

OLAITAN O. OLUSEGUN*

The Effect of Environmental Damage on Children in Armed Conflicts

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* Ph.D., Lecturer, Faculty of Law, Obafemi Awolowo University, Ile-Ife, Nigeria;
email: o.olusegun@hotmail.com.

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ABSTRACT

The environment is a great source of sustainability for humans and other aspects of the ecosystem. Unfortunately, the world, especially developing countries, has been hit by armed conflicts, which have great implications on the environment and all forms of life that depend upon it for their existence. Such effects are, however, more profound on children, who are one of the most defenseless groups of persons in armed conflicts. Nuclear weapons, small arms, fires, destruction of forests, water pollution, and air pollution are all methods of warfare that destroy the environment with a severe impact on children.

Using a doctrinal approach, this study examines the specific ways armed conflicts harm the environment and the effects of environmental degradation on children. Existing legal frameworks are discussed to determine their sufficiency and the extent of their effectiveness in protecting children from the effects of environmental degradation caused by armed conflicts. This is in addition to the steps that could help save children from environmental harm, as healthy children have better chances of contributing to the development of their communities and nation as a whole.

INTRODUCTION

The term “environment” does not have a single definition, and environmental law treaties usually simply define elements of the environment over which they have jurisdiction.¹ The environment in a broad sense, has been stated to include the physical, social and cultural conditions or influences “under which any individual or thing exists, lives or develops.”² The Stockholm Declaration declared that persons

¹ KAREN HULME, WAR TORN ENVIRONMENT: INTERPRETING THE LEGAL THRESHOLD 12 (2004).

² Alan Gilpin & Alan West, ENVIRONMENTAL IMPACT ASSESSMENT: CUTTING EDGE FOR THE 21ST CENTURY 1 (1995).

can enjoy their human rights only in an environment that promotes their human dignity and well-being.³

The increase in industrialization and development over the years has led to several environmental threats all over the world. These environmental threats are usually the result of atmospheric pollution from industries, polluted water, poor hygiene, and water- and air-borne diseases, among others.⁴ A 2006 study by the World Health Organization (WHO) on global environmental risks estimates that environmental “exposures to various physical, chemical, and biological risk factors” are responsible for approximately ten percent of deaths and diseases globally.⁵ About one-quarter of these deaths and diseases affect children under five years of age.⁶

Armed conflicts are one of the activities with the most dangerous effects on the environment. They have the capacity to cause extensive destruction, which affects the environment as well as the lives and incomes of people, even after such conflicts have ended.⁷ According to the United Nations Environmental Protection (UNEP), “armed conflict causes significant harm to the environment and the communities that depend on natural resources.”⁸ “Direct and indirect environmental damage, coupled with the collapse of institutions, lead to environmental risks that can threaten people’s health, livelihoods, and security, and ultimately undermine post-conflict peacebuilding.”⁹

Weapons used during armed conflicts pollute water bodies, contaminate the atmosphere with smoke and fumes, damage buildings and infrastructure, and destroy trees and forests, which serve as homes for biological diversity.¹⁰ The harm caused to the environment is felt

³ Declaration of the United Nations Conference on the Human Environment, Principle 1 (June 5–16, 1972).

⁴ Mary Ann Pass & Rebecca Pass, *The Environment and Maternal and Child Health*, in *MATERNAL AND CHILD HEALTH: GLOBAL CHALLENGES, PROGRAMS AND POLICIES* 99, 99–100 (John Ehiri ed., 2009).

⁵ WORLD HEALTH ORG., *GLOBAL HEALTH RISKS: MORTALITY AND BURDEN OF DISEASE ATTRIBUTABLE TO SELECTED MAJOR RISKS*, 23 (2009).

⁶ *Id.*

⁷ ONITA DAS, *ENVIRONMENTAL PROTECTION, SECURITY AND ARMED CONFLICT: A SUSTAINABLE DEVELOPMENT PERSPECTIVE* 120 (2013).

⁸ UNITED NATIONS ENV’T PROGRAMME, *PROTECTING THE ENVIRONMENT DURING ARMED CONFLICT: AN INVENTORY AND ANALYSIS OF INTERNATIONAL LAW* 4 (2009) [hereinafter *UNEP PROTECTING*].

⁹ *Id.*

¹⁰ For instance, during the Kosovo conflict in 1999, several industrial sites were bombed, which led to toxic chemical contamination. Also, the Mediterranean Sea was polluted due

more by children due to their physical, mental, and behavioral immaturity.¹¹ Their well-being is affected by the environmental impacts of armed conflicts, and taking specific steps to protect them will reduce the harm they are exposed to. A healthy environment is a basic right for everyone, including children, and protecting them is central to the sustainability of populations and should be a priority for all countries. Children who are poor and neglected are more vulnerable to environmental degradation since they have a greater tendency to live in unhealthy places with limited access to health care, education, unpolluted water, and hygiene.¹² This study discusses the impact of armed conflicts on the environment and its implications for children. It also highlights the existing legal framework that protects children who are affected by the environmental impacts of armed conflicts. Suggestions are then made regarding the effective protection of the rights and well-being of children from environmental harm caused by armed conflicts.

I

THE ENVIRONMENT AND ARMED CONFLICTS

According to the International Criminal Tribunal for the Former Yugoslavia (ICTY) in the case of *Prosecutor v. Tadic*,¹³ “[a]n 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.”¹⁴ Armed conflicts can be caused by various factors, including colonial legacies, ethnicity, religion, poverty, and poor leadership.¹⁵ Over the years, several developing nations have experienced armed conflicts that have negatively affected their citizens as well as their

to the release of about 12,000 to 15,000 tons of oil during the conflict between Israel and Lebanon in 2006; *Id.* at 8.

¹¹ See Goran Batinica, *Environmental Degradation Is Also an Erosion of Children's Rights*, HUMANIUM (Nov. 14, 2017), <https://www.humanium.org/en/environmental-degradation-also-erosion-childrens-rights/> [<https://perma.cc/52FR-TMAD>].

¹² WORLD HEALTH ORG., PRINCIPLES FOR EVALUATING HEALTH RISKS IN CHILDREN ASSOCIATED WITH EXPOSURE TO CHEMICALS 1 (2006) [hereinafter WHO PRINCIPLES].

¹³ *Prosecutor v. Tadic*, Case No. IT-94-1-A, Judgment, (July 15, 1999).

¹⁴ *Prosecutor v. Tadic*, Case No. IT-94-1-A, Decision on the Defence Motion for Interlocutory Appeal on Jurisdiction, (Oct. 2, 1995).

¹⁵ Geoff Harris & Neryl Lewis, *Armed Conflict in Developing Countries: Extent, Nature and Causes*, in RECOVERY FROM ARMED CONFLICT IN DEVELOPING COUNTRIES 24, 24–34 (Geoff Harris ed., 1999).

development.¹⁶ Traditionally, war was characterized by open battles between armed forces of countries.¹⁷ These wars targeted soldiers and military assets, occurring mostly in isolated battlegrounds away from civilian populations.¹⁸ Examples of such wars include the Crimean War of 1853–56; World War I of 1914–18; and the Sino-Japanese War of 1894–95.¹⁹ In contemporary armed conflicts, however, hostilities occur within societies, where civilians are deliberately targeted, leading to the destruction of lives.²⁰ For instance, the Syrian conflict between rebels and government forces, which commenced in 2011;²¹ the Libyan conflict between the “Tobruk” government and the rival Islamist government of the General National Congress (GNC);²² and the conflict in northeast Nigeria between the Boko Haram forces and government forces²³ are all conflicts that have killed thousands of persons and left thousands displaced and injured. The majority of these conflicts occur in developing countries that are mostly characterized by corrupt political regimes, poverty, and significant environmental stress.²⁴

Degradation of the environment occurs in all phases of armed conflicts, beginning in its preparation and continuing even after its cessation. In the 2004 UN Report, *A More Secure World*, environmental degradation was included as part of international security threats, while concerns were expressed about environmental issues not being considered during security and development

¹⁶ Nancy Annan, *Violent Conflicts and Civil Strife in West Africa: Causes, Challenges and Prospects* (Jan. 28, 2014), <https://www.stabilityjournal.org/articles/10.5334/sta.da/>.

¹⁷ INT’L BUREAU FOR CHILD.’S RIGHTS, CHILDREN AND ARMED CONFLICT: A GUIDE TO INTERNATIONAL HUMANITARIAN AND HUMAN RIGHTS LAW 31–32 (2d ed. 2010).

¹⁸ *Id.*

¹⁹ *Id.* at 31.

²⁰ *Id.* at 33.

²¹ *Syria: The Story of the Conflict*, BBC NEWS (Mar. 11, 2016), <https://www.bbc.com/news/world-middle-east-26116868> [<https://perma.cc/FVB4-5FZG>].

²² Bethan McKernan, *War in Libya: How Did It Start, Who Is Involved and What Happens Next?*, GUARDIAN (May 18, 2020), <https://www.theguardian.com/world/2020/may/18/war-in-libya-how-did-it-start-what-happens-next> [<https://perma.cc/75TY-8K7T>].

²³ Hagler Okorie, *Internationalization of Armed Conflict in Africa: Appraisal of Sub-Saharan African Countries of Democratic Republic of Congo, Somalia and Nigeria*, 6 J.L. & CRIM. JUST. 65, 77 (2018).

