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DISSERTATION

THE CHALLENGES OF PROSECUTING THE DESTRUCTION OF THE NATURAL ENVIRONMENT AS A WAR CRIME BEFORE THE INTERNATIONAL CRIMINAL COURT AND PREFERABLE ALTERNATIVES

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The Challenges of Prosecuting the Destruction of the Natural Environment as a War Crime before the International Criminal Court and Preferable Alternatives

Historical experiences have shown that war will always be harmful to the natural environment. Due to urgent global challenges threatening environmental systems, there is a need for international measures that limit and condemn wartime destruction of the natural environment. To this end, this study brings four themes to light. First, when it comes to wartime environmental protection, instruments which incorporate an ecocentric perspective, meaning that they recognize and safeguard the environment as an entity with intrinsic value, are preferable to anthropocentric ones, which only protect the environment to the extent it benefits humankind. The latter approach, which has been generally adopted in international law instruments applicable to the environment during armed conflict, fails to recognize that the wellbeing of humankind is interconnected with that of the environment. It is consequently an inadequate approach for dealing with contemporary challenges, such as climate change and the rapid loss of biodiversity. Second, the deficiencies in the international humanitarian law (IHL) applicable to the natural environment are replicated in international criminal law. These shortcomings include (i) the lack of clarity regarding the scope of protection; (ii) the use of imprecise yet stringent terms and principles that condone a high level of environmental damage; and (iii) the absence of protection applicable during internal armed conflicts. Third, this study develops from the assumption that criminalizing certain environmental destruction and thereby engendering accountability for such wrongdoing is in the international community's interest. International criminal liability can address impunity for wartime environmental damage and encourage compliance with applicable legal instruments. Finally, the fragmentation of international law applicable to the environment during armed conflict can be beneficial in addressing the lack of accountability for environmental damage. The different legal regimes discussed in this study can be applied to different situations to achieve favorable results because their fundamental principles are compatible with one another.

This study begins by analyzing various interpretations of the "natural environment" proposed by international instruments and adopting a working definition. It then goes on to address the different perspectives on environmental damage and argue in favor of the ecocentric approach. Following a brief

overview of what wartime environmental damage looks like using a series of examples, the study goes on to examine the international legal regimes offering wartime protection to the environment: international environmental law (IEL), IHL and international human rights law (IHRL). Other applicable regimes, like international trade law or the law of the sea, will not be addressed. Similarly, other mechanisms that can be used to enforce international obligations, including State responsibility and civil liability, will not be discussed, as this study only focuses on international criminal liability before the International Criminal Court (ICC). After reviewing the mechanisms available for enforcing the legal regimes examined, the viability of prosecuting the destruction of the natural environment as a war crime before the ICC is considered. This chapter will look at environmental destruction as a crime under Article 2(b)(iv) of the ICC Statute and as an underlying act in prosecuting other crimes, while considering the Office of the Prosecutor's recent policy goals. This study determines that the challenges of prosecuting the destruction of the natural environment as a war crime reflect the same deficiencies found in IHL instruments. In exploring alternatives to prosecuting environmental destruction as a war crime, the viability of prosecuting environmental destruction as other crimes under the ICC Statute; amending the ICC Statute to introduce a new crime against the environment; creating new mechanisms to impose individual criminal liability; and using the fragmentation of international law to foster compliance will be considered. This study concludes that the best avenue for developing meaningful environmental jurisprudence is to amend the ICC Statute and introduce a new crime against the environment.

I. Defining the Environment and What Amounts to its Destruction

i. A Working Definition of the (Natural) Environment

A commonly accepted definition of the "environment" is absent in international law. The definitions that have been proposed by international instruments identify what should be protected and consequently differ according to the purpose they aim to achieve.[1] In international environmental law (IEL), formulations are

[1] Doug Weir, "We Need to Define 'The Environment' to Protect it from Armed Conflict" (11 February 2016) The Toxic Remnants of War Project.

broader and clearer than those found in international humanitarian law (IHL), which applies exclusively during armed conflict. For example, the Stockholm Declaration, encompassing twenty-six non-binding principles to guide the development of international law, refers to the "human environment". It therefore sets out to not only protect the "natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems" but also to address the social, economic and cultural implications of these elements.[2] By contrast, the First Protocol Additional to the Geneva Conventions [API], which identifies who and what should be protected during an international armed conflict, equates the "natural environment" to the "system of inextricable interrelations between living organisms and their inanimate environment".[3] API purposely avoids using the term "human environment", which refers to the "external conditions and influences which affect the life, development and the survival of the civilian population and living organisms".[4] It follows that instruments referring to "natural" elements generally include the physical conditions of land, air and water, whereas instruments incorporating a "human" dimension to the environment address broader subject matter, such as health, social and cultural regulations.[5] Other IHL instruments, like the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques [ENMOD], neglect defining the environment altogether.[6] More recently, the United Nations Environment Programme, the body tasked with coordinating the global environmental agenda, adopted a broad definition by interpreting the environment as "[t]he sum of all external conditions affecting the life, development and survival of an organism", including the "physical conditions that affect natural resources (climate, geology, hazards) and the ecosystem services that sustain them."[7]

[2] UNGA "Declaration of the United Nations Conference on the Human Environment" (16 June 1972) UN Doc A/Conf.48/14/Rev. 1(1973) (Stockholm Declaration), Principle 2.
[3] Yves Sandoz et al (eds) *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949* (Martinus Nijhoff 1987) para 1451.
[4] ibid para 1451.
[5] Marie-Louise Larsson, *The Law of Environmental Damage: Liability and Reparation* (Kluwer Law International 1999) 156.
[6] Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (adopted 18 May 1977, entered into force 5 October 1978) 1108 UNTS 152 (ENMOD).
[7] UN Environment Programme, "Protecting the Environment during Armed Conflict: An Inventory and Analysis of International Law" (UNEP 2009) 56.

Without a precise definition of the "environment", there is uncertainty about which objects benefit from the protection of IHL instruments. On the one hand, precise and expansive interpretations like those found in IEL are controversial in this context because they could include elements like public and private property, natural resources with commercial value, and even cultural heritage.[8] On the other, the broadest perspectives can qualify any manifestation as the "environment".[9] There is also debate about whether the "natural environment" is protected as a civilian object during armed conflict.[10] By excluding "human" elements, IHL instruments create confusion between the terms "civilian object" and "natural environment", which should not be mutually exclusive, and deny the scientific reality that the wellbeing of the environment is connected to the wellbeing of humankind.[11] In light of this uncertainty, the "human" dimension should be combined with the "natural" in order to formulate a precise definition of the environment in the context of war.[12]

For the purposes of this study, the expansive working definition adopted by the International Law Commission (ILC) will be used. This "includes natural resources, both abiotic and biotic, such as air, water, soil, fauna and flora and the interaction between the same factors, and the characteristics of the landscape".[13] States had urged the ILC to clarify what is meant by the "environment" in relation to armed conflicts during its recent study on the subject.[14] This definition, as previously used in the Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, ultimately embraced "human" elements by drawing inspiration from the Convention Concerning the Protection of the World Cultural and Natural Heritage [World Heritage Convention].[15] The World Heritage Convention defined

[8] Cymie R Payne, "Defining the Environment: Environmental Integrity" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 41.
[9] ibid 45.
[10] Michael Bothe, "The Protection of the Environment in Times of Armed Conflict: Legal Rules, Uncertainty, Deficiencies and Possible Developments" (1991) 34 German Ybk Intl L 54 *in* Karen Hulme (ed), *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 239.
[11] Weir (n1).
[12] Larsson (n5) 175.
[13] ILC, "Preliminary Report on the Protection of the Environment in Relation to Armed Conflicts" (30 May 2014) UN Doc A/CN.4/674, para 86.
[14] UNGA Sixth Committee (70th Session) "Summary Record of the 24th Meeting" (4 December 2015) UN Doc A/C.6/70/SR.24, para 69.
[15] Preliminary Report (n13) paras 79-86; ILC, "Second Report on the Protection of the Environment in Relation to Armed Conflicts" (28 May 2015) UN Doc A/CN.4/685, para 224; ILC, "Third Report on the Protection of the Environment in Relation to Armed Conflicts" (3 June 2016) UN Doc A/CN.4/700, para 193.

natural heritage as “natural features consisting of physical and biological formations or groups of such formations…, geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants… and natural sites or precisely delineated natural areas” that have “outstanding universal value” from a scientific, conservationist or aesthetic perspective.[16] The ILC’s expansive interpretation can therefore clarify and facilitate the consistent application of IHL before, during and after armed conflict, and especially in the context of post-conflict accountability for environmental damage.[17]

ii. Perspectives on Environmental Damage

In addition to disputed definitions of the “environment”, there is disagreement about whether there should be a threshold of magnitude - and about what that threshold should be - for environmental damage to qualify as legally material.[18] The definition of transnational environmental damage, especially that amounting to crime, is contentious. The question depends on what instrument is defining the harm and what criteria are used in assessing the acts causing damage.[19] Although a distinction between global, regional and local environmental damage may be identified, geographical classifications are becoming less relevant. While issues concerning matters like waste management and transboundary pollution may initially have local or regional effects, they are increasingly interconnected with global problems like biodiversity loss, climate change, deforestation and desertification, which do not heed national boundaries.[20] Instead, the classification of harm is better understood in terms of the “environmental victim” it affects. This represents the idea that environmental injury can be caused by intentional or reckless acts or by omission, to either humankind (anthropocentrism) or to the environment as such (ecocentrism).[21] These two competing

[16] Convention Concerning the Protection of the World Cultural and Natural Heritage (adopted 23 November 1972, entered into force 15 December 1975) 1037 UNTS 151 (World Heritage Convention) art 2.
[17] Rosemary Rayfuse, “Introduction: Rethinking International Law and the Protection of the Environment in Relation to Armed Conflict” *in* Rosemary Rayfuse (ed) *War and the Environment: New Approaches to Protecting the Environment in Relation to Armed Conflic*t (Brill Nijhoff 2014) 4; Weir (n1).
[18] Payne (n8) 45.
[19] Rob White, *Transnational Environmental Crime: Toward an Eco-Global Criminology* (Routledge 2011) 3.
[20] Larsson (n5) 157.
[21] White (n19) 109.

perspectives on the relationship between humans and the natural environment can be used to classify environmental harm. The anthropocentric perspective, which is commonly found in international instruments, reflects human self-interest. It views humans as separate from the natural environment and considers the wellbeing of non-human ecosystems only insofar as it stands to benefit humans.[22] In other words, anthropocentrism tolerates any level of harm to the natural environment as long as it does not affect humankind. This exclusive focus on the well-being of humans without guarantees for the environment's intrinsic value is a critical shortcoming of international instruments because it fails to protect the environment for its own sake.[23] The scientific reality that human welfare is dependent on the long-term survival of non-human entities is neglected in this approach.[24] In contrast, the ecocentric perspective is based on the idea that human activity is interconnected with nature and that the environment is worth protecting in itself. Ecocentrism recognizes that a shift in perspective is necessary to respond to current challenges.[25]

iii. The Environmental Impact of Warfare

The dramatic consequences that recent armed conflicts have had on the environment coupled with the contemporary challenges threatening the wellbeing of our planet expose the critical need for international mechanisms that limit wartime damage to the natural environment. Keeping in line with the ecocentric perspective, the environment should be protected during armed conflict because its wellbeing is indivisible from the wellbeing of humankind.[26] Moreover, the impact of warfare should not prevent present and future generations from enjoying and utilising the environment. Conflict-related damage that hinders socio-economic advancement is contrary to the goals of sustainable development, which strive to improve

[22] Avi Brisman & Nigel South, "Green Criminology and Environmental Crimes and Harm" (2019) 13 Sociology Compass 1, 4.
[23] Catherine Redgewell, "Life, the Universe and Everything: A Critique of Anthopocentric Rights" in Alan Boyle & Michael R Anderson (eds) *Human Rights Approaches to Environmental* (Clarendon Press 1996) 71.
[24] Brisman & South (n22) 4.
[25] ibid 5.
[26] Michael Bothe, "The Ethics, Principles and Objectives of Protection of the Environment in Times of Armed Conflict" *in* Rosemary Rayfuse (ed), *War and the Environment: New Approaches to Protecting the Environment in Relation to Armed Conflic*t (Brill Nijhoff 2014) 92.

conditions for present generations without compromising future potential.[27] Yet it is difficult to predict the risks and consequences of environmental damage caused by warfare and to identify which conduct will cause long-term or irreversible effects.[28] However, even though, "it is not easy to know in advance exactly what the scope and duration of some environmentally damaging acts will be… there is a need to limit as far as possible environmental damage even in cases where [the degree of damage] is not certain…".[29] This need is illustrated by the environmental damage produced by recent armed conflicts., the ongoing effects of which continue to linger today.

