



Environmental Rights Protection: The Challenges of Food Supply During Armed Conflict

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ABSTRACT

The toll of warfare today reaches far beyond human suffering, displacement and damage to homes and infrastructure. Modern conflicts also cause extensive destruction and degradation of the environment. In turn environmental damage, which often extends beyond the borders of conflict-affected countries, can threaten the lives and livelihoods of people well after peace agreements are signed. This paper aimed to examine environmental rights protection, particularly the challenges of food supply during armed conflict. The paper adopted the doctrinal research method. The findings of the paper revealed that articles 35 and 55 of Additional Protocol I to the 1949 Geneva Conventions do not effectively protect the environment during armed conflict due to the stringent and imprecise threshold required to demonstrate damage. While these two articles prohibit “widespread, long-term and severe” damage to the environment, all three conditions must be proven for a violation to occur. In practice, this triple cumulative standard is nearly impossible to achieve, particularly given the imprecise definitions for the terms “widespread,” “long-term” and “severe.” The paper concluded that the fundamental question of applicability of human rights law during internal conflicts is contentious. Therefore, the paper recommended that in order to ensure that environmental violations committed during warfare are prosecuted, the provisions of international law that protect the environment in times of conflict should be fully reflected at the national level.

Keywords: Environment, Environmental Rights, Environmental Protection, Food Supply, Armed Conflict

I. INTRODUCTION

It is beyond doubt that everyone has a collective responsibility to protect and improve the environment for present and future generations.¹ Everyone is guaranteed the right to a healthy and productive life in harmony with nature.² Armed conflict is one of the primary obstacles to realization of the right to adequate food in many parts of the world today. War disrupts all stages of human nutrition - the production, procurement, preparation, allocation, consumption and biological utilization of food, thereby leaving malnutrition, disease and death in its wake. Given that international humanitarian law is the body of rules specifically applicable in situations of armed conflict, and that many of its provisions are moreover food-related, it must be seen as a complement to human rights norms dealing with the right to adequate food. The toll of warfare today reaches far beyond human suffering, displacement and damage to homes and infrastructure. Modern conflicts also cause extensive destruction and degradation of the environment. In turn environmental damage, which often extends beyond the borders of conflict-affected countries, can threaten the lives and livelihoods of people well after peace agreements are signed. While the aims of both international

¹ Constitution of the Federal Republic of Nigeria, 1999 (as amended), s 20; Stockholm Declaration on the Human Environment, 1972, principle 1.

² Rio Declaration on Environment and Development, 1992, principle 2.

humanitarian law and human rights law are the same, namely to protect the life, health and dignity of individuals or groups of people, the manner in which they seek to ensure such protection differs significantly owing to the different circumstances in which they are applied.

Public concern regarding the targeting and use of the environment during wartime first peaked during the Vietnam War. The use of the toxic herbicide Agent Orange, and the resulting massive deforestation and chemical contamination it caused, sparked an international outcry leading to the creation of two new international legal instruments. The Environmental Modification Convention (ENMOD) was adopted in 1976 to prohibit the use of environmental modification techniques as a means of warfare. Additional Protocol I to the Geneva Conventions, adopted in the following year, included two articles prohibiting warfare that may cause “widespread, long-term and severe damage to the natural environment.”³ In 1992, the United Nations (UN) General Assembly held an important debate on the protection of the environment in times of armed conflict. While it did not call for a new convention, the resulting resolution⁴ urged Member States to take all measures to ensure compliance with existing international law on the protection of the environment during armed conflict. It also recommended that States take steps to incorporate the relevant provisions of international law into their military manuals and ensure that they are effectively disseminated.

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

Internal and international armed conflicts are one of the major reasons for increased food insecurity and malnutrition. Despite well-established norms of international human rights law and international humanitarian law protecting the right to food, hunger and malnutrition, as well as famine has skyrocketed in last few years. There is a shocking failure in addressing criminal acts of deliberate starvation and other severe violations of a fundamental human right: the “right to food.” This non-compliance by States and other political actors as well as the reluctance to implement existing international norms to protect human rights and the environment in times of war is a critical failure of international community. Most recently, the war in Ukraine has elevated catastrophic hunger and malnutrition levels to the top of the global agenda. The war has raised awareness of ongoing widespread hunger and malnutrition even beyond Ukraine, as the parties to the conflict are the major players of global agricultural trade.