²⁴ Halvard Buhaug & Ole Magnus Theisen, *On Environmental Change and Armed Conflict*, in CLIMATE CHANGE, HUMAN SECURITY AND VIOLENT CONFLICT 43–44 (Jurgen Scheffran et al eds., 2012).

deliberations.²⁵ Armed conflicts have both immediate and long-term consequences on the environment and the well-being of humans. They threaten the livelihoods, health, and security of the population and reduce opportunities for sustainable development.²⁶ The environmental damage arising from armed conflicts is usually more severe and occurs at a higher degree than other situations that harm the environment. For example, the significant bombing of industrial areas substantially pollutes waterways, unlike the contamination that occurs in peace time.²⁷ The effects of armed conflicts are more prominent in developing countries, which rely on the environment for daily sustenance through farming, hunting, grazing of cattle, and fishing.²⁸ This increases poverty levels through the loss of livelihoods.²⁹ Steps must thus be taken to reduce environmental damage to nations that have been affected by war.

II

THE SUSCEPTIBILITY OF CHILDREN TO ENVIRONMENTAL THREATS

Children have a higher risk of suffering from the impact of environmental hazards mainly because their bodies develop quickly, both physically and mentally, and exposure to harmful substances limits their growth and development.³⁰ They have delicate organs that cannot repair themselves effectively when damaged by harmful substances.³¹ For example, when chemical weapons from armed conflicts affect their brain and nervous system, such cells may not recover, thereby leaving permanent damage.³² Furthermore, the harmful toxins children are exposed to as a result of armed conflicts are higher than those of adults, as children eat more, drink more, and

²⁵ U.N.G.A., *A More Secure World: Our Shared Responsibility, Report of the High-level Panel on Threats, Challenges and Change*, U.N. Doc. A/59/565 11 (Dec. 2, 2004).

²⁶ DAS, *supra* note 7, at 120.

²⁷ Bozidar Stojanovic, *Some Facts on the State of the Environment in FR Yugoslavia Before and After NATO Bombing*, 7 SPATIUM 24, 29 (2001); Robert A. Francis, *The Impacts of Modern Warfare on Freshwater Ecosystems*, 48 ENV'T MGMT. 985, 986 (2011).

²⁸ For example, in Nigeria, degradation of the environment through armed conflict has affected agricultural products in the Northern parts of the country and led to poverty in some areas. See Fatile J. Olufemi & Adejobi O. Samson, *Climate Change, Environment and Conflicts in Nigeria*, 6 BRITISH J. ARTS & SOC. SCIS. 11, 12–13 (2012).

²⁹ DAS, *supra* note 7, at 123.

³⁰ Pass & Pass, *supra* note 4, at 101–02.

³¹ P. J. Landrigan & A. Garg, *Children Are Not Little Adults*, in CHILDREN'S HEALTH AND THE ENVIRONMENT: A GLOBAL PERSPECTIVE 3, 4 (J. Pronczuk-Garbino ed., 2005).

³² *Id.*

breathe in larger quantities of air than adults, which results in greater harm to their health.³³ The years of exposure to such toxic substances is also lengthier than for adults, which means there is a higher tendency of developing chronic diseases than with adults, due to the long periods of exposure.³⁴ Also, children relate to their surroundings differently as they play on the ground with a propensity to put dirty things in their mouths, which increases their risk of infection.³⁵ They are more vulnerable to danger due to their inability to recognize and avoid the possible risks around them.³⁶ Children may also be affected in the womb when their mothers are exposed to toxic substances.³⁷ The vulnerability of children to environmental problems occurs at a higher level than for adults, which requires that they be specially attended to and protected from environmental damage during armed conflicts.

Environmental threats to children in armed conflicts can occur directly or indirectly. This section will discuss the threats that could arise as a result of the use of chemical weapons, nuclear weapons, biological weapons, military operations, landmines, noise, and resource division.

A. Chemical Weapons

The Chemical Weapons Convention (CWC) defines chemical weapons as “toxic chemicals and their precursors, . . . [m]unitions and devices, . . . [and] [a]ny equipment specifically designed for use directly in connection with [such weapons].”³⁸ Chemical weapons are the most brutal of the weapons of mass destruction (WMD), based on their “high toxicity, imperceptibility to senses and rapidity of action after dissemination and persistency.”³⁹ Between 1961 and 1971,

³³ LAURA WESTRA, ENVIRONMENTAL JUSTICE AND THE RIGHTS OF UNBORN AND FUTURE GENERATIONS 20–21 (2006).

³⁴ *Id.*

³⁵ Pass & Pass, *supra* note 4, at 102.

³⁶ *Id.*

³⁷ Tongzhang Zheng et al., *Effects of Environmental Exposures on Fetal and Childhood Growth Trajectories*, 82 ANNALS GLOB. HEALTH 41, 46 (2016).

³⁸ Convention on the Prohibition of the Development, Production, Stockpiling and use of Chemical Weapons and on their Destruction, art. II, Jan. 13, 1993, 1974 U.N.T.S. 45 [hereinafter CWC].

³⁹ K. Ganesan et al., *Chemical Warfare Agents*, 2 J. PHARM. BIO ALLIED SCIS. 166, 167 (2010).

approximately twenty million gallons of Agent Orange⁴⁰ and other kinds of herbicides were used in southern Vietnam by U.S. soldiers to remove about five million acres of forests so as to spot enemy troops more easily.⁴¹ Academic scientists protested the destructive effects of herbicidal warfare in 1964, known as “ecocide,” and were given permission to examine the effects of Agent Orange in Vietnam six years later.⁴² They discovered that not only were weeds eliminated but the environments that humans depended upon were destroyed.⁴³ Agent Orange may also lower fertility, increase maternal mortality, and cause birth defects like spina bifida and cleft lip.⁴⁴

Furthermore, the Japanese Army started producing chemical weapons in Hiroshima in 1929, and in 1937 it established a factory in Fukuoka Prefecture that aimed to produce chemical weapons to be used in China.⁴⁵ It was reported that between 1937 and 1945 there were approximately 889 to 2,900 attacks with chemical weapons in China, where Japan made use of “more than 9,000 chemical mortars and 43,000 toxic smoke cylinders.”⁴⁶ After World War II, chemical weapons were dumped in Japanese waters, which caused several deaths and injuries.⁴⁷ These weapons were concealed in different locations and discovered in the 1990s only by accident, after the environment had been contaminated and several lives were affected.⁴⁸ Chemical weapons were also used extensively in the war between Iraq and Iran, which occurred between 1981 and 1989.⁴⁹

⁴⁰ Agent Orange is an herbicide and defoliant chemical that contains dioxin, a highly toxic substance, which contaminates the environment and lasts for years, especially in soils and sediments of lakes and river. *See Agent Orange*, HISTORY (May 16, 2019), <https://www.history.com/topics/vietnam-war/agent-orange-1> [<https://perma.cc/MWA4-T2KK>].

⁴¹ *Id.*

⁴² DAVID ZIERLER, *THE INVENTION OF ECOCIDE: AGENT ORANGE, VIETNAM, AND THE SCIENTISTS WHO CHANGED THE WAY WE THINK ABOUT THE ENVIRONMENT* 2 (2011).

⁴³ *Id.*

⁴⁴ Le Thi Nham Tuyet & Annika Johansson, *Impact of Chemical Warfare with Agent Orange on Women's Reproductive Lives in Vietnam: A Pilot Study*, 9 REPROD. HEALTH MATTERS 156, 157 (2001).

⁴⁵ RYO SATO, GLOBAL GREEN USA, *SEA-DUMPED CHEMICAL WEAPONS: JAPAN* 4 (2010).

⁴⁶ MIKE BROMBACH, GLOBAL GREEN USA, *ABANDONED CHEMICAL WEAPONS IN CHINA: THE UNRESOLVED JAPANESE LEGACY* 7 (2011).

⁴⁷ SATO, *supra* note 45, at 11.

⁴⁸ BROMBACH, *supra* note 46, at 7.

⁴⁹ Kh Bijani & A. A. Moghadamnia, *Long-Term Effects of Chemical Weapons on Respiratory Tract in Iraq-Iran War Victims Living in Babol (North of Iran)*, 53 ECOTOXICOLOGY & ENV'T SAFETY 422, 422 (2002).

In the twentieth century, several countries have manufactured chemical weapons in large quantities, which have been stored in military arsenals.⁵⁰ There is a risk that these weapons could get into the hands of terrorists and be used to launch severe attacks, which could lead to massive destruction of cities and their inhabitants.⁵¹ The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction bans the use of chemical weapons.⁵² Parties to the Convention are also not allowed to develop, produce, transfer, or stockpile these weapons and must, instead, destroy existing ones in their jurisdictions or those abandoned in other territories.⁵³ Some countries, however, have been accused of noncompliance with the provisions of this Convention.⁵⁴ This is despite 193 States having ratified it and an implementation body known as the *Organisation for the Prohibition of Chemical Weapons* (OPCW) having been established with the goal of “strengthening international security” through the prevention of chemical agents in warfare.⁵⁵

Chemical weapons have the most dreadful and lasting effects on the environment and children. Although the estimated number of children that have been affected by these chemicals is not available, it has been discovered that contact with these chemicals has severe health consequences for children, both prior to their births and after they are born.⁵⁶ For example, after birth, their primary source of food, which is

⁵⁰ Gert G. Harigel, *Chemical and Biological Weapons: Use in Warfare, Impact on Society and Environment*, NUCLEAR AGE PEACE FOUND. (Nov. 22, 2001), <https://www.wagingpeace.org/chemical-and-biological-weapons-use-in-warfare-impact-on-society-and-environment/> [https://perma.cc/US2J-N29T].

