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Ecocide: from a war crime to an international crime?[1]

Ekobójstwo: od zbrodni wojennej do przestępstwa międzynarodowego

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Abstract: In response to the relevance achieved in the last decade, this article explores the evolution of ecocide as a legal concept, from its origins to its contemporary status as a potential international crime, with the aim of assessing whether current proposals are viable and legally coherent. Using both historical and black-letter legal approaches, the research traces the reciprocal influence of early ecocide definitions on international humanitarian law, and how the latter in turn contributed to consolidating a particular legal conception of the former. Focusing on the key elements of the currently prohibited threshold of environmental damage during armed conflicts, the study addresses its limitations, highlighting the ambiguities of the terms and their unsuitability for peacetime application. We conclude that while ecocide was ultimately codified as a war crime in Article 8.2(b)(iv) of the Rome Statute, its broader recognition as a standalone international crime requires clearer definitions and a reconsideration of the threshold criteria, in this way contributing to advancing the legal understanding of ecocide and its potential as a tool for environmental justice.

Keywords: ecocide, environmental damage, environmental protection, environmental warfare, Rome Statute

Abstrakt: Uznając znaczenie, jakie ekobójstwo zyskało w ostatnim dziesięcioleciu, artykuł przedstawia ewolucję tego pojęcia prawnego od jego początków do współczesnego statusu

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jako potencjalnego przestępstwa międzynarodowego. Celem jest dokonanie oceny, czy bieżące propozycje są wykonalne i prawnie spójne. Wykorzystując zarówno podejście historyczne, jak i formalnoprawne autor ustala w swoim badaniu wpływ wczesnych definicji na międzynarodowe prawo humanitarne, a także, jak to ostatnie z kolei przyczyniło się do skonsolidowania tego szczególnego prawnego pojęcia. Skupiając się na kluczowych elementach progu zabronionego zniszczenia środowiska podczas konfliktu zbrojnego, jaki funkcjonuje obecnie, autor wskazuje na jego ograniczenia, podkreślając dwuznaczność terminów oraz ich nieadekwatność w zastosowaniu w czasie pokoju. W konkluzji autor stwierdza, że chociaż ekobójstwo zostało ostatecznie skodyfikowane jako zbrodnia wojenna w artykule 8.2(b (iv) statutu rzymskiego, szersze uznanie go za autonomiczne międzynarodowe przestępstwo wymaga czytelniejszych definicji i ponownego rozważenia kryteriów progowych. W ten sposób przyczyni się do rozwinięcia prawnego rozumienia ekobójstwa oraz jego potencjału jako narzędzia do zapewnienia środowiskowej sprawiedliwości.

Słowa kluczowe: ekobójstwo, zniszczenia środowiska, ochrona środowiska, wojna środowiskowa, statut rzymski

Introduction

We are on the cusp of a new concept emerging in international criminal justice: ecocide. As a matter of fact, many States[2] as well as some regional bodies, like the European Union[3] and the Council of Europe,[4] are proposing the inclusion of the crime of ecocide in their respective legal regimes. On the other hand, while the core of this trend lies in the inclusion of such a crime in the Rome Statute of the International Criminal Court (ICC) or the Rome Statute, no State has officially put forward any proposal for amendment according to Article 121 of the Rome Statute so far.[5] However, new as it may seem, ecocide is in fact linked to the origins of Article 8.2(b)(iv) of the Rome Statute, currently

[2] By way of illustration, in 2023 the Parliaments of Belgium, Brazil, Italy, The Netherlands and Scotland either discussed or approved bills to criminalise ecocide, while Chile passed a new law amending its Criminal Code to include attacks against the environment amounting to ecocide (Stop Ecocide International 2023).

[3] Article 3(2), in relation with Preamble para. (9fa), of the last agreed text of the Draft Directive of the European Parliament and of the Council on the protection of the environment through criminal law and replacing Directive 2008/99/EC (2021/0422 (COD)), considers as a qualified offence those "cases comparable to ecocide".

[4] Article 27 of the Draft Convention on the Protection of the Environment through Criminal Law prepared by the Council of Europe's Committee of Experts on the Protection of the Environment through Criminal Law (PC-ENV (2023) 04) orders State Parties to criminalise ecocide under their domestic law.

[5] During the review process of this work Vanuatu, Fiji and Samoa filled an official amendment proposal to the Rome Statute to include the crime of ecocide (Stop Ecocide International 2024).

the only provision directly conferring jurisdiction to the ICC to prosecute for environmental harm. In turn, Article 8.2(b)(iv) of the Rome Statute is deeply rooted in *jus in bello*, as well as ecocide itself.

Indeed, Article 8.2(b)(iv) of Rome Statute is largely drawn from Article 1 of the 1976 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention), and Articles 35.3 and 55.1 of the 1977 Additional Protocol to the Geneva Conventions of 12 August 1949 relating to the Protection of Victims of International Armed Conflicts (Additional Protocol I). The origin of the concerns portrayed in these treaty-based rules governing the protection of the environment during International Armed Conflict (IAC) can be traced back to the very dawn of the modern laws of war. In particular, Hugo Grotius and Emer de Vattel living in the 17th and 18th centuries (Hulme 2004: 3; Cusato 2021: 64; Gillett 2022: 1), who believed that destroying enemy's possessions should be pursued in moderation in certain cases, argued in their works of that "fruit-trees" and "cultivated plants" ought to be preserved (Grotius 2005: 107; de Vattel 2008: 373).

