

## Can Environmental Law of War Contribute to Environmental Wholeness?

**Dokun Oyeshola**

*Department of International Relations, Obafemi Awolowo University, Ile-Ife, Nigeria.  
e-mail [doyeshola@oauife.edu.ng](mailto:doyeshola@oauife.edu.ng)*

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### **Abstract**

Environmental degradation which may result in global warming, ozone layer depletion, deforestation, erosion, desertification, among others, is already established as one of the major difficulties confronting humankind in the face of development, progress, economic growth, science and technology. Accordingly, various efforts from diverse perspectives have suggested methods to tackle the problem. Conferences, treaties, research and so on come to mind. However, one major area through which a significant contribution could come has not been properly explored namely the law of war in peace and war times. War is still a continuation of foreign policy in the realization of national interest of nation states. Since war with its catastrophic consequences has not been outlawed, this study examines the existing regimes concerning the effect of war and military tactics on the environment and finds out that the provisions are inadequate and that there is a need to formulate a convention that will take care of all the loop holes.

**Keywords:** Environment, law, war, pollution, degradation, biodiversity, development, poverty, regime

### **Introduction**

There are many environmental regimes already in place as responses to environmental degradation. Many of these regimes are robust and challenging while some others are of less serious consequence. 'Environmental Law of War' belongs to the latter category; it is grossly inadequate and so there is an urgent need to establish a convention that will address the inadequacies. This paper tries to demonstrate the necessity for such a convention. The first part of the paper takes an overview of complexities and interconnectedness of environmental issues and discusses the induced environmental degradation due to military activities both during peacetime and war situation. The consequences of a 'nuclear' war are part of the discussion. This section is followed by an evaluation of the existing international environmental regimes. The third section concludes the paper by calling for a Geneva Convention on the International Environmental Law of War.

### **An overview of the complexities of environmental issues**

Living and non-living beings in their habitats on our planet constitute our environment. All animals including human, require a certain quality of air and water to maintain a healthy life-span and the British who responded to the threat by the introduction of the Clean Air Act 1956 gave its local governments (authorities) power to control emissions of dark smoke and to establish Smoke Control Areas. That legislation and later amendments were incorporated into the British Clean Air Act 1993.

Similarly, a large volume of legislation in contemporary times exists to safeguard scarce water supplies requiring minimum water quality standards. This is not unconnected with the fact that over the centuries the world's rivers and seas have been used not only as sources of food, but also as a cheap and convenient repository for human and industrial waste. In the past three decades, rivers, seas and water falls have become a leisure facility for bathing and water sports. Now, they have come to be recognized as the basis of unique ecosystems worthy of protection in their own right through the legislation of treaties and protocols. If the water and marine environment is to continue to perform these various roles in a sustainable manner, then unrestrained disposal of waste into the aqueous environment (marine pollution) poses an unacceptable threat. Similarly, the same can be said in respect of other forms of pollution and environmental degradation.

Individuals as well as states have an obvious self-interest in ensuring the prudent use of natural resources such as oil, coal and gas, not only to maintain present needs but also to protect the needs of future generations. Plants and animals, on the other hand, are widely perceived as a type of natural resource which, unlike coal and gas, constitute a resource capable of self-renewal, provided appropriate steps are taken to conserve existing populations. It is now apparent that the conservation of living resources (biodiversity) cannot be achieved merely by controlling their exploitation by humankind. In particular, plants and animals cannot be conserved merely by focusing on the preservation of individual species through controls over human activities impinging directly upon them. Their conservation also requires the preservation of their habitat and of related species as well as the non-living elements of the environment on which they depend (Birnie and Boyle, 1992).

Environmental degradation (Ozone layer depletion, global warming, deforestation, desertification and so on) is local, national and global in dimension and there is no part of our planet that can survive wholesomely without the rest (Kanugi *et al.* 1995). Consequently, it is erroneous for some political leadership and groups to think that environmental problems either nationally or globally can be ignored at least temporarily, until more pressing matters of economic growth and unemployment are adequately confronted. Such an orientation embodies false dichotomies. Environmental degradation is no respecter of boundaries and neither do the solutions to environmental degradation in its often multifarious forms warrant a single universal policy response. Nigeria, a country situated in the tropics is already overburdened by developmental problems and now environmental problems are added difficulties. It

has witnessed environmental degradation, which consists among others the ground and surface water contamination, air pollution, which is peculiar to urban centres, water hyacinth that affects the coastal waters and in some places water transport is grossly affected. Other areas of degradation, that is, renewable resources of degradation include deforestation, fishery losses, wild-life and biodiversity losses. Land resource degradation includes gully erosion, coastal erosion and desertification. Industrial pollution, oil-spillage and gas flaring are part of the environmental degradation Nigeria is experiencing (Oyeshola, 1995; Adeleke, 2003).

