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Armed conflicts and the environment: An assessment of Principle 24 of the Rio Declaration thirty years on

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Abstract

This paper assesses the history and significance of Principle 24 of the Rio Declaration, which in 1992 called upon States to respect international law providing protection for the environment in times of armed conflict and to cooperate in its further development. In particular, the paper explores how the key elements of the principle have influenced subsequent law- and policy-making processes led by institutions such as the International Committee of the Red Cross, the UN Environment Programme, and the International Law Commission. The paper argues that while Principle 24 does not contain specific normative prescriptions, it has translated over the years into a significant and vibrant international law standard. However, in the light of the gaps and shortcomings that continue to characterize the protection afforded to the environment under international humanitarian law, the paper emphasizes the need to develop a comprehensive multilateral convention on armed conflict and the environment, with the aim of bringing the vision of Principle 24 into completion.

Keywords: Rio Declaration, Principle 24, Environment and Armed Conflict, International Humanitarian Law, International Environmental Law, International Law Commission, ICRC

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I. Background

Section 1. Historical Context

That disputes over natural resources may represent a leading cause of armed conflict – whether international or non-international – has been known for a long time. Ever since the second half of the past century, however, there has been increasing awareness about the parallel role that armed conflict can play in the degradation of the natural environment or the destruction of some of its elements.

Environmental impacts of armed conflicts can be the consequence of intentional actions – whenever the air, land, plants, animals, or water are specifically targeted by military operations – or represent a side-effect of the use of certain weapons or methods of warfare. For example, toxic chemicals contained in military ammunition or explosives may contaminate soils and water resources, with long-lasting effects on agriculture or freshwater availability. Similarly, wildlife populations and ecosystem processes may be affected by hostilities conducted in areas characterised by invaluable biological diversity, whereas in a growing number of cases activities such as poaching and unsustainable exploitation of natural resources constitute a means of waging the military effort of belligerents. In most of these situations, environmental degradation inevitably alters the flow of ecosystem services on which communities depend, thus affecting the well-being of local populations already threatened by armed conflict itself.

Although the First and Second World Wars already featured prominent examples of environmental damage, ranging from the atomic bombings of the Japanese cities of Hiroshima and Nagasaki to the “scorched earth” tactics adopted by both German and Allied forces, the concern of the international community with the environmental impact of armed conflict intensified in the 1960s, mainly as a result of the broader emergence of environmental and pacifist movements. The rapid expansion of nuclear tests during the Cold War and the fear of nuclear warfare were probably leading factors behind this development. However, several other events contributed to shaping international public opinion, including the 1952 bombing of dams during the Korean War and the use of the infamous Agent Orange herbicide by the United States (US) military in the Vietnam War.

At the level of international law, the landmark adoption of the 1972 Stockholm Declaration on the Human Environment represented the first recognition of the need for environmental protection in times of armed conflict. However, Principle 26 of the Declaration narrowly focused on weapons of mass destruction, calling on the international community to spare “man and his environment”

from "the effects of nuclear weapons and all other means of mass destruction".[1] Yet, soon thereafter and especially in the wake of the catastrophic impact of the use of Agent Orange in the Vietnam War on invaluable ecosystems and human health, the attention turned to the necessity of modernizing international humanitarian law (IHL or *jus in bello*) so as to make it more protective of the environment. As noted by Bouvier, this was both "*natural* because the trends that shape the legal rules applicable in peacetime often influence the development of the law of war, and *logical* in view of the extremely serious environmental damage caused by certain methods and means of modern warfare".[2]

In 1976, the ENMOD Convention was adopted, by which each State Party committed to refrain from 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".[3] One year later, two provisions dealing explicitly with environmental protection in times of *international* armed conflict were introduced in Additional Protocol I to the 1949 Geneva Conventions (AP I). Art. 35(3) of AP I prohibits the employment 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".[4] In turn, Art. 55 of AP I, while overlapping to some extent with Art. 35(3), discretely envisages a general duty of care in warfare to protect the environment against widespread, long-term and severe damage, as well as a prohibition of belligerent reprisals consisting in attacks against the natural environment.[5]

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[1] *Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972*, UN Doc. A/CONF.48/14 and Corr. 1, Section I. As to other weapons of mass destruction, the UN General Assembly had started to address the issue of chemical and biological agents of warfare capable of harming man, plants and animals already in 1969, with a resolution declaring their use in international armed conflicts as "contrary to the generally recognized rules of international law, as embodied in the [1925] Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and Bacteriological Methods of Warfare", UNGA Res. 2603 (XXIV), Question of Chemical and Bacteriological (Biological) Weapons (16 December 1969). Against that backdrop, a key development was the conclusion of the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (Biological Weapons Convention, BWC). Art. II of the BWC provides that States Parties, when destroying (or diverting to peaceful purposes) all biological weapons which are under their jurisdiction or control, shall observe "all necessary safety precautions... to protect populations and the environment".

[2] A. Bouvier, "Protection of the Natural Environment in Time of Armed Conflict", *International Review of the Red Cross*, 1991, p. 567 ss., p. 569.

[3] Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention), 10 December 1976, Art. 1(1), emphasis added.

[4] Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (AP I), 8 June 1977, Art. 35(3), emphasis added.

[5] Art. 55 of AP I reads in full: "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. 2. Attacks against the natural environment by way of reprisals are prohibited".

Despite the rapid evolution that had taken place in the previous decade and the adoption of further relevant instruments, such as the 1980 Convention on Certain Conventional Weapons with its protocols[6] and the 1982 World Charter for Nature,[7] when the UN General Assembly convened the Rio Conference on Environment and Development in 1989 the only reference to armed conflict was contained in the preamble of Resolution 44/228. The relevant recital was particularly narrow in scope, only stressing the need for international cooperation in the removal of "material remnants of war"[8] that adversely affect the environment.

