atrocity crimes').⁸ Environmental considerations and protections have become increasingly important within the objective of conflict and atrocity prevention of international human rights and international humanitarian law ('IHL').

Previous research on the impact of environmental damage during armed conflict on (international) peace and security has demonstrated the need for enhanced protection of the environment with an increased focus on implementation and compliance.⁹ However, the accurate prediction of the impact of environmental damage during armed conflict on the conflict itself and the potential exacerbation of atrocity crimes remains difficult due to insufficient data, scarce causal links, and effects that may not be imminently palpable. The literature on armed conflict, environmental protection, and environmental damage has given limited attention to the potential influence they may have on atrocity crimes. This is surprising as the potential of environmental degradation to worsen conflict and to potentially lead to the commission of atrocity crimes has previously been noted.¹⁰

The purpose of this paper is therefore to explore the potential impact of environmental protection obligations during armed conflict on the alleviation of conflict and their contribution towards atrocity prevention. Section 2

7 *ibid.*

8 See eg Solomon Hsiang et al, 'Quantifying the Influence of Climate on Human Conflict' (2013) 341 *Science* 1212; Lyal Sunga, 'Does Climate Change Worsen Resource Scarcity and Cause Violent Ethnic Conflict?' (2014) 21(1) *International Journal on Minority and Group Rights* 1; *The Environment and Human Rights (Advisory Opinion)*, OC-23/17, Inter-American Court of Human Rights (15 November 2017), unofficial translation; various reports by the IPCC. For an overview of the findings of the IPCC's sixth report, see Tobias Ide, 'What Do We Know About Climate Change, Peace and Conflict?' (*Toda Peace Institute*, 8 March 2022) <<https://toda.org/global-outlook/2022/what-do-we-know-about-climate-change-peace-and-conflict.html>>.

9 See eg Sunga (n 8); Halvard Buhaug et al, 'One Effect to Rule Them All? A Comment on Climate and Conflict' (2014) 127 *Climatic Change* 391.

10 Eg Sunga (n 8); Buhaug et al (n 9); Zorzeta Bakaki and Roos Haer, 'The Impact of Climate Variability on Children: The Recruitment of Boys and Girls by Rebel Groups' (2022) *Journal of Peace Research* 634.

explores the potential link between environmental damage and atrocity crimes. It finds that environmental damage, particularly if sustained during armed conflict, may be an exacerbating risk factor for existing tension, which may result in or prolong societal, political, or violent conflict. Environmental damage acts as a threat multiplier rather than a direct cause of atrocity crimes. Subsequently, Section 3 considers existing protections of the environment during armed conflict. It is necessary to understand existing rules and principles vis-à-vis environmental protection during armed conflict prior to analysing how these protections can be enhanced to alleviate the risk of atrocity crimes. Although general and specific protections are afforded under IHL and other areas of international law, including international environmental law ('IEL') and international criminal law ('ICL'), obligating States to take the environment into consideration in the course of armed conflict, existing legal obligations require a high threshold to be met, and in practice are often not implemented or complied with by belligerent parties in the first instance. This paper further goes on to consider the draft principles on protection of the environment in relation to armed conflicts, adopted by the International Law Commission ('ILC') in 2022, and argues that enhanced protection of the environment and the progressive development of the law in this area are hampered predominantly by political considerations. For the effective protection of the environment, which may contribute to atrocity prevention, improved implementation and compliance are required in the first instance. Finally, Section 4 considers the potential for enhanced protections of the environment and future developments, which may also contribute to the prevention of atrocity crimes. It explores recommendations specific to IHL, before assessing the viability of the newly proposed international crime of 'ecocide' as part of progressive development on environmental protection during armed conflict. Ultimately, the argument advanced in this paper is two-fold: the rules and principles for environmental protection during armed conflict can contribute to the reduction of risk factors for the commission of atrocity crimes, therefore supporting atrocity prevention; but to do so, the enhancement and strengthening of existing international legal obligations either through additional protections or improved implementation measures is necessary to protect the environment to ensure compliance.

2 The Nexus between Environmental Damage and Atrocity Crimes

Although armed conflict and damage to the environment can frequently be closely related, the impact of conflicts on the environment may vary. The

impact may depend on the intensity of the armed conflict as opposed to its duration: brief but high intensity armed conflicts are likelier to be more destructive than low intensity armed conflicts, even if the latter persist over years or even decades.¹¹ Many modern conflicts may be characterised by longer durations with periods of sustained high intensity. The impact of armed conflict on the environment is influenced by the type of belligerent parties, the location of the armed conflict, and the nature of warfare.¹² Past incidents have demonstrated that attacks on the environment can contribute to the decline in biodiversity and climate change, for example when agricultural or fossil fuel infrastructures are destroyed, and may also have other post-conflict impacts.¹³ Areas of ecological importance and biodiversity have frequently been the location of armed conflicts.¹⁴

There are many ways in which armed conflict can result in environmental damage and degradation without a direct attack or its weaponization. Previous examples of attacks, bombing campaigns and selection of targets in the Gulf War in 1991,¹⁵ the former Yugoslavia in 1991,¹⁶ Lebanon in 2006,¹⁷ and more recently in Iraq,¹⁸ demonstrate that some armed conflicts come at a very high environmental price.¹⁹ However, environmental damage during armed conflict may often not be a consequence of actual and direct combat operations. Other factors that may damage the environment (indirectly) include the pollution of the air, water and/or soil, the impairment of eco-systems and biodiversity via

11 CEOBS, 'How does war damage the environment?' (CEOBS, 4 June 2020) <<https://ceobs.org/how-does-war-damage-the-environment/>>.

12 *ibid.*

13 ICRC, 'Natural Environment' (n 5).

14 ILC, Draft principles on protection of the environment in relation to armed conflicts (18 November 2022), annexed to UNGA Res 77/104 (19 December 2022) UN Doc A/RES/77/104 ('Draft Principles'); ILC, Draft principles on protection of the environment in relation to armed conflicts, with Commentaries (18 November 2022) UN Doc A/77/10, [5] ('Draft Principles Commentary'); ICRC, *When Rain Turns to Dust: Understanding and Responding to the Combined Impact of Armed Conflict and the Climate and Environment Crisis in People's Lives* (Geneva, July 2020); Thor Hansson et al, 'Warfare in biodiversity hotspots' (2009) 23 *Conservation Biology* 578.

15 UNEP, *Desk Study on the Environment in Iraq* (Geneva, 2003).

16 UNEP and UNCHS, *Final Report: The Kosovo Conflict: Consequences for the Environment & Human Settlements* (Geneva, 1999); International Criminal Tribunal for the Former Yugoslavia, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia* (The Hague, 13 June 2000).

17 UNEP, *Lebanon Post-Conflict Environmental Assessment* (Geneva, 2007).

18 UNEP, *Environmental Issues in Areas Retaken from ISIL Mosul, Iraq: Rapid Scoping Mission July-August 2017 (Technical Note)* (Geneva, 2017).

19 Dieter Fleck, 'The Protection of the Environment in Armed Conflict: Legal Obligations in the Absence of Specific Rules' (2013) 82 *Nordic Journal of International Law* 7, 10–11.

the navigation of armed forces, the desertion of 'unexploded ordnance, toxic and hazardous remnants', or the illegal misuse and exploitation of natural resources.²⁰

The nexus between environmental degradation and armed conflict is evident. According to a report by the United Nations Environment Programme ('UNEP'), '40% of non-international armed conflicts over the past 60 years were related to natural resources and, since 1990, at least 18 armed conflicts have been fuelled directly by natural resources'.²¹ In the past decade, the UN Security Council ('UNSC') has increasingly concerned itself with questions of environmental security, environmental protection during armed conflict, and natural resources as a root cause for conflict.²² Retrospectively, the inclusion of environmental protection in IHL was a logical development when considering the potentially severe impact environmental damage that can be caused during armed conflict, through certain methods and means of warfare.²³ The International Committee of the Red Cross ('ICRC') has since identified the interconnections between environmental protection during armed conflict on one hand, and the protection of civilians in IHL on the other in its Guidelines on the Protection of the Natural Environment in Armed Conflict.²⁴

However, environmental damage during armed conflicts may not only prolong and exacerbate armed conflicts themselves. Environmental damage

20 Marja Lehto, 'Armed conflicts and the environment: The International Law Commission's new draft principles' (2020) 29(1) *Review of European Community & International Environmental Law* 67, 72.