⁵¹ DAVID HAY-EDIE ET AL., *THE MILITARY’S IMPACT ON THE ENVIRONMENT: A NEGLECTED ASPECT OF THE SUSTAINABLE DEVELOPMENT DEBATE 6* (International Peace Bureau 2002), <http://www.ipb.org/wp-content/uploads/2017/03/briefing-paper.pdf> [https://perma.cc/SF4H-QJSV].

⁵² CWC, *supra* note 38, art. I (1.b).

⁵³ *Id.* art. I (1–2).

⁵⁴ See U.S. Dep’t of State, *Compliance with the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction Condition (IO)(C) Report* (June 2020), <https://www.state.gov/wp-content/uploads/2020/06/2020-10C-Report-Unclassified-Version-for-H.pdf> [https://perma.cc/V6VX-XPL4].

⁵⁵ *Organisation for the Prohibition of Chemical Weapons (OPCW)*, UN JOBNET, <https://www.unjobnet.org/organization/OPCW> [https://perma.cc/6D8W-PVKM] (last visited Mar. 27, 2021).

⁵⁶ See JM Talabani et al., *Long-Term Health Effects of Chemical Warfare Agents on Children Following a Single Heavy Exposure*, (Oct. 25, 2017), <https://pubmed.ncbi.nlm.nih>

breast milk, could be contaminated by heavy metals and Persistent Organic Pollutants (POPs), which consequently affect their growth and development.⁵⁷ Waterbodies could also be contaminated by chemical weapons, which leads to the shortage of water and the death of species living inside seas. Water shortages lead to inadequate farmland irrigation, which leads to inadequate crop harvests.⁵⁸

B. Nuclear Weapons

“A nuclear weapon is an explosive device whose destructive force results from either nuclear fission chain reactions or combined nuclear fission and fusion reactions.”⁵⁹ During World War II, specifically on August 6, 1945, the United States released an atomic bomb over Hiroshima, causing the deaths of between 90,000 to 166,000 persons within four months.⁶⁰ Another bomb was dropped in Nagasaki three days later, killing approximately 45,000 to 75,000 persons, while about 60,000 people suffered severe injuries.⁶¹ There were debates as to whether the bombs were necessary in the first place, especially when placed side by side with the massive devastation that affected children, industries, schools, and civilians as a whole, causing physical, psychological, and environmental harm.⁶² Some States produced nuclear weapons due to the fear that other States would employ

.gov/29069930/ (discussing a study finding that children’s exposure to chemicals in Iraq in the 1980s resulted in visual impairments, dermatological issues, and respiratory problems like chronic bronchitis, bronchiectasis, and asthma). *See also* Rina Shaikh-Lesko, *Children Face the Greatest Danger from Chemical Weapons*, NPR (Apr. 9, 2018, 5:38 PM), <https://www.npr.org/sections/goatsandsoda/2018/04/09/600833043/children-face-the-greatest-danger-from-chemical-weapons> [<https://perma.cc/YH9U-LCMT>] (reporting that chemical weapons used in the Syrian city of Douma killed about 43 persons, including children).

⁵⁷ Terri Damstra, *Potential Effects of Certain Persistent Organic Pollutants and Endocrine Disrupting Chemicals on the Health of Children*, 40 *CLINICAL TOXICOLOGY*, 457, 458 (2002).

⁵⁸ Katherine Sentlinger, *Water Scarcity and Agriculture*, WATER PROJECT, <https://thewaterproject.org/water-scarcity/water-scarcity-and-agriculture> (last visited Mar. 27, 2021) [<https://perma.cc/54F6-LTDH>].

⁵⁹ GENEVA ACADEMY, *NUCLEAR WEAPONS UNDER INTERNATIONAL LAW: AN OVERVIEW* 4 (2014), <https://www.geneva-academy.ch/joomlatools-files/docman-files/Nuclear%20Weapons%20Under%20International%20Law.pdf> [<https://perma.cc/C7WA-2CEH>].

⁶⁰ *Bombings of Hiroshima and Nagasaki – 1945*, ATOMIC HERITAGE FOUND., (June 5, 2014), <https://www.atomicheritage.org/history/bombings-hiroshima-and-nagasaki-1945#:~:text=On%20August%206%2C%201945%2C%20the,as%20well%20as%2043%2C000%20soldiers> [<https://perma.cc/WD2E-3MXH>].

⁶¹ *Id.*

⁶² *Id.*

such weapons to fight against them.⁶³ Nuclear weapons were also deployed to aid national security as well as to promote political reputations.⁶⁴ Although several countries did not use them, nuclear weapons promoted respect and cautiousness, which allowed such countries to exert a lot of power and influence over the decisions of other nations.⁶⁵ When nuclear weapons are deployed, they have enormous consequences due to the blast, heat, radiation, injuries, and sicknesses that follow. They have the capacity to kill thousands of persons and damage the natural environment.⁶⁶

These weapons still exist in our world today, and even though they have not been used in recent times, atmospheric and underground nuclear tests have been conducted frequently in some countries.⁶⁷ Nuclear test explosions cause birth defects, which affect the growth and development of children and cause environmental harm that affects generations.⁶⁸ There is also the possibility of terrorists using such weapons on innocent civilians, including children.⁶⁹ Multilateral treaties prohibiting nuclear proliferation and testing include the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Partial Test Ban Treaty (PTBT), and the Treaty on the Prohibition of Nuclear Weapons (TPNW).⁷⁰ The non-proliferation regime has reduced the number of existing nuclear weapons from 65,000 in 1986 to approximately 27,000 today.⁷¹

⁶³ See SVERRE LODGAARD, NUCLEAR DISARMAMENT AND NON-PROLIFERATION 53–54 (2011).

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ Victor W. Sidel & Barry S. Levy, *Proliferation of Nuclear Weapons: Opportunities for Control and Abolition*, 97 AM. J. PUB. HEALTH 1589, 1591 (2007).

⁶⁷ Tilman A. Ruff, *The Humanitarian Impact and Implications of Nuclear Test Explosions in the Pacific Region*, 97 INT’L REV. RED CROSS 775, 775–77 (2015).

⁶⁸ *Id.* at 788, 813.

⁶⁹ JOSEPH CIRINCIONE, BOMB SCARE: THE HISTORY & FUTURE OF NUCLEAR WEAPONS, at xiii (2007).

⁷⁰ UNITED NATIONS OFF. FOR DISARMAMENT AFFS., *Nuclear Weapons*, <https://www.un.org/disarmament/wmd/nuclear/> [<https://perma.cc/8G8X-L3MJ>] (last visited Mar. 27, 2021).

⁷¹ JOSEPH CIRINCIONE ET AL., DEADLY ARSENALS: NUCLEAR, BIOLOGICAL AND CHEMICAL THREATS 8 (2005).

C. *Biological Weapons*

Biological weapons can be described as “the deliberate spreading of disease among humans, animals, and crops” during warfare.⁷² This method of war has been employed since 300 BC, where diseases were intentionally spread through the pollution of water supplies and the dumping of diseased bodies in military reinforcements.⁷³ An example of biological warfare occurred during the First World War, when Germany allegedly spread cholera in Italy and plague in Russia. German agents were also accused of attempting to ship animals infected with disease-producing bacteria, including anthrax and glanders, to some countries and contaminated grains to other countries.⁷⁴ Also, in Oregon, salad bars were contaminated with bacteria in 1984 for the purpose of disrupting elections, which led to about 750 people being diagnosed with salmonellosis.⁷⁵ Biological weapons are easier and cheaper to produce than other WMD,⁷⁶ as they only require access to diseases that are capable of becoming an epidemic. They are also the most difficult to identify, particularly because they can be easily transported quickly across countries with appropriate authorities unable to detect affected persons.⁷⁷ Biological agents capable of being used as weapons include bacteria like anthrax; a plague, caused by *Yersinia pestis*; *Brucella* species (brucellosis); *Coxiella burnetii* (Q fever); *Francisella tularensis* (tularemia); viruses like variola (smallpox), Ebola, and other hemorrhagic viruses; the viral encephalitides; and preformed toxins. Small quantities of these agents are sufficient to harm or cause the deaths of thousands of people.⁷⁸ The effects of biological weapons vary, depending on the type of agent and the victim. Children are particularly vulnerable and suffer from infections, psychological issues, and malnutrition caused by the

⁷² SIMON M. WHITBY, *BIOLOGICAL WARFARE AGAINST CROPS* 1 (2002).

⁷³ *Id.* at 3.

⁷⁴ *Id.* at 3–4.

⁷⁵ Thomas J. Török et al., *A Large Community Outbreak of Salmonellosis Caused by Intentional Contamination of Restaurant Salad Bars*, 278 J. AM. MED. ASS'N 389, 389 (1997).

⁷⁶ Rebecca Katz, *Biological Weapons: A National Security Problem That Requires a Public Health Response* 12–13 (Off. Population Rsch. Princeton Univ., Working Paper No. 2001-04).

⁷⁷ *Id.* at 14.