During the Vietnam War, the United States military intentionally targeted the environment in order to weaken its adversary. Military herbicides, including Agent Orange, were used to spray more than five million acres of vegetation and food crops, leading to the contamination of millions of trees and the poisoning of animal species and water sources.[30] Systematic plowing using heavily armored bulldozers cleared close to one million acres of vegetation.[31] Exploded munitions created an estimated 26 million craters displacing soil, destroying arable land and disrupting the timber industry.[32] Moreover, it was reported that artificial rainmaking techniques were used to cause flooding in an attempt to disorient enemy forces by disrupting communication and transit networks.[33] During the Gulf War, Iraqi forces also intentionally targeted the environment by spilling oil wells into the Persian Gulf and igniting them. The fires burned for months, releasing dangerous chemicals into the atmosphere. Exploded or damaged wells contaminated soil, drinking water and agricultural crops by creating large flammable lakes.[34] Military operations during this armed conflict also degraded the fragile desert terrain, the wildlife and the residential areas in the region.[35]

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[27] Onita Das, *Environmental Protection, Security and Armed Conflict: A Sustainable Development Perspective* (Elgar Publishing 2013) 124.
[28] ibid 123.
[29] UNSG, "Report of the Secretary-General on the Protection of the Environment in Times of Armed Conflict" (29 July 1993) UN Doc A/48/269, para 34.
[30] Richard A Falk, "Environmental Warfare and Ecocide – Facts, Appraisal and Proposals" (1973) 4 Security Dialogue 80, *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 112.
[31] ibid 113.
[32] ibid 115.
[33] Hans Blix, "Arms Control Treaties Aimed at Reducing the Military Impact on the Environment" in Karen Hulme (ed), Law of the Environment and Armed Conflict (Elgar Publishing 2017) 134.
[34] Peter H Sand, "Compensation for Environmental Damage from the 1991 Gulf War" (2005) 35(6) Env Policy & L 244 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 318.
[35] Das (n27) 143-146.

In the Kosovo War, even though the environment was not the direct target of attacks, it was indirectly affected when an industrial complex containing several chemical plants was destroyed. The chemicals were released into the Danube River, contaminating the drinking water, polluting the air and soil, and endangering the wildlife in the region.[36] In the Afghanistan War, in addition to the destruction of an estimated 10,000 villages, military operations led to the contamination of water sources and a significant loss of wildlife.[37] Moreover, the physical, chemical and explosive remnants of these wars threaten ecosystems. Their presence undermines the economic viability of nearby natural resources while their destruction threatens the ecosystems in which they remain.[38]

In addition to the damage brought about by armed conflict, the contemporary challenges facing the environment are likely to exacerbate the effects of warfare. Although developments like climate change, drought and the loss of biodiversity do not instigate wars alone, they may play a significant role in aggravating conflicts.[39] For example, competition over finite natural sources contributed to past wars and will continue to do so, especially considering the impact of climate change.[40] The effects of climate change are likely to extend beyond increases in temperature, flooding, extreme weather and soil erosion, as these events will also cause socio-economic consequences.[41] Phenomena like droughts, extreme heat and desertification will therefore lead to the loss of agricultural land, food sources and drinking water.[42] As water sources are particularly vulnerable to the impacts of armed conflict, its protection should be vigorously pursued.[43] Similarly, special protection is needed to prevent the destruction of animal habitats during armed

[36] ibid 163-169.
[37] Karmanye Thadani & Rohit Ayyagari, "Law of Armed Conflict and the Environment" (2015) 45 Env Policy & L 285, 288.
[38] Doug Weir, "Reframing the Remnants of War: The Role of the International Law Commission, Governments and Civil Society" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 438.
[39] Das (n27) 83.
[40] ibid.
[41] Stephen Farrall et al, "Introduction: Exploring the Legal and Criminological Consequences of Climate Change: An Introduction" *in* Stephen Farrall et al (eds) *Criminological and Legal Consequences of Climate Change* (Hart Publishing 2012) 1.
[42] Mara Tignino, "Water, International Peace and Security" (2010) 92(879) Intl Rev Red Cross 647 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 770.
[43] ibid 795.

conflicts.[44] In the Democratic Republic of the Congo[45], Mozambique[46] and the Sahara-Sahel[47], internal armed conflicts have led to extensive loss of biodiversity. Given these increasingly urgent threats, international law mechanisms that adequately protect the environment during armed conflict and enforce compliance with such protections are vital.

III. International Law Mechanisms Protecting the Environment

The environment is protected by multiple bodies of law, including international environmental law (IEL), international humanitarian law (IHL) and international human rights law (IHRL). As previously discussed, due to current ecological threats, the environment must be protected during peacetime as well as armed conflict. While IEL is traditionally viewed as the law regulating the environment during times of peace, IHL is the law specifically governing armed conflict.[48] However, when it comes to the protection of the environment, international law is fragmented.[49] In other words, due to the expansion and diversification of the various regimes that regulate environmental protections, IEL, IHL and IHRL risk overlapping and conflicting with one other, as they each provide distinct principles and institutions.[50] Yet despite the risk of incompatible practices competing against one another as suggested by fragmentation, this chapter will demonstrate that the principles of IEL, IHL and IHRL are compatible. The protection of the environment during armed conflict is best achieved through the joint application of all three legal regimes.

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[44] Brendan Kearns, "When Bonobos Meet Guerillas: Preserving Biodiversity on the Battlefield" (2012) 24(2) Georgetown Intl Env L Rev 123 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 704.
[45] ibid 699; Britta Sjostedt, "The Role of Multilateral Environmental Agreements in Armed Conflict: Green-Keeping in Virunga Park - Applying the UNESCO World Heritage Convention in the Armed Conflict of the Democratic Republic of the Congo" (2013) 82 Nordic J Intl L 129, 132.
[46] International Committee of the Red Cross, "Natural Environment: Neglected Victim of Armed Conflict" (5 June 2019) ICRC.
[47] Jonathan Watts, "Make Environmental Damage a War Crime, Say Scientists" (24 July 2019) The Guardian.
[48] Kirsten Stefanik, "The Environment and Armed Conflict: Employing General Principles to Protect the Environment" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 93.
[49] Bothe (n26) 92.
[50] Stefanik (n48) 98-99; Julian Wyatt, "Law-Making at the Intersection of International Environmental, Humanitarian and Criminal Law: The Issue of Damage to the Environment in International Armed Conflict" (2010) 92(879) Intl Rev Red Cross 593, 595.

i. International Environmental Law

The IEL instruments that protect the environment include binding treaties as well as non-binding declarations and resolutions. These instruments offer protection that is relevant in peacetime and wartime.[51] Multilateral environmental treaties generally contain loosely worded provisions and share the ability to cooperate with other institutions in international law in order to facilitate compliance and address environmental protection during these various stages.[52] However, IEL lacks a UN - mandated umbrella organization for coordinating policies, harmonizing conventions and monitoring implementation in relation to the environment.[53] Compared to other legal regimes, IEL is a new branch of international law, as instruments that exclusively focus on environmental protection primarily emerged after the Second World War.[54] The first treaties addressing the environment were bilateral agreements that dealt with the management of natural resources and wildlife from an anthropocentric perspective.[55] These early agreements had a utilitarian purpose and only protected the environment incidentally.[56] Throughout the mid-twentieth century, various multilateral agreements were adopted to regulate the commercial aspects of the environment.[57]

The subsequent development of IEL can be understood by examining the three consecutively adopted declarations which brought the importance of environmental protections and sustainable development to the international forum: the Stockholm Declaration, the Rio Declaration and the Johannesburg Declaration.

[51] Britta Sjostedt, "The Ability of Environmental Treaties to Address Environmental Problems in Post-Conflict" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 73.
[52] ibid.
[53] Stefanik (n48) 103.
[54] Ulrich Beyerlin & Thilo Marauhn, *International Environmental Law* (Hart 2011) 3.
[55] Tim Stephens, *International Courts and Environmental Protection* (CUP 2009) 3.
[56] Beyerlin (n54) 3.
[57] Stephens (n55) 3.

The Stockholm Declaration

The UNGA first proposed a forum for effectively addressing emerging environmental problems in 1968.[58] The ensuing UN Conference on the Human Environment in 1972 produced two non-binding legal documents: the Stockholm Declaration, encompassing the twenty-six fundamental principles to guide and consolidate the development of IEL, and an accompanying action plan.[59] Although the Declaration recognized the importance of preserving the environment for future generations it also emphasized the value of protecting it for its own sake.[60] The Stockholm Conference therefore prompted the adoption of increasingly ecocentric international agreements, including the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)[61] and the environmental protection rules in the Convention on the Law of the Sea (UNCLOS).[62] Similarly, it inspired a series of non-binding instruments, like the 1982 World Charter for Nature[63] and the World Commission on Environment and Development's report, Our Common Future, which articulated the first definition of sustainable development.[64] Yet the most significant outcome of the Conference was the establishment of UNEP as the first UN institution tasked with protecting the environment. However, because UNEP was established by a UNGA Resolution, it does not possess international legal personality like other UN specialized agencies.[65] Nevertheless, the institution has significantly contributed to the development of IEL, as will be later discussed.[66]

The Rio Declaration

In an effort to "elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of increased national and international efforts to promote sustainable and

[58] UNGA, "Resolution 2398: Problems of the Human Environment" (3 December 1968) UN Doc A/Res/2398(XXIII).
[59] Stockholm Declaration (n2).
[60] Stephens (n55) 3-4.
[61] Convention on International Trade in Endangered Species of Wild Fauna and Flora (adopted 03 March 1973, entered into force 1 July 1975) 993 UNTS 243.
[62] United Nations Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3 (UNCLOS).
[63] UNGA, "World Charter for Nature" (28 October 1982) UN Doc A/Res/37/7.
[64] World Commission on Environment and Development, *Our Common Future* (OUP 1987).
[65] UNGA, "Resolution 2997: Institutional and Financial Arrangements for International Environmental Cooperation" (15 December 1972) UN Doc A/Res/2997(XXVII).
[66] Beyerlin (n54) 8.

environmentally sound development",[67] the UN convened the 1992 Conference on Environment and Development (UNCED). As the previous conference did not address climate change and the loss of biodiversity, these were key topics discussed at UNCED.[68] The Conference led to the adoption of a series of soft law instruments, including the Rio Declaration on Environment and Development[69] and its accompanying action programme for implementation, Agenda 21.[70] Notably, Principle 24 of the Rio Declaration recognized that "[w]arfare is inherently destructive of sustainable development" and called upon States to "respect international law providing protection for the environment in times of armed conflict and co-operate in its further development, as necessary."[71] Moreover, due to UNCED's focus on climate change, the previously negotiated UN Framework Convention on Climate Change (UNFCCC) received a large number of signatures during the Conference.[72] By obliging states to mitigate the adverse effects of climate change, the UNFCCC became the international community's key response to the issue.[73] In 1997, the Kyoto Protocol to the Framework Convention introduced legally enforceable emissions targets for countries for a period lasting until 2020.[74] To continue the UNFCCC's goals beyond this year, the Paris Agreement was subsequently adopted with the goal of limiting global warming.[75] Yet all three instruments reflect a limited anthropocentric perspective that disregards the interrelation between human wellbeing and the wellbeing of the natural environment.[76] Following UNCED, the international community also adopted a series of legally binding instruments, including the UN Convention to Combat Desertification (UNCCD)[77]

[67] UNGA, "Resolution 44/228: United Nations Conference on Environment and Development" (22 December 1989) UN Doc A/Res/44/228, 151
[68] Stephens (n55) 4.
[69] UN Conference on Environment and Development (UNCED), "Rio Declaration on Environment and Development" (13 June 1992) UN Doc A/CONF.151/26 (vol I).
[70] UN Conference on Environment and Development (UNCED), "Agenda 21: Programme of Action for Sustainable Development" (14 June 1992) UN Doc A/Conf.151/26.
[71] Rio Declaration (n69).
[72] Beyerlin (n54) 14.
[73] Matthew Hall, "State Responsibility for the Adverse Impacts of Climate Change on Individuals: Assessing the Potential for an Interdisciplinary Approach" *in* Stephen Farrall et al (eds) *Criminological and Legal Consequences of Climate Change* (Hart Publishing 2012) 224-225.
[74] Kyoto Protocol to the United Nations Framework Convention on Climate Change (adopted 11 December 1997, entered into force 16 February 2005) 37 ILM 22 (1998).
[75] Paris Agreement (adopted 12 December 2015, entered into force 4 November 2016) UN Doc FCCC/CP/2015/10/Add.1.
[76] Hall (n73) 224-225.
[77] United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (adopted 17 June 1994, entered into force 26 December 1996) 1954 UNTS 3 (UNCCD).

and the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters[78], which sought to create new environmental obligations for States.[79]

The Johannesburg Declaration

The 2002 World Summit on Sustainable Development sought to reaffirm the international community's commitment to achieving the goals previously articulated at UNCED.[80] The Johannesburg Declaration was negotiated and adopted at the summit as evidence of an ongoing effort to apply a framework of sustainable development to IEL.[81] Yet rather than creating new international environmental agreements, the third conference focused on improving compliance with instruments already in effect.[82] Although the three conferences and subsequent declarations prompted debate about meaningful environmental protection, States have since failed to resolve the urgent challenges identified by UNCED, including climate change and the loss of biodiversity.[83]