Both developmental and environmental problems are formidable in the tropics and the countries in the region have to face them squarely or face greater impoverishment and degradation. Environmental management is necessary and its major aim is to avoid stressing a valued ecosystem beyond the limits of its resilience and stability. The call to increase agricultural productivity has already induced especially many private sector operators to mechanize cultivation as well as the use of fertilizers, herbicides, pesticides and insecticides for increased yields. Such development if not well monitored and managed can be costly in environmental terms.

Environmental degradation has been confronted from so many fronts and in fact there are many regimes in place. However, one area is calling for immediate attention. The area is that of the military induced degradation. In the following section, I wish to discuss the issue of military induced environmental degradation both in the context of conventional and nuclear warfare. This will be followed by an analysis of the inadequacies or otherwise of the regimes in place in respect of law of war with a view to making some recommendations. This is particularly necessary because Africa is war and crisis ridden.

### **Military induced degradation of the environment**

In the context of conventional warfare, it may be observed that incidental and deliberate damage to the environment has been a part of warfare since ancient times, and three broad categories of war-related environmental destruction can be identified. The first involves destruction of the environment for 'active' military purposes. A major component of this class involves destruction of natural cover enjoyed by enemy forces. Another active military rationale for environmental destruction arises when opportunities are taken to destroy enemy forces or civilians by directly exploiting powerful environmental forces, for example by deliberate destruction of dams when the enemy is situated downstream.

The second category involves the destruction of the environment for economic purposes or 'passive' military purposes. This is always difficult to judge during the war. However, the rationale is often to destroy the economic war effort of the enemy. Destruction of oil-fields, oil-fires and oil-spills come to mind. In the case of oil-fires sooty smoke, component of acid rain, tons of sulphur dioxide and carbon dioxide are rendered into the atmosphere (Leggett, 1992).

The third category is collateral damage where facilities such as petrol-chemical and industrial infrastructure are targets. The type of weaponry used are relevant and may include for example, a cluster-bomb units (CBUs)-52/B which can destroy everything within 1.3 million square feet (more than 22 football fields). A CBU-75 can carpet-bomb 157 football fields (Leggett,1992).

Historically, destruction of forests and the release of waters have been standard procedures in the manipulation of the environment for hostile military purposes (Renner, 1991; Westing, 1988). In 1938, the waters of the Yellow River were released by dynamiting the Huaguanknow dike to hold back the advancing Japanese. During the second Indo-China War of 1961-75, the US made extensive use of herbicides to destroy the agricultural plants of the enemy. In 1986, South Korea regarded the North Korean proposal to construct the Kungangsan hydroelectric dam on a northern tributary of the Han River as an aggressive act. It was seen as a potential military threat because of its capacity to store up to 20,000 metric tones of water, which, if released, could submerge much of central Korea (Cowell, 1990). At the minimum, if the dam were to collapse, whether accidentally or by intention, the Seoul metropolitan area would be flooded, and the resultant chaos would facilitate the progress of an invading army (Small, 1991; Pain, 1991).

In the area of conventional weaponry, the effect of security based on the premise of armament, on the environment is best demonstrated in the Iran-Iraq war of 1980s and the Persian Gulf War in 1991. After an Iraqi attack in 1983, over half a million barrels of oil poured from a shattered drilling platform into the Gulf waters. In the 1991 Gulf War, Iraq let loose hundreds of thousands of barrels of crude oil from Kuwaiti facilities into the Gulf. Vast numbers of marine plants and animals died and the desalination plants on which Saudi Arabia's drinking water depends were disrupted. Most of Kuwait's 950 oil wells were set on fire creating toxic smoke that blocked out the sun and could negatively affect agriculture throughout south-western Asia for years. Within a few weeks of the wells' igniting, tens of thousands of Kuwaitis had left the country, complaining of burning throats and respiratory problems (Horgan, 1991).