Article 11 of the International Covenant on Economic Social and Cultural Rights 1966, specifically recognizes “the fundamental right of everyone to be free from hunger,” which further imposes an obligation on States to ensure “the satisfaction of, at the very least, the minimum essential level” of this right under all circumstances, including the times of war. Freedom from hunger is accepted as part of customary international law, rendering it binding for all states regardless of whether they are party to the Covenant. States cannot put aside or postpone the realization of this core component of the body of economic and social rights. According to their international legal obligations, States must continue to take deliberate and targeted steps using all appropriate means to fulfill these rights, even in times of conflict.

II. CLARIFICATION OF CONCEPTS

Environment

The human environment can be defined as “the aggregate of all conditions and influences affecting the behaviour and development of humans as individuals and societies.”⁵ The effects of such conditions and influences result in a given environmental quality, either healthy or unhealthy. It goes

³ Additional Protocol I to the Geneva Conventions, arts. 35 and 55

⁴ RES 47/37

⁵ OAS, *Minimum Conflict: Guidelines for Planning the Use of American Humid Tropic Environments* (Washington, D.C.: OAS, 1987) 197.

without saying based on the foregoing definition that the environment relates to the natural condition in which man lives, composed of land, air and water. The Black's Law Dictionary,⁶ defines environment as the totality of physical, economical, cultural, aesthetic, and social circumstances and factors which surround and affect the desirability of peoples' lives. Okorodudu-Fubara,⁷ posits that the environment is the complex physical, chemical and biological factors/process which sustains life. According to Okorodudu-Fubara, man is part of the network of natural components which make up the plant ecosystem. Okorodudu-Fubara, further exposit that science and history have agreed that before the advent of man, the environment had already existed.⁸ To Agbola,⁹ environment 'is a composite set of behavioural settings in which individuals within a community act with diverse consequences'. According to him, environment 'is conceived as an agglomeration of all the influences and conditions (whether internal or external) which affect the living conditions of an organism, in this instance, man'.

Environmental Rights

Environmental rights often referred to as part of the third generation of human rights, the concept of environmental rights is unclear in meaning and content. No binding international agreement has had environmental rights as its primary focus because such rights fail to fit neatly into either of these two groups. According to Pathak¹⁰ environmental rights should be classified into the categories of human rights, as they surpass the essential feature of those groups of those presented in each group. Environmental rights are mentioned more explicitly at the regional level. In 1981 the African Charter on Human and Peoples' Rights was approved in Banjul, Gambia, West Africa. The charter states: All peoples shall have the right to a general satisfactory environment favourable to their development.¹¹

Similarly, the additional protocol to the America convention on Human Rights in the area of economic, social and cultural rights, the protocol of San Salvador (1988), affirms in article 11 that (1) everyone shall have the right to live in a healthy environment and (2) the states' parties shall promote the protection, preservation and improvement of the environment. In Europe the 1950 European Convention on Human Right did not include environmental rights. Nevertheless, the European Tribunal on Human Rights has included demands for the protection of the environment in some of the articles from the European convention on Human Rights such as the right to private and family life and the right to information.¹²

The recognition of environmental rights has a significant impact in the realisation of procedural rights by empowering individuals and groups most affected by environmental problems to participate in environmental governance. The opportunity for such groups to participate in environmental decision-making is the most useful and direct means of influencing the balance of environmental, social and economic interests.¹³

Environmental Protection

Environmental protection and human rights are interrelated, interconnected, and mutually responsive as both intended to the well-being of humanity. Safe and healthy environment is the pre-condition for the enjoyment of fundamental human rights. Environmental protection is a practice of protecting the environment, an individual, organization from harm or from degradation, for the benefit of the natural environment and (or) humans.¹⁴ Due to the increased pressures of population and new technological advancement, industrial revolution,

⁶B A Garner (ed.), *Black's Law Dictionary* (11th edn, Thomson West 2019).

⁷ M T Okorodudu-Fubara, *Law of Environmental Protection* (Caltop Publications Nigeria Limited 1998) 3.

⁸ Okorodudu-Fubara (n 7)

⁹ T Agbola, 'A Review of Environmental Components in Nigeria's National Development Plans (1946-85)' in P O Sada and F O Odemerho (eds.), *Environmental Issues and Management in Nigerian Development* (Ibadan: Evans Brothers (Nigeria Pub. Limited 1988) 47.