In addition to the instruments that emerged from previously discussed conferences, the environment is also protected by the customary international legal (CIL) principles of IEL. CIL consists of "international custom, as evidence of a general practice accepted as law."[84] It therefore refers to obligations that arise from "constant and uniform" State practice coupled with the "belief that this practice is rendered obligatory by the existence of the rule of law requiring it".[85] Generally accepted fundamental principles of IEL include: the principle of sustainable development; the principle of intergenerational equity; the principle of precaution; the no harm principle; and the principle of cooperation.[86] First, as previously discussed, sustainable development seeks to improve economic conditions for present generations without compromising the

[78] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (adopted 28 June 1998, entered into force 30 October 2001) 2161 UNTS 447 (Aarhus Convention).
[79] Beyerlin (n54) 20.
[80] UN World Summit on Sustainable Development (UNWSSD), "Johannesburg Declaration on Sustainable Development" (4 September 2002) UN Doc A/Conf.199/20.
[81] Das (n27) 15.
[82] Beyerlin (n54) 23.
[83] Das (n27) 18.
[84] *North Sea Continental Shelf* (Judgment) ICJ [1969] ICJ Rep 3, para 71.
[85] ibid para 77.
[86] Stefanik (n48) 103.

future potential of natural resources.[87] Similarly, the principle of intergenerational equity, as articulated in Principles 1 and 2 of the Stockholm Declaration, requires concern for the living conditions of future generations.[88] The principle of precaution requires international law actors (primarily States) to take measures to protect the environment even in the absence of scientific certainty about the risk of environmental damage.[89] The prohibition of significant transboundary harm, or the "no-harm" principle, was first articulated in the *Trail Smelter* arbitration ruling, which stated that "under the principles of international law… no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence".[90] This finding was later confirmed by the International Court of Justice (ICJ) in the *Corfu Channel Case*, which recognized that "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States" is based on "certain general and well-recognized principles". [91] This "no-harm" principle is further reiterated in Principle 2 of the Rio Declaration and Principle 21 of the Stockholm Declaration, which oblige States 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'".[92] The principle of cooperation, as articulated in Principle 7 of the Rio Declaration, further obliges States to "cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem".[93]

Yet despite these emerging fundamental principles and the progress made in recognizing the protection of the environment as an important objective of international law, there are challenges to enforcing CIL because of difficulties in ascertaining when an emerging practice has become accepted as a binding principle of IEL, and to identifying the exact content of the practice.[94]

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[87] Das (n27) 124.
[88] Bothe (n26) 102; Stockholm Declaration (n2).
[89] ibid.
[90] *Trail Smelter Arbitration (United States v Canada)* Arbitral Tribunal (16 April 1938 & 11 March 1941) 3 UN Rep Intl Arb Awards 1905, 1965.
[91] *The Corfu Channel Case* (Judgment, Merits) ICJ [1949] ICJ Rep 4, 22.
[92] Bothe (n26) 103; Rio Declaration (n69); Stockholm Declaration (n2).
[93] ibid 104.
[94] Hall (n73) 227.

ii. International Humanitarian Law

IHL includes the set of rules, stemming from both treaties and custom, that protect the environment by limiting the effects of armed conflict. These rules do not protect the environment during internal tensions, disturbances or sporadic acts of violence, but rather only apply once an armed conflict begins.[95] IHL distinguishes between an international armed conflict (IAC), which is a conflict involving two or more States[96], and a non-international armed conflict (NIAC), which is a conflict restricted to the territory of a single State and involves either State forces fighting armed dissidents or armed groups fighting one other.[97] Consequently, the natural environment enjoys different protections depending on the type of conflict involved.

Despite the environmental despoliation caused by armed conflict throughout history, environmental destruction has only recently emerged as a separate category of damage.[98] Consequently, the law protecting the natural environment during armed conflict directly derives from: (i) provisions of API expressly drafted to address environmental protection and (ii) the ENMOD Convention, while the law providing indirect protection derives from (iii) other IHL treaties that regulate means and methods of warfare; and (iv) customary principles of IHL. Although IEL instruments have begun adopting an ecocentric approach, IHL instruments continue to treat environmental protection from an anthropocentric perspective. There are few provisions in IHL instruments that address the protection of the natural environment directly, and those that do address the subject do so for the benefit of limiting the human suffering that such destruction may

[95] 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 (APII), art 1(2).
[96] Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (First Geneva Convention) (adopted 12 August 1949, entered into force 21 October 1950) 75 UNTS 31 (GCI), art 2.
[97] ibid art 3; APII (n95) art 1(1).
[98] Peter J Richards & Michael N Schmitt, "Mars Meets Mother Nature: Protecting the Environment During Armed Conflict" (1999) 28 Stetson L Rev 1947 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 418-419.

implicate.[99] For this reason, some have argued that the strongest protections that IHL confer on the environment stem from non-specific customary principles.[100]

Additional Protocol I

API supplemented the 1949 Geneva Conventions by clarifying and expanding the rules of IHL applicable during international armed conflicts.[101] Despite the 1949 Geneva Conventions' failure to address wartime environmental destruction directly, API introduced an obligation to that end. Article 35 prohibits the use of "methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment."[102] Article 55 reiterates this prohibition but adds a positive obligation by requiring that "[c]are shall be taken in warfare to protect the natural environment" in order to avoid damage that brings "prejudice to the health or survival of the population".[103] It also prohibits reprisals against the natural environment.[104] Although Articles 35 and 55 have the same effects and do not distinguish between deliberate or collateral environmental damage, the additional element of consequent human harm present in Article 55(1) renders the provision anthropocentric to the disadvantage of the natural environment.[105] In other words, an attack that is expected to cause damage to the natural environment without impacting the human population is not precluded by this provision.[106] This approach fails to consider the value of shielding the environment during war as an end in itself.[107] Nevertheless, the "care" obligation may be interpreted as requiring States to positive steps to keep the environment safe from

[99] Carsten Stahn et al, "Introduction: Protection of the Environment and Jus Post Bellum: Some Preliminary Reflections" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 4.
[100] Betsy Baker, "Legal Protections for the Environment in Times of Armed Conflict" (1993) 33 Virginia J Intl L 351 in Karen Hulme (ed), Law of the Environment and Armed Conflict (Elgar Publishing 2017) 191.
[101] 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 (API), art 1(3).
[102] ibid art 35(3).
[103] ibid art 55(1); Waldemar A Solf, "Article 35 – Basic Rules" *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 179.
[104] ibid art 55 (2).
[105] Karen Hulme, "Natural Environment" *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 368.
[106] ibid 459.
[107] Wil D Verwey, "Protection of the Environment in Times of Armed Conflict: In Search of a New Legal Perspective" (1995) 8 Leiden J Intl L 7 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 386.

damage. Such steps could include, for example, conducting rigorous investigations about the potential environmental impact of an attack prior to carrying it out and, depending on the results of the assessment, changing or abandoning the plan.[108]

In addition to the protection gap caused by API's failure to adopt an ecocentric approach, the threshold of what constitutes "widespread, long-term and severe damage" is too high to meaningfully safeguard the natural environment during armed conflict.[109] The *travaux préparatoires* provided little guidance to interpreting the meaning of these terms except to confirm that "long-term" means "a matter of decades".[110] Consequently, attacks expected to cause short-term damage to the environment are not prohibited by these provisions.[111] Although some interpretations have been proposed by the academic community, in the absence of a precise and commonly accepted definition of these terms, it is difficult for States to identify when damage to the environment violates the provision.[112] As all three qualifiers must be satisfied, attacks on the natural environment would therefore only be prohibited in very limited situations.[113] Moreover, it is problematic that API only addresses the "means and methods which are intended or may be expected" to cause damage, given that an attack could harm the environment in ways that are difficult to observe, predict or even understand.[114]

The question of whether API also protects the natural environment as a civilian object is controversial. Arguments in favor of the environment qualifying as a civilian object point to the Protocol, which provides that "all objects which are not military objectives" are civilian.[115] The environment will therefore qualify as a civilian object if by its "nature, location, purpose or use [it does not] make an effective contribution to military

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[108] Karen Hulme, "Taking Care to Protect the Environment Against Damage: A Meaningless Obligation?" (2010) 92(879) Intl Rev Red Cross 675 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 463.
[109] Baker (n100) 206.
[110] Sandoz (n3) para 1452; Verwey (n107) 382.
[111] Waldemar A Solf, "Article 55 – Protection of the Natural Environment" *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 183.
[112] Verwey (n107) 382; Kearns (n44) 709.
[113] ibid.
[114] ibid 383-384.
[115] API (n101) art 52(1); Cordula Droege & Marie-Louise Tougas, "The Protection of the Natural Environment in Armed Conflict - Existing Rules and Need for Further Legal Protection" (2013) 82 Nordic J Intl L 21, 27.

action" and as longs as its "total or partial destruction, capture or neutralization, in the circumstances ruling at the time [does not offer] a definite military advantage".[116] Under such an interpretation, elements of the natural environment which do not contribute to the military effort would also enjoy the treaty and customary protections afforded to civilian objects during armed conflict.[117] Arguments to the contrary point to the environment's unique attributes – its interconnectedness, its intangible features and its irreplaceability – to demonstrate that it is inappropriate to categorize it as a civilian "object".[118] Such claims also maintain that if the drafters had wanted the natural environment to qualify as a civilian object, they would have simply clarified this in the text.[119] However, an examination into how API is structured is most telling, as Article 55 appears in Part IV, which deals with the "Civilian Population", and more specifically, in the chapter entitled "Civilian Objects". It is therefore apparent that while the natural environment can qualify as a civilian object.

Yet some have argued that Articles 35(3) and 55 "render permissible what before would have been forbidden" by lowering the standard of protection afforded to civilian objects due to the cumulative triple qualifier.[120] In other words, the natural environment would enjoy more protection as a civilian object without the application of Articles 35(3) and 55. However, rather than lowering the standard of protection afforded to civilian objects, Articles 35(3) and 55 can be read as interpretive tools for determining when an attack is indiscriminate.[121] For instance, when elements of the environment are military objectives, the means and methods used to directly target them must not cause widespread, long-term and severe damage to the environment. When the environment qualifies as a civilian object, it must not be made the object of attacks.[122] In this context, an attack that causes widespread, long-term and severe incidental damage to the environment would be deemed disproportionate and in violation of API.[123] It can therefore be said that

[116] ibid art 52(2); International Committee of the Red Cross, "Strengthening Legal Protection for Victims of Armed Conflicts: Draft Resolution and Report" (October 2011) 31IC/11/5.1.1, 17.
[117] Dieter Fleck, "Legal Protection of the Environment: The Double Challenge of Non-International Armed Conflict and Post-Conflict Peacebuilding" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 218; Bothe (n10) 239.
[118] Richards (n98) 453.
[119] Wolff Heintschel von Heinegg & Michael Donner, "New Developments in the Protection of the Natural Environment in Naval Armed Conflicts" (1994) 37 German Ybk Intl L 281 in Karen Hulme (ed) Law of the Environment and Armed Conflict (Elgar Publishing 2017) 292.
[120] Verwey (n107) 383.
[121] API (n101) art 51(5).
[122] ibid art 52(1).
[123] Heintschel (n119) 291.