The ideas advanced by both Grotius and Vattel, among other publicists, paved the way for the anthropocentric view of the environment as a property, an exploitable resource in international law (Gillett 2013: 75). Since then, along with the development of the modern principle of sovereignty, the industrialized nations' concept of wellbeing has been deeply rooted in resource extraction activities (Segger 2013: 19). Indeed, in IAC natural resources are considered civilian objects – in the sense of non-military (Hulme 2010: 677) – and therefore the fundamental international humanitarian law (IHL) principles of necessity, distinction and proportionality have been interpreted as protecting the environment only indirectly (Gasser 1995; Roberts 2000; Droege and Tougas 2013). This indirect protection has provided only for the prohibition of needless environmental devastation, or "wanton destruction" (Hulme 2004: 3). It was not until the 1970s that the environment would be explicitly protected by IHL, mainly due to the heavily destructive effects of chemical and biological weapons (CBW) both on humans and the environment (Mathews and McCormack 1999: 336-337). Over time, the application of these military-humanitarian principles to the protection of the environment was confirmed as customary in Rules 43 to 45 and 76 of the ICRC's *Customary International Humanitarian Law* study (Henckaerts and Doswald-beck 2005). Nevertheless, Nature is "usually relegated in significance behind military and political values" (Gillett 2013: 75).

The environment-conflict nexus has since then been a long-standing, prolific research field of both IHL and international criminal law (ICL), especially regarding the above-mentioned provisions of the ENMOD Convention, Additional Protocol I, and the Rome Statute. Likewise, in recent years doctrinal

efforts on ecocide have gained momentum, becoming an encouraging new field of study. Many of these works deal with the origins of ecocide within the context of the Vietnam War, drawing a historical connection with the aforementioned international instruments. Yet few of them delve specifically into the extent to which these treaties were influenced by the emergence of ecocide.

In this paper, drawing from the drafting process of Articles 35.3 and 55.1 of Additional Protocol I, Article 1.1 of the ENMOD Convention, and Article 8.2(b(iv) of the Rome Statute, we aim to describe how they were prompted not only by environmental warfare concerns but as a direct result of the initial developments on ecocide. Particularly, we focus on the notion of "widespread, long-term and/or severe" damage and its different meanings as established in these instruments. As a conclusion, we argue that ecocide in its early conception was essentially codified in Article 8.2(b)(iv) of the Rome Statute. Moreover, we suggest briefly that current proposals for making ecocide an international crime in times of peace may be flawed, since they are partially based on those provisions.

1. Ecocide: origins, emergence, and early developments

Before looking at possible legal definitions, we first need to characterize the concept in broad terms. Ecocide is a neologism formed by the prefix eco- (from the Greek word *oikos*, meaning 'house') and the suffix -cide (from the Latin verb *caedere*, meaning 'to kill') which thus etymologically means "killing our home" (Higgins 2010: 3). Since its inception, ecocide has been conceptualized in several different ways[6] which reveal the flexibility of the term. Nevertheless, they all share common features from which a general understanding can arise, a basis that has barely changed in the last fifty years: it implies severe damage to or the mass destruction of the natural environment, sometimes – from the criminological point of view – emphasizing the irreversibility of the harm (Brisman and South 2019: 2). The difficulties emerge when one tries to establish the exact meaning of terms such as "severe" or even "natural environment" inasmuch they do not enjoy consensus within the international legal framework (Dupuy and Viñuales 2018, 29; Gillett 2022: 11). It is still more difficult to find the most apposite legal definition for the possible crime.

[6] For the most contemporary and authoritative legal definitions see, e.g., the definitions proposed by the European Law Institute (Bray et al. 2023); the Independent Expert Panel for the Legal Definition of Ecocide (Independent Expert Panel hereinafter) (Mehta et al. 2021); the UCLA Promise Institute for Human Rights Group of Experts (Aparac et al. 2021); or the Working Group directed by Laurent Neyret (Neyret 2015), English version by C-EENRG available at https://www.ceenrg.landecon.cam.ac.uk/report-files/report-002.

In any event, the coining of ecocide is unanimously attributed to Professor Arthur W. Galston, a plant biologist at Yale University.[7] He first used it at the Congressional Conference on War and National Responsibility, held in Washington in 1970, to denounce the ecological destruction of Vietnam brought by the herbicidal warfare carried out by the US forces during the campaign known as Operation Ranch Hand (Zierler 2011). This operation, as it is well documented, led to the spraying with 77 million litres of toxic, carcinogenic herbicides, such as Agent Orange, over 14,000 km^2 of South Vietnamese forests and croplands from 1961 to 1971; as well as, to a lesser extent, of Laos and Cambodia (National Academies 2018). Galston thus characterized ecocide as "the *wilful* and permanent destruction of (the) environment in which people can live in a manner of their own choosing" (Zierler 2011: 19; emphasis added). Notwithstanding this vague definition, it bears noting the use of the term "wilful", i.e., intentional, which is determinant from the legal perspective.

In terms of qualification, Galston and his colleagues used the concepts of genocide, crimes against humanity and war crimes interchangeably when they denounced the ecocidal acts committed during the Vietnam conflict, probably due to their lack of legal training. However, it can be argued that Galston envisaged ecocide as an unlawful act of war which he sought to halt as a "preventable ecological war crime" (Zierler 2011: 19). Moreover, the concept was born within the broader anti-war movement in the US at the time (15). While the legal conceptualization of ecocide remained unclear at that stage, it is undisputed that the environmental warfare conducted in Vietnam and the newly proposed term ecocide rapidly attracted the attention of both the academia and the international community, encouraging the expansion of international law for environmental protection and prompting the adoption of both the ENMOD Convention and Additional Protocol I (Hulme 2004: 9; Stahn, Iverson, and Easterday 2017: 2).