21 *ibid*; United Nations Interagency Framework Team for Preventive Action, *Renewable Resources and Conflict, Toolkit and Guidance for Preventing and Managing Land and Natural Resources Conflicts* (2012).

22 Daniëlla Dam-de Jong and Britta Sjöstedt, 'Enhancing Environmental Protection in Relation to Armed Conflict: An Assessment of the ILC Draft Principles' (2021) 44(2) *Loyola of Los Angeles International and Comparative Law Review* 129, 130. See eg UNSC Verbatim Record, 7818th mtg (22 November 2016) UN Doc S/PV.7818; UNSC Verbatim Record, 8307th mtg (11 July 2018) UN Doc S/PV.8307; UNSC Verbatim Record, 8372nd mtg (16 October 2018) UN Doc S/PV.8372; UNSC, Letter dated 21 September 2020 from the President of the Security Council addressed to the Secretary-General and the Permanent Representatives of the members of the Security Council (23 September 2020) UN Doc S/2020/929.

23 Antoine Bouvier, 'Protection of the Natural Environment in Time of Armed Conflict' (1991) 31(285) *International Review of the Red Cross* 567, 569.

24 ICRC, 'Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict' (1994) 31 *International Review of the Red Cross*; ICRC, *Guidelines on the Protection of the Natural Environment in Armed Conflict: Rules and Recommendations relating to the Protection of the Natural Environment under International Humanitarian Law, with Commentary* (Geneva, September 2020) ('ICRC 2020 Guidelines').

during armed conflict may also lead to the exacerbation of risk factors relating to atrocity crimes, contributing most notably to the commission of war crimes within already vulnerable populations. Environmental damage or degradation as such are not, however, considered to be stand-alone or specific risk factors for the indication of the probability of an atrocity crime. Instead, severe environmental damage can firstly contribute to the worsening of existing tensions leading to the exacerbation of violent conflict and risk factors of atrocity crimes, and secondly can hinder or prevent necessary measures to protect vulnerable populations and victims of armed conflict.²⁵ Environmental damage thereby functions as a threat-multiplier where vulnerable populations and at-risk States are already susceptible to environmental stresses and conflict. New technologies and considerable resources invested in the documentation of conflict-related environmental damage or degradation can aid the identification of patterns of environmental issues in conflicts.²⁶ However, the wide variety environmental damage may take and scarce causal links may mean that a conflict's effects on the environment may not be imminently evident.²⁷

Exacerbated poverty and despair as a result of armed conflict and environmental damage during armed conflict could lead to the increase of natural disasters further affecting resource scarcity, societal conflict over resources and other exacerbating factors. In fact, resource scarcity and the resulting competition over resources function as a 'threat-multiplier' exacerbating other risks.²⁸ Economic and societal impacts of environmental degradation (and climate change) warrant particular consideration vis-à-vis the risk of intensifying armed conflict and atrocity crimes.²⁹ Whether threat-multipliers contribute to and potentially exacerbate tensions to evolve into intensifying armed conflict and the commission of atrocity crimes depends, to a large extent, on the affected population's resilience.³⁰ Vulnerable populations unable to sufficiently respond to climate change and environmental damage

25 Bouvier, 'Protection of the Natural Environment in Time of Armed Conflict' (n 23) 570.

26 See eg CE OBS, 'Ukraine invasion: rapid overview of environmental issues' (CE OBS, 25 February 2022) <<https://ceobs.org/ukraine-invasion-rapid-overview-of-environmental-issues/>>; CE OBS, 'Environmental trends in the Ukraine conflict, 10 days in' (CE OBS, 5 March 2022) <<https://ceobs.org/environmental-trends-in-the-ukraine-conflict-10-days-in/>>.

27 Bouvier, 'Protection of the Natural Environment in Time of Armed Conflict' (n 23) 570.

28 UNDP, *Human Development Report 2011 – Sustainability and Equity: A Better Future for All* (New York 2011) 59; Sunga (n 8) 14.

29 See below.

30 Parvin Sultana and Paul Thompson, 'Adaptation or Conflict? Responses to Climate Change in Water Management in Bangladesh' (2017) 78 *Environmental Science and Policy* 149.

are likelier to engage in augmented violent conflict as a result of the effects of climate change and environmental damage.³¹ Environmental damage has the potential to amplify or aggravate ‘existing tensions within and between communities’ and States.³² Overall, however, environmental stresses including resource scarcity play a less significant role as risk factors for intensifying armed conflict and atrocity crimes than economic or political risk factors.³³ Whether a concrete and direct causal link between environmental damage during armed conflict and the increased risk of exacerbated armed conflict or atrocity crimes exists remains inconclusive on the basis of available evidence.³⁴ Frequently, such a direct nexus appears to have only been assumed.

While environmental damage and degradation are therefore not directly identified as risk factors for atrocity crimes, the Framework of Analysis for Atrocity Crimes highlights that a ‘humanitarian crisis or emergency, including those caused by natural disasters’ may be a common risk factor for ‘situations that place a State under stress and generate an environment conducive to atrocity crimes.’³⁵ Economic and political factors remain more important drivers of atrocity crimes and armed conflict risks, which can be potentially exacerbated by environmental damage or degradation including ‘economic instability caused by scarcity of resources or disputes over their use or exploitation’ especially as they relate to food resources,³⁶ ‘economic instability caused by acute poverty, ... or deep horizontal inequalities,’³⁷ ‘economic interests, including those based on the safeguard and well-being of elites or identity groups’, corruption, poor governmental infrastructure and planning to account for effective responses to environmental impacts,³⁸ or ‘control over

31 Tamma Carleton et al, ‘Conflict in a Changing Climate’ (2016) 225 *The European Physical Journal Special Topics* 489; Dennis Mares and Kenneth Moffett, ‘Climate Change and Interpersonal Violence: A “Global” Estimate and Regional Inequities’ (2016) 135(2) *Climatic Change* 297.

32 Hans-Otto Pörter et al (eds), ‘Climate Change 2022: Impacts, Adaptation and Vulnerability – Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change’ 1190 (‘IPCC WG II Sixth Report’).

33 See eg Val Percival and Thomas Homer-Dixon, ‘Environmental Scarcity: The Case of South Africa’ (1998) 35(3) *Journal of Peace Research* 279, 314.

34 IPCC WG II Sixth Report (n 31) 1190; Bakaki and Haer (n 10) 3; Jan Selby, ‘Positivist Climate Conflict Research: A Critique’ (2014) 19(4) *Geopolitics* 829.

35 UN Office of Genocide Prevention and Responsibility to Protect, *Framework of Analysis for Atrocity Crimes: A Tool for Prevention* (New York, 2014) indicator 1.3 (‘*Framework of Analysis for Atrocity Crimes*’).

36 *ibid* indicator 1.7.

37 *ibid* indicator 1.9.

38 Jan Selby et al, ‘Climate Change and the Syrian Civil War Revisited’ (2017) 60 *Political Geography* 232.

the distribution of resources;³⁹ degradation of human rights or increased human rights violations, and a lack of mitigating factors.⁴⁰ These risk factors in themselves or combined may contribute to situations at risk of resulting in atrocity crimes.⁴¹ The risk factors for atrocity crimes are compounded by multi-hazard risks whereby their likelihood increases for vulnerable populations who already experience 'repeated and successive climatic events' as a result of climate change.⁴² These risk factors are, however, more likely to lead to augmented armed conflict and atrocity crimes where they occur in conjunction with other risk factors. These factors may include a lack of or limited effective human rights mechanisms and democratic governance, political instability and a lack of trust in the ruling government and established infrastructures or limited societal resilience. Consequently, environmental damage and degradation may worsen existing tensions, which can lead to societal, political or prolonged violent conflict.⁴³ Environmental degradation is more accurately characterised as an important threat-multiplier for conflict generally and atrocity crimes, as opposed to a direct cause.