API's general prohibition of indiscriminate attacks and its provision limiting attacks to military objectives serve as additional protection of the natural environment during armed conflict.[124]

Other provisions of API further protect the natural environment, albeit indirectly.[125] Article 54 aims to protect objects indispensable to the survival of the civilian population by prohibiting attacks on "foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works".[126] However, these objects' immunity is not absolute and "imperative military necessity" may authorize their destruction.[127] Article 56 prohibits attacks on "dams, dykes and nuclear electrical generating stations… even where these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population."[128] The provision also prohibits attacks on military objectives in the vicinity of such works or installations if the incidental damage would render the same effect as a direct attack.[129] Nevertheless, API provides exceptions to this prohibition as well, namely, if the objects directly, "support military operations and if such attack is the only feasible way to terminate such support.[130] Although Articles 54 and 56 indirectly protect the environment, they do not possess an ecocentric character and there fail to reflect contemporary environmental concerns.[131]

ENMOD Convention

ENMOD intends to protect the environment during armed conflict by prohibiting State Parties from "engag[ing] 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".[132] The limitations present in this formulation demonstrate that ENMOD was adopted in reaction to the artificial rainmaking techniques used by the United States during the Vietnam War rather than concerns about

[124] API (n101) arts 51(4), 52(1)&(2); Beyerlin (n54) 414.
[125] Carson Thomas, "Advancing the Legal Protection of the Environment in Relation to Armed Conflict: Protocol I's Threshold of Impermissible Environmental Damage and Alternatives" (2013) 82 Nordic J Intl L 83, 93.
[126] API (n101) art 54(2).
[127] Blix (n33) 137; ibid.
[128] ibid art 56(1).
[129] ibid.
[130] Blix (n33) 137.
[131] Thomas (n125) 93.
[132] ENMOD (n6) art I.

wartime environmental destruction.[133] First, the techniques prohibited by ENMOD are only those which change "the dynamics, composition or structure of the earth…through the deliberate manipulation of natural processes".[134] Yet with the exception of the United States' weather modification program, the kind of manipulation that turns the environment into a weapon has yet to be conceived and is primarily the "subject of scientific speculation".[135] Second, because the manipulation of natural processes must be intentional, collateral damage resulting from an attack against a military objective is not captured. Consequently, causing toxic pollution by bombing a military target which contains chemicals is not prohibited by ENMOD, even though the negative effects of such action are more scientifically plausible.[136] Third, ENMOD only prohibits the use of environmental modification techniques rather than their development.[137] This gap is especially problematic because the Convention only applies to "hostile use" and therefore tolerates the use of environmental modification techniques for "peaceful purposes", all while it failing to define these terms.[138] It follows that the deliberate but peaceful use of modification techniques that produces widespread, long-lasting or severe effects is exempted from ENMOD. Similarly, the Convention allows the hostile use of modification techniques that produce destructive effects below the threshold.[139] Fourth, ENMOD is only applicable to States that have ratified or acceded to the Convention and is therefore not applicable during NIACs.[140]

The most notable limitation relates to the high threshold of destruction required before an act is condemned. According to the Committee on Disarmament, "widespread" means "an area on the scale of several hundred square kilometers"; "long-lasting" refers to "a period of months or approximately a season"; and "severe" entails "serious or significant disruption of harm to human life, natural and economic resources or other

[133] Richards (n98) 429.
[134] ENMOD (n6) art II.
[135] Jozef Goldblat, "The Environmental Warfare Convention: How Meaningful Is It?" (1977) 6(4) Ambio 216 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 127.
[136] Yoram Dinstein, "Protection of the Environment in International Armed Conflict" (2001) 5 Max Planck Yb UN L 523, 527.
[137] Goldblat (n135) 125.
[138] ibid.
[139] ibid.
[140] ENMOD (n6) art IX.

assets."[141] The Committee also noted that its interpretation is intended exclusively for ENMOD and should not prejudice the interpretation of similar terms used in other international agreements, such as API.[142] This was a critical observation, because API and ENMOD pursue different objectives. While API bans the use of methods and means of warfare that cause disproportionate damage to the environment regardless of weapons used, ENMOD only forbids the manipulation of the environment for hostile purposes.[143] Moreover, under ENMOD damage must only be widespread, long-term or severe, whereas under API the effects must be cumulative.[144] However, the API prohibition also includes objectively foreseeable collateral damage whereas ENMOD only prohibits intentional destruction. Given these limitations, ENMOD is unlikely to meaningfully protect the environment during armed conflict.

IHL Treaties Regulating Means and Methods of Warfare

Treaties that may provide indirect protection to the benefit of the environment include the (i) the Hague Convention IV Respecting the Laws and Customs of War and its accompanying Regulations (Hague Convention IV);[145] (ii) the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous and Other Gases, and of Bacteriological Methods of Warfare (Geneva Protocol);[146] (iii) the Biological Weapons Convention (BWC);[147] (iv) the Chemical Weapons Convention (CWC);[148] (v) the Certain

[141] UNGA, "Report of the Conference of the Committee on Disarmament" (1976) UN Doc A/31/27/vol1, 91.
[142] ibid.
[143] Goldblat (n135) 124.
[144] Solf (n111) 184.
[145] Hague 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) 187 CTS 227 (HCIV).
[146] Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (adopted 17 June 1925, entered into force 8 February 1928) 94 LNTS 65 (Geneva Protocol).
[147] Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (adopted 10 April 1972, entered into force 26 March 1975) 1015 UNTS 163 (BWC).
[148] Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (adopted 13 January 1993, entered into force 29 April 1997) 1974 UNTS 45 (CWC).

Conventional Weapons Convention and its protocols (CCW);[149] (vi) the Anti-Personnel Mine Ban Convention (Ottawa Treaty);[150] and (vii) the Convention on Cluster Munitions (CCM)[151].

Although the Hague Convention IV does not specifically reference the environment, it nevertheless provides that "the right of belligerents to adopt means of injuring the enemy is not unlimited."[152] This provision read together with the prohibitions on "employ[ing] poison or poisoned weapons" and "destroy[ing] or seiz[ing] the enemy's property" can be applied in the context of protecting the environment.[153] This interpretation would depend on elements of the environment qualifying as "enemy property", which itself only enjoys protection "unless [its] destruction or seizure be imperatively demanded by the necessities of war".[154] The Hague Convention IV can also protect elements of the environment during occupations, by requiring the occupying State to "safeguard [forests and agricultural estates] and administer them in accordance with the rules of usufruct". This provision protects the environment indirectly because it prohibits the occupying Sate from permanently altering or destroying the properties named.[155]

The Geneva Protocol protects fauna and flora during armed conflict by prohibiting "the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices" and "the use of bacteriological methods of warfare".[156] Although its effectiveness was initially limited by State reservations, the UNGA recognized that "the Geneva Protocol embodies the generally recognized rules of international law" given the "direct toxic effects on man, animals and plants" of chemical and biological agents.[157] The prohibitions declared by the Geneva Protocol were also further strengthened by the BWC and the CWC,

[149] 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 (adopted 10 October 1980, entered into force 2 December 1983) 1342 UNTS 137 (CCW).
[150] Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction (adopted 18 September 1997, entered into force 1 March 1999) 2056 UNTS 241 (Ottawa Treaty).
[151] Convention on Cluster Munitions (adopted 30 May 2008, entered into force 1 August 2010) 2688 UNTS 39 (CCM).
[152] HC(IV) (n145) art 22.
[153] ibid art 23(a) &(g).
[154] Beyerlin (n54) 413; HC(IV) (n145) art 23(g).
[155] Das (n27) 136.
[156] Geneva Protocol (n146).
[157] Blix (n33) 130; UNGA, "Resolution 2603: Question of Chemical and Bacteriological (Biological) Weapons" (16 December 1969) UN Doc A/Res/2603(XXIV), 16.

which state that chemical and biological weapons must "never under any circumstances" be developed, acquired or used.[158] The CWC also outlawed the use of chemical weapons in retaliation chemical attack, which had been contemplated by reservations to the Geneva Protocol.[159] However, unlike the Geneva Protocol, the CWC does not protect flora, as it is limited to those which "can cause death, temporary incapacitation or permanent harm to humans or animals".[160]

As an inherently anthropocentric framework convention, the CCW prohibits or restricts the use of certain conventional weapons that are excessively injurious to persons or have indiscriminate effects and consequently does not expressly protect the environment during armed conflict. Nevertheless, its third protocol on the restriction and use of incendiary weapons precludes 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".[161] Its fifth protocol, which addresses explosive remnants of war, can benefit the environment after hostilities have ceased by requiring the clearance of unexploded ordnance.[162] Similarly, the Ottawa Treaty and the CCM can also indirectly protect the environment by banning the use of munitions that create craters in the soil, destroy arable land and disrupt wildlife.[163]

Protection of the Environment during NIAC

There is no IHL instrument that specifically addresses the protection of the natural environment in the context of an internal armed conflict.[164] The few protections applicable during a NIAC stem from the IHL treaties banning chemical and biological weapons, which are applicable despite the nature of the conflict, and from customary IHL principles.[165] This poses a significant gap, given that modern conflicts are primarily

[158] CWC (n148) art I(1)(b); BWC (n147) art I.
[159] Beyerlin (n54) 413.
[160] CWC (n148) art II(2).
[161] Beyerlin (n54) 415; CCW (n149) Protocol III, art 2(4).
[162] ibid.
[163] ibid 415-416; Ottawa Treaty (n150); CCM (n151).
[164] Verwey (n107) 401.
[165] Carl E Bruch, "All's Not Fair in (Civil) War: Criminal Liability for Environmental Damage in Internal Armed Conflict" (2001) 25 Vermont L Rev 695 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 652.

internal.[166] Neither Common Article 3 of the Geneva Conventions nor the Second Protocol Additional to the Geneva Conventions (APII), the two sources of IHL applicable to internal armed conflicts, address the protection of the environment. However, because APII does protect certain objects indispensable to the survival of the civilian population as well as works and installations containing dangerous forces, it could indirectly contribute to preventing environmental harm from an anthropocentric perspective.[167] Moreover, States engaged in a NIAC continue to be bound by peacetime IEL obligations, such as the no-harm principle prohibiting the means and methods of warfare that have serious transboundary effects.[168] Nevertheless, the absence of codified environmental protections applicable during internal armed conflicts is a significant gap in IHL.

Customary IHL

In the absence of codified rules applicable to the natural environment during NIACs, the well-established customary principles of IHL, which are applicable in both international and internal armed conflicts, can provide substantial protection even though they do not address environmental issues specifically.[169] According to the limitation principle, as expressed in the Martens Clause, the right to injure one's enemy is not unlimited.[170] The principle of military necessity restricts parties to a conflict to using only the kind and degree of force necessary to overpower the enemy. The destruction of any element of the environment is therefore prohibited unless required by military necessity.[171] According to the principle of distinction, parties to a conflict must always distinguish between civilian objects and military objectives. [172] It follows that elements of the natural environment cannot be attacked unless they are military objectives.[173] Launching an attack against a military objective that is expected to cause excessive collateral damage to the environment in relation to the concrete and direct military advantage anticipated is prohibited by the

[166] ibid 639-640; Stahn (n99) 3.
[167] Beyerlin (n54) 417; APII (n95) arts 14&15.
[168] ibid.
[169] Baker (n100) 197.
[170] ibid 198; Viola Vincze, "The Role of Customary Principles of International Humanitarian Law in Environmental Protection" (2017) 2 Pécz J Intl & Eur L 19, 24.
[171] Jean-Marie Henckaerts & Louise Doswald-Beck, *Customary International Humanitarian Law Volume 1: Rules* (CUP 2005) 143; Erik V Koppe, "The Principle of Ambituity and the Prohibition against Excessive Collateral Damage to the Environment during Armed Conflict" (2013) 82 Nordic J Intl L 53, 68.
[172] ibid 143-144.
[173] ibid 143.

principle of proportionality.[174] Proportionality therefore requires parties to a conflict to balance military objectives against the humanitarian interest of protecting the environment.[175] The humanity principle advances an anthropocentric perspective to environmental protection by prohibiting damage to the environment that causes unnecessary human suffering.[176] Finally, according to the precautionary principle, the environmental impact of a military attack must be assessed during the planning stage. Parties must therefore take measures to prevent damage even if the impact of an attack is scientifically uncertain.[177]

Although the ICRC has interpreted Articles 35(3) and 55 of API as custom applicable in both IACs and NIACs, there is insufficient evidence of state practice and *opinio juris* to arrive at this conclusion.[178] The ICRC relies on the language contained in various military manuals to suggest that means and methods of warfare intended or expected to cause widespread, long-term and severe damage are prohibited.[179] However, due to countries like the United States and the United Kingdom objecting to this proposition and to the fact that APII does not contain a prohibition similar to that found in API, this rule cannot be said to represent custom applicable in both types of armed conflict.[180] In conclusion, because the precise content of IHL principles is vague and contested, as with other customary rules, it is difficult to enforce any concrete obligations that may derive from them.[181]

IHL instruments only provide partial and inadequate protection of the natural environment during armed conflicts.[182] Deficiencies in the treaties and customary principles that make up this body of law stem firstly from unclear definitions of like “the environment”.[183] The texts of API and ENMOD, the two treaties directly addressing the environment during armed conflicts, do not provide a precise definition of the objects benefiting from their protection. Consequently, there are doubts as to whether the natural environment

[174] ibid.
[175] Richards (n98) 448.
[176] Das (n27) 139.
[177] Henckaerts (n171) 150.
[178] Hulme (n105) 343.
[179] Henckaerts (n171) 152.
[180] ibid 153.
[181] Verwey (n107) 395.
[182] UN Environment Assembly of UNEP, “Protection of the Environment in Areas Affected by Armed Conflict” (4 August 2016) UN Doc UNEP/EA.2/Res.15, 4.
[183] Payne (n8) 41.

enjoys protection as a civilian object.[184] Moreover, there is lack of clarity about the meaning of "widespread, long-term and severe" and the high threshold of damage this phrase demands.[185] Although these terms have been interpreted for the purposes of ENMOD, it is uncertain whether they have a similar meaning in the context of API.[186] The language used is "both too stringent and too imprecise" to be used in practice.[187] With respect to customary principles, there is ongoing disagreement about their precise content.[188] In particular, it is unclear how the principle of proportionality should apply to environmental damage in relation to incidental damage resulting from attacks against military objectives.[189] However, the most significant deficiency in IHL instruments is their anthropocentric character and the resulting failure to protect the environment as such. It is due to the absence of ecocentric influences that the IHL instruments described in this chapter expressly allow the destruction of the natural environment during armed conflict on the grounds of military necessity.[190]