Furthermore, ecocide was essential in advancing the banning of CBW. In this regard, while the US denied the customary nature of the Geneva Gas Protocol – and hence not binding on them – (UN General Assembly [UNGA] 1966a: 39), other countries such as Hungary did not. In 1966, during UN General Assembly's 21st session, Hungary claimed that this norm prohibiting CBW was legally binding upon "practically" all States, and that both chemical herbicides and riot-control gases, like the ones used in Vietnam's ecocide, were included in such a prohibition (UNGA 1966b: 34). Accordingly, the Hungarian delegation submitted a draft resolution to the General Assembly, declaring that the use of CBW "for the purpose of destroying human beings and the means of their

[7] See, e.g., (Minkova 2023; Negri 2023; Neyret 2023; Gillett 2022; Robinson 2022; Colacurci 2021; Cusato 2021; Hough 2016; Lay et al. 2015; Higgins, Short, and South 2013; Zierler 2011).

existence constituted an international crime" (37). Unfortunately, after several amendments (UNGA 1966c: 15-18), the resulting approved UNGA Resolution 2162 B (XXI) of 5 December 1966 only called for the strict observance of the Geneva Gas Protocol by all States. However, the dispute was set and after the presentation in 1969 of the UN Secretary-General (UNSG) *Report on Chemical and Bacteriological (Biological) Weapons and the Effects of their Possible Use*, the General Assembly finally adopted its landmark Resolution 2603 A (XXIV) of 16 December 1969.

Following the UNSG Report's assertions that CBW are capable of harming and even killing all living matter (UNSG 1969: 371), and that "the large-scale use [of CBW] could have deleterious and irreversible effects on the balance of nature" (UNSG 1969: 371), this resolution declared the use in IAC of any chemical or biological agent which may hurt either humans, non-human animals or plants (UNGA 1969: 16) as contrary to the generally recognized rules of international law embodied in the Geneva Gas Protocol.[8]

Hence, the ecological devastation derived from the Vietnam War, embodied in the concept of ecocide, was indeed of paramount importance for these and other developments. As a matter of fact, during one of the side events of the 1972 UN Conference on the Human Environment, addressing "the effects of modern weapons on the human environment in Indochina" (*New York Times* 1972), Professor John Fried referred to the ecocide in Vietnam as "large-scale, *intentional* measures to disturb or destroy the ecological balance" (1973, 43; emphasis added).[9] More importantly, he gave legal substance to Galston's ideas and stated that ecocide was a grave breach of the rules of war and thus a war crime under the 1949 Geneva Conventions (44).

In line with the former, in 1973, Professor Richard Falk took over previous efforts[10] and proposed the first known International Convention on the Crime of Ecocide. In Article 1, he extended the scope of the crime to acts committed also in times of peace (Falk 1973: 93), while in Article 2 he provided a list of punishable acts to characterize it:

> Ecocide means any of the following acts committed with *intent* to disrupt or destroy, in whole or in part, a human ecosystem: (a) The use of weapons of mass destruction, whether nuclear,

[8] The process of disarmament regarding CBW ended up with the adoption of the UN Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction of 1972; and the UN Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction of 1993.

[9] On top of that, Vietnam's ecocide was denounced by Swedish Prime Miniter Olof Palme (1972: 227) at the Conference itself, one of the founding cornerstones of international environmental law (IEL).

[10] See, e.g., Johnstone 1971; Pettigrew 1971.

> bacteriological, chemical, or other; (b) The use of chemical herbicides […] for military purposes; (c) The use of bombs and artillery in such quantity, density, or size as to impair the quality of the soil…; (d) The use of bulldozing equipment to destroy large tracts of forest or cropland for military purposes; (e) The use of techniques designed to […] modify weather as a weapon of war; (f) The forcible removal of human beings or animals […] for the pursuit of military or industrial objectives. (93; emphasis added)

Despite envisaging that ecocide could be committed in times of peace, this possibility seemed difficult to apply since all the items were somehow related to warfare, ending itself as a war crime only. Article 2 of Falk's proposed draft convention also bears importance as a direct precedent of the rationale embodied by the ENMOD Convention, i.e., control over environmental modification techniques (EMT). Most importantly, Falk also used the formula "widespread and long-term damage" (Falk 1973: 96) for the first time, adding even more resemblance to what would later be prohibited by both the ENMOD Convention and Additional Protocol I. In a similar vein, in 1974 Arthur Westing, according to whom ecocide meant "widespread and serious ecological debilitations" (1974: 26), advocated a straightforward proscription of ecocide by an IHL instrument, although he alerted that limiting ecocide to military activities would be too narrow and that the ultimate intent was maybe irrelevant (26).

In conclusion, in these early formulations, ecocide was essentially understood as a potential crime under international law consisting in intentional acts, whether committed in times of peace or war (although especially linked to the latter), directed at inflicting serious damage to the environment, irrespective of the possible harm to humans. On the other hand, the question regarding the specific object of protection seems more contentious. While Galston aimed to protect human health from the effects of ecological disruption, Falk (1973: 88) opted for protecting the environment regardless of any adverse impact on humans. Similarly, Fried (1973: 43) focused on the interdependence of all living beings endangered by ecocide, targeting humans, non-human animals and plants alike in a more eco-centric sense.

2. The connection between ecocide and the protection of the environment under international humanitarian and criminal law

2.1. The Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques of 1976

After the ecological warfare in Vietnam, the international community realized that blind destruction of the environment as a means of war could result in a decline of natural life-supporting systems, entailing a serious risk for human

beings. In this way, the Conference of the Committee on Disarmament (CCD) followed through with the efforts on disarmament and started negotiations to reach an agreement on the use of EMT only for peaceful purposes by mandate of UNGA Resolution 3264 (XXIX) of 9 December 1974. This resolution recognized that the use of those means for military purposes could lead to destructive consequences entailing a serious risk not only for the environment but for "the maintenance of international security, human well-being and health" (UNGA 1974: 28). The work of the CCD would result in the ENMOD Convention.

Even though ecocide is not expressly mentioned in either the final draft or in the written proceedings of the CCD (UN Centre For Disarmament [UNCD] 1976, vol. 1), a connection may be drawn between ecocide – in its original understanding – and the acts covered by the convention. First, Article 2.1(k) of the initial draft proposal, submitted by the Soviet Union, considered among the activities that ought to be prohibited "the burning of vegetation and other actions leading to a disturbance of the ecology of the vegetable and animal kingdom" (UNGA 1974: 28). In the same way a working paper on the matter submitted by Canada to the CCD in 1975 identified various ways of impacting the environment, among which large-scale burning of vegetation was also included. The military applications of this technique, as described by Canada, clearly correspond to the operations conducted in Vietnam: "large-scale burning could remove natural cover, destroy human shelter, food, crops and supply dumps and disrupt communications" (UNGA 1976a: 101).