Nevertheless, contemporaneous events continued to emphasise the urgency of addressing the gaps, deficiencies and lack of clarity in the protections afforded to the environment under IHL. To take only the most famous example, it has even been doubtful whether the triple cumulative standard of environmental damage envisaged in the foregoing provisions of AP I ("widespread, long-term and severe") or the notion of "environmental modification technique" under the ENMOD Convention had been fulfilled by the devastation arising from the release of over one billion of oil barrels in the Arabian desert and the Persian Gulf as a result of the Kuwaiti oil fires ignited by Iraqi troops during the 1990-1991 Gulf War.[9] Yet the public outcry generated by the magnitude of the environmental harm caused by Iraq contributed to another key development which took shape in the run-up to the Rio Conference: the UN Security Council affirmed Iraq's liability under international law "for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations"[10] arising from the unlawful invasion and occupation of Kuwait (ie, violations of *jus ad bellum*, not *jus in bello*), and eventually established the UN Compensation Commission tasked with processing claims and paying compensation for those losses and damage.[11]

[6] 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, 10 October 1980, preamble; and Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III), 10 October 1980, Art. 2(4).

[7] UNGA Res. 37/7, World Charter for Nature (28 October 1982), annex. The World Charter for Nature declares that "[n]ature shall be secured against degradation caused by warfare or other hostile activities" (para. 5), and that "[m]ilitary activities damaging to nature shall be avoided" (para. 20).

[8] UNGA Res. 44/228, United Nations Conference on Environment and Development (22 December 1989), preamble.

[9] See ICTY*, Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia*, 14 June 2000, para. 15. See also J.-M. Henckaerts and L. Doswald-Beck (eds.), *Customary International Humanitarian Law, Vol. II: Practice*, Cambridge University Press, Cambridge, 2005, Ch. 14, paras. 267, 309.

[10] UNSC Res. 687 (1991) (3 April 1991), para. 16.

[11] UNSC Res. 692 (1991) (20 May 1991), para. 3.

Section 2. Preparatory Work

Like many other principles in the Rio Declaration, Principle 24 was born out of a compromise.[12] During the drafting process, a key point of contention was whether weapons of mass destruction (especially nuclear weapons) and associated disarmament matters should be referenced in the text. Whereas – somewhat ironically – nuclear weapons and other means of mass destruction were the exclusive focus of Principle 26 of the 1972 Stockholm Declaration, such issues had since become increasingly divisive and controversial in the international arena. It would suffice here to mention that a number of NATO member States had formulated similarly worded "non-conventional weapons" reservations upon their ratification of AP I. According to such reservations, the pertinent rules of AP I – like Arts. 35(3) and 55(1) on environmental damage caused by certain methods and means of warfare – only applied to conventional weapons and had no bearing on other types of weapons,[13] including nuclear weapons.[14] For essentially the same reasons, the US (non-Party to AP I), France and the United Kingdom are regarded by the International Committee of the Red Cross (ICRC) as persistent objectors to the alleged customary rule corresponding to Arts. 35(3) and 55(1) of AP I.[15]

It is therefore unsurprising that, during the preparatory work leading up to the Rio Conference, the US submitted a "very soft" text in relation to what would become Principle 24, a text only containing a slight reference to the importance of peace and security for sustainable development.[16] This approach was echoed in the proposals of other countries, including Canada,[17] Australia,[18] and New Zealand.[19] The question of environmental protection in times of armed conflict was similarly absent from the suggestions advanced by Japan and the United Kingdom. For their part,

[12] Cf. M.-L. Tougas, "Principle 24: The Environment in Armed Conflict", in J.E. Viñuales (ed.), *The Rio Declaration on Environment and Development: A Commentary*, Oxford University Press, Oxford, 2015, p. 569 ss., pp. 571-573.

[13] See eg the reservations by Spain, Italy, Germany, the Netherlands, and Belgium. For the text of such reservations, see the ICRC Treaties, States Parties and Commentaries database, available at <https://ihl-databases.icrc.org/ihl>.

[14] See the reservations by Canada, and – although postdating the Rio Declaration – those by the United Kingdom and France.

[15] See the first part of Rule 45 of the 2005 ICRC Customary IHL Study and related commentaries, J.-M. Henckaerts and L. Doswald-Beck (eds.), *Customary International Humanitarian Law, Vol. I: Rules*, Cambridge University Press, Cambridge, 2005, pp. 151, 154-155.

[16] Principles on General Rights and Obligations: Proposal Submitted by the United States of America, UN Doc. A/CONF.151/PC/WG.III/L.21 (4 March 1992), Principle 10 ("A commitment to peace and security for all States and people is fundamental to the achievement of sustainable development").

[17] Principles on General Rights and Obligations. Earth Charter: Proposal Submitted by Canada, UN Doc. A/CONF.151/PC/WG.III/L.23 (4 March 1992), preamble.

[18] Structure and Outline of the Rio de Janeiro Declaration/Earth Charter and Comments on A/CONF.151/PC/WG.III/L.8/Rev.1: Proposal Submitted by Australia, UN Doc. A/CONF.151/PC/WG.III/L.24 (5 March 1992), preamble.

[19] Principles on General Rights and Obligations: Chairman's Consolidated Draft, UN Doc. A/CONF.151/PC/WG.III/L.8/Rev.1 (30 August 1991), p. 13.

Scandinavian countries focused on the potential risks to international peace and security deriving from environmental threats, but not on the reverse proposition.[20]

On the other hand, an alternative text submitted by China and Pakistan on behalf of the so-called Group of 77 was much more ambitious and insisted on the need to consider the use of weapons of mass destruction – and generally the use of means and methods of warfare capable of severely harming the environment – as international crimes: "Employing methods or means of warfare which are intended or may be expected to cause widespread, long-term and severe damage to the natural environment shall be treated as a war crime. States must strive to reach prompt agreement on the complete elimination and destruction of weapons of mass destruction. The use of such weapons is a crime against humanity and the environment".[21]

This text was consistent with earlier proposals, including those of India (which similarly defined the use of nuclear weapons as a crime against humanity and the human environment) and the Soviet Union (which called on countries to refrain from military activities and tests susceptible of harming the environment, including within national jurisdiction).[22] In addition, it was actively supported by many non-governmental organizations participating in the conference.