The burning of the Kuwaiti oil fields by the retreating Iraqi army and bombardment of Iraqi chemical, biological and possibly even nuclear facilities by the multinational force in the 1991 Gulf conflict have brought in a new phase of environmental warfare. The precise effect of these actions on Kuwait and Iraq is not yet known, let alone on wider climatic conditions or on the South Asian monsoon. Even the peaceful destruction of lethal weapons, such as the nuclear weapons of the former Soviet Union can pose enormous environmental problems. In the same vein, the long-term health effects of the Chernobyl disaster of 1986 will take generations to unfold. Similarly, the future will reveal the full effect of the war led by the American forces against Iraq. In the context of Africa, the consequences of conflict are beautifully captured by Oyeshola (1998).

In the context of nuclear war scenario, nuclear weapons production is complex. One of its by-products is nuclear wastes that present long-term threats to the environment.

Plutonium, an essential component from which nuclear bombs are made, is so toxic that inhaling one millionth of an ounce can cause cancer; and it remains radioactive for thousands of years. So it will outlive any container that can be produced to 'bury' it. Already, US weapons programmes have generated 700 times more high-level nuclear wastes than those generated by commercial nuclear-power plants. In 1996, the US Department of Energy estimated that:

*3,700 sites in US weapons-manufacturing complexes could contaminate ground-water and threaten the environment in other ways. Some, like the 571-square mile (1,480-square-kilometre) Hanford Reservation in Washington State, already have so much radioactivity in their soil and underground water that they can never be reclaimed and will become 'national sacrifice zones' (Porter and Brown, 1996).*

Another area of risk based on nuclear weapons security strategy is in its nuclear-powered submarines and rockets. They constitute a potential threat to the global commons (Global Commons comprises the high seas and the deep sea-bed. It also encompasses outer space, global atmosphere and Antarctica that has been ascribed the status of a common 'through a 1959 Treaty which placed territorial claims in abeyance'. These areas belong to the international community. In other words, they belong to all). Of the world's 745 nuclear power plants by 1996, submarines contain 340. Their operations remain totally secret from the public. Between the former Soviet Union and the US, five nuclear-powered submarines have been lost at sea with an estimated total radioactive content that is 212 times greater than all the radioactive wastes known to have been dumped at sea deliberately (Arkin and Handler, 1989). Unfortunately, the London Dumping Convention of 1972 does not cover nuclear-powered submarines at sea.

At peace time, activities of military establishments on the environment can be devastating. With the retreat of the Soviet military from Eastern Europe at its demise, the government of Czechoslovakia discovered large-scale toxic pollution at military sites previously occupied by Soviet troops. Czechoslovakia ground water, in particular, has been seriously polluted by the Soviet military disposal of fuel

A similar pattern of environmental violence undertaken by the US military has emerged. The 871 US domestic military bases occupying 25 million acres (10.1 million hectares) of land have been producing more hazardous wastes every year than the five biggest US chemical companies combined. In addition, 'the costs of cleaning up nuclear weapons production facilities have been estimated at between \$130 and \$300 billion, not to mention the addition costs of long-term storage of radioactive wastes' (Porter and Brown, 1996). Both the costs of cleaning up nuclear weapons production facilities and the cost of cleaning up the environmental damage associated with military bases that has been estimated at \$20-40 billion annually are not charged to the defence budget.

Space exploration, mostly security oriented, presents its own problem because many of the satellites that are in use are nuclear powered. Wood-Kaczmar reported that in

the period of 1973-81, seven American Delta rockets exploded in space before the manufacturers McDonnell Douglas, realized their fate. Over the period 1964-86, the Soviets destroyed over thirty satellites for security reasons. The fragments of the destroyed satellites are in space. Half of the rubbish in space is the product of explosions deliberately or accidentally caused by the US and Russia. They are the major culprits of space degradation. The tiny fragments of rubbish traveling at a high velocity could cause fatal damage to spaceships and astronauts, as well as to space stations. Moreover, that damage will itself result in many more dangerous fragments in space (Thomas, 1992).