In any case, the most remarkable contribution of the convention is arguably the official establishment of the formula "widespread, long-term and/or severe", similar to Falk's terminology, which would later become normative in international legal language addressing environmental damage (Robinson 2022: 327). Indeed, Article 1.1 of the ENMOD Convention prohibits any EMT from "having widespread, long-lasting or severe effects". It bears noting in this regard that the disjunctive criterion "or" – i.e., only requiring fulfilment of one of the elements – has been considered an overbroad threshold for the possible international crime of ecocide (328). Moreover, these terms were not peacefully accepted. In this regard, both during 1976 CCD and UNGA debates, several States – e.g., Argentina, Mexico, The Netherlands, and Iran – argued that these elements would not provide for a comprehensive prohibition, which was preferable (UNCD 1976, vol. 1: 184), since they could legitimize the use of equally undesirable techniques which did not cause these effects (188). Additionally, the lack of any official definition for such terms further hinders the potential enforcement of this provision. In this respect, while the core text of the ENMOD convention did not undertake any defining effort, the Under-

standings relating to articles I, II, III and IV included in the 1976 CCD report interpreted the terms as

> (a) "widespread": encompassing an area on the scale of several hundred square kilometres;
> (b) "long-lasting": lasting for a period of months, or approximately a season;
> (c) "severe": involving serious or significant disruption or harm to human life, natural and economic resources or other assets. (UNGA 1976(b): 91)

These unofficial definitions, which are the only source of interpretation applying to the Convention as expressly indicated by the Committee (UNGA 1976b: 91), may help us to better understand their limitations. Mainly, their significance is too ambiguous (Vöneky 2022: 372), adding more uncertainty to their respective scope: for instance, what is the exact extent of "several hundred"? These concerns were indeed visible during the first revision of the Convention in 1984, where the delegate of Sweeden highlighted the possibility for States territorially smaller than "several hundred square kilometres" to be rendered legally defenceless, advocating for a more precise definition (First Review Conference of the Parties 1984a, 3: 3). Be that as it may, the contribution of the ENMOD Convention to the development of international environmental legal standards should not be disregarded as it was the first international treaty to address environmental damage directly (Minkova 2023: 66).

2.2. The Additional Protocol to the Geneva Conventions (1949) relating to the Protection of Victims of International Armed Conflicts of 1977

Between 1974 and 1976, at the time the ENMOD Convention was being debated and subsequently adopted, the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts (the Diplomatic Conference) was taking place. Its fourth and final session held from March to June 1977 ended with the approval of the two Additional Protocols to the 1949 Geneva Conventions. While the overriding influence of the Vietnam War in the attainment of these instruments is unchallenged (Okimoto 2019; Alexander 2016) it is not less true that, as with the ENMOD Convention, neither Additional Protocol I nor its official recordings refer to ecocide. Nevertheless, it clearly underlies the environment-related issues discussed therein. By way of illustration, the delegate of Cuba made the following statement regarding his concerns on CBW: "A case in point in recent years was a war of aggression in which changes in the ecology had been brought about with disastrous effects" (Federal Political Department [FPD] 1978, vol. 6, 289: 59). Clearer still, the Hungarian delegation highlighted that "the methods of destruction of the environment – for example, the use of defoliants and gi-

ant bulldozers, the systematic bombardment of forests and fields, etc. – were numerous" (vol. 14: 139, 55). These allusions were all made in reference to the Vietnam War.

On a different note, Additional Protocol I also adopted the "widespread, long-term, and/or severe" damage standard. First of all, it must be noted that Articles 33 and 48bis of Draft Protocol I (ICRC 1976), drafted during the second session of the Diplomatic Conference in 1975, already used that formula independently of the CCD's ENMOD Convention. Consequently, it seems that the drafters of both instruments sought consciously to uniform the terminology (Pilloud et al. 1987: 416), despite their different scopes.

That being said, the drafters of Additional Protocol I opted for a cumulative criterion, and therefore requiring the fulfilment of all three elements in order to consider a breach:

> Article 35. Basic Rules
> […]
> 3. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.
> Article 55. Protection of the natural environment
> 1. Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.

This slightly different threshold to the one endorsed in the ENMOD Convention chosen in Additional Protocol I is of notable importance in terms of compliance. At first glance, the scope of Article 35.3 of Additional Protocol I seems broader than the one of the ENMOD Convention since (1) it applies to any means of warfare and not only modification techniques; and (2) it anticipates fault before damage is actually produced ["may be expected"]. Moreover, it is said that this provision was the first to protect the environment *per se* against excessive damage (UNEP 2009: 11), given that ENMOD was more concerned in the use of the environment as a weapon. By contrast, the wrongful conduct described in Article 55.1 is undoubtedly stricter both in language ["care shall be taken"] and in context, as it aims specifically to ensure the survival or the health of the civilian population (Pilloud et al. 1987: 414).

However, the cumulative threshold set in Additional Protocol I – meaning that all three damage requisites have to be fulfilled – is higher than ENMOD's alternative, as well as equally uncertain and imprecise (Thomas 2013: 84). In this regard, Additional Protocol I does not provide a definition for any of these elements either. Thus, we must look to the ICRC's *Commentary* for yet another unofficial source of interpretation. There, the commentators mirrored the work of the Diplomatic Conference and confirmed the view by which the

long-term element should encompass one or more decades. At the same time, no interpretation was delivered for the seriousness of the damage; nor was it supplied for its geographical distribution, only referring to the latter as "vast stretches of land" (Pilloud et al. 1987: 420). Some commentators even argue that the widespread requisite could amount to tens of thousands of square kilometres, in reference to the actual area affected in Vietnam (Wyatt 2010: 623). Consequently, these provisions do not impose any significant limitation on conventional warfare (Bothe et al. 2010: 573) and therefore do not protect the environment effectively. As Falk notes, the atmosphere at the Diplomatic Conference was never focused enough on the specifics of environmental protection to reach an appropriate legal "consciousness" (Falk 2000: 146).