Environmental damage and degradation during armed conflict may be severe. The effects of such damage are most commonly felt locally through the exacerbation of risk factors conducive of atrocity crimes within already vulnerable populations, but they may also have broader consequences for international peace and security. With armed conflicts raging across the globe and the issue of environmental damage and degradation becoming more acute and urgent as climate change worsens and threatens to further exacerbate precarious situations, the nexus between environmental damage during armed conflict and the intensified risks of atrocity crimes must be acknowledged and ought to receive more attention on the international level. It is therefore necessary to consider existing protections of the environment during armed conflict to be able to determine what steps can and should be taken to enhance these protections and reduce the risk of the commission of atrocity crimes.

39 *Framework of Analysis for Atrocity Crimes* (n 35) indicator 4.2.

40 Eg *ibid* Indicators 6.1–6.11. Other risk factors identified in the framework may also be indirectly implicated in a less obvious manner.

41 Carleton et al (n 31); Nina von Uexkull et al, 'Drought, Resilience, and Support for Violence: Household Survey Evidence from DR Congo' (2016) 64(10) *Journal of Conflict Resolution* 1994; Tobias Ide et al, 'Multi-Method Evidence for When and How Climate-Related Disasters Contribute to Armed Conflict Risk' (2020) 62 *Global Environmental Change* 102063.

42 IPCC WG II Sixth Report (n 32) 1178.

43 Luca Marchiori et al, 'The Impact of Weather Anomalies on Migration in Sub-Saharan Africa' (2012) 63(3) *Journal of Environmental Economics and Management* 255.

3 Existing Protections of the Environment During Armed Conflict

IHL sets limits on what belligerent parties may lawfully do and achieve during armed conflict. As early as 1868, the Saint Petersburg Declaration specified that ‘the only legitimate object which States should endeavour to accomplish during war is to weaken the military forces of the enemy’.⁴⁴ However, some damage to the environment may be inevitable during armed conflict.⁴⁵ Therefore, IHL contains provisions for the protection of the natural environment,⁴⁶ to avoid unlimited damage by setting limits on the lawful right of belligerent parties to cause damage or destruction. Notably, this protection is two-fold: first, belligerent parties are required to contemplate the possibility of environmental damage in their planning of attacks; secondly, IHL provides specific prohibitions such as the use of the natural environment as a weapon or to direct deliberate attacks against the natural environment unless in instances where the natural environment has become a military objective. The latter is, however, rare.

Much has been written on the protection of the natural environment under IHL and during armed conflict.⁴⁷ This section therefore provides a brief overview of general rules of IHL and specific protection provisions relevant to the protection of the environment during armed conflict to subsequently enable the identification of how these protections may contribute to the prevention of atrocity crimes. The interconnections between the protection of the environment on one hand, and the protection of civilians on the other, during armed conflict have also been acknowledged and considered

44 Declaration Renouncing the Use, in Time of War, of Explosive Projectiles under 400 Grammes Weight (signed 29 November 1868, entered into force 11 December 1868).

45 See eg Yves Sandoz, Christophe Swinarski and Bruno Zimmermann (eds), *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949* (Martinus Nijhoff 1987) 410, [1442], fn 84.

46 See (n 1).

47 See eg Gasser (n 2); Fleck (n 19); Bouvier, ‘Protection of the Natural Environment in Time of Armed Conflict’ (n 23); Cordula Droege and Marie-Louise Tougas, ‘The Protection of the Natural Environment in Armed Conflict – Existing Rules and Need for Further Legal Protection’ (2013) 82 *Nordic Journal of International Law* 21; Jean-Marie Henckaerts and Dana Constantin, ‘Protection of the Natural Environment’ in Andrew Clapham and Paola Gaeta (eds), *The Oxford Handbook of International Law in Armed Conflict* (OUP 2014); Michael Addaney et al, ‘Protection of the Environment and Natural Resources during Armed Conflicts in Africa’ (2019) 3 *Chinese Journal of Environmental Law* 85; Peter Maurer, ‘Protecting the Natural Environment in Armed Conflict’ (2021) 51 *Environmental Policy and Law* 21.

by the ICRC and the ILC separately.⁴⁸ Where protections afforded by IHL are considered, the term ‘natural environment’ is used.

3.1 *General Principles of International Humanitarian Law Protecting the Natural Environment During Armed Conflict*

The concept of ‘natural environment’ within IHL was not introduced until 1977. Since then, however, general principles within IHL have emerged which provide for and contribute to the protection of the natural environment during armed conflict, in addition to specific obligations and protections set out below. The ICRC’s recently updated Guidelines on the Protection of the Natural Environment in Armed Conflict (‘ICRC Guidelines’) identify a total of 30 general rules and two general recommendations.⁴⁹ Most of the general principles of IHL protecting the natural environment during armed conflict are based on the consideration and interpretation that the term and protection of ‘civilian objects’ in IHL includes and extends to the natural environment. This interpretation flows from the acknowledgement that the natural environment and parts thereof are inherently civilian in nature. This section provides a succinct overview of these general principles to demonstrate their scope and reach.

In particular, the principles of distinction and proportionality prohibit the launching of an attack firstly against civilian objects including the natural environment unless they are a military objective; and secondly where any incidental damage including to the natural environment may be expected to be excessive in relation to the concrete and direct military advantage anticipated.⁵⁰ Similarly, indiscriminate attacks which employ methods or means of warfare which cannot be directed at a specific military objective, or the effects of which cannot be limited in accordance with IHL, are prohibited.⁵¹ Unless justified by military necessity, a general prohibition on

48 Draft Principles (n 14); ICRC 2020 Guidelines (n 24).

49 ICRC 2020 Guidelines (n 24).

50 See the principle of distinction: Protocol Additional to the Geneva Conventions of 12 August 1949 and relating to the Protection of Victims of International Armed Conflicts (Protocol I) (adopted 8 June 1977, entered into force 7 December 1978) 1125 UNTS 3, arts 48 and 52(2) (AP I); Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law: Volume I: Rules* (CUP 2009) rule 43(A); ICRC 2020 Guidelines (n 24) rule 5. See the principle of proportionality: AP I, art 51(5); Henckaerts and Doswald-Beck, rules 14, 43(C); ICRC 2020 Guidelines (n 24) rule 7. See also *Nuclear Weapons (Advisory Opinion)* (n 6) [30]; Draft Principles (n 14).

51 AP I (n 50) arts 51(4), 48, 52(2); Henckaerts and Doswald-Beck (n 50) rule 12; ICRC 2020 Guidelines (n 24) rule 6.

destroying civilian objects exists, which also supports the protection of the environment.⁵² Additionally, precautions are to be taken to avoid or at least minimise any incidental loss of civilian life, injury to civilians and damage to civilian objects including the natural environment,⁵³ and an attacker must take all feasible precautions to protect civilian objects against the effects of their attacks.⁵⁴ Further prohibitions exist against the attack, destruction, removal or rendering useless of objects indispensable to the survival of the civilian population,⁵⁵ works and installations containing dangerous forces,⁵⁶ and cultural property,⁵⁷ with limited exceptions. Belligerent parties are also prohibited from the pillage of property constituting part of the natural environment.⁵⁸ The natural environment therefore benefits from protection afforded to specially protected objects, rather than from protection arising from the general rules on the conduct of hostilities itself.