The deficiencies of IHL instruments can be addressed by applying IEL principles during armed conflict to interpret the provisions relating to wartime environmental protection.[191] This exercise is possible because the fundamental principles of IEL are compatible with those of IHL and because IHL is open to the influence of other international legal frameworks.[192] The continued applicability of IEL during armed conflict was recently confirmed by the ILC in its study on the effects of armed conflicts on treaties.[193] The ILC concluded that treaties do not automatically cease to operate during armed conflict and that, depending on their subject

[184] Michael Bothe et al, "International Law Protecting the Environment During Armed Conflict: Gaps and Opportunities" (2010) 92(879) Intl Rev Red Cross 569, 591.
[185] Thomas (n125) 94.
[186] Bothe et al (n184) 591.
[187] Payne (n8) 59.
[188] Verwey (n107) 402.
[189] Bothe (n184) 591.
[190] Thomas (n125) 94.
[191] Bernard K Schafer, "The Relationship Between the International Laws of Armed Conflict and Environmental Protection: The Need to Re-evaluate what Types of Conduct Are Permissible During Hostilities" (1989) 19(2) California Western Intl L J 287 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 45.
[192] ibid 57; Vincze (n170) 39.
[193] ILC, "Report of the International Law Commission on the Work of its 63rd Session: Effects of Armed Conflicts on Treaties" (26 April–3 June & 4 July–12 August 2011) UN Doc A/66/10/Ch.VI.

matter, object and purpose, and content, peacetime treaties may continue to apply in parallel with IHL.[194] In practice, this would result in environmental concerns playing a greater role while balancing military objectives against humanitarian concerns.[195] However, there is still uncertainly about the extent to which IEL can meaningfully contribute to enhancing wartime protection of the environment beyond inserting environmental considerations into the military assessments conducted prior to carrying out an attack.[196]

iii. International Human Rights Law

Beyond IEL and IHL, environmental concerns have been increasingly pursued through international human rights law (IHRL) instruments and institutions. This body of law has even been applied in the context of armed conflict because, as confirmed by the ICJ, non-derogable protections offered by IHRL instruments do not cease to apply during hostilities.[197] This is notable, given the recent emergence of a separate human right to a healthy environment in IHRL.[198] For instance, the African Charter recognizes that "[a]ll peoples shall have the right to a general satisfactory environment favourable to their development."[199] Similarly, the right of everyone to "live in a healthy environment" has been recognized in the inter-American human rights system.[200] Yet while some IHRL instruments adopted environment-focused rights, others have addressed environmental harms indirectly through the "greening" of other human rights which did not explicitly deal with environmental protection.[201] For example, the Committee on Economic, Social and Cultural Rights has interpreted the right to health as encompassing "a wide range of socio-economic factors that promote

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[194] Silja Voneky, "A New Shield for the Environment: Peacetime Treaties as Legal Restraints of Wartime Damage" (2000) 9 Rev European Community & Intl Env L 20 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 808; ibid arts 3 & 6.
[195] Bothe (n26) 105.
[196] Schafer (n191) 77.
[197] *Case Concerning Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v Uganda)* (Judgment) ICJ [2005] ICJ Rep 168, para 216.
[198] James Cameron, "Compliance, Citizens and NGOs" *in* James Cameron et al (eds) *Improving Compliance with International Environmental Law* (Earthscan 1996) 29 & 39.
[199] African Charter on Human and Peoples' Rights (adopted 27 June 1981, entered into force 21 October 1986) 1520 UNTS 217(ACHPR) art 24.
[200] Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (adopted 17 November 1988, entered into force 16 November 1999) OAS Treaty Series No 69 (1988) (Protocol of San Salvador) art 11(1).
[201] Merryl Lawry-White, "Victims of Environmental Harm During Conflict: The Potential for 'Justice'" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 376.

conditions in which people can lead a healthy life, and extends to the underlying determinants of health, such as … a healthy environment."[202] This direction has equipped litigants with a rights-based language that could be used to bring environmental claims before established IHRL complaint mechanisms.[203]

The growing jurisprudence of the UN rights-monitoring bodies and the specialized regional systems tasked with protecting IHRL has presented an opportunity for pursuing environmental claims at the international level.[204] Although the adjudication mechanisms in human rights treaty systems can be both slow and expensive, their decisions can be legally binding and provide remedy to claimants affected by environmental damage.[205] Moreover, the jurisprudence of IHRL mechanisms may also prove valuable in eventually prosecuting international environmental crimes.

At the UN level, the Human Rights Committee has considered whether storing toxic waste violated the right to life of present and future generations[206] and whether the use of genetically modified crops violated the right to live in a healthy environment.[207] In *Poma Poma v Peru*, the Committee concluded that measures affecting indigenous communities' access to vital natural resources violated their right to practice their culture.[208]

In the African system, the African Commission on Human and Peoples' Rights upheld the right to a general satisfactory environment as guaranteed under Article 24 of the African Charter.[209] Although the decision was legally non-binding, the Commission urged States to take "reasonable measures to prevent pollution

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[202] UN Committee on Economic, Social and Cultural Rights, "General Comment No 14: The Right to the Highest Attainable Standard of Health" (11 August 200) UN Doc E/C.12/2000/4 para 4.
[203] Stephens (n55) 53.
[204] ibid 54.
[205] Karen Hulme, "Using a Framework of Human Rights and Transitional Justice for Post-Conflict Environmental Protection and Remediation" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 128.
[206] *Communication No 67/1980: EHP v Canada*, UNHRC (27 October 1982) UN Doc CCPR/C/17/D/67/1980.
[207] *Communication No 1453/2006: Brun v France*, UNHC (18 October 2006) UN Doc CCPR/C/88/D/1453/2006.
[208] *Poma Poma v Peru*, UNHRC (28 March 2009) UN Doc CCPR/C/95/D/1457/2006.
[209] *Social and Economic Rights Action Centre (SERAC) and Another v Nigeria*, ACHPR (27 May 2002) Communication 155/96, ACHPR/COMM/A044/1.

and ecological degradation, to promote conservation, and to secure ecologically sustainable development and use of natural resources."[210] More recently, the African Court on Human and Peoples' Rights found that the rights of indigenous communities are closely linked to their ability to access the natural environment.[211] Similarly, the regional African Courts have also issued decisions that protect the environment. In *SERAP v Nigera*, the ECOWAS Court of Justice found that Nigeria had failed its obligation to "enforce laws and regulations to protect the environment and prevent pollution" and ordered the government to "[t]ake all measure to prevent… damage to the environment; and to … hold the perpetrators of the environmental damage accountable." [212] In *ANAW v Tanzania*, the East African Court of Justice considered "issues that are today the subject of wide debate across the world, including; environmental protection, sustainable development [and] environmental rule of law" and declared a proposed road project that would have cut across the Serengeti National Park to be unlawful because it would have "a negative impact on the environment".[213]

In the inter-American system, the Inter-American Court of Human Rights recently adopted an ecocentric view by recognizing an independent right to a healthy environment and finding that "forests, rivers and seas" are protected as such and that environmental damage could be justiciable even in the absence of evidence of harm to persons.[214] Previous jurisprudence at the inter-American system had focused on the link between indigenous rights and environmental protection.[215]

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[210] ibid para 52.
[211] *African Commission on Human and Peoples' Rights v Republic of Kenya*, ACtHPR (26 May 2017) Judgment, App 006/2012, para 169.
[212] *SERAP v Nigeria*, ECOWAS Court of Justice (14 December 2012) Judgment ECW/CCJ/JUD/18/12, para 121.
[213] *African Network for Animal Welfare (ANAW) v Tanzania*, EACJ (20 June 2014) First Instance Judgment, Ref No 9 [2010], paras 85-86.
[214] *The Environment and Human Rights (State Obligations in Relation to the Environment in the Context of the Protection and Guarantee of the Rights to Life and to Personal Integrity – Interpretation and Scope of Articles 4(1) and 5(1) in relation to Articles 1.1 and 2 of the American Convention on Human Rights) Advisory Opinion OC-23/18 (15 November 2017) IACtHR Series A No 23*, paras 62-63; Maria L Banda, "Inter-American Court of Human Rights' Advisory Opinion on the Environment and Human Rights" (2018) 22(6) ASIL Insights.
[215] *Yanomani Indians v Brazil (Case No 7615)* IACHR (5 March 1985) Resolution No 12/85; *The Mayagna (Sumo) Awas Tingni Community v Nicaragua*, Judgment (31 August 2001) IACtHR Series C No 79; *Mary and Carrie Dann v United States (Case No 11.140)* IACHR (27 December 2002) Resolution No 75/02; *Case of Claude Reyes et al v Chile,* Merits, Reparations and Costs (19 September 2006) IACtHR Series C No 151; *Case of the Saramaka People v Suriname*, Preliminary Objections, Merits, Reparations and Costs (28 November 2007) IACtHR Series C No 172.

In Europe, even though the Convention on Human Rights (ECHR) does not recognize an individual right to a healthy environment, the Court of Human Rights developed its environmental jurisprudence by recognizing that environmental damage and exposure to environmental risks may impact the exercise of other human rights enshrined in the ECHR.[216] For instance, the Court has previously recognized that exposure to environmental harm can violate the right to life;[217] the right to private and family life;[218] and the right to property.[219] The Court has also found that States have the positive obligation to impose substantive environmental quality standards on private actors to prevent them from interfering with individuals' rights to health, private life or property.[220]

Despite the growing jurisprudence of IHRL mechanisms, given the inherently anthropocentric perspective of human rights law, meaningful environmental protection is limited to situations when the objectives of safeguarding human rights and preserving the environment are complementary.[221]

iv. Accountability for Violations of International Law

In parallel with the development of international instruments that protect the environment during war, there is an emerging realization that institutions capable of enforcing these protections are necessary for

[216] Preliminary Report (n13) para 160.
[217] *Kolyadenko and Others v Russia*, ECtHR (20 February 2012) App 17423/05, 20534/05, 20678/05, 23263/05, 24283/05 & 35673/05.
[218] *Lopez Ostra v Spain*, ECtHR (9 December 1994) App 16798/90; *Guerra and Others v Italy*, ECtHR (19 February 1998) App 116/1996/735/932; *Taşkın and Others v Turkey*, ECtHR (10 November 2004) App 46117/99; *Fadeyeva v Russia*, ECtHR (9 June 2005) App 55723/00; *Roche v United Kingdom*, ECtHR (19 October 2005) App 32555/96; *Giacomelli v Italy*, ECtHR (2 November 2006) App 59909/00; *Tătar v Romania*, ECtHR (27 January 2009) App 67021/01; *Brânduse v Romania*, ECtHR (7 April 2009) App 6586/03; *Dubetska and Others v Ukraine*, ECtHR (10 February 2011) App 30499/03; *Brincat and Others v Malta,* ECtHR (24 July 2014) App 60908/11, 62110/11, 62129/11, 62312/11 & 62338/11; *Vilnes and Others v Norway,* ECtHR (5 December 2013) App 52806/09; *Cordella and Others v Italy,* ECtHR (24 January 2019) App 54414/13 & 54264/15.
[219] *N.A. and Others v Turkey*, ECtHR (11 October 2005) App 37451/97; *O'Sullivan McCarthy Mussel Development Ltd v Ireland*, ECtHR (7 June 2018) App 44460/16; *Dimitar Yordanov v Bulgaria,* ECtHR (6 September 2018) App 3401/09.
[220] Beyerlin (n54) 401; *Fredin v Sweden*, ECtHR (18 February 1991) App 12033/86.
[221] Stephens (n55) 53.

promoting compliance.[222] Enforcement refers to "the right to take measures to ensure fulfillment of international legal obligations" and can be achieved by "obtain[ing] a determination by an appropriate international court, tribunal or other body… that obligations are being fulfilled".[223] Compliance can be defined as "an actor's behaviour that conforms to a treaty's explicit rules".[224] The effectiveness of international laws can be evaluated in terms of the extent to which actors comply with their obligations.[225] Consequently, one of the primary objectives of IEL and IHL is to ensure that actors respect the laws protecting the environment.[226] To facilitate compliance with international commitments, incentives include the imposition of liabilities upon actors who violate their obligations.[227] However, to be effective, liabilities must be "credible and potent", thereby making violation unattractive.[228]

A violation of the laws previously discussed in this study can give rise to different forms of liability, including state responsibility, civil liability or criminal liability.[229] Although it has also been proposed that trade sanctions are effective in ensuring compliance, this suggestion is controversial and beyond the scope of this study.[230] States incur responsibility for environmental damage when their agents engage in conduct that breaches an international obligation arising from either treaty or custom.[231] The state injured by such a breach is then entitled to request "full reparation for the [damage] caused by the internationally wrongful act", which may take the form " of restitution, compensation and satisfaction, either singly or in