To conclude, from the previous exposition it follows that the ecological devastation caused in Vietnam and the first doctrinal efforts on ecocide were pivotal for the adoption of both the ENMOD Convention and Additional Protocol I. The outcome was patently less ambitious than what was sought by ecocide supporters and did not entail any criminal sanction (Cusato 2018: 9). Although as Fried anticipated (1973: 43) the question was not whether ecocide was forbidden – or criminalised – as such, but that the acts described by it ought to be recognised as contrary to international law. This was the actual achievement of the ENMOD Convention and Additional Protocol I.

2.3. The Draft Code of Crimes Against the Peace and Security of Mankind of 1996, and the Rome Statute of the International Criminal Court of 1998

Regardless of the flaws of the previous instruments, namely the lack of effective enforcement mechanisms (Heller and Lawrence 2007: 67), they provided the basis for Article 8.2(b)(iv) of the Rome Statute, which includes the first international crime addressing environmental degradation during IAC. Prior to this achievement, in the 1980s, the long, tortuous journey to internationally criminalise ecocide[11] commenced with the International Law Commission's (ILC) work on the Draft Code of Crimes Against the Peace and Security of Mankind (Draft Code). Criminalisation of environmental harm was featured from the very beginning, as recommended in the Second Report of the Special Rapporteur, Mr. Doudou Thiam in 1984. The Special Rapporteur asserted that there was a wide international agreement that serious damage to the environment should constitute a criminal offence against peace and security (Thiam

[11] We must recall that neither Article 1.1 of the ENMOD Convention nor Articles 35.3 and 55.1 of Additional Protocol I criminalised ecocide.

1984: 47). Accordingly, in the early Draft Code versions of 1984 and 1986, environmental harm was included within crimes against humanity (Tomuschat 1996: 5-7). However, in the first reading-adopted draft of 1991, acts of wilful and severe damage to the environment were listed in Article 26 – as an autonomous crime – and Article 22.2(d) – as a war crime. The former reads as follows:

> Article 26. Wilful and severe damage to the environment.
> An individual who wilfully causes or orders another individual to cause widespread, long-term and severe damage to the natural environment shall, on conviction thereof, be sentenced… (ILC 1991a: 234)

Although the idea that the Code should cover environmental harm received general support by the Drafting Committee, some key points remained controversial. Some members suggested that Article 26 wording should mirror Article 19 of the Draft Articles on State Responsibility for Internationally Wrongful Acts (Draft Articles) of the time (ILC 1991a: 234, 59). This would arguably have been preferable to borrowing it directly from both Additional Protocol I and the ENMOD Convention, as did finally happen (ILC 1991b: 107, 2), as Article 19 of the Draft Articles was broader in scope. Indeed, even though Article 26 expanded its *ratione materiae* beyond armed conflict, Article 19 was not limited by the "widespread, long-term and severe" standard and included any (d) "serious breach of an international obligation of essential importance for the safeguarding and preservation of the human environment" (ILC 1980: 32). Accordingly, the use of the formula "widespread, long-term and severe" was not peacefully accepted either. As a matter of fact, the Drafting Committee cautioned, for instance, that "long-term" could render the article unenforceable if interpreted as in Article 55 of Additional Protocol I (ILC 1991a: 235, 67-76).

Consequently, following the proposal of the Special Rapporteur based on the belief that Article 26 was strongly opposed, it was removed from the Draft Code in the second reading (Thiam 1995: 35, 8). Even though the ILC (1995: 30, 119-120) itself and the member of the Commission, Mr. Christian Tomuschat (1996: 20, 10), reported that there were delegations both for and against. It is perhaps more accurate to say that, without detriment to the broader climate of acceptance, there were some doubts. Firstly, comparable to the ENMOD Convention and Additional Protocol I, there was no clear interpretation of the terms "widespread, long-term and severe" (ILC 1991b: 5). This point was troublesome for Poland, the United Kingdom, and the United States (ILC 1993, 96-105). Secondly, some States such as Austria, Belgium, and Uruguay (68-106) expressed interesting objections to the requisite of intent, advocating for a lower *mens rea* in accordance with Article 22.2(d), which aimed at "methods or means of warfare which are intended or *may be expected to* cause" damage (ILC 1991a: 223; emphasis added).

It is worth questioning, therefore, whether the above-mentioned misgivings about the wording of Article 26 were sufficient to abandon it, considering that both the damage threshold and the intentional element were adopted in Article 20(g) of the final approved text. Moreover, this provision, which ultimately served as the model for Article 8.2(b)(iv) of the Rome Statute, replaced the former Article 22.2(d), which was remarkably narrowed:

> Article 20. War Crimes
> […]
> (g) in the case of armed conflict, using methods or means of warfare not justified by military necessity with the intent to cause widespread, long-term and severe damage to the natural environment and thereby gravely prejudice the health or survival of the population and such damage occurs. (ILC 1996, 53)

Despite the disappointing outcome, an important event may be highlighted to help understand the cautiousness of States to separate serious environmental harm from IAC.[12] By the time the text of the Draft Code was being debated, the environmental devastation caused during the 1990-1991 Gulf War shocked the international community once again. In fact, this event was mentioned by Mr. Tomuschat himself (1996: 27, 74) as an example of a situation where the Draft Code ought to apply. This conflict raised, among others,[13] UNGA Resolution 47/37 on the *Protection of the Environment During Armed Conflict*, which was even mentioned by the International Court of Justice (ICJ) in its Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons* (ICJ 1996: 32). Significantly, the Court noted that Articles 35.3 and 55.1 of Additional Protocol I taken together "embody a general obligation to protect the natural environment against widespread, long-term and severe environmental damage" (ICJ 1996: 29), anchoring these terms in international legal language and reaffirming the universal applicability of the general principles of IHL to environmental issues. Unfortunately, the Court did not make any additional effort to clarify such terms.