Additionally, relevant rules of customary international law, IEL and other international agreements remain applicable insofar as they are not inconsistent with IHL. This is echoed in Principle 24 of the Rio Declaration on Environment and Development:

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- 52 Convention (IV) respecting the Laws and Customs of War on Land and its annex: Regulations concerning the Laws and Customs of War on Land (adopted 18 October 1907, entered into force 26 January 1910), art 23(g) (Regulations) ('HC IV'); Convention (IV) relative to the Protection of Civilian Persons in Time of War (adopted 12 August 1949, entered into force 21 October 1950) 75 UNTS 287, art 53 ('GC IV'); AP I (n 50) art 52; Protocol Additional to the Geneva Conventions of 12 August 1949 and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II) (adopted 8 June 1977, entered into force 7 December 1978) 1125 UNTS 609, art 14 ('AP II'); Henckaerts and Doswald-Beck (n 50) rules 43(B) (specific to the natural environment), 50; ICRC 2020 Guidelines (n 24) rule 13.
- 53 AP I (n 50) arts 35, 48, 52, 57; Henckaerts and Doswald-Beck (n 50) rule 44 (specific to precautions vis-à-vis the natural environment); ICRC 2020 Guidelines (n 24) rule 8.
- 54 Regarding passive precautions see: AP I (n 50) art 58(c); ICRC 2020 Guidelines (n 24) rule 9.
- 55 AP I (n 50) art 54(2); AP II (n 52) art 14; Henckaerts and Doswald-Beck (n 50) rule 54; ICRC 2020 Guidelines (n 24) rule 10.
- 56 AP I (n 50) art 56; AP II (n 52) art 15; Henckaerts and Doswald-Beck (n 50) rule 14; ICRC 2020 Guidelines (n 24) rule 11.
- 57 AP I (n 50) art 53; AP II (n 52) art 16; Henckaerts and Doswald-Beck (n 50) rules 38–40; ICRC 2020 Guidelines (n 24) rule 12.
- 58 HC IV (n 52) arts 28, 47 (Regulations); GC IV (n 52) art 33(2); AP II (n 52) art 4(2)(g); Henckaerts and Doswald-Beck (n 50) rule 52; ICRC 2020 Guidelines (n 24) rule 14. See also Rome Statute of the International Criminal Court (adopted 17 July 1998, entered into force 1 July 2002) 2187 UNTS 3, arts 8(2)(b)(xvi), (e)(v).

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.⁵⁹

Situations not provided for by existing international agreements may still require the protection of the natural environment through ‘the principles of international law derived from established custom, the principles of humanity and the dictates of public conscience’.⁶⁰ Although IHL provisions do not explicitly refer to the natural environment, Article 56(6) of Additional Protocol I to the Geneva Conventions (‘AP I’) further urges States to negotiate added protections ‘for objects containing dangerous forces’ during armed conflict, which may also extend to the natural environment.⁶¹ The ICRC Guidelines specifically urge States to negotiate added protections of the natural environment during armed conflict.⁶² Additionally, belligerent parties to a non-international armed conflict (‘NIAC’) are encouraged to apply the same protections to the natural environment afforded in an international armed conflict (‘IAC’).⁶³ The extent to which general principles and rules of IHL contribute to the protection of the natural environment during armed conflict appear fairly comprehensive. They are further strengthened and supplemented by specific provisions explored below.

59 Rio Declaration on Environment and Development (adopted 14 June 1992) UN Doc A/CONF.151/26.

60 See Convention (II) with Respect to the Laws and Customs of War on Land and its annex: Regulations Concerning the Laws and Customs of War on Land (adopted 29 July 1899, entered into force 4 September 1900) preamble (Convention); HC IV (n 52) preamble (Convention); AP I (n 50) art 1(2); AP II (n 52) preamble; ICRC 2020 Guidelines (n 24) rule 16. For denunciation clauses of the Geneva Conventions see: Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (adopted 12 August 1949, entered into force 21 October 1950) 75 UNTS 31, art 63 (‘GC I’); Convention (II) for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea (adopted 12 August 1949, entered into force 21 October 1950) 75 UNTS 85 (GC II), art 62 (‘GC II’); Convention (III) relative to the Treatment of Prisoners of War (adopted 12 August 1949, entered into force 21 October 1950) 75 UNTS 135 (GC III), art 142 (‘GC III’); GC IV (n 52) art 158. The ICJ has confirmed the customary nature of the Martens clause in its *Nuclear Weapons (Advisory Opinion)* (n 6) [84].

61 Similarly see GC I (n 60) art 6; GC II (n 60) art 6; GC III (n 60) art 6; GC IV (n 52) art 7. See also Common Article 3 in each of the Geneva Conventions.

62 ICRC 2020 Guidelines (n 24) recommendation 17.

63 *ibid* recommendation 18. See also Common Article 3 in each of the Geneva Conventions.

3.2 *Specific Protections of the Natural Environment*

There are several provisions within international agreements that are specifically aimed at providing wartime protection to the natural environment, and which have influenced the development of further propositions to enhance environmental protection. More specifically, Articles 35(3) and 55(1) of AP I, some customary IHL rules, including Rules 43, 44 and 45, Article 1(1) of the Environmental Modification Convention ('ENMOD'), and Article 8(2)(b) (iv) of the Rome Statute are frequently considered as the main environmental protection provisions imposing obligations on States to enable and ensure specific protections of the natural environment to varying degrees. The focus of each provision is environmental damage during armed conflict. Much has been written on the protection of the environment on the basis of these provisions. This section will therefore limit itself to a brief overview of current international obligations to enable consideration of how these protections can be enhanced to alleviate the risk of atrocity crimes.

The protection of the natural environment through IHL, as captured in AP I, prohibits the use of 'methods or means of warfare which are indeed, or may be expected, to cause widespread, long-term and severe damage to the natural environment'.⁶⁴ This provision affects the choice of weapon and the type of tactic that can be employed in IACs. It is generally implemented and enforced through military manuals, military training, military operations choices about weapons and tactical decisions on the ground. Article 35(3) of AP I is mirrored by Rule 45 of the customary IHL database.

Further, in accordance with Article 55(1) AP I:

Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.⁶⁵

Additionally, States Parties to AP I are not permitted to employ reprisals in the form of attacks against the natural environment and against objects protected under the Additional Protocol, including those which are part of the natural environment.⁶⁶ All States bear an obligation to refrain from reprisals

64 AP I (n 50) art 35(3).

65 *ibid* art 55(1) (emphasis added).

66 *ibid* art 55(2).

against protected objects under the Hague Convention for the Protection of Cultural Property and Geneva Conventions, including those which form part of the natural environment. Article 55 is located in Part IV of AP I, dealing with the protection of the civilian population against effects of hostilities. Both Articles 35(3) and 55(1) entail a high threshold for assessing unlawful environmental damage, triggering concerns about the provisions' ability to address environmental damage in practice where the damage falls short of being widespread, long-term and severe.⁶⁷ A provision with a lower threshold prohibiting, for example, severe and either widespread or long-term damage as opposed to the cumulative requirement contained in AP I captures a wider array of instances and at-risk situations, which may be critical to not only the protection of the natural environment but also the prevention of atrocity crimes where risk factors may be exacerbated through environmental damage or degradation.

Other specific environmental protection provisions require States to take the following measures to avoid:

- Making 'forests or other kinds of plant cover the object of attack by incendiary weapons except when such natural elements are used to cover, conceal, or camouflage combatants or other military objectives, or are themselves military objectives';⁶⁸
- Attacks on 'objects indispensable to the survival of the civilian population', including foodstuffs, agricultural areas, or drinking water installations, if conducted 'for the specific purpose of denying' such objects to the civilian population;⁶⁹ and
- Attacks on 'works or installations containing dangerous forces, namely dams, dykes and nuclear electrical generating stations, [...] even where they are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population' with limited exceptions outlined in Article 56(2) AP I.⁷⁰

67 Liana Minkova, "The Fifth International Crime: Reflections on the Definition of "Ecocide" (2021) 25(1) *Journal of Genocide Research* 1, 6. See also Marcos Orellana, 'Criminal Punishment for Environmental Damage: Individual and State Responsibility at a Crossroad' (2005) 17(4) *Georgetown International Environmental Law Review* 673, 683–84.

68 Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III) (adopted 10 October 1980, entered into force 2 December 1983) 1342 UNTS 137, art 2(4).

69 AP I (n 50) art 54; AP II (n 52) art 14.

70 AP I (n 50) art 56; AP II (n 52) art 15.

These protection provisions aim to safeguard resources and other important infrastructures which may cause tensions exacerbating risk factors for atrocity crimes.