However, none of the two foregoing approaches prevailed,[23] as the text agreed on the final day of the Preparatory Conference generally called on States to respect existing norms of international law relating to environmental protection in armed conflict and cooperate in their further development. This text was later adopted without modifications as Principle 24 of the Rio Declaration.[24] It was accompanied by a few modest propositions in Agenda 21, which noted the need to consider measures "to address, in times of armed conflict, large-scale destruction of the environment *that cannot be justified* under international law",[25] as well as "the vital necessity of ensuring safe and environmentally sound nuclear power".[26] In the final text of the Declaration, two further pertinent principles were inserted next to Principle 24. These are Principle 23 on the protection of the environment and natural resources of oppressed people and Principle 25 on the

[20] Earth Charter. Elements for Consideration: Proposal Submitted by Denmark, Iceland, Norway and Sweden, UN Doc. A/CONF.151/PC/WG.III/L.27 (9 March 1992), para. 4.

[21] Principles on General Rights and Obligations – China and Pakistan: Draft Decision, UN Doc. A/CONF.151/PC/WG.III/L.20/Rev.1 (19 March 1992), p. 6.

[22] Principles on General Rights and Obligations: Chairman's Consolidated Draft, n 19, p. 13.

[23] The proposals by the US and other countries about peace and sustainable development were accommodated in a distinct principle, ie, what would become Principle 25 of the Rio Declaration ("Peace, development and environmental protection are interdependent and indivisible").

[24] *Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, Volume I, Resolutions Adopted by the Conference*, UN Doc. A/CONF.151/26/Rev.l (Vol. I) (12 August 1992), Annex I, Principle 24.

[25] Ibid, Annex II, para. 39.6, emphasis added.

[26] Ibid, para. 39.7.

interdependence of peace, development and environmental protection. Principle 24 should be read together with them.

II. Key Elements

Principle 24 consists of two sentences. Albeit expository in character, the first sentence contains a powerful statement, according to which "[w]arfare is inherently destructive of sustainable development". It thus makes clear that any situation involving armed conflicts is intrinsically incompatible with, and harmful to, the pursuit of sustainable development.[27] Armed conflicts entail regression or, at best, stagnation of the process towards sustainability.

In line with the key theme and purpose of the Rio Conference, the sentence thus refers to sustainable development at large, thereby speaking to all three pillars which make up this concept, namely its environmental, social and economic pillars. It is evident that where war prevails, social progress and justice, economic development and environmental protection, as well as their mutually beneficial integration, are equally marginalized and undermined. Surprisingly, the 2030 Agenda for Sustainable Development adopted in 2015 by the UN General Assembly[28] does not feature a specific Sustainable Development Goal (SDG) focused on armed conflicts. SDG 16 on "Peace, Justice and Strong Institutions", which generically addresses the need to significantly reduce "all forms of violence"[29] and "illicit financial and arms flows",[30] appears more relevant to Principles 25 and 26 of the Rio Declaration. Yet, the devastating impact of war on sustainable development underlies several passages of the 2030 Agenda.[31] For instance, world leaders properly emphasize the two-way relationship between sustainable development and absence of war: "Sustainable development cannot be realized without peace and security; and peace and security will be at risk without sustainable development".[32] They accordingly profess their determination to redouble efforts "to resolve or prevent conflict and to support post-conflict countries".[33]

[27] As Sweden put it at the Rio Conference, "[w]ar is the opposite to sustainable development", quoted by Tougas, n 12, p. 572.
[28] UNGA Res. 70/1, Transforming Our World: The 2030 Agenda for Sustainable Development (25 September 2015).
[29] Ibid, Target 16.1.
[30] Ibid, Target 16.4.
[31] World leaders regard "spiralling conflict, violent extremism, terrorism and related humanitarian crises" as an ongoing immense challenge to sustainable development, one which "threaten[s] to reverse much of the development progress made in recent decades", ibid, para. 14.
[32] Ibid, para. 35.
[33] Ibid. See also ibid, paras. 22, 42, 56, 64.

At any rate, the second, prescriptive sentence of Principle 24 shifts the focus on environmental sustainability, thus making clear that the gist of the principle is not concerned with the socio-economic consequences of war, but rather with a call to safeguard and enhance the protection of the environment in armed conflict.

The sentence foresees two distinct commitments on the part of States. First, they *shall* "respect international law providing protection for the environment in times of armed conflict". Secondly, they *shall* "cooperate in [the] further development" of that body of international law.

The expression "international law providing protection for the environment in times of armed conflict" is decidedly broad. For one thing, it refers to "armed conflict" with no qualifications; it therefore catches both international armed conflicts (IACs) and non-international armed conflicts (NIACs),[34] of course without prejudice to the distinct legal regimes applicable to these situations. Moreover, the expression directs States to respect at least all binding rules of international law "providing protection for the environment in times of armed conflict", be they of a customary or treaty nature.

But which rules are exactly envisaged here? Does Principle 24 simply cover IHL principles and rules as *lex specialis* of armed conflicts expressly[35] or implicitly[36] affording environmental protection, as well as the associated international criminal law provisions?[37] Or does it also recognize the continued and concurrent applicability and relevance in times of war of bodies of law other than IHL, such as chiefly international environmental law (IEL) and (environmental) human rights law?