Military activities, even when there are no armed hostilities do present long-lasting and serious damage to natural systems and the health of living things. Military manoeuvres and war games, low-level test flights, the dumping of solvent and fuels, the procurement of excess and unnecessary materials which are wasted and discarded – all these contribute to the degradation of and violence to the common heritage of humankind (Oyeshola, 1995).

### **Consequences of a 'Nuclear' War**

Unlike conventional war, nuclear war has not taken place and so it is impossible to measure or speak categorically on the consequences of such a war on the environment. To our advantage however, a serious study has been undertaken at the request of the Senate Committee on Foreign Relations, during the Cold War era when the Office of Technology Assessment undertook to describe the effects of a nuclear war on the civilian populations, economies and societies of the United States and the then Soviet Union. The following was the finding as captured by Ehrlich *et al.* (1984).

*In an event of a nuclear war, the immediate consequences of a single thermonuclear weapon explosion are fireball radiation, prompt neutrons and gamma rays, blast and fires. There will be 'counterforce' attack. Most of the strategic airfields, missile silos, naval bases, submarines at sea, weapons manufacturing and storage locales, civilian and military command and control centres, attack assessment and early-warning facilities and the like are probable targets. 'Counter value' attack will also take place. Most 'war-supporting' facilities will be attacked. These facilities are necessarily industrial in nature and engage a workforce of considerable size. They are often located proximate to or in cities. Some of the 'war-supporting' targets may include the transport systems themselves (road, canals, rivers, railways, civilian airfields), petroleum refineries, storage sites and pipelines, hydroelectric and nuclear power plants, radio and television transmitters and so on. In effect a counter value exchange for example between the US and Russia might involve almost all large cities in the US and Russia and most of the large cities of the Northern hemisphere and definitely the Southern hemisphere may not be spared (Oyeshola, 1995).*

In relation to atmospheric and climatic consequences, at least half of the human population on the planet would be killed or seriously injured by the direct effects of a nuclear war. There will be a social disruption of unparalleled gravity in human history like the unavailability of electricity, fuel, transportation, food deliveries, communications and other civil services. Others may include rampant disease and severe psychiatric disorders would doubtless claim collectively a significant number of further victims. The ground bursts of nuclear weapons over cities and forests will tend to produce massive fires, in some cases over a total area of 100,000 square kilometers or more. The high temperatures in the fireball in nuclear explosion chemically would ignite some of the nitrogen in the air, producing oxides of nitrogen which in turn chemically attack and destroy the gas ozone in the middle stratosphere. As the ozone layer absorbs the biologically dangerous ultraviolet radiation from the sun, the partial depletion of the ozone layer will increase the flux of solar ultraviolet radiation at the surface of the Earth. Since nucleic acids and proteins, the fundamental molecules for life on Earth, are especially sensitive to ultraviolet radiation, the increase in the solar ultra-violet flux at the surface of the Earth is potentially dangerous to life (Oyeshola, 1995).

The dust and especially the dark soot that would absorb ordinary visible light from the sun, would heat-up the atmosphere causing darkness and cooling on the Earth's surface. Because temperatures are moderated by the adjacent oceans, temperatures in coastal regions will be less extreme than in continental interiors. However, the very sharp temperature contrast between the frozen continents and the only slightly cooled oceans will produce continuing storms of unprecedented severity along coastal lines and the preferential rainout and washout of radioactivity there indicate that neither continental interiors nor coastlines will be spared. Because of the obscuration of the sun, the daytime light levels could fall to a twilight gloom or worse. For more than a week in the northern mid-latitude target zone, it might be much too dark to see, even at midday. The average daytime over the entire Northern hemisphere would fall to about 0.1 percent of normal making it impossible for most plants to photosynthesize (Ehrlich *et al.*, 1984).

On the biological consequences front, medical care and other disaster-relief services would be essentially nonexistent. There would be no place for help to come from even if there are survivors after nuclear war. The ecosystem (biological community - plants, animals and microbes) that lives in one area combined with the physical environment in which those organisms exist may be destroyed for ever. Immune system of humans and the genetic material (DNA) may also be destroyed (Ehrlich *et al.*, 1984).