⁷⁸ Am. Acad. Pediatrics, *Chemical-Biological Terrorism and Its Impact on Children: A Subject Review*, 105 PEDIATRICS 662, 663 (2000).

contamination of food and water resources.⁷⁹ They also experience nerve disturbances; severe diarrhea, which could lead to fluid loss and shock; weakness; fever; vomiting; and death.⁸⁰

D. Military Operations

Activities of both State and non-state actors have caused non-international armed conflicts (NIAC), which are disastrous to the environment.⁸¹ The armed forces of nations have the duty to defend the interests of their territories from both internal and external threats. In the process of performing these duties, the operations of armed forces affect the environment and children in several ways. Oftentimes, these armed forces have to take over lands to store equipment and train their members, which leads to displacement, destruction of property, and loss of livelihoods.⁸² Furthermore, militaries often make use of explosives to wage war against their opponents.⁸³ These substances harm the environment if they are not handled appropriately.⁸⁴ Large amounts of dumped military waste also cause pollution, especially when the waste is burned openly.⁸⁵ An example of environmental harm through military activities is seen on the Island of Vieques, Puerto Rico, which the U.S. Navy used for sixty years as a site for training exercises and bombings.⁸⁶ After several protests and complaints, the Navy confessed that metals and toxic chemicals were used.⁸⁷ Furthermore, air attacks during the NATO military action in Kosovo and the Federal Republic of Yugoslavia (FRY) damaged the environment severely.⁸⁸ Due to the oil refineries that were burned, oil chemicals leaked into the Danube River, harmful substances escaped into the environment

⁷⁹ A. Korkmaz et al., *Role of the Nurses on Protection of the Children from Effects of the NBC Attacks*, 11 BALKAN MIL. MED. REV. 40, 42 (2008).

⁸⁰ See Am. Acad. Pediatrics, *supra* note 78, at 666.

⁸¹ UNEP PROTECTING, *supra* note 8, at 10.

⁸² HAY-EDIE ET AL., *supra* note 51, at 7.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ Doug Weir, *Civilian Protection, Environmental Pollution and Conflict – A Role for the Public Health Community Medicine*, 31 MED., CONFLICT & SURVIVAL 4, 6 (2015).

⁸⁶ Valeria Pelet, *Puerto Rico's Invisible Health Crisis: The Island of Vieques Has Some of the Highest Sickness Rates in the Caribbean. Is the U.S. Navy Responsible?*, ATLANTIC (Sept. 3, 2016), <https://www.theatlantic.com/politics/archive/2016/09/vieques-invisible-health-crisis/498428/> [<https://perma.cc/Q6XM-STFF>].

⁸⁷ *Id.*

⁸⁸ HAY-EDIE ET AL., *supra* note 51, at 4–5.

through bombed chemical plants, and biodiversity sites were affected.⁸⁹ Also, a major industrial complex in Pancevo, Serbia, consisting of a petrochemical plant, a fertilizer plant, and a major oil refinery, was subjected to air strikes, which led to the release of dangerous substances. This caused “black rain” to fall, with negative effects on the health of humans as well as damage to water and crops.⁹⁰

E. Landmines

Over the years, landmines have been an effective method of warfare, especially in internal armed conflicts, as they reached civilian populations and caused injuries amongst them. It has been estimated that since World War II about 400 million landmines have been scattered all over the world.⁹¹ Countries employ the use of landmines as a war tactic without fulfilling their responsibilities under “international law to mark, map, monitor and remove them” upon the cessation of such conflicts.⁹²

Landmines lead to the death of civilians and result in injuries, including loss of limbs, loss of sight, hearing impairments, and injuries to genital areas.⁹³ Landmines are particularly dangerous to children because they are laid indiscriminately, which harm children while they play or run errands. They remain a menace even after conflicts are over.⁹⁴ Landmine explosions injure wildlife, disrupt soil and water systems, damage plants, and disrupt the ecosystem.⁹⁵ The fear of mines also restricts people’s access to natural resources, biological diversity, and arable land, as civilians are forced to flee from such hostile environments.⁹⁶ For example, it was estimated in a 1997 study “that 35% of the land in Cambodia and Afghanistan is unusable because of mines.”⁹⁷ Several of these mines are placed on farms, which has the

⁸⁹ *Id.* at 5.

⁹⁰ Manoj Kumar Sinha, *Protection of the Environment During Armed Conflicts: A Case Study of Kosovo*, 13 ISILYBIHRL 2, 3 (2001).

⁹¹ Jennifer Leaning, *Environment and Health: Impact of War*, 163 CANADIAN MED. ASS’N J. 1157, 1158 (2000).

⁹² *Id.*

⁹³ SAVE THE CHILDREN, *CHILD LANDMINE SURVIVORS: AN INCLUSIVE APPROACH TO POLICY AND PRACTICE* 3 (2000).

⁹⁴ JO BOYDEN ET AL., *CHILDREN AFFECTED BY ARMED CONFLICT IN SOUTH ASIA: A REVIEW OF TRENDS AND ISSUES IDENTIFIED THROUGH SECONDARY RESEARCH* 47 (2002).

⁹⁵ Leaning, *supra* note 91, at 1159.

⁹⁶ *Id.*

⁹⁷ Richard A. Gosselin, *War Injuries, Trauma, and Disaster Relief*, 20 TECH. ORTHOPEDICS 97, 98 (2005).

effect of reducing incomes and the availability of food for families and communities.⁹⁸ Shortage of food is felt most by children, who need food and adequate nutrition to grow.

F. Noise

During armed conflicts, noise pollution occurs in several ways. Apart from the fact that explosions cause a lot of noise, the military employs aircrafts for operations that produce noise that affects animals.⁹⁹ Depending on the particular species as well as the intensity and duration of the noise, permanent damage can ensue.¹⁰⁰ The noise from military aircrafts, for example, has “primary, secondary and tertiary effects” on animals.¹⁰¹ Primary effects include the rupturing of eardrums, hearing impairment, and the inability to identify sounds.¹⁰² Secondary effects include physiological impacts, which could cause inhibitions in reproduction and foraging behavior, among others.¹⁰³ Tertiary effects entail both primary and secondary effects, which could encourage “population declines, species extinction, and habitat degradation.”¹⁰⁴ It has been discovered that birds, for instance, avoid nesting in loud areas and might even migrate to other conducive environments, which affects food webs and species combination in some areas.¹⁰⁵ Marine species like whales and dolphins depend on sounds to interact with their environment and detect food sources.¹⁰⁶ Thus, excessive noise affects them a great deal. In 2000, sixteen whales were stranded on beaches in the Bahamas as a result of sonar tests conducted by the United States Navy, which generated powerful sounds under the water.¹⁰⁷ In humans, Noise Induced Hearing Loss

⁹⁸ SAK SAMBATH ET AL., A STUDY ON THE LINK BETWEEN DEMINING ACTIVITIES AND IMPROVED FOOD AND NUTRITION SECURITY 15–16 (2017).

⁹⁹ Michael J. Lawrence et al., *The Effects of Modern War and Military Activities on Biodiversity and the Environment*, 23 ENV'T REVS. 443, 444 (2015).

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Noise Pollution and the Environment*, AUSTRALIAN ACAD. SCI., <https://www.science.org.au/curious/earth-environment/noise-pollution-and-environment> [<https://perma.cc/K3HP-XTEW>] (last visited Mar. 30, 2021).

¹⁰⁶ *Id.*

¹⁰⁷ Rick Weiss, *Whales' Deaths Linked to Navy's Sonar Tests*, WASH. POST (Dec. 31, 2001), <https://www.washingtonpost.com/archive/politics/2001/12/31/whales-deaths-linked>

(NIHL) is a consequence of the use of high caliber weapons in warfare.¹⁰⁸ Other effects include sleep disorders, stress, and high blood pressure from the fear of being attacked or killed. All these may reduce the level of attention given by children in school, in addition to affecting their level of retention and reading habits.¹⁰⁹

G. Resource Diversion

Armed conflicts have a great influence on the revenue and expenditure of countries, which in turn affects their economic growth. Military expenditure usually increases in times of conflicts and remains high, even after its cessation.¹¹⁰ During prolonged internal conflicts, weapons, ammunitions, and other necessary equipment are purchased.¹¹¹ Moreover, a large amount of money is usually spent on reconstructing destroyed communities.¹¹² The funds spent on security can affect the resources that should have been allocated to other sectors of the nation, such as education and health.¹¹³ Thus, sustainable living is usually not a priority as there is more focus on achieving security. For example, issues like environmental impact assessments, cleaning of oil spills, and the enforcement of environmental protection regulations and policies are likely to be relegated to the background. Thus, environmental degradation, which will usually result from the inadequate protection of the environment, will affect the health and well-being of children. Also, children's access to education and health care services will be restricted.

-to-navys-sonar-tests/2d2f3124-394d-4d25-a68a-5ec983834efc/ [https://perma.cc/E3XJ-HJ2V].

¹⁰⁸ Jenica Su-ern Yong & De-Yun Wang, *Impact of Noise on Hearing in the Military*, 2 MIL. MED. RSCH. 1–6 (2015).

¹⁰⁹ *Noise Pollution*, NAT'L GEOGRAPHIC (July 16, 2019), <https://www.nationalgeographic.org/encyclopedia/noise-pollution/> [https://perma.cc/BT6Q-M3PS].

¹¹⁰ Sanjeev Gupta et al., *Fiscal Consequences of Armed Conflict and Terrorism in Low- and Middle-Income Countries*, 20 EUR. J. POL. ECON. 403, 406 (2004).

¹¹¹ See *Military Expenditure—The Opportunity Cost*, UNICEF, <https://www.unicef.org/sowc96/8military.htm> [https://perma.cc/5NEJ-2GWX].