[34] At least as these notions are commonly understood in international law. Thus, IACs correspond to situations where there is resort to armed force between two or more States, regardless of the reason or the intensity of the conflict, and "even if the state of war is not recognized by one of them", Common Art. 2 of the 1949 Geneva Conventions. This notion comprises so-called wars of national liberation, ie "armed conflicts in which peoples are fighting against colonial domination and alien occupation and against racist régimes in the exercise of their right of self-determination", Art. 1(4) AP I. In turn, NIACs are protracted armed confrontations between governmental armed forces and the forces of one or more armed groups, or between such groups occurring in the territory of a State. Such armed confrontations must reach a minimum level of intensity and the parties involved in the conflict must show a minimum of organisation, cf. Common Art. 3 of the 1949 Geneva Conventions and Art. 1 of the Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts (AP II), 8 June 1977.

[35] See especially the already-mentioned ENMOD Convention and Arts. 35(3) and 55(1) AP I.

[36] For instance, the prohibition against pillage and the principles of distinction, proportionality and precaution as applied to the protection of civilian objects. For a succinct overview, see J.-M. Henckaerts and D. Constantin, *Protection of the Natural Environment*, in A. Clapham and P. Gaeta (eds.), *The Oxford Handbook of International Law in Armed Conflict*, Oxford University Press, Oxford, 2014, p. 469 ss., pp. 471-478.

[37] See especially Art. 8(2)(b)(iv) of the Rome Statute of the International Criminal Court, 17 July 1998.

Perhaps intentionally, also considering the many legal uncertainties at stake, the drafters left this key point ambiguous.[38] That was a wise approach, as developments post-dating the Rio Conference show that the open-ended wording of Principle 24 has been authoritatively relied on to uphold the continued operation of IEL during armed conflict. This corresponds indeed to a persuasive interpretation of certain passages of the *Nuclear Weapons* Advisory Opinion[39] given in 1996 by the International Court of Justice (ICJ). The Court was faced with the argument by several States that IEL, especially the general obligation of States to prevent transboundary environmental damage[40] as "codified" in Principle 2 of the Rio Declaration, was irrelevant to the case at hand, given that it was essentially meant to apply in times of peace and did not expressly address nuclear warfare.[41] The Court disagreed and clarified that the issue was "not whether the treaties relating to the protection of the environment [we]re or not applicable during an armed conflict, but rather whether the obligations stemming from these treaties were intended to be obligations of total restraint during military conflict".[42] It next stated that environmental law was without prejudice to the States' right of self-defence.[43] However, it significantly added: "States must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives. Respect for the environment is one of the elements that go to assessing whether an action is in conformity with the principles of necessity and proportionality".[44] According to the Court, "[t]his approach [wa]s supported, indeed, *by the terms* of Principle 24 of the Rio Declaration",[45] which was then quoted in full. Concluding on this point, the Court stated: "[W]hile the existing international law relating to the protection and safeguarding of the environment does not specifically prohibit the use of nuclear weapons, it indicates important environmental factors that are properly to be taken into account in the context of the implementation of the principles and rules of the law applicable in armed conflict".[46] The latter thus

[38] Cf. UNEP, *Protecting the Environment During Armed Conflict – An Inventory and Analysis of International Law*, November 2009, p. 42.
[39] ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996, *ICJ Reports 1996*, p. 226.
[40] As is well-known, this was the first time that the ICJ characterized the duty to prevent transboundary environmental damage as a "general obligation of States" that was "now part of the corpus of international law relating to the environment", ibid, para. 29. This holding is commonly regarded as a recognition of the customary status of the duty in question.
[41] Ibid, paras. 27-28.
[42] Ibid, para. 30.
[43] Ibid.
[44] Ibid.
[45] Ibid, emphasis added.
[46] Ibid, para. 33.

constituted, together with *jus ad bellum*, "the most directly relevant applicable law"[47] vis-à-vis the question put to the Court, not the single applicable law.

More recently, the continued operation of environmental treaties in times of armed conflict has been firmly endorsed by the International Law Commission (ILC). The ILC's 2011 Draft Articles on the Effects of Armed Conflicts on Treaties[48] set forth the general principle that armed conflicts do not automatically imply the termination (or suspension) of treaties[49] and establish that, in order to determine whether termination may occur, regard shall be had to all relevant factors, including the treaty's subject-matter.[50] They next envisage that the subject-matter of certain treaties triggers a (rebuttable) *presumption of continued operation* in armed conflict[51] and provide an indicative list of these treaties in an annex. Crucially, this annex encompasses "Treaties relating to the international protection of the environment",[52] whereas the related commentary quotes in support thereof the above-mentioned *dicta* of the ICJ including their reference to Principle 24.[53] At the same time, there exists no plausible argument to exclude, *in principle*, the continued applicability of *customary* rules of environmental law, such as the duties of prevention and environmental impact assessment, in case of armed conflict.[54] The same holds true, *a fortiori*, for human rights treaty and customary obligations providing direct and indirect protection for the environment.[55]

In a nutshell, there is now widespread consensus[56] that the *lex specialis* nature of IHL vis-à-vis armed conflicts is consistent with the parallel operation[57] of environmental principles and norms,

[47] Ibid, para. 34.
[48] Text of the Draft Articles on the Effects of Armed Conflicts on Treaties, adopted by the Commission on second reading, in *Report of the International Law Commission on the work of its 63rd session, 26 April-3 June and 4 July-12 August 2011*, UN Doc. A/66/10, pp. 175-217.
[49] Ibid, draft Art. 3.
[50] Ibid, draft Art. 6.
[51] Ibid, draft Art. 7.
[52] Ibid, draft Annex(g). This Annex also lists "Treaties relating to international watercourses and related installations and facilities" and "Treaties relating to aquifers and related installations and facilities", draft Annex(h) and (i).
[53] Ibid, pp. 211-212.
[54] See also ibid, draft Art. 10.
[55] Ibid, draft Annex(f). For the ICJ's jurisprudence, see *Legality of the Threat or Use of Nuclear Weapons*, n 39, para. 25; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, Advisory Opinion of 9 July 2004, *ICJ Reports 2004*, p. 136, para. 106.
[56] See *ex multis*, Tougas, n 12, p. 575; A. Boyle and C. Redgwell, *Birnie, Boyle and Redgwell's International Law and the Environment*, 4th edition, Oxford University Press, Oxford, 2021, pp. 216-218.The same position has been generally endorsed by the ILC within its work on the protection of the environment in relation to armed conflicts, see infra n 92 and related text.
[57] Yet the notion of parallel operation is essentially unproblematic only when it translates into a mutually supportive relationship between IHL and environmental law, whereas it gives rise to difficult questions in cases of inconsistency between these two branches of international law. Such questions should be tackled on ad hoc basis, ie, if and when they emerge.

including *a fortiori* their human rights dimension. Certainly, the wording of Principle 24 has played a significant role within the process leading up to that consensus.