¹⁰R S Pathak, 'The Human Rights System as a Conceptual Framework for Environmental Law' in B E Weiss, (ed.), *Environmental Change and International Law: New Challenges and Dimensions* (UN University Press Tokyo 1992) 205-243.

¹¹ African Charter on Human and Peoples' Rights 1981, art. 24.

¹² European Convention on Human Right 1950, art. 11.

¹³ A Boyle, 'Human Rights and the Environment: A Reassessment' (A Paper Presented at the High-Level Expert Meeting on the New Future of Human Rights and Environment: Moving the Global Agenda Forward, Co-organized by UNEP and OHCHR in Nairobi, Nov 30 – Dec 1 2009); C Gearty, 'Do Human Rights Help or Hinder Environmental Protection?' [2010] (1)(1) *Journal of Human Rights and the Environment*, 7-22.

¹⁴ The Law Dictionary, 'What is Environmental Protection' <<https://thelawdictionary.org/environmental-protection/>> accessed 17 February 2023.

the physical environment and the biological life forms are being degraded (that is, the built environment and the natural environment), sometimes permanently. The biophysical environment is the complex of biotic, climatic, and edaphic factors that act upon an organism and determine its form and survival, and how it adapts itself in the process. If the influence of the factors mentioned above influence the biophysical environment, it is pertinent to establish the sustainability of the environment and determine the level of pressure and activity placed on it by man.¹⁵

Food Supply

Food supply may be regarded as an energy carrying chain. It embraces the complex of factors which determine food production, distribution and consumption for a particular population group and defines the way each element relates to the rest.¹⁶ Man has selected certain plants and animals for food. The production of food, therefore, may be regarded as the application of techniques to improve environmental energy concentration and storage processes. The distribution component of the food supply system is the transport of bound environmental energy to an area where human demand for it exists.

Armed Conflict

Conflict is a congenital characteristic of mankind and a notable aspect of international relations. There is no specific definition of armed conflict acceptable to all international experts. As a result, most of the argument about armed conflict focuses on moralistic or pragmatic explanations of human nature.¹⁷ An armed conflict can be defined, very simply, as any disagreement involving the use of weapons between two or more, national such as civil wars, or international parties such as international armed conflicts. A weapon, in turn, can be defined as an “instrument used or designed to be used to injure or kill someone.”¹⁸ The International Criminal Tribunal for the former Yugoslavia defined armed conflict as follows: “An armed conflict exists whenever there is a resort to armed force between States or protracted armed violence between governmental authorities and organized armed groups or between such groups within a State”.¹⁹

The Permanent Court of International Justice was the first to use the expression in the *SS. Wimbledon Case*,²⁰ when it referred to “the rights consequent upon neutrality in an armed conflict.” Later, in 1949, the four Geneva Conventions for the Protection of War Victims, declared that the scope of the Conventions extended to “all cases of declared war or of any other armed conflict...”²¹ Those definitions suggest that parties can engage in armed conflicts even without declaring war on each other. Modern warfare also presents unprecedented threats to the environment. A significant example of using the environment as a weapon in armed conflict occurred in the Gulf War II, 1990-1991, when Iraqi President Saddam Hussein ordered his troops to invade Kuwait on August 2, 1990.²²

An international armed conflict arises when one State uses armed force against another State or States. The term also applies to all cases of total or partial military occupation, even if the occupation meets with no armed resistance. It is now irrelevant whether the States concerned consider themselves to be at war with each other or how they describe the conflict. An international armed conflict is considered to be over once active hostilities or territorial occupation have ceased. Prisoner of Wars (POWs) still held by the parties nevertheless remain under the protection of the law until their ultimate release.²³

¹⁵ P Karamanos, ‘Voluntary Environmental Agreements: Evolution and Definition of a New Environmental Policy Approach’ [2001] (44)(1) *Journal of Environmental Planning and Management*, 67-84.

¹⁶ R W Hay, ‘Famine Symposium Report: The Concept of Food Supply System with Special Reference to the Management of Famine’ [1978] (7) *Ecology of Food and Nutrition*, 65-72.