¹¹² UNITED NATIONS DEVELOPMENT PROGRAMME, POST-CONFLICT ECONOMIC RECOVERY: ENABLING LOCAL INGENUITY 3 (2008); Sheriff Ghali Ibrahim & Ipinmoye Ayodele Olu, *The Political Economy of Reconstruction and Rehabilitation of North Eastern Nigeria in the Post-Boko Haram Era: The Gap in Contribution Between Africa and Europe*, 1 INT'L J. MULTIDISCIPLINARY RSCH. & MOD. EDUC. 179, 186 (2015).

¹¹³ Gupta et al., *supra* note 110, at 406.

III EFFECTS OF ARMED CONFLICT–INDUCED ENVIRONMENTAL DEGRADATION ON CHILDREN

An environment that has been plagued by armed conflict affects children in several ways. This section discusses effects like health issues, contamination of clean water and sanitation, loss of biological diversity, destruction of public institutions, and inadequate nutrition.

A. Health Issues

A nation that invests in the health of its children promotes its human and economic development. Healthy children have better chances of living healthy, productive lives in the future and contributing positively to the development of the society.¹¹⁴ Exposure to environmental hazards is a key factor that causes health issues in children. According to WHO, “[O]ver 30% of the global burden of disease can be attributed to environmental factors” and “40% of this burden falls on children under five years of age.”¹¹⁵ Their susceptibility increases when this exposure occurs during armed conflicts. This is because of the severity of environmental destruction, the anarchy and confusion they are subjected to, and the inadequate care they experience due to the loss of parents and relatives.¹¹⁶ For example, the testing of military weapons and hardware releases chemicals and heat into the atmosphere, which causes air pollution.¹¹⁷ Furthermore, when bullets are fired, they release small particles of metal into the air.¹¹⁸ Air pollution causes respiratory diseases in children and, according to Landrigan and Garg, approximately two million children younger than five die annually from respiratory infections intensified by environmental damage.¹¹⁹ Environmental health risks during armed conflicts are more devastating for children in poor developing countries due to social and economic factors.

¹¹⁴ WORLD HEALTH ORG. & EUROPEAN ENV'T AGENCY, CHILDREN'S HEALTH AND ENVIRONMENT: A REVIEW OF EVIDENCE 12 (Giorgio Tamburlini et al. eds, 2002) [hereinafter CHILDREN'S HEALTH].

¹¹⁵ WHO PRINCIPLES, *supra* note 12, at 14.

¹¹⁶ *Id.*

¹¹⁷ C. Protopsaltis, *Air Pollution Caused by War Activity*, 157 WIT TRANSACTIONS ON ECOLOGY & ENV'T 93, 94 (2012).

¹¹⁸ *Id.* at 95.

¹¹⁹ Landrigan & Garg, *supra* note 31, at 6.

The health care system is considerably weakened in some countries as a result of armed conflict.¹²⁰ Due to an increase in diseases and injuries, health care services such as vaccination programs and maternal care are disrupted.¹²¹ The exposure of pregnant women to environmental hazards can result in complications during pregnancy and birth defects.¹²²

B. Contamination of Clean Water and Sanitation

Freshwater ecosystems include resources such as “drinking water, food, energy, irrigation, and transportation to essential services such as nutrient cycling, pollution dispersal, maintenance of biodiversity and flood protection.”¹²³ These resources are vulnerable during armed conflicts, which results in the reduction of access to water in communities. This is mostly due to the contamination of water bodies by military operations and chemicals, as well as the fear of attacks and abduction while trying to get water.¹²⁴ Water production systems may also be rendered useless when, for example, repair works are discontinued due to prolonged hostilities, insufficient spare parts, and inadequate maintenance.¹²⁵ Also, occupying powers frequently take over some portions of land, thus depriving people in such territories of the use of their water sources for various purposes.¹²⁶ Contaminated water can cause many life-threatening diseases including diarrhea, which has been estimated to cause about 12% of all deaths of children below five in developing countries.¹²⁷ It can also lead to other diseases including hepatitis B, cholera, dysentery, and typhoid fever.¹²⁸ Contaminated water kills fish and other forms of life in the sea, reducing the nutrition available to children, especially in communities that rely on fishing for sustenance. It is also difficult to maintain a clean environment without water.

¹²⁰ ALICE DEBARRE, INT’L PEACE INST., *HARD TO REACH: PROVIDING HEALTHCARE IN ARMED CONFLICT* 1 (2018).

¹²¹ Ayesha Kadir et al., *Effects of Armed Conflict on Child Health and Development: A Systematic Review*, 14 PLOS ONE 1, 21 (2019).

¹²² WHO PRINCIPLES, *supra* note 12, at 60.

¹²³ Francis, *supra* note 27, at 986.

¹²⁴ JASON GEHRIG & MARK M. ROGERS, *WATER AND CONFLICT: INCORPORATING PEACEBUILDING INTO WATER DEVELOPMENT* 5, 53, 116 (Dennis Warner et al. eds., 2009).

¹²⁵ Ameer Zemmali, *Dying for Water*, in *FORUM: WAR AND WATER* 32, 33 (1998).

¹²⁶ *Id.*

¹²⁷ Landrigan & Garg, *supra* note 31, at 5.

¹²⁸ *Id.* at 5.

C. Loss of Biological Diversity

All species enhance the quality and functionality of the ecosystem through their medicinal, historical, cultural, religious, and recreational values.¹²⁹ Armed conflicts are, however, a threat to these resources in several ways. Forests, plants, and animals are destroyed by chemical and nuclear weapons, as well as other military activities.¹³⁰ Non-state armed groups invade forests and use them as a form of cover, as well as a source of food, water, and medicine.¹³¹ According to Deanna et al., this invasion has affected “[t]hree-quarters of Asian forests, two-thirds of African forests and one-third of Latin American forests.”¹³² The animals in these forests, such as gorillas, rhinos, and elephants, are also poached and threatened during these conflicts.¹³³ Water bodies are corrupted and contaminated, which kills fishes and other important forms of life in the seas.¹³⁴ The destruction of natural resources results in the extinction of parts of the ecosystem and truncates the principle of sustainable development.¹³⁵ Future generations, therefore, do not get to know these species and experience the benefits they offer. They are deprived of opportunities to learn due to reduced resources,¹³⁶ which affects their development and reduces their effectiveness in contributing to their nation.

Services provided by the environment are essential for the wellbeing of children. They include “food, fuel, fresh water, medicines and other materials.”¹³⁷ A functioning ecosystem also helps in preserving a

¹²⁹ Damilola S. Olawuyi & Olaitan O. Olusegun, *Achieving the United Nations Sustainable Development Goals on Biological Diversity in Nigeria: Current Issues and Future Directions*, 7 GLOB. J. COMPAR. L. 37, 38 (2018).

¹³⁰ Lawrence et al., *supra* note 99, at 446, 448.

¹³¹ Jay E. Austin & Carl E. Bruch, *Legal Mechanisms for Addressing Wartime Damage to Tropical Forests*, 16 J. SUSTAINABLE FORESTRY 161, 162–63 (2003).

¹³² DEANNA DONOVAN ET AL., *EXTREME CONFLICT AND TROPICAL FORESTS 1* (W. de Jong et al. eds., 2007).

¹³³ Joseph P. Dudley et al., *Effects of War and Civil Strife on Wildlife and Wildlife Habitats*, 16 CONSERVATION BIOLOGY 319, 322 (2002).

¹³⁴ Lawrence et al., *supra* note 99, at 444–45.

¹³⁵ Sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”; U.N. Commission on Environment and Development, *Our Common Future* (1987). *See also* Olawuyi and Olusegun, *supra* note 129, at 48.

¹³⁶ Thomas Beery & Kari Anne Jørgensen, *Children in Nature: Sensory Engagement and the Experience of Biodiversity*, 24 J. ENV'T EDUC. RSCH. 14 (2018).

¹³⁷ Raf Aerts et al., *Biodiversity and Human Health: Mechanisms and Evidence of the Positive Health Effects of Diversity in Nature and Green Spaces*, 127 BRIT. MED. BULL. 5, 7 (2018).

variety of species in addition to controlling the climate, the quality of air, fertilization, and preventing pests and vector-borne diseases.¹³⁸ There is also growing evidence that children who grow up in natural environments have increased “cognitive, emotional, and physical benefits,” including the capacity to perform better academically, a decrease in stress levels, and a lower risk for obesity.¹³⁹ Exposure to greenness positively affects the blood pressure of adolescents and “beneficial microbiota in the environment during the early life” helps the immune system develop properly, reducing the risk of chronic inflammatory diseases.¹⁴⁰

D. Destruction of Public Institutions

Armed conflicts, especially protracted ones, usually result in the destruction of public facilities like schools and hospitals.¹⁴¹ Oil and energy infrastructure are also targeted, which has been evidenced in areas such as Libya, Syria, and Gaza.¹⁴² Waste disposal institutions may collapse, which affects the ability of authorities to respond to threats and dangers of waste pollution.¹⁴³ Children who are displaced and have lost their parents and relatives are especially excluded from the use of these services, and most of the displacement camps have to manage the services offered to them by host communities, whether sufficient or not.¹⁴⁴

E. Leisure and Play

The United Nations Convention on the Rights of the Child (UNCRC) acknowledges the importance of leisure and play to the development of children.¹⁴⁵ Environmental damage as a result of armed conflicts prevents children from having fun with their peers. Many of them are scared of being blown up or wounded by landmines.¹⁴⁶

¹³⁸ *Id.*

¹³⁹ Susan Strife & Liam Downey, *Childhood Development and Access to Nature: A New Direction for Environmental Inequality Research*, 22 *ORG. & ENV'T.* 99, 100 (2009).