The other commitment in the second sentence of Principle 24 is prospective in character, as it calls upon States to cooperate in the "further development" of international law concerning environmental protection in armed conflict. Analogous appeals to States to further develop international law may also be read in Principle 13 vis-à-vis liability and compensation for environmental damage to areas beyond national jurisdiction and Principle 27 vis-à-vis "the field of sustainable development".

Twenty years after the adoption of the Rio Declaration, it is safe to submit that the appeal embodied in Principle 24 has been the most successful.[58] Since 1992, States and international institutions have engaged in a constantly rising number of law-making activities in the area of armed conflicts and the environment. Although such process has not yet resulted in novel treaty rules or pertinent treaty amendments, their significance is best appreciated from the perspective of accumulation of extensive and consistent practice which is necessary to the formation of customary law.

Clearly, many other factors have contributed to the legal progress in this area, first and foremost the increasing societal mindfulness of the urgency and pervasiveness of the global environmental challenge. Yet the call in Principle 24 has undeniably operated as a cornerstone for the developments reviewed in the next section.

III. Subsequent Practice

Similarly to other principles in the Rio Declaration, the broad nature of, and associated lack of detail in Principle 24 implied that a number of key issues concerning armed conflicts and the environment – eg, the customary status of IHL rules on environmental protection or their coverage of NIACs and non-State armed groups (NSAGs) – were unsettled and needed further research and elaboration.

Following the adoption of the Rio Declaration, historical occurrences have provided further impetus in this direction, as they have continued to spotlight the interplay of war and environmental degradation with an ensuing quest to strengthen the existing legal framework. On the one hand, the threat posed by weapons and methods of warfare which may cause severe environmental harm

[58] Despite its "as necessary" proviso. By contrast, Principle 13 mandates States to cooperate "in an expeditious and more determined manner" in the further development of liability regimes for environmental damage to areas beyond national jurisdiction. Yet this call has essentially remained a dead letter so far.

has not subsided, with examples ranging from the release of pollutants as a result of the bombing of Serbian industrial facilities during the 1999 intervention in Kosovo by NATO[59] to forest fires and massive outflows of burning fuel oil into the Mediterranean Sea caused by Israel's military operations in Lebanon in 2006.[60] On the other hand, awareness has also grown about other environmental dimensions of armed conflicts, such as the exponential surge of illegal trade in natural resources as a means of waging military efforts especially by NSAGs, with associated wildlife declines frequently occurring in biodiversity hotspots,[61] as well as the cumulative impact of warfare and climate change on vulnerable countries and populations.[62]

Against that backdrop, the merit of Principle 24 has been to serve as a catalyst for a host of law- and policy-making activities about environmental protection and armed conflicts that have unfolded in the wake of the principle's proclamation in 1992. This is evidenced by the frequent citations to Principle 24 made by many key instruments, reports and publications emerging from those

[59] Henckaerts and Doswald-Beck (eds.), *Customary International Humanitarian Law, Vol. II: Practice*, n 9, Ch. 14, paras. 58-59, 117, 271, 277; ICTY*, Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign*, n 9, paras. 14-26. See also, ICJ, *Legality of Use of Force (Yugoslavia v. Belgium; Yugoslavia v. Canada; Yugoslavia v. France; Yugoslavia v. Germany; Yugoslavia v. Italy; Yugoslavia v. the Netherlands; Yugoslavia v. Portugal; Yugoslavia v. Spain; Yugoslavia v. the United Kingdom; and Yugoslavia v. United States of America)*, Applications instituting proceedings of 29 April 1999. In all such applications, (then) Yugoslavia submitted, *inter alia*, that the respective NATO member States, "by taking part in the bombing of oil refineries and chemical plants, [had] acted... in breach of [their] obligation not to cause considerable environmental damage", and that, "by taking part in the use of weapons containing depleted uranium, [they had] acted... in breach of [their] obligation not to use prohibited weapons and not to cause far-reaching health and environmental damage". The ICJ did not unfortunately adjudicate the merits of the issues raised by the foregoing applications, as it found in various decisions that it lacked jurisdiction in respect of all of them, see eg, ICJ, *Legality of Use of Force (Yugoslavia v. United States of America)*, *Provisional Measures*, Order of 2 June 1999, *ICJ Reports 1999*, p. 916.

[60] After more than fifteen years, the environmental disaster caused in 2006 by Israel's destruction of oil storage tanks close to an electric power plant in Lebanon, resulting in an oil slick that covered the entire coastline of Lebanon and extended to the coastline of Syria, continues to be in the agenda of the UN General Assembly, see lately, UNGA Res. 76/199, Oil Slick in Lebanese Shores (17 December 2021). The General Assembly has so far unsuccessfully urged Israel to acknowledge responsibility for the disaster and compensate Lebanon and other directly affected States for the resulting environmental damage. Curiously, these General Assembly resolutions ground Israel's responsibility merely in its violation of the norms prohibiting marine pollution and accordingly only quote Principle 7 of the Stockholm Declaration, as well as Principle 16 of the Rio Declaration (on the polluter pays principle).