¹⁷ J M Elliot and R Reginald, *The Arms Control, Disarmament, and Military Security Dictionary* (Clio Press Ltd. 1989) 14

¹⁸ B A Garner (ed.) *Black’s Law Dictionary* (7th edn, West Publishing Company 1999) 1587

¹⁹ *The Prosecutor v Dusko Tadic*, Case No. IT-94-1-AR72, Oct. 2, 1995, 35 I.L.M. 32, para. 70

²⁰ *Britain, France, Italy, Japan v Germany*, 1923 P.C.I.J. (ser. A) No.1, at 24.

²¹ Geneva Convention Protocols I, II, III, IV 1949, art. 2

²² A Rosenthal, ‘Bush Calls Gulf Oil Spill A “Sick” Act by Hussein’ *N.Y. Times*, (January 26, 1991) L5.

²³ Geneva Convention Protocol I, art. 5; Geneva Convention Protocol II, art. 5; Geneva Convention Protocol III, art. 6; Geneva Convention Protocol IV, art. 3(b)

III. PROVISIONS AIMED AT PROTECTING THE ENVIRONMENT DURING ARMED CONFLICT

Additional Protocols to the 1949 Geneva Conventions

The negotiations of Additional Protocols I and II to the Geneva Conventions took place against the backdrop of various wars of national liberation – including the Viet Nam War – that raised serious questions regarding the protection of civilian populations and the environment. Growing environmental awareness, as well as concern over military tactics employed during these wars, led to the inclusion of two provisions in Additional Protocol I that explicitly addressed environmental harm: Articles 35(3) and 55. Article 35 concerns basic rules regarding the means and methods of warfare. Article 35 stipulates that “it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.”²⁴ The Article thus protects the natural environment *per se* – which had never been done before and applies not only to intentional damage, but also to expected collateral damage. Importantly, specific intent is not necessary. Article 55(2) provides specific protection for the environment within the context of the protection granted to civilian objects. It also explicitly prohibits attacks on the environment by way of reprisals. Natural resources such as agricultural land, cattle, and drinking water could in many instances be seen as such means of survival.

This provision is generally considered to reflect customary international law as its violation would constitute a grave breach of International Humanitarian Law (IHL) if it amounted to any of the acts enumerated within Article 147 of Geneva Convention IV. In addition, Article 55(3)(b) applies even when farmlands and foodstuffs are used in direct support of military action, if their destruction were to cause starvation or forced relocation of the civilian population. The effect of this provision is also to exclude, except in defence of a State’s own territory, recourse to scorched-earth policies that cause severe environmental destruction.

The common core of these two Articles is the prohibition of warfare that may cause “widespread, long-term and severe damage to the natural environment.” The scope of these provisions initially appears extensive. However, important questions remain with regard to the threshold at which the damaging activity violates international law. Indeed, this triple standard is a cumulative requirement, meaning that to qualify as prohibited “damage,” the impact must be widespread and long-term and severe. The Protocol fails to define these terms, resulting in a high, uncertain and imprecise threshold.²⁵

Bothe and others while reviewing Article 35(3) noted that it would “not impose any significant limitation on combatants waging conventional warfare. It seems primarily directed instead to high-level decision-makers and would affect such unconventional means of warfare as the massive use of herbicides and chemical agents which could produce widespread, long-term and severe damage to the natural environment.”²⁶ The relevance of these two provisions and the effectiveness of the protection they provide in practice, therefore, seem limited. However, the obviously limited scope of this provision was remedied to a large extent by Additional Protocol I. It stipulates that relief actions for the entire civilian population of any territory under the control of a party to an international armed conflict, shall be undertaken when the population is not adequately provided with supplies, which of course include food.²⁷ Relief actions must be humanitarian and impartial in character and conducted without any adverse distinction. The Protocol does, however, expressly mention that such actions are subject to the “agreement” of the parties concerned which raises the question of the extent to which a State is obliged to accept humanitarian aid for the benefit of its own population. The generally accepted answer is that a State must accept relief actions when the aforesaid conditions are met, that is, when the civilian population is not adequately supplied and when relief which is humanitarian and impartial in nature is available. Refusing a relief action or relief consignments is thus not a matter of discretion and agreement could

²⁴ Additional Protocols I to Geneva Convention, art. 35(3)

²⁵ L Lijnzaad and G Tanja, ‘Protection of the Environment in Times of Armed Conflict: The Iraq-Kuwait War’ [1993] (40) *Netherlands International Law Review*, 180; W Verwey, ‘Observation on the Legal Protection of the Environment in Times of International Armed Conflict’ [1994] (7) *Hague Yearbook of International Law*, 36.