[222] ibid 7.
[223] Philippe Sands, "Compliance with International Environmental Obligations: Existing International Legal Arrangements" *in* James Cameron et al (eds) *Improving Compliance with International Environmental Law* (Earthscan 1996) 58.
[224] Ronald B Mitchell, "Compliance Theory: An Overview" *in* James Cameron et al (eds) *Improving Compliance with International Environmental Law* (Earthscan 1996) 5.
[225] Beyerlin (n54) 317.
[226] Mitchell (n224) xiv.
[227] Sands (n223) 56.
[228] Mitchell (n224) 14 & 21.
[229] Jean-Marie Henckaerts, "International Legal Mechanisms for Determining Liability for Environmental Damage under international Humanitarian Law" in Austin Jay E & Bruch Carl E (eds) *The Environmental Consequences of War Legal, Economic, and Scientific Perspective*s (CUP 2000) 602; Bruch (n165) 662.
[230] Jenkins Leesteffy, "Trade Sanctions: Effective Enforcement Tools" *in* Cameron James et al (eds) *Improving Compliance with International Environmental Law* (Earthscan 1996) 221.
[231] Christopher Greenwood, "State Responsibility and Civil Liability for Environmental Damage Caused by Military Operations" *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 592-592.

combination".[232] Notably, in an effort to improve institutional capacity to address environmental disputes, the ICJ adopted a specialized permanent Chamber for Environmental Matters in 1993.[233] However, because no State ever requested that a case be dealt with in this Chamber, it ceased to exist in 2006.[234] This demonstrates the drawback of using the framework of State responsibility to enforce environmental obligations, given its reliance on States' willingness to bring claims in international courts. Civil liability for environmental damage, a recently emerged concept in international instruments that establishes mechanism for financial compensation for harm caused, has also been criticized for failing to discourage potential breaches of international obligations.[235] It therefore follows that international criminal law, as a form of individual liability, is better suited for responding to concerns about deterrence and is therefore a better mechanism for enforcing international laws applicable to the environment.[236]

Although international criminal prosecutions for environmental damage remain uncommon, as the concept of "environmental crimes" is a recent development, this form a liability is well suited for facilitating compliance with international law.[237] International criminal courts challenge the State-centered character of international law by allowing individuals to be held liable for intentional environmental damage.[238] Criminal sanctions can have a better deterrent effect on belligerents because they hold one individual responsible rather than dispensing responsibility to an abstract entity, like a State; draws outrage to condemnable actions; and exposes the appropriate standard of behaviour.[239] Moreover, international criminal prosecutions can play an important role in redressing wartime environmental damage as part of securing a sustainable peace.[240] By helping re-establish the rule of law and bringing perpetrators to account,

[232] ILC, "Draft Articles on the Responsibility of States for Internationally Wrongful Acts" (3 August 2001) UN Doc A/56/10 (2001) arts 31(1) & 34.
[233] Stephens (n55) 10.
[234] ibid 39-40.
[235] Alla Pozdnakova, *Criminal Jurisdiction Over Perpetrators of Ship-Source Pollution: International Law, State Practice and EU Harmonisation* (Martinus Nijhoff 2013) 40.
[236] ibid.
[237] ibid 39.
[238] Stephens (n55) 54.
[239] Cymie R Payne, "Developments in the Law of Environmental Reparations: A Case Study of the UN Compensation Commission" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 336; Steven Robert Freeland, *Addressing the Intentional Destruction of the Environment during Warfare under the Rome Statute of the International Criminal Court* (Intersentia 2015) 35.
[240] Lawry-White (n201) 368.

international criminal law serves the international community.[241] In conclusion, the imposition of individual criminal liability to intentional wartime environmental damage represents the best method for producing long-term compliance with IHL.[242]

IV. Prosecuting the Destruction of the Natural Environment as a War Crime

Having considered the extent to which treaty and custom-based international law addresses the destruction of the natural environment during armed conflict, this section will examine whether these principles of international law are enough to establish individual criminal accountability for such acts. In particular, the chapter will examine the ICC's role in addressing the destruction of the natural environment as a war crime and whether the 2016 policy goals released by the Office of the Prosecutor (OTP), which demonstrated a willingness to consider crimes involving environmental destruction, can meaningfully contribute to this endeavor.[243]

Despite the previously mentioned link between armed conflict and disastrous environmental destruction, wartime environmental damage has not been prosecuted at the international level since the Nuremberg Trials.[244] In the *Jodl Case*, the Nuremberg Tribunal found General Alfred Jodl guilty of war crimes associated with scorched earth tactics which "completely destroyed" entire cities.[245] In the *Rendulic Case*, the Tribunal considered war crimes involving the physical destruction carried out in order to rescue forces from a "strategically perilous situation".[246] Following these decisions, acts committed during armed conflict continued to cause environmental destruction in situations where the natural environment was intentionally targeted and where the environment was exploited to serve a means of warfare, because they were

[241] Payne (n239) 336.
[242] Wyatt (n50) 616.
[243] International Criminal Court, "Office of the Prosecutor: Policy Paper on Case Selection and Prioritisation" (15 September 2016).
[244] Rosemary Mwanza, "Enhancing Accountability for Environmental Damage under International Law: Ecocide as a Legal Fulfilment of Ecological Integrity" (2018) 19(2) Melbourne J Intl L 586, 587.
[245] *Jodl Case - The Trial of German Major War Criminals,* International Military Tribunal at Nuremberg*,* (14 November 1945 - 1 October 1946) 1 Proceedings Intl Mil Tribunal, 324-325.
[246] *Rendulic Case - Trial of William List and Others (The Hostages Trial)* United States Military Tribunal, Nuremberg (8 1947 - 19 February 1948) 8 L Rep Trials War Crim 43, 45.

tolerated as unavoidable collateral damage. However, as the international community has come to be increasingly concerned with protecting the natural environment, especially considering issues like climate change, the role of international courts in preventing environmental damage should be revisited.[247]

i. The International Criminal Court's Jurisdiction

As a permanent mechanism of international criminal justice that seeks to promote the values and norms universally accepted among the international community, the ICC is a valuable instrument that has the potential to foster compliance with international law by imposing individual criminal liability to intentional wartime environmental damage.[248] Given that it has the power to exercise its jurisdiction with respect to crimes that occur at any time after the ICC Statute came into force on 1 July 2002, the values and norms it promotes will continue to evolve in the future in order to prevent impunity for those who commit "unimaginable atrocities that deeply shock the conscience of humanity".[249] As present threats to the natural environment have come to threaten the future wellbeing of humanity, it is important that international criminal law addresses environmental destruction as an atrocity that shocks human conscience.

The ICC can only operate within the limits of its jurisdiction. It can exercise its jurisdiction in relation to specific crimes when (i) the alleged crime is committed on the territory of a State Party;[250] (ii) a national of a State Party is alleged to have committed a crime;[251] (iii) a crime that "appears to have been committed" is referred to the ICC Prosecutor by the United Nations Security Council acting under Chapter VII of the UN Charter;[252] or (iv) a non-State Party lodges a declaration with the ICC Registrar, accepting the jurisdiction of the Court with respect to the "crime in question".[253] Moreover, the ICC only has jurisdiction with respect to crimes committed after 1 July 2002.[254] If a State becomes a Party to the ICC Statute after this date, the

[247] Freeland (n239) 1.
[248] ibid 1&184.
[249] Rome Statute of the International Criminal Court (adopted 17 July 1998, entered into force 1 July 2002) 2187 UNTS 90 (ICC Statute) preamble.
[250] ibid art 12(2)(a).
[251] ibid art 12(2)(b)
[252] ibid art 13(b).
[253] ibid art 12(3).
[254] ibid art 11(1).

Court “may exercise its jurisdiction only with respect to crimes committed after the entry into force of this Statute for that State, unless that State” declares otherwise.[255]

The ICC’s jurisdiction is also subject to the principle of complementarity, meaning that the international court operates as a mechanism of last resort and that national courts retain primary responsibility for prosecuting these crimes. According to the ICC Statute, a case is inadmissible before the court if (i) it is being investigated or prosecuted by a State, unless the State is genuinely unwilling or unable to carry out the investigation or prosecution;[256] (ii) it has been investigated and the State has decided not to prosecute, unless the decision resulted from the State’s genuine unwillingness or inability to prosecute;[257] or (iii) the case is insufficiently grave to justify further attention from the ICC.[258]

Jurisdiction is also limited to crimes that are expressly provided in the ICC Statute.[259] While the ICC Statute has jurisdiction in relation to crimes of genocide (as defined in Article 6); crimes against humanity (Article 7); war crimes (Article 8);[260] and crimes of aggression (Article 8bis), it does not include a specific “crime against the environment” under any of these crimes or as a stand-alone offence. This omission was addressed during the drafting of the ICC Statute, when it was suggested that damage to the natural environment would usually fall within the scope of other crimes already included in the draft text, and that, if that were not the case, the act would not meet the gravity threshold for an international crime.[261] The ICC Statute therefore compromised by setting out the limited circumstances in which damage to the natural environment may constitute a war crime.[262]

[255] ibid art 11(2).
[256] ibid art 17(1)(a).
[257] ibid art 17(1)(b).
[258] ibid art 17(1)(d).
[259] ibid art 5.
[260] ibid art 8(1).
[261] Antonio Cassese et al (eds) *The Rome Statute of the International Criminal Court: A Commentary* (OUP 2002) 522–3.
[262] Freeland (n239) 178.

a. Destruction of the Natural Environment under Article 8(2)(b)(iv)

Under the ICC Statute, a war crime requires the presence of both a material element (actus reus) and a mental element (mens rea).[263] The material elements of war crimes include the underlying conduct specified in Article 8 and the existence of either an international or internal armed conflict. In terms of the mens rea, the ICC Statute sets out the default mental element in Article 30, which specifies that, for individual criminal responsibility to apply, the material elements (actus reus) of the crime must be "committed with intent and knowledge".[264] A person is deemed to have intent where "[i]n relation to conduct, that person means to engage in the conduct"[265] and where "[i]n relation to a consequence, that person means to cause that consequence or is aware that it will occur in the ordinary course of events."[266] The ICC Statute defines knowledge as "awareness that a circumstance exists or a consequence will occur in the ordinary course of events".[267] The default mens rea applies "[u]nless otherwise provided", meaning that specific crimes may have mental element requirements that differ from the Article 30 standard.[268]

Article 8(2)(b)(iv) classifies "other serious violations of the laws and customs applicable in international armed conflict, within the established framework of international law," including "[i]ntentionally 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" as war crimes.[269] To prosecute this crime, the OTP must establish that (i) the act took place within the context of an international armed conflict; (ii) the attack was intentional; (iii) the ensuing damage was widespread, long-term and severe; and (iv) the perpetrator had the knowledge that the damage would be "clearly excessive" in relation to a "concrete and direct overall military advantage".[270]

[263] ibid 186.
[264] ICC Statute (n249) art 30(1).
[265] ibid art 30(2)(a).
[266] ibid art 30(2)(b).
[267] ibid art 30(3).
[268] ibid art 30(1).
[269] ibid art 8(2)(b)(iv).
[270] Tara Weinstein, "Prosecuting Attacks that Destroy the Environment: Environmental Crimes or Humanitarian Atrocities" (2005) 17(4) Georgetown Intl Env L Rev 697 *in* Karen Hulme (ed) *Law of the Environment and Armed Conflict* (Elgar Publishing 2017) 619.