[61] T. Hanson et al., "Warfare in Biodiversity Hotspots", *Conservation Biology*, 2009, pp. 578-587. An emblematic case is provided by the endless wars in the Democratic Republic of the Congo (DRC), which have dramatically been devastating the environment of areas of exceptional value for decades, see B. Sjöstedt, "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", *Nordic Journal of International Law*, 2013, pp. 129-153. The dozen NSAGs operating in the DRC are lately devising unimaginable methods for extracting funds from wildlife resources, such as the taking of endangered species as hostage and eventually demanding a ransom to conservationist institutions for their release, see "Pangolin Kidnapped and Held to Ransom in Congo Amid Fears of 'New Trend' in Wildlife Crimes", available at <https://www.independent.co.uk/climate-change/news/pangolin-kidnap-ransom-congo-b2001124.html>. See also, T. de La Bourdonnaye, "Greener Insurgencies? Engaging non-State Armed Groups for the Protection of the Natural Environment During non-International Armed Conflicts", *International Review of the Red Cross*, 2020, p. 579 ss., pp. 581-584.

[62] See eg the report of the ICRC, *When Rain Turns to Dust: Understanding and Responding to the Combined Impact of Armed Conflicts and the Climate and Environment Crisis on People's Lives*, July 2020.

activities. It would suffice here to mention an emblematic sample of such citations. Just a few months after the Rio Conference, Principle 24 was quoted by a significant General Assembly resolution,[63] where States were urged "to take all measures to ensure compliance with the existing international law applicable to the protection of the environment in times of armed conflict"[64] and to incorporate the related international law norms into their military manuals.[65] As already discussed, in 1996 a full citation to Principle 24 – regarded as supportive of the broad applicability of IEL during armed conflict – was made by the ICJ in its *Nuclear Weapons* Advisory Opinion.[66] This is a fairly unique case of reference to Principle 24 within international judicial decisions. Yet, given the leading role of ICJ jurisprudence in international law, this reference was certainly of the utmost importance. Over subsequent years, high-profile quotations to Principle 24 have appeared in the ICRC Customary IHL Study,[67] in an influential report by the United Nations Environment Programme (UNEP),[68] in the work of the ILC on the protection of the environment in relation to armed conflicts,[69] and – most recently – in the ICRC Guidelines on the Protection of the Natural Environment in Armed Conflict.[70]

As the preceding account makes clear, several prominent international institutions have engaged with the issue of environmental protection in armed conflict since the adoption of the Rio Declaration. The ICRC has no doubt played a crucial role. On the one hand, it has contributed to standard-setting in this area by elaborating a dedicated instrument in the form of Guidelines for Military Manuals first released in 1994.[71] A major work of revision and expansion of the 1994 Guidelines was finalized in 2020 when the Guidelines on the Protection of the Natural Environment

[63] UNGA Res. 47/37, Protection of the Environment in Times of Armed Conflict (25 November 1992), ninth preambular paragraph.
[64] Ibid, para. 1.
[65] Ibid, para. 3.
[66] ICJ, *Legality of the Threat or Use of Nuclear Weapons*, n 39, para. 30.
[67] Henckaerts and Doswald-Beck (eds.), *Customary International Humanitarian Law, Vol. II: Practice*, n 9, Ch. 14, para. 76.
[68] UNEP, *Protecting the Environment During Armed Conflict*, n 38, p. 42.
[69] *Report of the International Law Commission on the work of its 63rd session*, n 48, Annex E, p. 354, para. 13.
[70] ICRC, Guidelines on the Protection of the Natural Environment in Armed Conflict: Rules and Recommendations Relating to the Protection of the Natural Environment Under International Humanitarian Law, with Commentary, 2020, para. 4, note 5 (quoting Principle 24 as a remarkable expression of the deep concern of the international community with the damage wrought by armed conflict on the environment). An advance copy of the Guidelines, dated September 2020, is freely available at <https://www.icrc.org/en/download/file/141079/guidelines_on_the_protection_of_the_natural_environment_in_armed_conflict_advance-copy.pdf>.
[71] Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict, published as an annex to *United Nations Decade of International Law: Report of the Secretary-General*, UN Doc. A/49/323 (19 August 1994).

in Armed Conflict[72] were published. This impressive document contains thirty-two pertinent IHL rules and recommendations, with related commentaries and a comprehensive bibliography. On the other hand, a specific chapter on environmental protection was included in the monumental 2005 ICRC Customary IHL Study.[73]

In line with the overall approach of the Study, this chapter is quite proactive and ambitious vis-à-vis the purportedly customary IHL norms applicable in this area. It contains three rules. In the wake of the ICJ *dicta* in the *Nuclear Weapons* Advisory Opinion,[74] Rule 43 stipulates that the general IHL principles on the conduct of hostilities apply to the natural environment and singles out the principle of distinction,[75] the prohibition of environmental destruction unless required by imperative military necessity,[76] and the principle of proportionality.[77] This is arguably the most important rule included in the environmental chapter of the Study, as it is firmly said to be indistinguishably applicable to IACs and NIACs. At the same time, the well-known shortcomings arising from the implementation of these principles, both in general and in the specific context of environmental protection, cannot be overlooked. For instance, no dedicated criteria are envisaged to establish when the environment may actually become a military objective (only by its use to make an effective contribution to military action? Or also by its nature, location or purpose?).[78] In turn, proportionality may turn out to be a volatile standard by reason of the difficult subjective determinations, value judgments and balancing exercise that it involves (excessive environmental damage versus concrete and direct military advantage).[79] This is shown, *inter alia*, by the already-mentioned report of the ICTY Committee, according to which the environmental damage arising from the NATO strikes against the former Yugoslavia during the 1999 Kosovo crisis could not be regarded as disproportionate,[80] and – more recently – by the refusal of US courts to rely on proportionality as a basis to review the merits of the lawsuits brought by victims (or their heirs) of