Similarly, Chapter 14 of the ICRC's customary IHL database explicitly deals with obligations of States during armed conflict for the protection of the natural environment. Rule 43 *inter alia* sets out that '[n]o part of the natural environment may be attacked, unless it is a military objective' and that 'the destruction of any part of the natural environment is prohibited'.⁷¹ To do so may exacerbate food, water, and other resource shortages with the potential of increasing existing tensions and aggravating existing risk factors for the commission of atrocity crimes. Additionally, States are required to refrain from any attack against a military objective where any incidental environmental damage could be deemed to be 'excessive in relation to the concrete and direct military advantage anticipated'.⁷² Rule 44 concerns the means of warfare that may be employed. It places a general obligation on belligerent parties to pay due regard to environmental protection and preservation in their choice of methods and means, and requires 'all feasible precautions' to be taken to reduce any incidental environmental damage. Rule 45 mirrors Article 35(5) AP I in the prohibition of '[t]he 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'. These customary IHL rules are applicable in IACs and NIACs,⁷³ and may therefore support atrocity prevention efforts in both types of armed conflict.

Another significant development to the protection of the natural environment during armed conflict was the adoption of ENMOD.⁷⁴ Article 1(1) provides 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.

⁷¹ Henckaerts and Doswald-Beck (n 50) rule 43(A)-(B).

⁷² *ibid* rule 43(C).

⁷³ The position regarding rule 45 is, however, less clear. While it can be argued that the rule extends to both international and non-international armed conflict, some persistent objectors oppose the first part of Rule 45 generally, who are also not States Parties to the AP I. Objections by States also exist regarding the use of nuclear weapons (such as France, the UK, and the US).

⁷⁴ Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (adopted 10 December 1976, entered into force 5 October 1978) 1108 UNTS 151 ('ENMOD').

While ENMOD provides for a lower threshold than that of AP I, which requires widespread, long-lasting and severe effects on the natural environment, its scope is narrower in that it addresses the manipulation or modification of the environment on the territory of a State Party. ENMOD considers the use of the environment by States Parties as a weapon as opposed to the victim-focus approach adopted by AP I.

Articles 146 and 147 of the Geneva Convention IV and Article 86 of AP I provide that where rules of IHL protecting the natural environment are breached, measures shall be taken to suppress any such violation and to prevent further breaches. Where breaches are serious, perpetrators may face individual criminal responsibility and/or State responsibility. Causing damage to the natural environment is further criminalised under Article 8(2)(b)(iv) of the Rome Statute – the only article under the Rome Statute which directly provides for the protection of the natural environment. This provision is therefore intended to directly prevent atrocity crimes through the conduct's criminalisation. It criminalises the following as a war crime:

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

Building on Article 35(1) of AP I, Article 8(2)(b)(iv) of the Rome Statute requires a high threshold: the damage to the natural environment must be so widespread, long-term and severe that it would clearly be excessive to the military advantage. It does, however, have a somewhat limited reach: not only is this Article the only provision that specifically criminalises environmental damage during armed conflict, but it is only applicable vis-à-vis IACs. Environmental damage caused during times of peace or in NIACs does not fall within the scope of Article 8(2)(b)(iv) of the Rome Statute, notwithstanding that significant environmental damage can occur outside of an IAC as well.⁷⁵ However, actual damage to the natural environment is not required to satisfy the elements of this war crime, nor is it necessary that the natural environment is the direct intended target.⁷⁶ The mere launching of an attack in the knowledge

⁷⁵ See eg Sébastien Jodoin, 'Conclusion: Protecting the Rights of Future Generations Through Existing and New International Criminal Law', in Sébastien Jodoin and Marie-Claire Cordonier Segger (eds), *Sustainable Development, International Criminal Justice, and Treaty Interpretation* (CUP 2013) 352.

⁷⁶ Minkova (n 67) 7; Ines Peterson, 'The Natural Environment in Times of Armed Conflict: A Concern for International War Crimes Law?' (2009) 22(2) *Leiden Journal of International Law* 325, 327.

that it will result in damage will be a criminal act, so long as it satisfies the high threshold of being widespread, long-term and severe.

Some, however, argue that environmental protections during armed conflicts are provided by international law, and IHL specifically, 'more by accident than by design'.⁷⁷ Others contend that existing international law provides adequate protection 'if properly implemented and respected', noting that the focus of any improvement on the protection and preservation of the natural environment in armed conflict ought to be on more effective implementation, enforcement and compliance mechanisms.⁷⁸ Current protections of the natural environment during armed conflict by IHL and other areas of international law are only afforded in extreme situations when high thresholds have been met, notwithstanding that significant environmental damage and degradation may occur below these high thresholds with exacerbating consequences as well. Regardless, IHL creates substantive obligations for the protection of the environment as a victim of armed conflict in both IACS, based on treaty and custom, and NIACS, on the basis of custom, and protection from the environment when used as a weapon of war; as well as providing a legal basis, albeit with a high threshold, for prosecuting certain types of environmental damage as a war crime in IACS. Adherence to these provisions positively contributes to the reduction of damage suffered by the natural environment during armed conflict, thereby also alleviating and reducing risk factors for the commission of atrocity crimes affecting already vulnerable populations.

3.3 *Draft Principles on Protection of the Environment in Relation to Armed Conflicts*

In its 73rd session in 2022, the ILC adopted the Draft principles on protection of the environment in relation to armed conflicts ('Draft Principles'),⁷⁹ after commencing work on the issue in 2013.⁸⁰ The ILC included this topic in its

77 Minkova (n 67) 6–7; Anthony Liebler, 'Deliberate Wartime Environmental Damage: New Challenges for International Law' (1992) 23(1) *California Western International Law Journal* 67, 132; Richard Falk, 'The Inadequacy of the Existing Legal Approach to Environmental Protection in Wartime', in Jay E Austin and Carl E Bruch (eds), *The Environmental Consequences of War: Legal Economic and Scientific Perspectives* (CUP 2000) 140.

78 Eg Antoine Bouvier, 'Recent Studies on the Protection of the Environment in Time of Armed Conflict' (1992) 32(291) *International Review of the Red Cross* 554; Minkova (n 67); Dam-de Jong and Sjöstedt (n 22).

79 Draft Principles (n 14).

80 Marie Jacobsson, 'Protection of the Environment in Relation to Armed Conflicts' (2011) UN Doc A/66/10 Annex E; Tara Smith, 'A Framework Convention for the Protection of the Environment in Times of Armed Conflict: A New Direction for the International Law Commission's Draft Principles?' (2020) 11 *Journal of International Humanitarian Legal Studies* 148, 150.

programme of work, noting that environmental damage caused during armed conflict can have particularly disruptive and long-term impacts on populations' lives, livelihoods, and post-conflict complexities. Throughout the commentary to its Draft Principles, the ILC makes interconnections between the effects of environmental protection on the protection of civilians and vice versa, as well as the effects of environmental damage and degradation on civilian populations.⁸¹

Notably, the scope of the Draft Principles extends to the protection of the environment before, during and after an armed conflict, and is therefore not limited to situations in the course of armed conflict. Any consideration of the Draft Principles in the present article is, however, limited to those generally applicable and those applicable during armed conflict.⁸² In addition to calling on States to take effective legislative, administrative, judicial and other measures to enhance the protection of the environment,⁸³ the Draft Principles further make specific reference to the designation and defence of protected zones of environmental or cultural importance,⁸⁴ the enhanced protection of the environment of indigenous peoples,⁸⁵ and environmental protections in areas affected by displacement *inter alia*.⁸⁶ The latter two principles demonstrate the broad reach and complexities associated with armed conflict and the environment. In accordance with the Articles on the Responsibility of States for Internationally Wrongful Acts, principle 9 reflects the basic rule that States are responsible for internationally wrongful acts, including those that cause environmental damage or degradation.⁸⁷ States may further be required to make reparation for any (environmental) damage arising from an internationally wrongful act including for 'damage to the environment in and of itself'.⁸⁸ Part Three of the Draft Principles specifically addresses principles

81 See in particular Draft Principles Commentary (n 14) principle 12, [4]-[9].

82 Notwithstanding that environmental protections before and after armed conflicts also play a vital role in the reduction of risk factors for atrocity crimes and the building of sustainable peace.