¹⁴⁰ Aerts et al., *supra* note 137, at 6.

¹⁴¹ ACAPS, *DISASTER SUMMARY SHEET: ARMED CONFLICT 8* (2012).

¹⁴² Weir, *supra* note 85, at 7.

¹⁴³ *Id.*

¹⁴⁴ See Olaitan Olusegun & Adedokun Ogunfolu, *Protecting Internally Displaced Children in Armed Conflicts: Nigeria in Focus*, 9 *NOTRE DAME J. INT'L & COMPAR. L.* 34, 37 (2019).

¹⁴⁵ G.A. Res. 44/25, Convention on the Rights of the Child art. 31 (Nov. 20, 1989) [hereinafter UNCRC].

¹⁴⁶ BOYDEN ET AL., *supra* note 94.

Children who are heads of households, due to the loss or absence of their parents, are responsible for performing tasks in the home and providing food for themselves and their siblings. Therefore, they have neither the time nor the energy to play.¹⁴⁷ The inability to participate in leisure and play leads to feelings of loneliness and boredom.¹⁴⁸ Protracted conflicts means that the social lives of these children could be affected for the whole length of their childhood.

F. Inadequate Nutrition

Inadequate nutrition is caused by drought, famine, and poverty, which are more prominent in armed conflict situations.¹⁴⁹ This is because farmers usually do not have the opportunity to work on their agricultural lands, either due to displacement or the fear of being attacked.¹⁵⁰ Furthermore, the destruction of the environment through various methods of warfare is not handled appropriately, and resources are supplied to military budgets more than to developmental programs and drought relief.¹⁵¹ Children are highly susceptible to diseases due to inadequate breast milk or nutritious meals.¹⁵² WHO recommends the exclusive breastfeeding of infants for the first six months after the birth of the child, which should be accompanied by complementary food until two years of age.¹⁵³ Breastfeeding is very important for children as it reduces their risk of infection in infancy.¹⁵⁴ Under-nutrition reduces learning capacity and increases the rate of sicknesses in children by reducing their immune response.¹⁵⁵

¹⁴⁷ KENDRA E. DUPUY & KRIJN PETERS, *WAR AND CHILDREN: A REFERENCE HANDBOOK* 42 (2009).

¹⁴⁸ BOYDEN ET AL., *supra* note 94, at 55.

¹⁴⁹ Meedan Mekonnen, *Drought, Famine, and Conflict: A Case from the Horn of Africa*, *BEYOND INTRACTABILITY* (Sept. 2006), <https://www.beyondintractability.org/casestudy/mekonnen-drought> [<https://perma.cc/ZL6E-D8QK>].

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² WORLD HEALTH ORGANIZATION, *INFANT AND YOUNG CHILD FEEDING: MODEL CHAPTERS FOR TEXTBOOKS FOR MEDICAL STUDENTS AND ALLIED HEALTH PROFESSIONALS 1* (2009).

¹⁵³ *Exclusive Breastfeeding for Six Months Best for Babies Everywhere*, WHO (Jan. 15, 2011), https://www.who.int/mediacentre/news/statements/2011/breastfeeding_20110115/en/ [<https://perma.cc/G444-ZQK6>].

¹⁵⁴ *Infant and Young Child Feeding*, WHO (Aug. 24, 2020), <https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding> [<https://perma.cc/69V2-473Q>].

¹⁵⁵ LUCIANNE LICARI ET AL., *WHO EUROPE, CHILDREN'S HEALTH AND ENVIRONMENT: DEVELOPING ACTION PLANS 15* (2005).

IV

INTERNATIONAL LEGAL PROTECTION OF CHILDREN'S
ENVIRONMENTAL HEALTH IN ARMED CONFLICT

International humanitarian law (IHL) establishes the principle that parties involved in hostilities must observe some rules to preserve humanity in warfare.¹⁵⁶ It therefore regulates the means and methods of warfare during armed conflicts that, if respected, can preserve the environment in these periods.¹⁵⁷ The existing legal framework that protects children from environmental harm in NIAC is, however, not sufficient.

During the Vietnam War, the targeting of the environment during armed conflicts gained public consciousness when a toxic herbicide called "Agent Orange" caused massive pollution and deforestation.¹⁵⁸ This led to the creation of the 1976 ENMOD Convention, which has the primary objective of prohibiting the use of environmental modification techniques as a means of warfare.¹⁵⁹ Additional Protocol I to the Geneva Conventions was adopted in 1977, and Articles 35 and 55 prohibit "widespread, long-term and severe damage to the natural environment [during armed conflicts]."¹⁶⁰ Meron criticized these provisions as setting a threshold that is too high to secure a violation and effectively protect the environment.¹⁶¹ According to him, "[T]heir usefulness . . . for international armed conflicts is limited."¹⁶² In 1992, the UN General Assembly adopted a Resolution entitled "Protection of the Environment in Times of Armed Conflict,"¹⁶³ which prohibits the degradation of the environment that is not justified by military necessity.¹⁶⁴ As an outcome of the UN debate, the International

¹⁵⁶ INT'L COMM. OF THE RED CROSS, INTERNATIONAL HUMANITARIAN LAW: ANSWERS TO YOUR QUESTIONS, 3, 4 (2014).

¹⁵⁷ DAS, *supra* note 7, at 121, 122.

¹⁵⁸ Roman Reyhani, *Protection of the Environment During Armed Conflict* 14 MO. ENV'T L. & POL'Y REV. 323, 324 (2006).

¹⁵⁹ JAVAID REHMAN, INTERNATIONAL HUMAN RIGHTS LAW 803 (Pearson Education Ltd., 2010).

¹⁶⁰ Additional Protocol I to the Geneva Conventions art. 35, June 8, 1977, 1125 U.N.T.S. 3 [hereinafter API].

¹⁶¹ Theodor Meron, *Comment: Protection of the Environment During Non-International Armed Conflict*, in PROTECTION OF THE ENVIRONMENT DURING ARMED CONFLICT AND OTHER MILITARY OPERATIONS 353, 356 (Richard J. Grunawalt et al. eds., 1996).

¹⁶² *Id.*

¹⁶³ G.A. Res. 47/37, Protection of the Environment in Times of Armed Conflict (Feb. 9, 1993).

¹⁶⁴ *Id.*

Committee of the Red Cross (ICRC) issued some guidelines in 1994¹⁶⁵ that encourage parties to a NIAC to prohibit environmental damage in their military manuals.¹⁶⁶ According to the guidelines, States are expected to take necessary actions to prevent attacks on forests, crops, and objects necessary for persons to survive.¹⁶⁷ The 1998 Rome Statute of the International Criminal Court criminalizes violations of international law that occur during armed conflicts.¹⁶⁸ The statute includes an environmental war crime provision that prohibits attacks harmful to the environment.¹⁶⁹ This provision is similar to Article 35(3) of Additional Protocol I, which 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.”¹⁷⁰ However, both Article 8(2)b and the Additional Protocol I applies only to international armed conflicts.¹⁷¹

The legal framework that has been established to protect the environment during international armed conflicts is more comprehensive than laws regulating NIAC. There have thus been questions as to whether provisions regulating the means and methods of warfare as well as the general protection of civilian persons and objects can be resorted to in NIAC.¹⁷² For example, Additional Protocol II prohibits pillage,¹⁷³ while Article 14 of Additional Protocol II prohibits attacks on objects necessary for the welfare of populations including the natural environment and resources, such as lakes or rivers where fish are found.¹⁷⁴ Furthermore, Article 17 of Additional Protocol

¹⁶⁵ Int’l Comm. of the Red Cross, *Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict*, 311 INT’L REV. RED CROSS 230 (Apr. 30, 1996).

¹⁶⁶ *Id.* princ. 6.

¹⁶⁷ *Id.* princ. 9.

¹⁶⁸ U.N. Doc. A/CONF.183/9, Rome Statute of the International Criminal Court, art. 6, 7, 8 (July 17, 1998) [hereinafter Rome Statute].

¹⁶⁹ *Id.* 8(2)(b)(iv); ERIK KOPPE, *THE USE OF NUCLEAR WEAPONS AND THE PROTECTION OF THE ENVIRONMENT DURING INTERNATIONAL ARMED CONFLICT* 161 (2008).

¹⁷⁰ API, *supra* note 160, art. 35(3).

¹⁷¹ Tara Smith, *The Prohibition of Environmental Damage During the Conduct of Hostilities in Non-International Armed Conflict* 25–26 (May 9, 2013) (Ph.D. Thesis, Irish Centre for Human Rights School of Law).

¹⁷² Michael Bothe et al., *International Law Protecting the Environment During Armed Conflict: Gaps and Opportunities*, 92 INT’L REV. RED CROSS 569, 579 (2010).

¹⁷³ Additional Protocol II to the Geneva Conventions art. 4(2)(g), 1125 U.N.T.S. 609, June 8, 1977 [hereinafter APII]; JAMES G. STEWART, *CORPORATE WAR CRIMES: PROSECUTING THE PILLAGE OF NATURAL RESOURCES* 133 (2010); Smith, *supra* note 171.

¹⁷⁴ APII, *supra* note 173, art. 14.