Notably, Article 8(2)(b)(iv) only applies during an international armed conflict.[271] Although earlier drafts of the ICC Statute had included similar provisions in Articles 8(2)(c) and 8(2)(e), which are applicable during internal armed conflicts, this was ultimately omitted in the final version of the Statute.[272] The drafters' decision to exclude a corresponding crime applicable during NIACs mirrors the gap present in the Additional Protocols.[273] With respect to the mental element of Article 8(2)(b)(iv), Article 30 of the ICC Statute applies as the standard requiring both knowledge and intent of the material elements.[274] This is a departure from the text in API, which regulates means and methods of warfare that are "intended, or may be expected to" cause damage, but does not require that the effects be known.[275] Another departure from the API text is that for the war crime to crystallize, the damage to the natural environment must be clearly exceed the concrete and direct military advantage anticipated.[276] According to the drafters, a "concrete and direct military advantage" is "foreseeable by the accused at the relevant time,… substantial and relatively close" and excludes advantages that are "hardly perceptible" or "only appear in the long term".[277] The phrase "clearly excessive" requires perpetrators to male a value judgment regarding the impact of damage based on the information available to them at the time.[278] The drafters therefore entrusted the ICC to "respect judgments that are made reasonably and in good faith on the basis of the requirements of IHL."[279]

b. Destruction of the Natural Environment as an Underlying Act in Prosecuting Other War Crimes

Beyond Article 8(2)(b)(iv), the ICC Statute can address damage to the natural environment indirectly by treating it as a material element of other crimes.[280] For instance, during an IAC, environmental destruction could be prosecuted as the underlying act in the crimes of: (i) extensive destruction and appropriation of

[271] ICC Statute (n249) art 8(2)(b).
[272] Freeland (n239) 211.
[273] Dinstein (n136) 535; Knut Dörmann, "War Crimes under the Rome Statute of the International Criminal Court, with a Special Focus on the Negotiations on the Elements of Crimes" (2003) 7 Max Planck UNYB L 341, 345.
[274] ICC Statute (n249) art 8(2)(b).
[275] Dinstein (n136), 535; API (n101) art 35(3).
[276] ibid.
[277] Dörmann (n273) 384–386.
[278] ibid 386-387.
[279] ibid 386-388.
[280] UN Environment Programme (n7).

property, not justified by military necessity and carried out unlawfully and wantonly;[281] (ii) intentionally directing attacks against civilian objects;[282] (iii) employing poison or poisonous weapons;[283] (iv) pillaging a town or place, even when taken by assault;[284] (v) employing asphyxiating, poisonous or other gases;[285] or (vi) intentionally using starvation of civilians as a method of warfare by depriving them of objects indispensable to their survival.[286] However, the success of this approach would depend on the ICC's willingness to interpret the natural environment as property; a civilian object; or an object indispensable to human survival. While prosecuting environmental damage as the underlying act to other crimes may lead to similar results as prosecuting environmental destruction directly, this approach fails to protect the environment as an entity with intrinsic value.[287]

Similarly, in the absence of a provision that directly addresses environmental damage during an internal armed conflict, the OTP's only option is to prosecute environmental destruction as the underlying act in the crimes of: (i) pillaging a town or place, even when taken by assault;[288] (ii) ordering the displacement of the civilian population for reasons related to the conflict;[289] (iii) destroying or seizing the property of an adversary unless such destruction or seizure be imperatively demanded by the necessities of conflict;[290] (iv) employing poison or poisoned weapons;[291] or (v) employing asphyxiating, poisonous or other gases.[292] Even though these provisions do not mention the environment, they may serve as avenues for punishing certain types of environmental damage in limited circumstances.[293] With respect to pillage, it is worth noting that the provision only focuses on appropriation of property for private or personal use – rather than its destruction – and does not criminalize seizures justified by military necessity.[294] This therefore excludes some of the

[281] ICC Statute (n249)art 8(2)(a)(iv).
[282] ibid art 8(2)(b)(ii).
[283] ibid art 8(2)(b)(xvii).
[284] ibid art 8(2)(b)(xvi).
[285] ibid art 8(2)(b)(xviii).
[286] ibid art 8(2)(b)(xxv).
[287] Mwanza (n244) 597.
[288] ICC Statute (n249) art 8(2)(e)(v).
[289] ibid art 8(2)(e)(viii).
[290] ibid art 8(2)(e)(xii).
[291] ibid art 8(2)(e)(xiii).
[292] ibid art 8(2)(e)(xiv).
[293] Bruch (n165) 659-660.
[294] International Criminal Court, "Elements of Crimes of the International Criminal Court" (9 September 2002) UN Doc PCNICC/2000/1/Add.2 (2000) 36.

damage caused to the environment.[295] Moreover, for this approach to work, the ICC would have to interpret the environment broadly to qualify it as "property".[296] It is also problematic that while the intentional starvation of the civilian population is recognized as a war crime during an IAC, there is no analogous provision applicable to NIACs.[297] This omission also contrasts the approach adopted in APII, which prohibits attacks on "foodstuffs, agricultural areas, … crops, livestock [and] drinking water installations", which could encompass elements of the environment.[298] Given these limited situations in which the OTP may prosecute environmental destruction as the material element of war crimes occurring during NIACs, it is evident that "international jurisdiction on ecological crimes in [NIACs] is factually nonexistent today".[299]

ii. The OTP's Recent Policy Goals

Despite the limited circumstances under which wartime environmental destruction can be prosecuted at the ICC, the OTP has indicated its willingness to prioritize crimes that are committed by means of or result in "the destruction of the environment, the illegal exploitation of natural resources, or the illegal dispossession of land."[300] The purpose of the *2016 Policy Paper on Case Selection and Prioritization* was to itemize the considerations guiding "the exercise of prosecutorial discretion" in the selection of cases to be investigated and prosecuted.[301] Generally, the OTP selects its cases based on the "gravity of the crimes, the degree of responsibility of the alleged perpetrators and the potential charges".[302] While these criteria will continue to guide the OTP's decisions to pursue a case, the policy acknowledged that the destruction of the environment is worth considering as a crime in itself and as an underlying act used in the commission of other crimes.[303]

[295] Matthew Gillet, "Eco-Struggles: Using International Criminal Law to Protect the Environment During and After Non-International Armed Conflict" *in* Carsten Stahn et al (eds) *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 231.
[296] ibid 233.
[297] ibid 232.
[298] APII (n95(art 14.
[299] Fleck (n117) 213.
[300] Policy Paper (n243) 13-14.
[301] ibid 3.
[302] ibid 12.
[303] ibid 4 & 13-14.

Some commentators have further interpreted the policy as demonstrating the ICC's readiness to prosecute corporate executives or investors for the environmental destruction caused by their business practices.[304] It therefore inspired groups to lodge cases with the OTP in relation to land-grabbing as an underlying act of crimes under the Court's jurisdiction.[305] Although the ICC has "the power to exercise its jurisdiction over persons for the most serious crimes of international concern", which typically includes heads of state and political or military leaders, there are difficulties in ensuring that heads of corporate enterprises also face criminal liability before the international court.[306] Arguments in favor of prosecuting corporate misconduct at the ICC point to the inadequacy of civil penalties or mere sanctions for addressing corporate misconduct and note that environmental damage caused by businesses can be as harmful as military attacks.[307] In particular, multinational corporations involved in the mining and agricultural sectors play an active role in environmental destruction, whether during peacetime or armed conflict.[308] While the ICC cannot pursue a corporate entity, as it only has jurisdiction over natural persons, the OTP's recent *Policy Paper* can be interpreted as encouraging the prosecution of business officials.[309] However, the OTP has always had the power to prosecute corporate officials involved in the commission of international crimes.[310] In practice, there are practical challenges to prosecuting business officials before the ICC.[311] First, even serious corporate misconduct may fail to reach the high gravity threshold required to constitute an international crime.[312] Second, it will be difficult for the OTP to analyze the specialized evidence required to establish a link between corporate misconduct and ensuing environmental harm in the absence of expertise and in the

[304] John Vidal & Owen Bowcott, "ICC Widens Remit to Include Environmental Destruction Cases" (15 September 2016) The Guardian; Shehab Khan, "CEOs Can Now Be Tried under International Law at The Hague for Environmental Crimes" (19 September 2016) The Independent; Adam Taylor, "Is Environmental Destruction a Crime Against Humanity? The ICC May be About to Find Out" (16 September 2016) Washington Post.
[305] Global Diligence LLP, "Communication Under Article 15 of the Rome Statute of the International Criminal Court - The Commission of Crimes Against Humanity in Cambodia July 2002 to Present" (7 October 2014).
[306] ICC Statute (n249) art 1; Audrey Crasson, "The Case of Chevron in Ecuador: The Need for an International Crime against the Environment" (2017) 9(3) Amsterdam L Forum 29, 30.
[307] ibid 44.
[308] Nadia Bernaz, "An Analysis of the ICC Office of the Prosecutor's Policy Paper on Case Selection and Prioritization from the Perspective of Business and Human Rights" (2017) 15 J Intl Crim Justice 527, 528.
[309] ICC Statute (n249) art 25 (1); ibid 529.
[310] ibid 532.
[311] ibid.
[312] ibid 533.

face of budget constraints.[313] Finally, the uncertainty regarding the mental element required to establish criminal liability in these cases renders the prosecution of corporate misconduct before the ICC unlikely.[314] Consequently, the success of recent claims lodged before the ICC is uncertain, as the *Policy Paper* is not legally binding and does not formally extend the ICC's jurisdiction. Rather, the OTP has declared a general interest in assessing existing offences in a broader context.[315]

V. The Challenges of Prosecuting the Destruction of the Natural Environment as a War Crime

i. Reflections of IHL Deficiencies in the ICC Statute

The overriding challenge to prosecuting wartime environmental destruction is that the ICC Statute fails to meaningfully resolve the previously discussed deficiencies of IHL instruments applicable to the environment and instead replicates them. First, both the ICC Statute and the Elements of Crimes refer to the "natural environment" but provide no guidance in defining the terms.[316] As in other IHL instruments, the environment is qualified as "natural" without providing any clarity on the purview of protection.[317] It is therefore unclear whether the terms "civilian objects", "property" or "objects indispensable to the survival of the population" also include elements of the environment. This lack of clarity is particularly problematic given how the few provisions that could address environmental damage during a NIAC use these terms. In response to how vague the terms applicable during NIACs are in relation to the environment, a defendant could argue the *nullem crimen sine lege* maxim, according to which "[t]he definition of a crime shall be strictly construed and shall not be extended by analogy. In case of ambiguity, the definition shall be interpreted in favour of the person being investigated, prosecuted or convicted".[318] This point relates to the second deficiency of IHL reflected in the ICC Statute; namely, the failure to include war crimes explicitly related to environmental

[313] Sandra C Wisner, "Criminalizing Corporate Actors for Exploitation of Natural Resources in Armed Conflict: UN Natural Resources Sanctions Committees and the International Criminal Court" (2018) 16 J Intl Crim Justice 963, 971.
[314] Taylor (n304).
[315] Vidal (n304).
[316] ICC Statute (n249) art 8(2)(b)(iv); Elements of Crimes (n294) 19.
[317] Weir (n1).
[318] Bruch (n165) 689; ICC Statute (n249) art 22(2).

destruction during internal armed conflicts.[319] The exclusive application of Article 8(2)(b)(iv) to international armed conflicts therefore presents a serious gap.[320] Third, the crimes enumerated in the ICC Statute which are applicable to the environment adopt an anthropocentric view, similarly to other IHL instruments.[321] This reflects the international community's reluctance in acknowledging environmental crimes in the absence of a destructive humanitarian impact.[322] Crimes that harm the environment are therefore treated as "victimless crimes".[323] As a result, impunity for environmental damage prevails when the environment is itself the victim.[324] However, as previously mentioned, anthropocentric laws neglect the scientific reality that the wellbeing of humankind is dependent on the wellbeing of the environment. Therefore, "we are all harmed by crimes" that aggravate climate change or the loss of biodiversity.[325] To meaningfully respond to these contemporary environmental challenges, the international criminal law should embrace an ecocentric value system.[326]

Like Articles 35(3) and 55 of API, the ICC Statute uses imprecise but stringent language in Article 8(2)(b)(iv), which creates uncertainty about what level of environmental damage, if any, is prohibited. The material element of Article 8(2)(b)(iv) is therefore difficult to establish. By requiring criminal damage to the natural environment to be widespread, long-term *and* severe, the ICC Statute departs from the standard specified in ENMOD, which only prohibited States from engaging "in military or any other hostile use of environmental modification techniques having widespread, long-lasting *or* severe effects" [emphasis added].[327] Similarly, the ICC Statute requires that the damage be "clearly excessive in relation to the concrete and direct overall military advantage anticipated"[328], whereas API only prohibited "the use of methods or means of warfare which are intended or may be expected to cause [damage] to the natural environment".[329] This indicates

[319] Henckaerts (n229) 616.
[320] ibid.
[321] Saloni Malhotra, "The International Crime That Could Have Been but Never Was: An English School Perspective on the Ecocide Law" (2017) 9(3) Amsterdam L Forum 49, 51.
[322] Weinstein (n270) 627.
[323] Sandra Rousseau, "Judicial Discretion and Optimal Environmental Enforcement" (2017) 9(3) Amsterdam L Forum 100, 101.
[324] Weinstein (n270) 634.
[325] Rousseau (n323) 101.
[326] Mwanza (n244) 590.
[327] ENMOD (n6) art I(1).
[328] ICC Statute (n249) art 8(2)(b)(iv).
[329] API (n101) art 55(1).

that the degree of harm necessary to amount to a war crime under the ICC Statute is higher than that required to violate ENMOD or API. Moreover, some environmental destruction could breach API but not necessarily amount to a war crime under Article 8(2)(b)(iv). This is especially evidenced by the requirement that damage must be "clearly" excessive.[330] In balancing the expected environmental damage against the anticipated military advantage, the Article implies that environmental concerns are secondary to military interests.[331] It therefore echoes the traditional and flawed approach that harm to the natural environment is an inevitable and tolerable consequence of armed conflict, even when the harm is intentional.[332]

The ICC Statute does not define the terms "widespread", "long-term" or "severe". As previously mentioned, for the purposes of ENMOD, "widespread" was defined as encompassing an area of several hundred square kilometers; "long-lasting" as lasting for a period of months or a season; and "severe" as involving serious or significant disruption or harm to human life, natural and economic resources or other assets.[333] However, these interpretations were intended exclusively for ENMOD and are not necessarily applicable to the Statute.[334] As the interpretations offered for the purposes of ENMOD and API should not be automatically transferred to the ICC Statute, the precise meaning of "widespread", "long-term" and "severe" in the context of international criminal law remains unclear until the ICC itself has the opportunity to determine it.[335]