²⁶ M Bothe and Others, *New Rules for Victims of Armed Conflicts: Commentary on the Two 1977 Additional Protocols to the Geneva Conventions of 1949* (The Hague/Boston/London: Martinus Nijhoff Publishers 1982) 56.

²⁷ Protocol I, art. 70(1).

be withheld only for exceptional reasons, “not for arbitrary or capricious ones”.²⁸ The Additional Protocol’s rules on relief actions should, moreover, be read in conjunction with the already mentioned provisions prohibiting the starvation of civilians as a method of warfare and those stating that intentional starvation, including the impediment of relief supplies, is a war crime.

Article 3 common to the four Geneva Conventions applies to armed conflicts not of an international character occurring in the territory of a State Party, either between its armed forces and armed insurgents, or between rebel groups. Its provisions thus bind not only States Parties, but also non-State contenders, that is, armed insurgents, rebel groups and other formations. Common Article 3 is considered to reflect customary international law; the International Court of Justice has called it an “elementary consideration of humanity” applicable, in fact, to all types of armed conflicts.²⁹ Its application does not, however, affect the legal status of the parties to a non-international armed conflict.

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

The ENMOD Convention was established as a reaction to the military tactics employed by the United States during the Viet Nam War. These included plans for large-scale environmental modification techniques that had the ability to turn the environment into a weapon, for instance by provoking earthquakes, tsunamis, or changes in weather patterns – what some commentators have called “geophysical warfare.” The Convention was also a reaction to the use of large quantities of chemical defoliants (known as Agents Orange, White and Blue),³⁰ which resulted in extensive human suffering (death, cancer and other illnesses, mutations, and birth defects) and long-term environmental contamination, as well as very significant destruction of forests and wildlife.³¹

ENMOD’s objective was to prohibit the use of environmental modification techniques as a means of warfare. Article 1 requires that “each State Party to this Convention undertakes not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party.” Hence, while Article 35(3) of Additional Protocol I aim to protect the natural environment per se, ENMOD prohibits the use of techniques that turn the environment into a “weapon.” Although UNEP helped convene the negotiations that led to the ENMOD Convention, it has not had a systematic role in monitoring its implementation and enforcement.

Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (CCW), and its Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons, 1980

The CCW (also known as the Convention on Certain Conventional Weapons and the Inhumane Weapons Convention)³² states in its Preamble that “it is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment” (the triple cumulative standard). An amendment to Article 1 of the Convention introduced in 2001 extends its application to situations referred to in common Article 3 to the 1949 Geneva Conventions – that is, to non-international armed conflict (NIAC). Article 2(4) of the CCW Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons also directly addresses environmental protection, as it prohibits “making forests or other kinds of plant cover the subject of an attack by incendiary weapons except when such natural elements are used to cover, conceal, or camouflage combatants or other military objectives, or are themselves military objectives.”

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

²⁸ Y Sandoz and Others (eds), *Commentary on the Additional Protocols of 8 June 1977* (Geneva, 1987) 819-820.

²⁹ *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v United States of America)*, Merits, Judgment, I.C.J. Reports 1986, para. 218.

³⁰ A H Westing, *Warfare in a Fragile World: Military Impact on the Human Environment* (London: Taylor and Francis 1980) 79

³¹ K Hulme, *War Torn Environment: Interpreting the Legal Threshold* (Leiden: Martinus Nijhoff Publishers 2004) 5.

³² CCW, adopted on 10 October 1980, UN Document A/CONF.95/15.

³³ WFP, ‘Fighting Famine’ <<https://www.wfp.org/fight-famine>> accessed 17 February 2023.

IV. ARMED CONFLICTS, THE RIGHT TO FOOD AND ENVIRONMENTAL RIGHTS

Conflict can trigger food insecurity in a myriad of ways, including through the loss of assets, the erosion of communities' coping capacities, and the breakdown of social support systems. It often reinforces existing social inequalities and intensifies the human rights violations experienced by disadvantaged populations. The right to adequate food may also be endangered in times of conflict through the disruption of agricultural activity, the deterioration of food-related economies, and the deliberate undermining of access to food and humanitarian assistance by parties to the conflict. Contrary to popular belief, casualties resulting direct from combat usually make up only a small proportion of deaths in conflict zones; in fact, most individuals perish from hunger and diseases. Joint, coordinated actions and policy responses are needed to address the current challenges for the people most in need and to mitigate the impact on food insecurity at global level.