Reduced temperatures would have dramatic direct effects on animal population many of which would be wiped out by the unaccustomed cold. In addition, without the photosynthetic activities of plants, virtually all animals and human beings would cease to exist. Reestablishment of agriculture after the nuclear war would probably be difficult. Most crops are highly dependent on substantial subsidies of energy and fertilizers (Ehrlich *et al.*, 1984).

Finally, the possibility of a full-scale nuclear war exterminating homo-sapiens could not be ruled out. Below is the discourse of environmental regimes during war time.

### **Environmental regimes at war time**

Environmental principles are relevant only during peace time. Therefore, it is necessary to discuss the principles that are applicable during wars if the totality of environmental situation is to be captured. The discourse will be centred on normative principles of customary international law of war upon which those of the environment and international treaty prescriptions of law of war are based.

### **Normative Principles of Customary International Law of War**

The following is an overview of the normative principles of customary international law upon which the law of war is based. Even though, there is no single accepted text that formulates the principles of customary international law of war, there is a fairly wide consensus on the identity and purpose of these principles that can be classified into four main and two subsidiary principles (Falk, 1992). The principles of normative customary international law of war are:

- a. **Principle of Discrimination.** Weapons of war and tactics of the military must clearly discriminate between military and non-military targets and be confined in their application to military targets if they are to be lawful. Indiscriminate warfare is considered illegal while indirect damage to civilians and civilian targets is not necessarily illegal.
- b. **Principle of Proportionality.** Weapons and tactics must be proportional to their military objective. Disproportionate weaponry and tactics are excessive and as such, illegal.
- c. **Principle of Necessity.** Weapons and tactics involving the use of force must be reasonably necessary to the attainment of their military objective. No superfluous or excessive application of force is lawful, even if the damage done is confined to the environment, thereby sparing people and property.
- d. **Principle of Humanity.** No weapon or tactic can be validly employed if it causes unnecessary suffering to its victims, whether this is by way of prolonged or painful death or is in a form calculated to cause severe fright or terror. Accordingly, weapons and tactics that spread poison or disease or do genetic damage are generally illegal per se, as they inflict unacceptable forms of pain, damage, death and fear; all forms of deliberate ecological disruption would appear to fall within the sway of this overall prohibition.
- e. **Principle of Neutrality.** To be lawful, no weapon or tactic can be relied upon if it seems likely that it will do harm to human beings, property or the natural environment of neutral or non-participating countries. A country is neutral or non-participating if its government declares its neutrality and acts in a neutral manner, pursuing in relation to the armed conflict a policy that can be assessed to be impartial in view of its behaviour and situation.

- f. **Principle of Inter-generational Equity.** Again, to be lawful, no weapon or tactic can be employed if it inflicts pain, risk of harm and damage, or if it can be reasonably apprehended to do so upon those unborn.

### **Existing International Treaty Prescriptions of Law of War**

The nineteenth and early twentieth centuries could be said to be a serious starting point when attempts to develop the law of war upon broad normative mandates started and it is upon these attempts that subsequent efforts were based. The St Petersburg Declaration of 1868, despite proclaiming itself as a declaration, has come to be regarded as a binding agreement by the leading states of Europe to renounce the use of explosive or expanding bullets in wartime because of their cruel effects. It represented the first formal inter-governmental attempt to limit the tactics and methods of warfare, explicitly adopting the view that there are 'technical limits to which the necessities of war ought to yield to the requirements of humanity' and that 'the only legitimate object which states should endeavour to accomplish during war is to weaken the military force of the enemy'. In the background to the St Petersburg Declaration is the central humanitarian objective of avoiding unnecessary suffering on the part of combatants and other war victims, and the importance of shaping choices about the development of and reliance upon weaponry in the light of such limiting considerations.

The St Petersburg Declaration is important in two ways. First, it makes absolute claims of 'military necessity' to be rejected, subordinates and restricts the claims. At the same time, ad hoc considerations of military necessity were no longer allowed to prevail in the absence of specified prohibitions on weapons or targets (for example, nuclear weaponry). Second, the central notion that a mode of warfare must be relevant to a military purpose implies the 'illegality' of all models of behaviour that involve punitive or vindictive destruction, including, by implication, deliberate damage to resources, infrastructure and the environment (Falk, 1992).