83 Draft Principles (n 14) principle 3.

84 *ibid* principles 4, 18. The latter relates to the protection of such zones against attacks unless in instances where such a zone has become a military objective.

85 *ibid* principle 5.

86 *ibid* principle 8.

87 ILC, 'Responsibility of States for Internationally Wrongful Acts', annexed to UNGA Res 56/83 (12 December 2001) UN Doc A/RES/56/83 (28 January 2002).

88 ILC, 'Report of the International Law Commission on the Work of its 71st Session' (29 April-7 June and 8 July-9 August 2019) UN Doc A/74/10, 211. See also *Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v Nicaragua) (Judgment)* [2018] ICJ Rep 15, [41]-[43].

applicable during armed conflict including situations of occupation.⁸⁹ The adopted Draft Principles largely reflect existing general protections of the natural environment during armed conflict under IHL, as outlined above. As such, the Draft Principles make note of *inter alia* the applicability of the Martens Clause,⁹⁰ the principles of distinction, proportionality, and precautions in attack,⁹¹ and the prohibitions of reprisals and pillage.⁹² The Draft Principles further capture specific environmental protections also provided under treaty law.⁹³ Part Four outlines three principles applicable in situations of occupation: the occupying power has the obligation ‘to respect and protect the environment’ in accordance with international obligations under IEL and human rights law and to prevent any significant harm within any occupied territory,⁹⁴ as well as transboundary harm,⁹⁵ and make use of natural resources in a sustainable manner where the administration of natural resources is permitted ‘for the benefit of the protected population of the occupied territory’.⁹⁶ These principles complement those applicable to all belligerent parties. The most important distinction is that the occupying power incurs special responsibilities as the *de facto* authority.⁹⁷

In its work on this topic, the ILC was faced with a hybrid issue of addressing two areas of international law regulating the law of armed conflict on one hand, and the protection of the environment on the other. It is no easy feat ‘to make different instruments dealing with aspects of the same larger issue coherent with one another’.⁹⁸ This may be particularly true where the different instruments, here governing IHL and IEL (and, to an extent, international human rights law within the Draft Principles’ broader focus), have different, and to varying degrees opposing objectives, aims, and basic principles. The ILC’s commentary to the Draft Principles does affirm that relevant rules of

89 The Draft Principles, however, also contain dedicated draft principles applicable in situations of occupation specifically.

90 Draft Principles (n 14) principle 12.

91 *ibid* principle 14.

92 *ibid* principles 15–16.

93 See *ibid* principle 17, which specifically makes references to States’ international legal obligations under ENMOD.

94 *ibid* principle 19. This is derived from Article 43 of the Hague Regulations attached to the 1907 Hague Conventions and Article 55(1) of AP I.

95 *ibid* principle 21. This is derived from Article 55 of the Hague Regulations attached to the 1907 Hague Conventions.

96 *ibid* principle 20.

97 Dam-de Jong and Sjöstedt (n 22) 148.

98 Nele Matz-Lück, ‘Framework Conventions as a Regulatory Took’ (2009) 1(3) *Goettingen Journal of International Law* 439, 447.

customary international law and IEL remain applicable insofar as they are not inconsistent with IHL as *lex specialis*.⁹⁹ However, it may be that it proved too complex of a task to ensure coherency across the relevant areas of law, with the adopted Draft Principles largely reflecting *lex lata* vis-à-vis the obligations of States during armed conflict with limited substantive contributions and recommendations for further protections instead of adopting a more progressive position. The adopted Draft Principles remain silent on how environmental protections during armed conflict can be achieved. Additionally, while the Draft Principles could be viewed as progressive for not incorporating a distinction between rules applicable to IACs and NIACs, they also fail to provide potential remedies to or even address this gap in the protection of the environment during armed conflict. To achieve such a goal, new rules would be necessary.¹⁰⁰

Where the Draft Principles do achieve a significant development on the law pertaining to environmental protection in relation to armed conflicts is vis-à-vis the law applicable in situations of occupation.¹⁰¹ The principles pertaining to environmental protection during occupation have been interpreted by some as representative of progressive development,¹⁰² or as examples of State practice and evolutionary interpretation.¹⁰³ In any case, the main focus of the Draft Principles was on principles of general application and those applicable after the conclusion of armed conflicts as opposed to providing a more comprehensive reflection of applicable principles during armed conflicts.

The preference from the outset, for largely political but also normative reasons,¹⁰⁴ appears to have been the formulation of non-binding principles or guidelines based on existing international law at the cost of progressively developing the law in this area. Subsequent to the adoption of the Draft Principles, the ILC recommended that the UN General Assembly take notice of the Draft Principles as adopted and 'encourage their widest possible

99 Draft Principles Commentary (n 14) [4].

100 Smith (n 80) 151.

101 See Draft Principles (n 14) part 4.

102 ILC, 'Second report on protection of the environment in relation to armed conflicts by Maja Lehto, Special Rapporteur' (27 March 2019) UN Doc A/CN.4/728, [2]-[3].

103 Dam-de Jong and Sjöstedt (n 22) 151.

104 ILC, 'Report of the International Law Commission on the work of its sixty-third and sixty-fifth sessions' (23 January 2014) UN Doc A/CN.4/666, 14; ILC, 'Report of the International Law Commission on the work of its sixty-fifth session' (6 May-7 June and 8 July-9 August 2013) UN Doc A/68/10, [137]; ILC, 'Preliminary report on the protection of the environment in relation to armed conflicts' submitted by Marie G Jacobsson, Special Rapporteur (30 May 2014) UN Doc A/CN.4/674, [89].

dissemination' amongst States, international organisations, and other relevant actors.¹⁰⁵ The potential legal and practical effects of the Draft Principles remain to be seen. As non-binding principles, they in themselves impose no legal obligations on relevant actors. The Draft Principles are, however, binding insofar as they reflect existing treaty obligations or general international law. Considering the urgency of the protection of the environment, its importance for both present and future generations, and the potential for environmental damage during armed conflict to exacerbate global environmental and other challenges,¹⁰⁶ the only protections afforded to the environment during armed conflict, which are binding on States and belligerent parties, are the general and specific protections outlined above.¹⁰⁷

4 Potential for Enhanced Protections and Future Developments

As part of the general and specific obligations for the protection of the environment arising from IHL and environmental agreements, States incur obligations to fulfil and to ensure respect for the implementation and dissemination of these rules on a national and international level. States are further required to contribute to the repression of war crimes that concern the natural environment by conducting effective investigations and prosecuting alleged perpetrators. While IHL may impose relevant obligations on States, in practice, effective implementation and compliance is lacking.¹⁰⁸ It is therefore necessary to consider potential avenues for the enhancement of environmental protection obligations and their implementation and what effect they may have on the prevention of atrocity crimes. This section first considers recommendations specific to IHL, before assessing the viability of the newly proposed international crime of 'ecocide' as part of progressive development on environmental protection during armed conflict which may effectively also contribute to atrocity prevention.

105 See Draft Principles (n 14). See also UNGA Res 77/104 (7 December 2022) UN Doc A/RES/77/104. Here, the UNGA welcomed the conclusion of the ILC's work on this topic, took note of the Draft Principles and encouraged their widest possible dissemination while also bringing them to the attention of States, international organisations, and other relevant actors.

106 Draft Principles (n 14) preamble.

107 See Section 3 above.

108 Bouvier, 'Protection of the Natural Environment in Time of Armed Conflict' (n 22); Bouvier, 'Recent Studies' (n 80); Minkova (n 67); Dam-de Jong and Sjöstedt (n 22).