Even though war in Ukraine has brought attention to the issue of world hunger, prior to the conflict global levels of hunger and malnutrition were alarmingly high. The impact of weather-related disasters on acute food insecurity in the form of drought, rainfall deficit, flooding, and cyclones has intensified since 2020. Moreover, economic shocks were the main drivers of uneven economic recovery from the COVID-19 pandemic and widespread supply chain disruptions shocks continue to rise. About 811 million people go to bed hungry each night. The Integrated Food Security Phase Classification is a standardized tool that classifies the magnitude of food insecurity. Categories three, four, and five, (crisis, emergency, and famine, respectively) require urgent action. According to the findings of the 2022 Global Report on Food Crises (GRFC), 193 million people across 53 countries were acutely food insecure and in need of urgent assistance, more than doubled from 135 million to 276 million since 2019. Surpassing all previous records. The number of people in crises or worse has almost doubled between 2016 and 2021. A total of 48.9 million people are currently facing emergency levels of hunger.³³ The number of people on the brink of starvation across Africa's Sahel region, for example, is at least 10 times higher than in pre-COVID 2019.³⁴

Even prior to the war in Ukraine, international food prices had reached an all-time high. This was mostly due to market conditions, but also because of high prices of energy, fertilizers, and other agricultural services. In February 2022, the FAO Food Price Index reached a new historical record: 21 percent above its level a year earlier, and 2.2 percent higher than its previous peak in February 2011.³⁵ The Ukraine crisis has revealed that just a handful of countries export the vast majority of the world's staple grain trade and a small number of firms control most of that trade. Concentration at such levels typically indicates extreme differentials in power within food systems and highlights the way in which people in import-dependent, low-income countries are barred from engaging with food systems on their own terms.³⁶

Armed Conflict: Risks to Environmental Rights

While much of this discussion has focused on the human costs of conflict, it is also worth exploring what options exist for pursuing accountability for the severe environmental impacts of the war. Conflicts often have profound ecological impacts. Wars destroy habitats, kill wildlife, spread pollution and completely remake ecosystems, resulting in consequences that ripple forward for decades. The Ukraine war is wreaking environmental havoc on the top of its human tragedies. At the UN Environmental Assembly meeting in Nairobi in March, 108 NGOs highlighted the serious risks that the Russian Federation's invasion poses to the ecosystem and expressed concerns over shelling and releasing nuclear and toxic waste into the environment.

³³ WFP, 'Fighting Famine' <<https://www.wfp.org/fight-famine>> accessed 17 February 2023.

³⁴ WFP, 'A Hunger Catastrophe, Marching Towards Starvation' <<https://www.wfp.org/stories/hunger-famine-and-starvation-750000-people-are-front-line-un-study-says>> accessed 17 February 2023.

³⁵ FAO, 'Impact of the Ukraine Russia Conflict on Global Food Security Matters under the Mandate of the FAO' <<http://www.fao.org>> accessed 17 February 2023.

³⁶ J Clapp and H Elver, 'The War in Ukraine Could Spark a Hurricane of Global Hunger' <<https://news.trust.org/item/20220331100348-mcl51>> accessed 17 February 2023.

According to a study in 2009, more than 80% of the world's major armed conflicts between 1950 and 2000 took place in biodiversity hot spots. There has been very little large-scale research on the ecological impact of warfare, but one 2018 study found that armed conflict correlated with the decline of wildlife populations across protected areas of Africa. Wildlife populations tended to be stable in peacetime and decline during war, with more frequent the conflicts leading to steeper the declines.³⁷

In some cases, deliberate environmental destruction is an explicit military tactic. During the Vietnam War, the US military sprayed Agent Orange to destroy the forest's flora and uncover the Vietnamese forces. During the first Gulf War, Saddam Hussein's army destroyed Kuwait's oil resources as a combat tactic, eventually leading to the release of massive amounts of air pollution into the atmosphere. In other cases, environmental destruction might not be deliberate, but armed forces still hugely damage the environment. For example, armies dig trenches, tanks flatten vegetation, bombs scar landscapes, and explosives ignite fires. Weapons release toxic gases and particulates into the air and leak heavy metals into the soil and water.