Moreover, Article 8(2)(b)(iv) requires that the proportionality of the environmental damage be balanced in relation to the military advantage surrounding such actions. This requirement, absent from the API prohibition in relation to the natural environment, makes it more difficult and subjective to apply the provision. Therefore, even if damage to the natural environment is found to be widespread, long-term and severe, it could still fall short of a war crime if the anticipated military advantage of destroying it is

[330] Freeland (n239) 207.
[331] ibid 206.
[332] ibid.
[333] UNGA, "Report of the Conference of the Committee on Disarmament" (1976) UN Doc A/31/27/vol1, 91.
[334] ibid
[335] Freeland (n239) 208.

sufficient.[336] Notably, the ICC Elements of Crimes provides that "[t]he expression 'concrete and direct overall military advantage' refers to a military advantage that is foreseeable by the perpetrator at the relevant time" and that "[i]t reflects the proportionality requirement inherent in determining the legality of any military activity undertaken in the context of an armed conflict".[337] As the advantage of any act is to be determined on the basis of "the broader purpose" of the particular operation[338], it is likely that Article 8(2)(b)(iv), when read together with the Elements of Crimes, would tolerate many, if not all, decisions to intentionally target the environment.[339]

VI. Alternatives to Prosecuting Environmental Destruction as a War Crime

i. Prosecuting Environmental Destruction as Other Crimes under the ICC's Jurisdiction

Given the difficulties of prosecuting environmental war crimes as stand-alone violations, the OTP may consider prosecuting environmental destruction as conducted in furtherance of other crimes under its jurisdiction, including (i) crimes against humanity; (ii) genocide; or (iii) crimes of aggression.[340] By prosecuting environmental destruction as a crime against humanity or genocide, the existence of an armed conflict is no longer required. In practice, this means that environmental damage can be considered in the context of either an IAC or a NIAC.[341] This approach would also enable the OTP to sidestep the stringent conditions in Article 8(2)(b)(iv) while establishing a precedent for quantifying environmental damage.[342] It could therefore serve as a first meaningful step towards prosecuting wartime environmental destruction as stand-alone violations.[343]

[336] ibid 209.
[337] Elements of Crimes (n294) UN Doc PCNICC/2000/1/Add.2 (2000).
[338] Dörmann (n273) 95 & 127.
[339] Freeland (n239) 210; Weinstein (n270) 622.
[340] ibid 626.
[341] ibid.
[342] ibid.
[343] ibid 612.

Crime Against Humanity

A crime against humanity (CAH) is defined in the ICC Statute as any of a number of listed "acts when committed as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack".[344] Even though CAH are focused on actions that cause direct harm to human wellbeing, environmental destruction could constitute one of the underlying acts when committed as part of an intentional widespread or systematic attack on civilians.[345] Specifically, the "[d]eportation or forcible transfer of population";[346] or the commission of "[o]ther inhumane acts of a similar character intentionally causing great suffering, or serious injury to body or to mental or physical health" could arise from severe environmental degradation.[347] Although a CAH does not require a nexus to armed conflict, because the OTP must demonstrate that the attack was widespread, systematic or pursuant to a State policy, this is a difficult crime to prove.[348] Moreover, because this approach is limited to cases where environmental damage impacts humans, the OTP would be unable to prosecute purely environmental harm.[349]

Genocide

The crime of genocide is defined in the ICC Statute as any of five distinct "acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such".[350] In the context of genocide, environmental destruction could constitute the underlying acts of "[c]ausing serious bodily or mental harm to members of the group";[351] "[d]eliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part";[352] or of "[i]mposing measures intended to prevent births within the group".[353] For example, the widespread use of scorched earth tactics and the poisoning of water resources for the purpose of destroying a protected group could amount to genocide.[354] In *Prosecutor v Al Bashir*, the OTP sought to prosecute the intentional infliction of conditions of life calculated to bring

[344] ICC Statute (n249) art 7(1).
[345] Bruch (n165) 670.
[346] ICC Statute (n249) art 7(1)(d).
[347] UN Environment Programme (n7) 30-31; ICC Statute (n249) art 7(1)(k).
[348] Weinstein (n270) 634.
[349] Mwanza (n244) 597.
[350] ICC Statute (n249) art 6.
[351] ibid art 6(b).
[352] ibid art 6(c).
[353] ibid art 6(d).
[354] Bruch (n165) 670.

about a group's physical destruction through the underlying act of ruining and depleting natural resources on which the group relied.[355] Although the Pre-Trial Chamber dismissed the charge for lack of evidence, it did not deny the connection between environmental destruction and genocide.[356] The difficulty in prosecuting this crime, however, is in proving the specific intent to destroy a particular group.[357] Although genocide does not require the presence of an armed conflict, the special intent would be difficult to prove in the context of environmental destruction.[358] Moreover, because the crime is inherently anthropocentric, it can only be used to prosecute limited instances of environmental harm inflicted on human groups.[359]

Crime of Aggression

The crime of aggression entails the "the use of armed force by a State against the sovereignty, territorial integrity or political independence of another State".[360] As the potential acts of aggression enumerated in the ICC Statute all involve the use of armed force by one state against another, this crime would not apply in the context of a NIAC. Nevertheless, if a State were to send its armed forces to attack its adversary, the resulting environmental destruction could qualify under this definition.[361] The drawback of this approach is that environmental harm caused by anything other than a military attack would not qualify as aggression. Moreover, because the crime can only be committed "by a person in a position effectively to exercise control over or to direct the political or military action of a State", liability would be limited to individuals in a leadership position.[362]

In considering whether environmental destruction could be prosecuted in furtherance of other crimes within the ICC's jurisdiction, it becomes apparent that meaningful protection of the environment "cannot effectively be achieved simply by trying to 'pigeon-hole' such environmental concerns into … already existing core

[355] *The Prosecutor v Omar Hassan Ahmad Al Bashir* (Decision on the Prosecution's Application for a Warrant of Arrest) International Criminal Court (4 March 2009) ICC-02/05-01/09.
[356] UN Environment Programme (n6) 31.
[357] Freeland (n239) 192.
[358] Mwanza (n244) 604-605.
[359] Gillet (n295) 225.
[360] ICC Statute (n249) art 8bis(2).
[361] Gillet (n295) 227.
[362] ibid 227-228; ICC Statute (n249) art 8bis(1).

international crimes".[363] Not only would such an approach diminish the scope of CAH and genocide, which are meant to address egregious international offences, but because these crimes only address incidental environmental destruction, it would also fail to secure meaningful protection for the environment.[364]

ii. Amending the ICC Statute

In the absence of a war crime directly addressing environmental destruction during internal armed conflicts, some commentators have suggested amending the ICC Statute to adopt a "mirror provision" to Article 8(2)(b)(iv) that would apply during NIACs.[365] Proponents of this solution argue that while the practical impact of such an amendment is uncertain, it would nevertheless play a "symbolic function" by reflecting the international community's condemnation of environmental destruction during NIACs.[366] Moreover, they point to the 2010 precedent when the Kampala Review Conference decided that poison weapons, asphyxiating gases and expanding bullets should not only be criminalized in IACs but also in NIACs by adding new paragraphs to Article 8(2)(e).[367] However, simply adding a new but parallel war crime within Article 8(2)(e) of the ICC Statute in the context of environmental destruction would fail to address the previously mentioned deficiencies that were adopted from flawed IHL instruments.

Other proposals have called for the introduction of a fifth and separate "crime against the environment", or "ecocide", under the ICC's jurisdiction.[368] Due to the transboundary effects of environmental damage, adopting a new international crime subject to the ICC's complementarity principle is an appropriate measure for protecting the environment.[369] Although the crime lacks a universally accepted definition, it has been proposed that it should address "extensive damage to, destruction of or loss of ecosystems of a given

[363] Freeland (n239) 227.
[364] Gillet (n295) 226.
[365] ibid 234.
[366] ibid 237.
[367] ibid 237-238; International Criminal Court, "Resolution RC/Res.5: Amendments to Article 8 of the Rome Statute" (10 June 2010).
[368] Lay Bronwyn et al, "Timely and Necessary: Ecocide Law as Urgent and Emerging" (2015) 28 J Jurisprudence 431; Nada Al-Duaji, *Environmental Law of Armed Conflict* (Transnational Publishers 2004) 385; Vanessa Schwegler, "The Disposable Nature: The Case of Ecocide and Corporate Accountability" (2017) 9(3) Amsterdam L Forum 71.
[369] ibid 448.

territory, whether by human agency or by other causes, to such an extent that peaceful enjoyment by the inhabitants of that territory has been severely diminished".[370] Other proposals have adopted an ecocentric character by defining the crime as "the commission of specific intentional acts that threaten the security of the planet and are committed as part of a widespread or systematic action".[371] Rather than requiring a nexus with armed conflict, the law would be more effective as both a peacetime and wartime crime.[372] Moreover, it has been suggested that the crime could give the ICC jurisdiction over crimes committed by both legal and natural persons, to enable the Court to address corporate misconduct more effectively.[373] Although such an amendment would ultimately require a shift in political will, given increasingly changing attitudes about the importance of protecting the environment during war, the opportunity for revision may soon present itself.[374]

iii. Creating New Mechanisms to Impose Individual Criminal Liability

Rather than amending the ICC Statute, some academics have proposed the establishment of a specialized international judicial body, or International Court for the Environment (ICE), to adjudicate environmental cases exclusively.[375] It has been suggested that the ICE should have jurisdiction over environmental disputes even in the absence of express acceptance of its jurisdiction.[376] Advocates for an ICE have also suggested that in addition to resolving individual complaints, the Court should possess criminal jurisdiction to prosecute environmental crimes.[377] As a result, proposals for an ICE have been overly ambitious, as they envision "a court that bears little resemblance to any [other] judicial institution."[378] Moreover, the proposals are based on the flawed assumption that environmental disputes arise in isolation, when in fact environmental issues implicate other subject matter, such as, for example, human rights.[379] Given the

[370] Polly Higgins, "Seeding Intrinsic Values: How a Law of Ecocide will Shift our Consciousness" (2012) 5 Cadmus 9, 9-10.
[371] Mwanza (n244) 588.
[372] Bronwyn (n368) 449.
[373] Mwanza (n244) 599.
[374] Gillet (n295) 234.
[375] Al-Duaji (n368) 417.
[376] ibid.
[377] Stephens (n54) 58.
[378] ibid 61.
[379] ibid.

complexities involved in introducing a new institution in the already existing "patchwork of jurisdictions" applicable to the environment, it is more practical to improve existing laws and entrust existing courts, like the ICC, to prosecute environmental crimes.[380]

With respect to improving existing laws, there have been recent appeals, from scientific and legal communities alike, to adopt a "Fifth Geneva Convention" related to environmental protection.[381] Reflecting earlier calls for the drafting of such a legal instrument,[382] the proposed convention would seek to protect the environment during armed conflict by preserving natural resources, safeguarding biodiversity, and holding members of the military more accountable for their wartime activities.[383] In light of the limitations and challenges discussed in relation to preventing wartime environmental destruction, international criminal law and IHL can only provide complementary protection to the natural environment. To meaningfully address and limit the consequences of environmental harm, a varied approach incorporating principles of IEL and IHRL will therefore be necessary.[384]

In conclusion, despite having historically tolerated wartime environmental destruction, the international community is increasingly concerned with protecting the natural environment during armed conflict. Efforts from institutions like the ICRC, the ILC and UNEP to clarify the rules protecting the environment during armed conflict demonstrate changing attitudes about tolerable wartime activities. These efforts also indicate a slow shift away from the anthropocentric approach and towards the recognition that human wellbeing is interconnected and dependent on the wellbeing of the environment. Having examined how different legal regimes protect the environment during armed conflict and identified the glaring deficiencies in the few applicable IHL instruments, this study turned to examine avenues for ensuring compliance with international obligations. The ICC was therefore presented as a valuable institution for addressing impunity for wartime environmental damage. The study examined the crimes under the ICC's jurisdiction which could be used

[380] ibid.
[381] Sarah M Durant & Jose C Brito, "Stop Military Conflicts from Trashing Environment" (23 July 2019) Nature International Journal of Science.
[382] Richards (n98) 424.
[383] Watts (n47).
[384] Gillet (n295) 225.

to prosecute environmental destruction during armed conflicts. Due to the challenges of prosecuting environmental destruction as a war crime, including the lack of clarity regarding terms used in the ICC Statute and the absence of crimes applicable during internal armed conflicts, this study considered other alternatives. Having examined the possibility of prosecuting environmental damage as another crime under the ICC's jurisdiction and creating new mechanisms to impose individual criminal liability, the study concluded that the international community would best be served by amending the ICC Statute to include a specific crime against the environment. Moreover, the continued application of the different legal regimes discussed in this study is particularly critical to ensuring the full protection of the environment during armed conflict.

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