4.1 *Recommendations Specific to IHL*

While debates within scholarship exist as to whether the protections afforded to the natural environment during armed conflict under IHL are sufficient or whether these protections are more accidental than intentional, it may be argued that in any case, effective implementation and actualisation of the protection obligations outlined above can positively contribute towards the realisation of the natural environment as a protected object during armed conflict and within IHL. Most damage to the environment during armed conflicts is incidental, but at times also inevitable. This suggests that short of intentionally weaponizing the environment, environmental damage is not generally the main preoccupation of belligerent parties. Regardless of the intention of belligerent parties, environmental damage and degradation can have far-reaching consequences for already vulnerable populations and can exacerbate risk factors associated with the likely occurrence of atrocity crimes. It is therefore necessary to investigate how environmental protection can be afforded during armed conflict. The following recommendations are aimed at strengthening existing protections in IHL as opposed to the creation of supplementary provisions.

First, there remains an enduring need to strengthen awareness and compliance with IHL and obligations arising therefrom. Scholars which advocate that existing environmental protections within IHL are sufficient frequently highlight implementation and compliance of those protections as a key issue for IHL.¹⁰⁹ The benefit of strengthening awareness and compliance of existing obligations is three-fold: first, it contributes to the limitation of damage done to the natural environment; secondly, it could and would help affected populations recover from conflict, thereby easing existing tensions which may otherwise contribute to risk factors of atrocity crimes; and thirdly, it may limit the exacerbation of conflict and reduce risk factors associated with atrocity crimes, which are enhanced through environmental degradation.

Secondly and more specifically, belligerent parties are recommended to take the following measures to prevent environmental damage:¹¹⁰

- Belligerent parties ought to avoid the positioning of armed forces or military material in protected areas, areas of ecological importance or in fragile ecosystems, so that they cannot be considered ‘military targets’.
- Belligerent parties ought to identify important or fragile ecological areas, and refrain from conducting military operations in these areas.

¹⁰⁹ See eg *ibid.*

¹¹⁰ ICRC, ‘Natural Environment’ (n 5).

- Belligerent parties ought to jointly agree to designate important or fragile ecological areas or protected areas as demilitarised zones, prohibiting any military action or the positioning of armed forces and military materials.
- States and belligerent parties should effectively implement the ICRC Guidelines into military manuals, domestic legislation and policy.¹¹¹

For concrete measures to not only provide effective environmental protection but to also ease risk factors for atrocity crimes, these measures will be most effective where they strengthen the transparency and accountability of public institutions and the perceived faith in them by civil society. Where measures ensure that all levels of government subscribe and adhere to principles of transparency and accountability, they also act as mitigating factors for further conflict and atrocity crimes.¹¹² Measures to prevent environmental damage, taken in line with human rights considerations, further contribute to the promotion of such rights specifically affected by environmental damage and degradation and human rights in a State generally. Where measures contribute to the promotion of social and economic equality, for example through the consideration of resource allocations and the effect of military action on resources, such policy and action can have a direct contribution to the prevention of atrocity crimes.¹¹³ The implementation of policy reducing already vulnerable populations and at-risk States' exposure and vulnerability to adverse environmental effects in addition to the specific recommendations above is beneficial.

Thirdly and importantly, as weapons and warfare gain sophistication and are modernised, so must protections of the natural environment be adapted to account for these developments.¹¹⁴ Concrete and specific steps must be taken to appropriately and effectively afford environmental protection during armed conflict in compliance with the obligations imposed on States under IHL. This may include, but is not limited to, the negotiation and agreement of detailed rules, regulations and obligations addressing the effect specific weapons may have on the natural environment to limit environmental damage and degradation resulting from them. This is particularly relevant vis-à-vis weapons that may 'cause particularly serious effects on the environment'.¹¹⁵

¹¹¹ See eg UNGA Res 49/50 (9 December 1994) UN Doc A/RES/49/50.

¹¹² Asia-Pacific Centre for the Responsibility to Protect and Global Centre for the Responsibility to Protect, *A Framework for Action for the Responsibility to Protect: A Resource for States* (2023) action 1.2

¹¹³ *ibid* action 1.1.

¹¹⁴ See eg ICRC 2020 Guidelines (n 24).

¹¹⁵ UNEP, 'Proceedings of the Governing Council at its 16th Session' (31 May 1991) UN Doc UNEP/GC.16/27, 12 (decisions 16/11 A and B).

Arising from the modernisation of weapons and warfare, States may also continuously review and update existing military manuals, domestic legislation and policy. Additionally, enhanced inter-disciplinary cooperation and ecological assessments to explore and assess the environmental impacts of armed conflicts are necessary.¹¹⁶ The implementation and compliance with existing environmental protection obligations under IHL requires continued vigilance and respect by States and belligerent parties, and the consideration of contemporary developments to enable the appropriate level of protection. Where environmental damage or degradation may otherwise exacerbate existing risk factors for atrocity crimes, strengthening implementation of, and compliance with, environmental protection obligations to reduce such damage or degradation can have an alleviating effect.

4.2 *Introduction of the New Crime of Ecocide*

Atrocity crimes are conceptually indefinite, but are generally considered to be systematic, heinous acts on a large scale and of severe gravity or as part of a plan or policy, which not only affect vulnerable populations, but are crimes against all States. They share some commonalities; however, their objective and subjective elements differ. It is therefore possible for the term 'atrocity crimes' to extend beyond genocide, war crimes, and crimes against humanity.¹¹⁷ An addition of other crimes to those established as atrocity crimes may enhance their overall deterrence effect of the commission of future crimes.¹¹⁸

In June 2021, a panel of independent experts drafted a potential definition of the crime of 'ecocide', proposing for it to be included in the Rome Statute as the fifth international crime over which the International Criminal Court ('ICC') may exercise jurisdiction.¹¹⁹ The aim of the independent expert panel is that the proposed definition of ecocide would usefully lend itself to an amendment of the Rome Statute through the inclusion of ecocide as Article 8ter as the fifth international crime under the jurisdiction of the ICC.

¹¹⁶ See eg UNEP, *Protecting the Environment during Armed Conflict: An Inventory and Analysis of International Law* (2009) 9–11.

¹¹⁷ Yvonne Breitwieser-Faria, 'The Prevention of Atrocity Crimes: Legal Obligations and State Responsibility' (DPhil thesis, The University of Queensland) 19–20.

¹¹⁸ Martin Mennecke, 'Punishing Genocidaires: A Deterrent Effect or Not?' (2017) 8(4) *Human Rights Review* 319, 323–25; Kate Cronin-Furman, 'Managing Expectations: International Criminal Trials and the Prospects for Deterrence of Mass Atrocity' (2013) 7(3) *International Journal of Transitional Justice* 434, 435–37.

¹¹⁹ Minkova (n 67). The notion of 'ecocide' dates back decades. See eg the proposal for an International Convention on the Crime of Ecocide in 1973. Richard Falk, 'Environmental Warfare and Ecocide – Facts, Appraisal and Proposal' (1973) 4(1) *Bulletin of Peace Proposals* 80, 91.

The benefit of a potential inclusion of ecocide would be two-fold: firstly, it would allow the ICC to prosecute severe cases of environmental damage outside of IACs, and secondly, it would contribute to the recognition of the crime as on equal footing and of equal importance as genocide, war crimes, crimes against humanity and aggression adding to the protection of the environment in times of peace and (armed) conflict.

Prior to the report by the independent expert panel, the ICC issued a policy paper explicitly indicating the prosecutor's willingness to investigate environmental damage within the scope of the four international crimes within its jurisdiction.¹²⁰ While some scholars welcomed this apparent 'green-shift',¹²¹ others were more critical over whether the consideration of environmental damage in the assessment of the gravity of other international crimes was sufficient.¹²² In any case, the ICC is currently limited to the international crimes under its jurisdiction to-date and any environmental protections they may provide. The Rome Statute currently only contains one provision which specifically criminalises environmental damage incurred during IACs: as aforementioned, Article 8(2)(b)(iv). This is a significant limitation considering significant environmental damage may also occur outside of IACs, in NIACs or during times of peace.¹²³

To strengthen environmental protection through ICL and to enhance its deterrent effect, the independent expert panel proposed the following definition of the crime of ecocide:

[...] 'ecocide' means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.¹²⁴

Acts may therefore amount to ecocide where two thresholds are reached. Firstly, a substantial likelihood must exist that the conduct, which may consist of an

120 Office of the Prosecutor of the ICC, *Policy paper on case selection and prioritisation* (The Hague, 15 September 2016) <https://www.icc-cpi.int/sites/default/files/itemsDocuments/20160915_OTP-Policy_Case-Selection_Eng.pdf>.