Paradoxically, the Gulf War also revealed the inadequacy of existing IHL to protect the environment (Gasser 1995: 639), thus revitalizing the discussion on ecocide[14] and similar concepts.[15] Especially relevant was the work of Mark A. Gray who, in line with the first attempts of the Draft Code, considered that causing or not preventing massive harm to the environment was a breach of

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[12] As a matter of fact, as early as in 1978, UN Special Rapporteur Mr. Nicodème Ruhashyankiko already remarked that "the question of 'ecocide' has been placed by States in a context [of war crimes] other than that of genocide" (134, 478).

[13] E.g., UN Security Council (UNSC) Resolution 687.

[14] See, e.g., (Teclaff 1994; Gray 1996).

[15] See especially the work of Lynn Berat on "geocide" (Berat 1993).

a universal duty of care and therefore an international crime (Gray 1996: 216). Gray was also of the opinion that ecocide could be based either on deliberate or *negligent* behaviour (Gray 1996: 216; emphasis added). Furthermore, although maintaining the same damage standard, he opted for a mixed cumulative-alternative approach: "serious, and extensive or lasting ecological damage" (Gray 1996: 216).

Turning to the matter in hand, after the completion of the Draft Code, the UNGA decided through Resolution 52/160 to hold the Diplomatic Conference of Plenipotentiaries on the Establishment of an International Criminal Court (Rome Conference), which took place in 1998. Unlike the Draft Code, it seems that during the Rome Conference, the possible inclusion of any environmental crime outside the scope of war crimes was never really considered (UN Diplomatic Conference of Plenipotentiaries [UNDCP] 2002, vol. 2). Therefore, attacks on the environment were seen punishable only as an act of war from the beginning, even though three remarkably different options, in terms of qualification, were at stake: punishing widespread, long-term and severe damage (1) not justified by military necessity; (2) excessive in relation to the concrete and direct overall military advantage anticipated; or (3) categorically (UNDCP 2002, vol. 3: 16). In the end, despite support for each version (UNDCP 2002: vol. 2: 157-168), the least protective one was finally endorsed principally due to the strong influence of the United States (UNDCP 2002, vol. 2: 159, 50 f). Article 8.2(b)(iv) of the Rome Statute reads as follows:

> Article 8. War Crimes
> […]
> 2. For the purpose of this Statute, "war crimes" means:
> […]
> (b) […]:
> (iv) Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.

Unlike Article 20(g) of the Draft Code, as Peterson (2009: 327) remarks, Article 8.2(b)(iv) of the Rome Statute does not require the actual causation of the damage, akin to the "may be expected" clause of former Article 22.2(d) of the same Daft Code. Rather, launching the potentially harmful attack is sufficient. In fact, while the former required an intention to cause such significant damage, the latter attaches this requisite to the attack only. However, the key point here is knowledge: in addition to intent, Article 8.2(b)(iv) demands knowledge that the damage will be widespread, long-term and severe, and that it would be clearly excessive (Heller and Lawrence 2007: 78). The introduction of this balancing test means the application of the principle of proportionality in such

a manner that even the gravest disruption may be justified by military objectives (Peterson 2009: 341). This, combined with the high threshold that the cumulative standard imposes and the vagueness of these undefined terms, makes the provision more problematic than useful (Heller and Lawrence 2007; Peterson 2009). Such ambiguousness was highlighted by, e.g., the United States (UNDCP 2002, vol. 2: 158, 49), Germany (vol. 2: 159, 56), and Jordan (158, 46).

Hence, bearing in mind that the wording of Article 8.2(b)(iv) is largely borrowed from Additional Protocol I (UNDCP 2002, vol. 2 *passim*), it is possible for the ICC to interpret the former in the light of the latter, which would render Article 8.2(b)(iv) "a virtual nullity" (Heller and Lawrence 2007: 73). As a matter of fact, no prosecution has been initiated in this way so far, not even after the 2016 Office of the Prosecutor's (OTP) Policy Paper on Case Selection and Prioritisation (Abad Castelos 2023: 81), where it was stated that the Office would give particular consideration to prosecuting environment-related crimes (OTP 2016: 14).

In sum, Article 8.2(b)(iv) of the Rome Statute followed through with the process initiated by Galston's proposal. As a result, what was criminalised was essentially a war crime of ecocide, albeit a narrower and outdated version of it.[16]

3. What next? A brief reflection on the current ecocide proposals

As previously demonstrated, the concept of ecocide was originally and strongly associated with war, to the extent of being internationally criminalised as a war crime. However, it evolved rapidly as to encompass not simply military hostilities.[17] Nowadays, it is understood as a type of environmental harm – the most serious one – which revolves mainly around state and corporate activities, whether lawful or unlawful (e.g. Higgins, Short, and South 2013; Lay et al. 2015). From the criminological perspective, some authors even highlight the role of quotidian, individual acts such as consumerism contributing to ecocide (Agnew 2020: 52). Unfortunately, by the time the Rome Statute was signed the "widespread, long-term and/or severe" formula had been anchored firmly in International Law to address massive environmental damage inflicted during IAC, and thus the Rome Statute drafters could not escape this context.[18]

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[16] The conclusion which is supported by other scholars such as Valérie Cabanes, member of the Independent Expert Panel, who defined Article 8.2(b)(iv) of the Rome Statute as an edulcorated version of ecocide (Cabanes 2016: 268).

[17] The studies on the question of the crime of genocide prepared by UN Special Rapporteurs Mr. Nicodèm Ruhashyankiko (1978) and Mr. Benjamin Whitaker (1985) already commented on the views of ecocide as a type of either genocide or crimes against humanity.