Wars often cause economic and food insecurity, driving vulnerable local communities to rely more on natural resources and wild game to survive. Large wild animals also often leave their environment during the war. Some armed forces depend on wild animals to feed their troops or harvest valuable animal parts, like elephant tusks and rhinoceros horns, to finance their activities. This increased demand for wildlife is often accompanied by a weakening of environmental protections or enforcement. During Angola's civil war in 1975 and Mozambique's civil war between 1977-1992, the population of large mammals declined by more than 90%.³⁸

Armed conflicts and wars obstruct environmental safeguards. In the struggle to survive, other interests are prioritized over caring for the environment. As a result, natural harmony fades, pollution levels rise and biodiversity disappears rapidly. The UN Environment Programme stated in 2018, "For over six decades, armed conflicts have occurred in more than two-thirds of the world's biodiversity hotspots thus posing critical threats to conservation efforts." Afghanistan, the Democratic Republic of the Congo, Syria, Viet Nam and Yemen have suffered catastrophic forest and biodiversity losses due to hostilities. Similar losses are expected in Ukraine's conflict zones.

In most cases, both locals and aggressors contribute equally, resulting in forest and biodiversity losses. However, local communities bear the burdens of losses and environmental degradation by losing their livelihoods. To preserve biodiversity, it is of utmost importance that everyone works together to mitigate conflict.

V. INTERNATIONAL COURT OF JUSTICE ON ENVIRONMENTAL RIGHTS

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

Nicaragua v. United States (1986) on the Customary Nature of UN Resolutions

In its judgement in the case of *Nicaragua v United States*,³⁹ the ICJ based part of its decision on the Parties' adherence to a UN resolution and stated that its opinion was based on customary international law. Commentary on this decision suggests that the conclusion of this reasoning is that UN resolutions may, if they enjoy sufficiently wide acceptance, constitute customary international law. If these so-called soft law documents are indeed considered customary international law, it ensues that their provisions become binding on all States.

New Zealand v. France (1995) on Nuclear Testing⁴⁰

In 1995, Australia and New Zealand requested examination by the ICJ of a situation relating to the legality of nuclear testing by France in the Pacific Ocean.⁴¹ Before ultimately dismissing the case as moot due to France's

³⁷ E Anthes, 'Silent Victim: How Nature Becomes a Casualty of War' *New York Times* (13 April 2022)

³⁸ D Walsh and V Hopkins, 'Russia Seeks Buyers for Plundered Ukraine Grain, U.S. Warns' *The New York Times* (5 June 2022)

³⁹ Merits, ICJ 14, 27 June 1986

⁴⁰ *New Zealand v France Case*, ICJ 288, 22 Sept. 1995.

⁴¹ T L Anderson and J B Grewell, 'The Greening of Foreign Policy' (PERC Policy Series, PS-20. Property and Environment Research Center, Bozeman, MT 2000) 11

voluntary cessation of its activities, the Court issued interim relief. It is possible that the granting of interim relief was based on recognition of the plaintiffs' right to environmental protection. Scholarship has suggested, however, that the best interpretation of the granting of interim relief is that it "was merely standard injunctive relief designed to foreclose the possibility of irreparable harm."⁴²

ICJ Advisory Opinion on Nuclear Weapons (1996)⁴³

Initiated from a request emanating from the UN General Assembly, the ICJ 1996 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons highlighted the uncertainties in applying international law – especially IHL – to nuclear weapons, which can profoundly affect human health, society and the environment. First, the court recognized "that the general obligation of States to ensure that activities within their jurisdiction or control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment."⁴⁴ This principle, known as the Trail Smelter Principle, was also reiterated in the 1972 Stockholm Declaration and 1992 Rio Declaration. The ICJ acknowledged that the principle now constitutes customary international law. Second, the Court instructed States to account for environmental considerations when determining what constituted necessary and proportionate levels of military action.⁴⁵ Third, the Court concluded that the threat or use of nuclear weapons "would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law,"⁴⁶ as such weapons were considered to be indiscriminate and non-proportional in

⁴² M N Schmitt, 'War and the Environment: Fault Lines in the Prescriptive Landscape' in J E Austin and C E Bruch (eds.), *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: Cambridge University Press (2000) 45

⁴³ *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, ICJ., para. 30, 1996

⁴⁴ (n 43), para. 29

⁴⁵ A L Bunker, 'Protection of the Environment During Armed Conflict: One Gulf, Two Wars' [2004] (23) *Review of European Community and International Environmental Law*, 210

⁴⁶ (n 43) para. 105

⁴⁷ *Corfu Channel Case (United Kingdom v Albania)*, Merits, 1949 ICJ 4, 22

⁴⁸ 1999 I.C.J. 124 (Order of June 2)

⁴⁹ ICJ Press release, May 2001

application. Finally, the ICJ handed down a non-liquet⁴⁷ on the question of the use of the nuclear weapon in self-defence (put forward by the United Kingdom), due to gaps in the law.