121 Eg Eliana Teresa Cusato, 'Beyond Symbolism: Problems and Prospects with Prosecuting Environmental Destruction Before the ICC' (2017) 15(3) *Journal of International Criminal Justice* 491, 493.

122 Minkova (n 67).

123 *ibid* 2.

124 *Independent Expert Panel for the Legal Definition of Ecocide, Commentary and Core Text* (June 2021) <<https://static1.squarespace.com/static/5ca2608ab914493c64ef16d/t/60d1e6e604fae2201d03407f/1624368879048/SE+Foundation+Commentary+and+core+text+rev+6.pdf>>, proposed art 8ter.

act or omission, will cause 'severe and either widespread or long-term damage to the environment'. Secondly, proof is required that the conduct is unlawful or wanton. Unlike Article 8(2)(b)(iv) of the Rome Statute, the proposed definition of ecocide criminalises such conduct during times of peace as well, thereby expanding the current protection of the environment in ICL.

In line with the ICC's limited mandate, instances of ecocide would involve only the gravest crimes. The definition proposed would not afford protection of the environment against less severe damage. Notwithstanding this significant and welcoming advancement in the decade-long attempt to codify 'ecocide',¹²⁵ the proposed definition has some notable shortcomings. Firstly, the proposed definition contains an anthropocentric element as opposed to an ecocentric focus.¹²⁶ Article 8*ter*(2) provides for a limitation to conduct amounting to ecocide notwithstanding that this conduct can lead to environmental damage in the sense of Article 8*ter* as a result of 'social and economic benefits anticipated'. Scholars have since argued against such an anthropocentric element on the basis that such a limitation conveys that 'the problems of the environment and the problems of human communities can be separated and that humans may, in some cases, legitimately benefit from the severe and widespread or long-term degradation of the environment'.¹²⁷ Secondly, concerns have been raised as to the mental element required to satisfy proposed Article 8*ter*. Accordingly, 'knowledge that there is a substantial likelihood' that the actions of the accused would cause severe and either widespread or long-term environmental harm is required in accordance with the plain meaning of the proposed definition. However, in the commentary, the independent expert panel suggests that more accurately either recklessness or *dolus eventualis* is required, raising concerns as to the conceptual ambiguity of the mental element. The proposed mental elements entail very different requirements in practice with 'knowledge' requiring a higher standard than either of the other modes. A lower threshold of the mental element may be more appropriate considering the complexities incumbent to environmental damage and ecocide which may often be anticipated but not known with certainty or intended.¹²⁸

125 See eg Minkova (n 67) 8–10.

126 *ibid*; Kevin Heller, 'Ecocide and Anthropocentric Cost-Benefit Analysis' (*OpinioJuris*, 26 June 2021) <<http://opiniojuris.org/2021/06/26/ecocide-and-anthropocentric-cost-benefit-analysis/>>; Kevin Heller, 'The Crime of Ecocide in Action' (*OpinioJuris*, 28 June 2021) <<http://opiniojuris.org/2021/06/28/the-crime-of-ecocide-in-action/>>; Kai Ambos, 'Protecting the Environment through International Criminal Law?' (*EJIL:Talk!*, 29 June 2021) <<https://www.ejiltalk.org/protecting-the-environment-through-international-criminal-law/>>.

127 Minkova (n 67) 4.

128 *ibid*.

The inclusion of the crime of ecocide as the fifth international crime over which the ICC can exercise jurisdiction undoubtedly would be a welcome development in the protection of the environment. However, while atrocity crimes generally share some commonalities and they may overlap or occur simultaneously, their objective and subjective elements differ and their distinction from one another remains important. The criminalisation of ecocide may have no direct bearing on the deterrence effect on genocide, war crimes, or crimes against humanity, although this added protection may support the reduction of risk factors of atrocity crimes generally.

5 Conclusion

States and vulnerable populations suffering from (armed) conflict are disproportionately affected by environmental damage and degradation which may contribute to climate change and climate variability.¹²⁹ Environmental damage during armed conflicts may not only exacerbate climate change generally, but compounded with climate change, further has the potential to intensify a crisis' root causes and violence. Ultimately, enhanced respect for the protection of the environment during armed conflict and the obligations States incur in this respect can contribute to the limitation of environmental damage as a threat multiplier for atrocity crimes and other interlinked consequences for vulnerable populations.

Nevertheless, the existing international legal protections of the environment during armed conflict are marred by several deficiencies and gaps. This may be because the majority of the relevant rules were developed between the 1900s and 1970s, in an era where IEL was still in its infancy and IHL concerned itself predominantly with regulating armed conflict between States as opposed to those conflicts within States.¹³⁰ This is demonstrative of two prime shortcomings vis-à-vis current protections of the environment during armed conflict. Firstly, existing legal obligations require a high threshold to be met – any environmental damage below this threshold is deemed acceptable and lawful. The ILC's work on its Draft Principles is reflective of the political difficulties faced when attempting to progressively develop or negotiate further protections applicable during armed conflict. However, these existing legal obligations do not sufficiently reflect what we know now as being necessary for the effective protection of the environment in this phase. Secondly, most of

¹²⁹ ICRC, *When Rain Turns to Dust* (n 14).

¹³⁰ Dam-de Jong and Sjöstedt (n 22) 131–32.

the existing legal obligations are applicable to IACs, with debate on whether these environmental protections may also extend to NIACs. However, the occurrence and severity of environmental damage during armed conflict does not discriminate based on whether fighting and damage occurs within the scope of an IAC or NIAC.

While the recommendations for enhanced protection of the environment above, in themselves, may also be insufficient to afford an appropriate and effective level of protection to halt the exacerbation of conflict, the risk factors for atrocity crimes, and to potentially contribute to the worsening of climate change, they represent a starting point for enhanced protection which may contribute to the alleviation of various threats outlined above. At the forefront ought to be the consideration that environmental degradation and climate change are 'the greatest threat to human rights', not only in regions dominantly affected by climate change but worldwide.¹³¹ States and international organisations have taken some measures to enhance the protection of the environment,¹³² and are encouraged to further negotiate added protections of the environment during armed conflict.¹³³

Current protections of the natural environment during armed conflict by IHL and other areas of international law are only afforded in extreme situations. Even the draft definition of ecocide, as a newly proposed international crime, requires high thresholds to be met. General rules of IHL, relevant rules of customary international law, and IEL (as far as they are not inconsistent with IHL) therefore appear more effective and appropriate in their protection of the environment during armed conflict to avoid the exacerbation of risk factors for atrocity crimes. While the crystallisation and/or codification of environmental protection obligations during armed conflict is promising, it also begs the question of whether these obligations are sufficient? With effective implementation and compliance of existing legal obligations lacking in practice, there remains an enduring need to strengthen awareness

131 Statement by John H Licht, 'General Debate of the 18th Session of the Assembly of State Parties to the Rome Statute of the International [sic] Criminal Court' (The Hague, 2–7 December 2019) <https://aspi.icc-cpi.int/sites/asp/files/asp_docs/ASP18/GD.VAN.2.12.pdf>.

132 Member States of the EU have, for example, been urged by the European Parliament to support the recognition of ecocide as an international crime and the fifth crime before the ICC. 'European Parliament Urges Support for Making Ecocide an International Crime' (*Stop Ecocide*, 21 January 2021) <<https://www.stopecocide.earth/press-releases-summary/european-parliament-urges-support-for-making-ecocide-an-international-crime>>.

133 See eg GC I (n 60) art 6; GC II (n 60) art 6; GC III (n 60) art 6; GC IV (n 52) art 7. See also Common Article 3 in each of the Geneva Conventions; ICRC 2020 Guidelines (n 24) recommendation 17; Draft Principles (n 14) principle 3(2).

and compliance with IHL and obligations arising therefrom in relation to the environment.

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