[72] Guidelines on the Protection of the Natural Environment in Armed Conflict, n 70.
[73] Henckaerts and Doswald-Beck (eds.), *Customary International Humanitarian Law, Vol. I: Rules*, n 15, Ch. 14, pp. 143-158.
[74] ICJ, *Legality of the Threat or Use of Nuclear Weapons*, n 39, para. 33.
[75] "No part of the natural environment may be attacked, unless it is a military objective" (Rule 43(A)).
[76] Rule 43(B).
[77] "Launching an attack against a military objective which may be expected to cause incidental damage to the environment which would be excessive in relation to the concrete and direct military advantage anticipated is prohibited" (Rule 43(C)).
[78] See Art. 52(2) AP I.
[79] See eg, Henckaerts and Constantin, *Protection of the Natural Environment*, n 36, p. 475.
[80] ICTY*, Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign*, n 9, paras. 19-26, 48-50.

Agent Orange against the companies which produced the chemicals for manufacturing that infamous defoliant used in the context of the Vietnam War.[81]

An absence of well-defined, objective IHL "green" prohibitions is also visible in Rule 44 of the ICRC Study, which is said to apply to IACs, but only "arguably" to NIACs.[82] The first part of the rule provides that methods and means of warfare must be employed with "due regard" to the protection and preservation of the environment, whereas the second part enshrines the principle of precaution. The latter part is most interesting, because precaution is understood both in classic IHL terms and according to the meaning given to the principle of the same name under IEL. Unfortunately, IHL precaution is only envisaged in its active dimension, ie, as a duty to take all feasible precautions *in attack* so as to avoid or minimize incidental damage to the environment.[83] In order for this duty to appear more realistic, the Study could have retained also the passive version of the principle in question, ie, as a duty to take precautions against the effects of attacks, for instance by prohibiting the location of military objectives within or in the vicinity of areas of ecological importance.[84] In turn, the IEL version of precaution in Rule 44, as adapted to the context of warfare, broadly foresees that "[l]ack of scientific certainty as to the effects on the environment of certain military operations does not absolve a party to the conflict from taking such precautions".[85] This is a welcome example of cross-fertilization between IHL and IEL, which evidently arises from the acknowledgement that IEL does continue to apply in times of armed conflict.

Clear-cut and absolute (allegedly customary) prohibitions are contemplated in Rule 45 of the Study, which is regarded as applicable to IACs, whereas, again, only "arguably" to NIACs. The first prohibition is a restatement of Art. 35(3) of AP I. It thus outlaws methods and means of warfare which may cause "widespread, long-term and severe damage" to the environment. As already recalled, the strictness of this threshold of damage makes this prohibition ill-equipped to meaningfully protect the environment in times of war. The same threshold is not foreseen in the second prohibition in Rule 45, pursuant to which "[d]estruction of the natural environment may not be used as a weapon". It is however made clear that this rule concerns deliberate attacks

[81] US Court of Appeals for the Second Circuit, *Vietnam Association for Victims of Agent Orange v. Dow Chemical Company*, Opinion of 22 February 2008, *517 F.3d 104 (2008)*, p. 122.
[82] As is well-known, an important factor for this state of affairs is represented by the lack of pertinent rules in AP II as opposed to AP I.
[83] Cf. Art. 57(2)(a)(ii) AP I.
[84] Cf. Art. 58 AP I.
[85] Cf. Principle 15 of the Rio Declaration.

against the environment as a method of warfare resulting in massive environmental harm or "ecocide",[86] for instance that which may arise from the military use of the environmental modification techniques outlawed by the ENMOD Convention.

The environmental chapter of the ICRC Study is thus testimony to the significant progress that – by 2005 – had been achieved in the field of environmental protection in times of armed conflict. The Study gives persuasive evidence of a set of consolidated or emerging customary rules in this area, including vis-à-vis NIACs and NSAGs. At the same time, given the drawbacks of many of these *specific* rules, the Study shows the enduring relevance of classic, indisputably customary IHL norms for the purpose of safeguarding the environment in armed conflict, such as those *generally* protecting civilian objects (a notion that, however controversially, does encompass the environment).

At any rate, further international standard-setting activities in this area were bound to follow. Crucially, a 2009 report by UNEP and the Environmental Law Institute proposed that the ILC "should examine the existing international law for protecting the environment during armed conflict and recommend how it can be clarified, codified and expanded".[87] This proposal was accepted by the ILC, which in 2011 included the topic "Protection of the environment in relation to armed conflicts" in its agenda.[88] The ILC process has so far culminated in 2019 with the completion of the first reading of a set of draft principles and related commentaries.[89]

Since this is a first-reading text which will inevitably be modified in the next phases of the ILC's process, a few observations would suffice. It is submitted that the ILC's Draft Principles on Protection of the Environment in Relation to Armed Conflicts, as they currently stand, represent a remarkable achievement and, for a variety of reasons, a pioneering text with great potential to influence the evolution of international law. First, as their title suggests, the Draft Principles do not only address the protection of the environment *during* armed conflict, including situations of occupation, but also *before* and *after* armed conflict by means of preventive and remedial measures, such as, respectively, the designation of protected zones[90] and the removal of hazardous remnants of war.[91]

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[86] Henckaerts and Doswald-Beck (eds.), *Customary International Humanitarian Law, Vol. I: Rules*, n 15, pp. 155-158.
[87] UNEP, *Protecting the Environment During Armed Conflict*, n 38, p. 53.
[88] *Report of the International Law Commission on the work of its 63rd session*, n 48, paras. 49, 365-367. For the ILC syllabus of the topic, see ibid, Annex E, pp. 351-368.
[89] Text of the Draft Principles on Protection of the Environment in Relation to Armed Conflicts, adopted by the Commission on first reading, in *Report of the International Law Commission on the work of its 71st session, 29 April-7 June and 8 July-9 August 2019*, UN Doc. A/74/10, pp. 211-296.
[90] Draft Principle 4.
[91] Draft Principle 27.