[18] It is noteworthy here that Judge Weeramantry argued in his dissenting opinion to ICJ's Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons* that "these principles [of

Consequently, ecocide has been effectively tied to the same terminology since then. For instance, the definitions both offered in 2021 by the UCLA Group of Experts and the Independent Expert Panel convened by Stop Ecocide Foundation, where the former requires "widespread, long-term and severe damage" (Aparac et al. 2021: 2) and the latter "severe and either widespread or long-term damage" (Mehta et al. 2021: 5). Or the definition put forward by the Working Group directed by Laurent Neyret in 2015, which speaks of "*dégradation étendue, durable et grave*" (Neyret 2015: 288).[19]

Conducting an in-depth analysis of these and other current proposals is unfortunately out of the scope of this paper since, as it has been previously stated, it focuses on the influence of early ecocide in the drafting processes of the ENMOD Convention, Additional Protocol I, and the Rome Statute. However, having a glimpse at these proposals may be insightful. First, they all, to a greater or lesser extent, use the same damage benchmark, and differences are only apparent in the approach – i.e., cumulative, alternative, or mixed – and in the use of some of the terminology – e.g., long-term or constant. Given the limitations mentioned throughout this paper, any attempt to criminalise ecocide as an autonomous international crime in the Rome Statute using this same terminology may be ill-suited to deal with peacetime situations if not carefully drafted.[20] It must be recognized that the "widespread, long-term and/or severe" formula was developed to apply specifically in IAC because it was thought that only certain weapons and means of war could cause such tremendous damage. Damage which, in the sense of widespread, long-term and/or severe, would be hard to equate without the aid of such weaponry and tactics; especially, where the legal understanding of the threshold's elements remains the same. Even at the First Review Conference of the Parties (1984b: 3) to the ENMOD Convention it was cautioned that these terms should be kept under continuing review to ensure their effectiveness.

This is not to say, nonetheless, that the transmission of elements between international crimes is impracticable given their close relationship, as was the case with war crimes and crimes against humanity (e.g. Akhavan 2008). However, caution is necessary. The ambiguity of these terms thus may be clarified in a possible standalone crime of ecocide by offering a new, clearer definition for each element – widespread, long-term, and severe – while using a familiar

environmental law, including the prohibition of damage, are not] confined to either peace or war, but cover both situations, for they proceed from general duties…" (ICJ 1996: 504).

[19] "Widespread, constant and serious degradation" according to the English version. See *supra* note 6.

[20] This cautiousness had already been expressed by the members of the Drafting Committee of the Draft Code of Crimes against the Peace and Security of Mankind (ILC 1991a: 235, 73).

language in international law (Voigt 2024). This is the case of the Independent Expert Panel's proposal, for whom

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

and

> […]
> b. "Severe" means damage which involvers very serious adverse changes, disruption or harm to any element of the environment, including grave impacts on human life or natural, cultural or economic resources;
> c. "Widespread" means damage which extends beyond a limited geographic area, crosses state boundaries, or is suffered by an entire ecosystem or species or a large number of human beings;
> d. "Long-term" means damage which is irreversible or which cannot be redressed through natural recovery within a reasonable period of time (Mehta et al. 2021: 5).

Additionally, the lack of clarity could also be overcome by further judicial interpretation, although, as of writing this paper, the ICC is yet to do so.

All these proposals share the element of severity, which appears to be the common ground in every ecocide definition since its coinage. This requirement is imperative for any international crime to be judged by the ICC, since the jurisdiction of the Court is limited to the most serious crimes of concern to the international community, according to Article 5 of the Rome Statute. However, there does not seem to be a necessary link between the severity of a particular harm to the environment and its geographical and temporal extension. As Karen Hulme (2010: 684) remarked, "not all long-term and severe harm will be widespread, and not all widespread harm will be either long-term or severe." This again seems to be partially solved with the definition put forward by the Independent Expert Panel, where the mixed approach – similar to that advanced by Gray in 1994 – allows disregarding either the widespread or the long-term element while maintaining the severity.[21]

Be that as it may, most environmental harm is both enduring – in the sense of either its manifestation or its disappearance – and mobile – in the sense of its transference whether transnationally or locally – in nature (White 2021: 95). Therefore, any legally defined environmental crime relying on such parameters could be redundant besides unnecessarily limiting. If, as some scholars advocate (e.g., de Hemptinne 2023; Robinson 2022), a potential international environmental crime such as ecocide ought to imbibe the principles of IEL, a possible solution to the former issue may be provided by the precautionary principle. If,

[21] This approach has also been adopted in the definition proposed by the European Law Institute. See *supra* note 6.

according to that principle, the lack of scientific certainty about the potential effects of an activity must not restrain the States from taking preventative measures, why ought a certain length of damage prescribed *ex ante* – and equally hard to foresee – to be part of the *actus reus* of such a crime? In other words, given the traditional difficulties in detecting and proving environmental harm, the precautionary principle serves "to lower the threshold of evidence" in this regard (White 2008: 67).

Borrowing from IEL, de Hemptinne (2023: 1297) also proposes to lower the standard of severity to overcome the current limit applicability of ecocide. Furthermore, the severity or gravity required by an international crime is not necessarily defined by quantitative elements such as the geographical scope of its consequences, but rather by qualitative features like the interests of the international community (Greenawalt 2020). In this regard, on the one hand, the customary nature of the prevention principle – as developed throughout the jurisprudence of the ICJ – points to environmental protection as an interest not only of individual States but the international community as a whole (Viñuales 2008; Dupuy, Le Moli, and Viñuales 2021). On the other hand, the ongoing breach of planetary boundaries, any of which may be impaired by environmental crime, poses a direct threat to the whole planet.[22] According to a report of the UN Office for Disaster Risk Reduction (UNDRR) "the implication for global regimes […] is that they must do more to foresee harm instead of only addressing it in an 'ex post facto' approach" (Bernstein et al. 2022: 6). It would seem, therefore, that the destruction of the natural environment on the scale of ecocide would be sufficiently grave to warrant its criminalisation, without reference to a particular geographical or temporal scope.