II prohibits forced movements of civilians during armed conflicts.¹⁷⁵ This provision is thus violated when some parts of the environment are destroyed for the main purpose of forcing people to leave their homes in search of more peaceful places.¹⁷⁶ These acts could include destruction of water installations, contaminating water bodies, detonation of bombs, and damaging agricultural land.¹⁷⁷ The inadequacy of the legal framework protecting the environment in NIAC is a significant obstacle to the effective protection of children, as more contemporary armed conflicts are internal in nature.

Some international laws address the need for the promotion of healthy environments for children due to the awareness of their increased vulnerability. For example, the United Nations Convention on the Rights of the Child (UNCRC) provides that environmental pollution should be addressed to prevent harm to the health and well-being of children.¹⁷⁸ In 1990, the World Summit for Children adopted the *World Declaration on the Survival, Protection, and Development of Children*, where parties agreed to protect the environment to ensure the safety of children.¹⁷⁹ Agenda 21 also notes that children's health is affected by adverse environmental factors, even more than other groups of persons, which leads to their deaths from preventable causes.¹⁸⁰ These provisions are laudable, but need to be developed to be effective in NIAC and protect the environment, which in turn will improve the well-being of children.

V

ACHIEVING ENVIRONMENTAL PROTECTION OF CHILDREN IN ARMED CONFLICTS

This section discusses the steps that could be taken by relevant stakeholders to improve the well-being of children in countries where armed conflicts have taken place or will take place. This will ensure

¹⁷⁵ *Id.* art. 17.

¹⁷⁶ Smith, *supra* note 171, at 76.

¹⁷⁷ An example of forcible movement through environmental damage happened in Iraq, when the Marsh Arabs supported the Shi'ite Muslims in rebelling against Saddam Hussein's government in 1991. The government in return, drained the Mesopotamian Marshes and destroyed their rich ecosystem, which led to the displacement of approximately 200,000–400,000 people; Smith, *supra* note 171 at 76–77.

¹⁷⁸ G.A. Res. 44/25, Convention on the Rights of the Child art. 24(2)(c) (Nov. 20, 1989).

¹⁷⁹ World Declaration on the Survival, Protection, and Development of Children (Sept. 30, 1990); WHO PRINCIPLES, *supra* note 12.

¹⁸⁰ U.N. Conference on Environment and Development, *Agenda 21*, ¶ 6.19, U.N. Doc. A/CONF.151/26 (Vol. 1) (June 3, 1992).

that in these countries the impact of these conflicts on the environment, and subsequently, children, will be reduced.

A. Development of a Legal Framework

Over the years, the awareness of the need to protect the environment has increased globally due to an increase in the knowledge of environmental issues such as climate change, loss of biodiversity, pollution, and oil spills, among others. This increased level of awareness promoted the establishment of several laws that regulate contemporary issues affecting the environment.

However, the protection of the environment during armed conflicts has not received sufficient attention, and this is obvious in the existing legal framework, especially in NIAC.¹⁸¹ More importantly, children are not adequately protected, as existing laws do not specifically emphasize environmental effects, which children are particularly vulnerable to during armed conflicts. According to the ICRC, “[I]nternational humanitarian law in this area should be made more explicit and developed to safeguard the wellbeing and livelihood of present and future generations.”¹⁸² A new convention dealing with the protection of the environment in situations of armed conflicts, applicable in both international and NIAC, should be adopted.¹⁸³ The convention should criminalize environmental destruction in armed conflicts and specify the types of harm, as well as various degrees of liability.¹⁸⁴ Protected areas and sites should be clearly defined with measures on how to protect them.¹⁸⁵ Furthermore, States should reflect international law in national legislation and ensure that such law is enforceable. In Nigeria, laws have to be domesticated by the National Assembly before they can be enforced, as enshrined in Section 12 of Nigeria’s Constitution.¹⁸⁶ Enactment of laws should be followed by the

¹⁸¹ Indrè Lechtimiakytė, *Preservation of Environment in Times of Non-international Armed Conflict. Legal Framework, Its Sufficiency and Suggestions*, 20 JURIS. 569, 586 (2013).

¹⁸² Int’l Comm. of the Red Cross and Red Crescent, *Strengthening Legal Protection for Victims of Armed Conflicts*, 31IC/11/5.1.1, 19 (Nov. 28, 2011) [hereinafter ICRC: Strengthening].

¹⁸³ Lechtimiakytė, *supra* note 181, at 583.

¹⁸⁴ *Id.*

¹⁸⁵ *Id.* at 585.

¹⁸⁶ CONSTITUTION OF NIGERIA (1999), § 12(1); *Abacha v. Fawehinmi* [2000] 6 NWLR 228 (Nigeria).

prosecution of violators for the purpose of deterrence.¹⁸⁷ Compliance with existing rules should also be made a priority, and conscious efforts must be made to ensure that non-state parties comply. Compliance of IHL could be ensured through special agreements with armed groups who agree to limit environmental harm as well as the granting of amnesties to those who have not committed war crimes, all with a view of protecting children from environmental harm during armed conflicts.¹⁸⁸

B. Arms Control and Denuclearization Programs

More efforts should be made to control WMDs, as well as small arms and light weapons. It has been estimated that “875 million small arms are in circulation” globally and, of these, two-thirds are in the possession of non-state actors and civilians, while 100 million have been stated to be in Africa.¹⁸⁹ According to Esther Chelule,

[these weapons] increases the intensity and duration of armed conflict, undermines the sustainability of peace agreements, impedes the success of peace building, frustrates efforts aimed at the prevention of armed conflict, hinders considerably the provision of humanitarian assistance and compromises the effectiveness of the Security Council discharging its primary responsibility for the maintenance of international peace and security.¹⁹⁰

Treaties and declarations that have been established to regulate these weapons should be complied with and enforced by countries so as to ensure international cooperation and provide protection to the environment. United Nations member States are expected to submit a report of the transfer of major conventional weapons to the UN Register of Conventional Arms (UNROCA) annually.¹⁹¹ This reporting promotes transparency in international arms transfers and monitors the

¹⁸⁷ UNEP PROTECTING, *supra* note 8, at 6.

¹⁸⁸ For example, due to the alarming rate of deaths through landmines in Sudan, the Sudan People's Liberation Army (SPLA) in 1996 signed an agreement with the government of Sudan, committing itself to the demining of areas under its control, in respect for IHL. Furthermore, in Ethiopia, the ICRC in 1996 started negotiations with armed opposition groups such as the Oromo Liberation Front (OLF) and the Oromo National Liberation Front (ONLF) to persuade them to respect IHL; Churchill Ewumbue-Monono, *Respect for International Humanitarian Law by Armed Non-State Actors in Africa*, 88 INT'L REV. RED CROSS 905, 913–14 (2006).

¹⁸⁹ Esther Chelule, *Proliferation of Small Arms and Light Weapons: Challenge to Development, Peace and Security in Africa*, 19 INT'L ORG. SCI. RSCH. J. HUMAN. & SOC. SCI. 80, 81 (2014).

¹⁹⁰ *Id.* at 83 (quoting U.N. Security Council).

¹⁹¹ G.A. Res 46/36 L, ¶¶ 7, 9 (Dec. 6, 1991).

level of national implementation of obligations in relevant treaties. The level of reporting has, however, reduced in recent years due to security and political factors and should be resuscitated.¹⁹²

C. Coherence and Integration Between Environmental and Health Institutions

The attainment of good health cannot be achieved without sustainable environmental protection. It is therefore important that environmental and health institutions team up to address the effects of environmental degradation on children in armed conflict.¹⁹³ For example, health agencies and institutions in Nigeria, such as the National Primary Health Care Development Agency (NPHCDA)¹⁹⁴ and the National Agency for Food and Drug Administration and Control (NAFDAC), aim to protect the health of individuals.¹⁹⁵ On the other hand, environmental agencies, such as the National Environmental Standards and Regulations Enforcement Agency (NESREA), concentrate on protecting the environment.¹⁹⁶ To provide for a coordinated and holistic approach to environmental protection, these health and environmental agencies should work together.

D. Promoting Educational Programs

The impact of armed conflicts on the environment as well as the consequent implications on children are not sufficiently known.¹⁹⁷ People are also not aware that children should be specially protected

¹⁹² PAUL HOLTOM & MARK BROMLEY, STOCKHOLM INT'L PEACE RSCH. INST., IMPLEMENTING AN ARMS TRADE TREATY: LESSONS ON REPORTING AND MONITORING FROM EXISTING MECHANISMS 20 (2011).

¹⁹³ See FED. MINISTRY OF HEALTH OF NIGERIA, NATIONAL POLICY ON INTEGRATED DISEASE SURVEILLANCE AND RESPONSE (2005), <https://cheld.org/wp-content/uploads/2012/04/National-Policy-on-Integrated-Disease-Surveillance-and-Response.pdf> [<https://perma.cc/L6VT-L65A>] (last visited Mar. 29, 2021).

¹⁹⁴ NAT'L PRIMARY HEALTH CARE DEV. AGENCY, <https://nphcda.gov.ng/> (last visited Mar. 29, 2021).

¹⁹⁵ NAT'L AGENCY FOR FOOD & DRUG ADMIN. AND CONTROL, <https://www.nafdac.gov.ng/about-nafdac/nafdac-vision-and-mission/> [<https://perma.cc/4EN3-423L>] (last visited Mar. 29, 2021).