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

Yugoslavia v. NATO (1999)⁴⁸

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

The ICJ handed down its admissibility decision on 2 June 1999, whereby it dismissed the cases filed against Spain and the United States, as those States do not recognize the compulsory jurisdiction of the Court. In the other eight cases, the ICJ found that it lacked *prima facie* jurisdiction, as the applicant (Serbia and Montenegro) “had no access to the Court,” and that, therefore, it could not indicate provisional measures as requested by the Federal Republic of Yugoslavia. However, the ICJ added that it remained seized of those cases and stressed that its findings, at that stage, “in no way prejudice (d) the question of the jurisdiction of the Court to deal with the merits” of the cases and left “unaffected the rights of the Government of Yugoslavia (and of the respondent States) to submit arguments regarding those questions.”⁴⁹ This articulation on the *ratione materiae* competence of the ICJ in this case suggests that the Court views cases related to environmental degradation in armed conflicts to be within its purview. As such, the decision indicates that the ICJ could be an appropriate forum for litigating such issues, noting that it only hears cases concerning State responsibility or those related to international organizations, and it does not have competence for individual criminal prosecution.

Armed Activities on the Territory of the Congo (DRC v. Uganda)⁵⁰

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

VI. CONCLUSION AND RECOMMENDATIONS

Intentional environmental damage for military purposes or unintentional widespread, long-term, and severe damage to the environment should similarly be considered as a crime against nature and perpetrators should be held accountable. Human rights and environmental rights cannot be separated

⁴⁷ *Corfu Channel Case (United Kingdom v Albania)*, Merits, 1949 ICJ 4, 22

⁴⁸ 1999 I.C.J. 124 (Order of June 2)

⁴⁹ ICJ Press release, May 2001

⁵⁰ ICJ GL No 116, [2005] ICJ Rep 168, ICGJ 31 (ICJ 2005)

from one another or be undermined, both in times of war and in times of peace. International humanitarian law contains important rules aimed at ensuring that persons affected by armed conflict have food or have access to it. While the rules are primarily formulated as obligations of parties to an armed conflict, rather than as rights, the results desired by both humanitarian and human rights law are the same - the ability of individuals to obtain or receive adequate food.

To improve the effectiveness of Articles 35 and 55, clear definitions are needed for “widespread,” “long-term,” and “severe.” As a starting point in developing these definitions, the precedents set by the 1976 ENMOD convention should serve as the minimum basis, namely: Widespread” encompasses an area on the scale of several hundred square kilometres; “Long-term” is a period of months, or approximately a season; and “Severe” involves serious or significant disruption or harm to human life, natural economic resources or other assets.

In view of the rapid transformations in the methods and means of warfare, as well as the increase in non-international armed conflicts, updating of the 1994 ICRC Guidelines is necessary. Once endorsed by the General Assembly, States would be in a position to adopt and reflect these guidelines in national legislation and military manuals as appropriate, as well as to integrate them into the training of their armed forces. In particular, the revised guidelines should explain how damage to the environment affects human health, livelihoods and security, and undermines effective peacebuilding and define key terms such as “widespread,” “long-lasting,” and “severe” as suggested above.

In order to ensure that environmental violations committed during warfare are prosecuted, the provisions of international law that protect the environment in times of conflict should be fully reflected at the national level. This will require targeted capacity-building programmes for legal drafters and practitioners addressing the following issues: Ways to reflect the relevant provisions of international law in existing or new national legislation; Options for implementing and enforcing legal provisions protecting the environment in times of armed conflict; and Options for using national legislation for holding individuals and corporations accountable for environmental damages committed abroad as underlying acts of war crimes.

⁵⁰ ICJ GL No 116, [2005] ICJ Rep 168, ICGJ 31 (ICJ 2005)