Finally, the issue of the scale merits a few words given its centrality in international criminal justice together with gravity. Not without a reason has the ICC's OTP considered the scale of crimes as one of the criteria for analysing gravity in line with Article 17 of the Rome Statute (SáCouto and Cleary 2008). As a matter of fact, on the one hand, the "widespreadness" of the attack in the context of crimes against humanity has been interpreted as "the large-scale nature of the attack and the number of victims" throughout the jurisprudence of both the *ad hoc* international criminal tribunals and the ICC.[23] More precisely,

[22] According to the last update, six out of the nine planetary boundaries – stratospheric ozone depletion, increase in stratospheric aerosols loading, ocean acidification, freshwater change, land system change, climate change, modification of biogeochemical flows, introduction of novel entities, and change in biosphere integrity – have surpassed the safe levels (Caesar et al. 2024). For the relationship between environmental crimes and the planetary boundaries, especially climate change and biodiversity loss, see, e.g., (Brubacher and Borges 2023).

[23] See, e.g., Prosecutor v. Kordić and Čerkez, IT-95-14/2-A, Appeals Judgement, 94 (17 Dec. 2004); Nahimana et al v. Prosecutor, ICTR-99-52-A, Appeals Judgement, 920 (28 Nov. 2007); and

in order to be large-scale the attack "should be massive, frequent, carried out collectively with considerable seriousness and directed against a multiplicity of victims" (ICC 2010: 95). Although, as explicitly stated by the ICC, this element is of a contextual nature, its assessment "is neither exclusively quantitative nor geographical" (*id*.).[24] On the other hand, the large-scale requirement, although not absolute (ICC 2006: 70), is expressly provided in Article 8.1 of the Rome Statute for war crimes. Hence, the large-scale element may be particularly required by the crime or inferred as an element of gravity when analysing the conditions of admissibility under Article 17 of the Rome Statute.

4. Conclusions

Throughout this article we have presented how the term ecocide was born as a direct consequence of the ecological destruction caused during the Vietnam War and therefore it was intimately linked to IAC since its inception. Likewise, the progress symbolized by the ENMOD Convention and Articles 35.3 and 55.1 of Additional Protocol I was a product of the same event. These two instruments embedded the main features encompassed by the early conception of ecocide: the wilful destruction of the natural environment, represented by inflicting the most serious harm possibly, which was ultimately characterized as widespread, long-term and/or severe. These provisions and the high threshold imposed by them, controversial from the very beginning, were prepared with this very specific context in mind and still some authors have even questioned whether this threshold was reached by the means and methods of warfare employed in the Vietnam War (Thomas 2013: 90). In this regard, we have highlighted the inherent flaws of both the threshold itself and its elements (widespread, long-term, and severe), namely their ambiguity: the threshold may be either too loose or too demanding, while its elements have never attained a general, harmonized, nor convincing definition. Article 8.2(b)(iv) of the Rome Statute, which somewhat criminalised ecocide as a war crime, inherited the same weaknesses.

We have also commented briefly on how the current ecocide proposed definitions may inherit the very same weaknesses if they were to stick to the conventional "widespread, long-term and/or severe" formula. Fortunately, some proposals, such as the one raised by the Independent Expert Panel, try to over-

Prosecutor v. Katanga, ICC-01/04-01/07, Judgement pursuant article 74 of the Statute, 1123 (7 March 2014).

[24] On this basis, the Independent Expert Panel expanded the definition of "widespread" regarding the number of victims of the attack, as an alternative to the quantitative-geographical element. In fact, they go beyond the classic conception of victim by including ecosystems and their non-human inhabitants (Mehta et al. 2021, 5).

come these difficulties while keeping the definition feasible to adopt. This does not mean, however, that such a proposal would be free of any ambiguity, for what constitutes a "limited geographic area" is yet to be addressed. Moreover, it is still questionable as to why the severity of a certain environmental damage must be analysed along with either its extension or its duration. It thus seems legitimate to question the suitability of using the same damage standard for different, originally unforeseen situations. Caution must be appealed at the very least

Considering all the struggles faced to attain a reliable definition for both "widespread" and "long-term", it would seem reasonable to drop such terms and simply stick with severity. In addition, the severity of the damage could be expressly linked to the scale of the acts or, alternatively, the term "widespread" could be defined in the sense of its large-scale nature as explained above. It must be noted, nonetheless, that the allusion to victims within the concept "large-scale" could be troublesome altogether. Were we to remain faithful to the values that underpin ecocide, we ought to speak (also) of non-human victims – as did by the Independent Expert Panel. However, the status of the natural environment as a victim *per se* is disputed in international law. This issue is beyond the scope of this work, although we may conclude by acknowledging that some voices argue that the ICC's legal framework allows for the recognition of nonhuman, environmental victims (Frisso 2023).

Abbreviations

CCD – Conference of the Committee on Disarmament
CBW – Chemical and Biological Weapons
EU – European Union
EMT – Environmental Modification Techniques
FDP – Federal Political Department
IAC – International Armed Conflict
ICC – International Criminal Court
ICJ – International Court of Justice
ICL – International Criminal Law
ICRC – International Committee of the Red Cross
IEL – International Environmental Law
IHL – International Humanitarian Law
ILC – International Law Commission
OTP – Office of the Prosecutor
UN – United Nations
UNCD – United Nations Centre for Disarmament
UNDCP – United Nations Diplomatic Conference of Plenipotentiaries
UNDRR – United Nations Office for Disaster Risk Reduction
UNGA – United Nations General Assembly

UNSC – United Nations Security Council
UNSG – United Nations Secretary-General
UNTS – United Nations Treaty Series
YB – Yearbook

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