¹⁹⁶ NAT'L ENV'T STANDARDS AND REGULS. ENF'T AGENCY, <https://www.nesrea.gov.ng> (last visited Aug. 28, 2020); see G.A. Res. 2200A(XXI), art. 12 (2) (Dec.16, 1966); see also Audrey R. Chapman, *Core Obligations Related to the Right to Health*, in CORE OBLIGATIONS: BUILDING A FRAMEWORK FOR ECONOMIC, SOCIAL AND CULTURAL RIGHTS 185 (Audrey R. Chapman & Sage Russell eds., 2002).

¹⁹⁷ ICRC: Strengthening, *supra* note 182, at 28.

from environmental harm and threats around them. Another area where awareness is lacking is on the existing international laws that prohibit environmental damage.¹⁹⁸ It is therefore necessary that programs, seminars, workshops, and trainings are organized to provide relevant information to all stakeholders, so that adequate changes can be made.

Legal drafters and practitioners also require capacity-building programs, which would address how international law can be reflected, implemented, and enforced in national legislation.¹⁹⁹ More information on the relationship between the environment and the health of children is also needed by children, parents, teachers, and environmental authorities.²⁰⁰ NGOs need to promote relevant information, including the need to protect the environment during armed conflicts.²⁰¹

E. Establishment of Demilitarized Zones

To protect areas of major ecological importance and prevent a drastic loss of biological diversity as a result of armed conflicts, certain fragile environments, including national parks and territories of endangered species, should be prohibited from involvement in any form of military activity. These areas should be designated as demilitarized zones, either before the onset of an armed conflict or as soon as hostilities begin, with the implication that they will not be used for military activities. Such designation would require the agreement between parties to the conflict as well as the strengthening of laws that establish the prevention of environmental harm during armed conflicts.²⁰²

F. Post-conflict Assessment

Post-conflict environmental assessment is important as it helps to address the harm that could result from the damage that had been done to the environment during armed conflicts. Authorities conducting such assessment must have sufficient skill; expertise and knowledge of pollutants that can cause harm to children and where to find such pollutants; and knowledge of how the environment can be cleaned up to prevent havoc on children. However, there are some challenges that

¹⁹⁸ See API, *supra* note 160; Rome Statute, *supra* note 168; U.N. Convention on Biological Diversity (1992); The U.N. Framework Convention on Climate Change (1992).

¹⁹⁹ UNEP PROTECTING, *supra* note 8, at 6.

²⁰⁰ See CHILDREN'S HEALTH, *supra* note 114, at 64.

²⁰¹ HAY-EDIE ET AL., *supra* note 51, at 13.

²⁰² Int'l Conf. of the Red Cross, *Guidelines on the Protection of the Natural Environment in Armed Conflicts*, 14, 62 (2020).

might hinder post-conflict assessment. One such challenge is the lesser concern or significance assigned to the environment in humanitarian and post-conflict responses.²⁰³ The late response or lack of response leads to an increase in the injury of populations.²⁰⁴ Security is also another challenge, especially for prolonged NIAC, where it is difficult to determine whether such conflict has ended and when the post-conflict assessment can commence. This will make relevant authorities fearful of going to certain areas for assessment.²⁰⁵ Furthermore, such assessments require a lot of funds for the purchase of equipment, transportation, provision of security, and the payment of officials. Such funds may not be readily available, as the need to restructure and rebuild the society might be massive. International organizations should provide support to States that are recovering from armed conflicts with respect to environmental cleanup such as replanting trees that have been destroyed, cleaning waters that have been polluted, and ensuring the conservation of biological diversity. This support should be done in collaboration with national authorities and civil society organizations in the State.

G. Military Efforts

The military forces of countries should make conscious efforts to protect the environment. They should undertake an assessment of methods of warfare as well as the potential damage that could occur from the use of such methods.²⁰⁶ They should also modify or call off a planned attack that could cause harm to the environment. Damage to the environment can be reduced by using only the required weapons necessary to subdue opponents.²⁰⁷ These efforts will reduce the risk to

²⁰³ Weir, *supra* note 85, at 8.

²⁰⁴ *See id.*

²⁰⁵ In Nigeria, for example, there have been random abductions and killings of people by the Boko Haram sect, to the extent that people are still reluctant to travel to the North-Eastern parts of the state. *See* Abdulkareem Haruna, *Boko Haram Executes Five Aid Workers*, PREMIUM TIMES (July 22, 2020), <https://www.premiumtimesng.com/news/headlines/404486-breaking-boko-haram-executes-five-aid-workers.html> [<https://perma.cc/X3SZ-SPGT>].

²⁰⁶ For the obligation of states to take the environment into consideration in their weapons assessment, *see* KATHLEEN LAWAND ET AL., INT'L COMM. RED CROSS, A GUIDE TO THE LEGAL REVIEW OF THE NEW WEAPONS, MEANS AND METHODS OF WARFARE, 19–20 (2006); Karen Hulme, *Taking Care to Protect the Environment Against Damage: A Meaningless Obligation?*, 92 INT'L REV. RED CROSS 675, 682 (2010).

²⁰⁷ Hulme, *supra* note 206.

endangered species and fragile environments.²⁰⁸ During the Kosovo Conflict, for example, damage to the environment was reduced during attacks through the removal of hazardous chemicals in the attacked location.²⁰⁹

H. Civil Liability

Upon the cessation of armed conflicts, States need sufficient funds to clean up the environment.²¹⁰ Thus, civil liability should be placed on violators of relevant laws protecting the environment. According to Smith, “[C]ivil compensation has the potential to provide a rapid and satisfactory route by which environmental damage caused during armed conflict may be redressed as soon as possible after it occurs.”²¹¹ For adequate implementation of a civil liability measure, a compensatory commission, just like the United Nations Compensation Commission (UNCC), which was established to arrange for compensations for damage in the Iraq-Kuwait armed conflict, is important.²¹²

I. Addressing the Root Causes of Conflict

To prevent environmental harm and its effects on children in armed conflicts, it is important to address the root causes of such conflicts. According to the United Nations, pulling up the roots of conflict requires that the underlying conditions that led to conflict must be addressed, thus enhancing the prospect of achieving durable and sustainable peace.²¹³ Some of these root causes in the case of NIAC

²⁰⁸ *Id.*

²⁰⁹ U.N. Env't Program & U.N. Ctr. Hum. Settlements, *The Kosovo Conflict: Consequences for the Environment and Human Settlements* (1999), <https://reliefweb.int/sites/reliefweb.int/files/resources/finalreport.pdf> [<https://perma.cc/YU2G-LZKP>]; Hulme, *supra* note 206, at 675, 682.

²¹⁰ For example, after the invasion of Iraq by the coalition forces in the United States of America, funds were donated for the purpose of assisting Iraq to recover from the environmental damage that occurred. U.N. Env't Programme, UNEP in Iraq: Post- Conflict Assessment, Clean-up and Reconstruction (Dec. 2007), https://wedocs.unep.org/bitstream/handle/20.500.11822/17462/UNEP_Iraq.pdf?sequence=1&BisAllowed=.

²¹¹ Tara Smith, *Criminal Accountability or Civil Liability: Which Approach Most Effectively Redresses The Negative Environmental Consequences of Armed Conflict?*, in *INTERNATIONAL LAW AND ARMED CONFLICT: CHALLENGES IN THE 21ST CENTURY* 104 (Noelle Quenivet & Shilan Shah Davis eds., 2010).

²¹² S.C. Res. 687 (Apr. 8, 1991).

²¹³ U.N. Secretary-General, *Development and International Economic Cooperation: An Agenda for Development*, ¶¶ 16–40, U.N. Doc A/48/935 (May 6, 1994).

include poverty, economic deprivation, and poor governance.²¹⁴ Also, conflict should be defused in its early stages, instead of trying to address it when it has escalated.

CONCLUSION

Children are entitled to rights as established under several national, regional, and international legal frameworks.²¹⁵ Section 2 of the Child Rights Act 2003 provides that a child should be adequately protected and cared for, to preserve his or her well-being.²¹⁶ The rights that accrue to children do not apply during peacetime alone, but extend to periods of armed conflicts.²¹⁷ Armed conflicts cause significant damage to the environment, which affects the health, future, and well-being of children due to their vulnerability and the destruction of the support systems they normally rely upon. Their development and future can thus be ruined if they are not adequately protected from environmental harm caused by armed conflicts. Thus, the legal framework for their protection should be strengthened and enforced, while violators of these laws should be prosecuted. Protection in this regard could be challenging, thus all relevant stakeholders such as caregivers, health care providers, educators, environmental experts, and legal practitioners would have to work together to effectively safeguard the rights of the child to a healthy environment.

²¹⁴ Nancy Annan, *Violent Conflicts and Civil Strife in West Africa: Causes, Challenges and Prospects*, 3 INT'L J. SEC. & DEV. 1, 5 (2014).

²¹⁵ The rights of children are expressly stated in international instruments like the UNCRC, while the African Charter of the Rights and Welfare of the Child is an example of a regional instrument which protects children. National laws vary on the particular country. In Nigeria, for example, the Child Rights Act 2003 is a comprehensive law protecting various aspects of the child's life. Child's Right Act (2003) Cap. (A453) (Nigeria).

²¹⁶ *Id.* § 2.

²¹⁷ U.N. High Comm'r, *International Legal Protection of Human Rights in Armed Conflict*, 5, 6, 41, U.N. Doc. HR/PUB/11/01 (2011).