Secondly, this holistic approach evidently implies that the source of principles and obligations enshrined in the ILC's Draft is not only IHL, but also IEL and human rights law. Most important, the continued operation of IEL and human rights law, alongside IHL, *during* armed conflict is firmly backed by the ILC.[92] Thirdly, the same approach is reflected in one of the most interesting aspects of the ILC's Draft, namely that concerning "areas of major environmental and cultural importance".[93] It is envisaged that States should designate such areas as protected zones, which would then be protected against any attack, as long as they do not contain military objectives. This is an appropriate recognition of the frequently inextricable relationship between the safeguarding of culture and nature.[94] It also highlights the potential relevance of a landmark treaty of universal application which incontestably continues to operate in times of armed conflict, ie, the 1972 World Heritage Convention (WHC)[95] with its lists and system aimed at preserving cultural, natural and mixed heritage of outstanding universal value. For example, the lists under the WHC might constitute a key reference for the identification of protected zones as set forth in the ILC's Draft Principles.[96] Fourthly, the Draft Principles cover "armed conflict" as such, hence both IACs and NIACs. The commentaries, indeed, refer to a "general understanding"[97] that the Draft applies to both types of conflict. This is a bold step on the part of the ILC, one which goes further than the ICRC Customary IHL Study.[98] It should largely be regarded as an expression of progressive development of international law. Yet it is a welcome step showing the ILC's resolve to align its work with the realities of current wartime offences against the environment, which are increasingly taking place during NIACs and at the hands of NSAGs.

It is a matter of regret that the work of the ILC on the environment and armed conflicts has so far been cast, apparently for the sake of rapidity, in the unusual form of draft principles, rather than

[92] Draft Principle 13(1), which is included in Part Three devoted to the "Principles applicable during armed conflict", reads as follows: "The natural environment shall be respected and protected in accordance with applicable international law and, in particular, the law of armed conflict".
[93] Draft Principles 4 and 17.
[94] Similar considerations apply to draft Principle 5 on the protection of the environment of indigenous peoples.
[95] Convention Concerning the Protection of the World Cultural and Natural Heritage, 16 November 1972, especially Arts. 1, 2, 6(3), and 11.
[96] Useful indications might also be provided, insofar as material, by the lists and registers elaborated under the following treaties: Convention for the Protection of Cultural Property in the Event of Armed Conflict, 14 May 1954, and its Second Protocol, 26 March 1999; Convention on Wetlands of International Importance especially as Waterfowl Habitat, 2 February 1971; Convention for the Safeguarding of the Intangible Cultural Heritage, 17 October 2003.
[97] *Report of the International Law Commission on the work of its 71st session*, n 89, p. 281. This approach does not obviously imply that each and every principle in the ILC's Draft applies to both types of armed conflict, see eg, ibid, p. 284.
[98] Cf. S.-E. Pantazopoulos, "Protection of the Environment during Armed Conflicts: An Appraisal of the ILC's Work", *Questions of International Law*, Zoom-in 34, 2016, p. 7 ss., pp. 9-10.

draft articles. Unfortunately, that form does not augur well for its translation into a treaty. On the contrary, this looks precisely as a case involving a topic in bad need of a potentially binding dedicated instrument which would fill a glaring gap in international law, as highlighted in many quarters at the time of the Rio Declaration and its Principle 24.[99]

IV. Conclusion

At this very moment in time, one may feel disheartened when attempting to assess Principle 24 of the Rio Declaration and the progress it has spurred in the field of environmental protection in armed conflict. A shocking war of aggression blatantly violating the most fundamental rules of the international legal order has just been unleashed against Ukraine at the hands of Russia (and Belarus). In this context, it may appear naive to expect those responsible for this tragedy to exercise restraint in the light of international law when undertaking military operations which may cause extensive environmental damage and even affect sites of outstanding universal value. This could occur if, for instance, heavy shelling tactics employed by the Russian army impacted the primeval beech forests of the Carpathians in Western Ukraine, which are a component of an impressive transnational serial property progressively inscribed on the World Heritage List under the WHC since 2007.[100]

Yet, if one pauses for a moment and looks back with lucidity at developments since the adoption of the Rio Declaration, it may safely be observed that Principle 24 has translated into a significant and vibrant international law standard for the past thirty years. It has indeed been routinely referenced within many pertinent fora and documents, especially in the wake of the well-known full quotation of the principle on the part of the ICJ in the 1996 *Nuclear Weapons* Advisory Opinion.

Principle 24 does not contain specific normative prescriptions about war and the environment whose correspondence with current customary international law may meaningfully be debated. It has rather operated as a general, yet powerful, reminder that armed conflicts are destructive of sustainable development and that States must respect the evolving international law norms mandating environmental protection in times of war. That reminder, coupled with relentless manifestations of classic and emerging attacks on the environment arising from military activities,

[99] See especially, G. Plant (ed.), *Environmental Protection and the Law of War: A "Fifth Geneva" Convention on the Protection of the Environment in Time of Armed Conflict*, Belhaven Press, London, 1992, 302 p.
[100] See <https://whc.unesco.org/en/list/1133>.

has been taken quite seriously, as it has contributed to boosting a variety of high-profile law- and policy-making processes led by such institutions as the ICRC, UNEP and the ILC.

It is now high time for the international community to bring that project to completion, by agreeing on a comprehensive multilateral convention on armed conflict and the environment. If widely ratified, that convention would enhance legal certainty, while most likely proving pivotal for the consolidation of customary law in this area.

There can be little doubt that nowadays the vast majority of the international community has realized that the humanization of war encompasses the protection and preservation of our Mother Earth against the effects of military hostilities.

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