Subsequent conferences added to and developed these provisions. Notably, the Hague Conferences of 1899 and 1907 produced a series of international agreements on various modes of warfare, on land and sea. These agreements, in many instances, remain the only codified formulation of restrictions on the generality of methods of warfare (often called the 'Hague' law to distinguish it from the mainly humanitarian objectives of the 'Geneva' law). Article 22 of The 1907 Hague Convention (IV) Respecting the Laws and Customs of War on Land expresses a general normative sentiment that has often been invoked against military extremism: 'The right of belligerents to adopt means of injuring the enemy is not unlimited'. Such a general directive provides a legal foundation in certain settings for an authoritative condemnation of contested belligerent practices (Falk, 1992).

Of related, and reinforcing, significant provision is the 'Martens Clause' that was included in the preamble to the Hague Convention (IV) of 1907, which is an insistence that states not adhering to the written laws of land warfare were nevertheless not liberated from legal restraint

*... the inhabitants and belligerents remain under the protection and the rule of the principles of the law of nations, as they result from the usages established among civilized peoples, from the laws of humanity, and the dictates of the public conscience.*

The Martens Clause is important because it confirms the persistence of customary international law in relation to belligerent practices not covered by treaty norms, and extends the law of war to states that have failed to accede to recent developments in treaty law. However, Falk (1992) points out that the true relevance of this purported applicability of customary norms depends on the existence of a forum or tribunal that can offer authoritative interpretations of contested practices.

It is pertinent to state that there was a lack of environmental consciousness until the mid-century and as noted from the above stated provisions, none had the environment specifically in view. This explains why international environment law is a relatively new branch of international law. Normative attention began to be directed toward environmental protection as a distinct public concern in 1972 on the occasion of the Stockholm Conference on the Human Environment which yielded the now famous Stockholm Declaration.

Principles 21 and 26 of the Stockholm Declaration are often referred to as foundational. Principle 21 confirms that states can 'exploit their own resources pursuant to their own environmental policies' but imposes 'responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction'.

This principle is not directly applicable to wartime, but it reinforces customary international law particularly activities that cause transboundary pollution, climate change or release of radioactive, chemical and biological agents into the atmosphere. Principle 26 insists that 'Man and his environment must be spared the effects of nuclear and other means of mass destruction'; states are implored 'to reach prompt agreement...on the elimination and complete destruction of such weapons'.

Several UN General Assembly resolutions deserve mention. Resolutions 2849 (XXVI), 2992 (XXVII) and 3129 (XXVIII) affirmed and confirmed 'the responsibility of the international community to take action to preserve and enhance the environment'. On 14<sup>th</sup> December, 1978 Resolution 3154 (XXVIII) deplored 'environmental pollution by ionizing radiation from the testing of nuclear weapons'. Resolution 3264 (XXIX) of 9 December, 1974 expressed the need 'to adopt through the conclusion of an appropriate international convention, effective measures to prohibit action to influence the environment and climate for military and other hostile purposes which are incompatible with the maintenance of international security, human well-being and health'.

Other relevant normative prescriptions include Article 35 of Protocol 1 of Geneva. Article 35(1) repeats Article 22 of the Hague Convention (IV) of 1907 to the effect

that there are limits on the means that a belligerent may adopt to injure an enemy in war. Article 35(2) repeats the customary norm prohibiting methods and means of warfare that cause unnecessary suffering and superfluous injury. Article 35(3) is the innovative provision, being concerned explicitly with environmental harm. 'It is prohibited to employ methods or means of warfare which are intended, or may be expected to cause widespread, long-term and severe damage to the natural environment'. Article 55(1) of Protocol 1 states that

*Care should be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition on the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to, prejudice the health or survival of the population'.*

Article 55(2) adds 'Attack against the natural environment by way of reprisals is prohibited'. Article 51(5) prohibits the merging of military targets in civilian areas, thereby sharpening the meaning of 'indiscriminate' in relation to bombardment of other means of attack; Article 54 prohibits methods and means of warfare designed to starve or displace civilians by attacking 'objects indispensable to the survival of the civilian population'. And Article 56 prohibits attacks upon dams, dykes and nuclear-power plants 'if such attacks may cause the release of dangerous forces and consequent severe losses among the civilian population'.

### **A critique of the existing international law of war**

The above normative principles do exist but their application in war situations is lacking (Bunker, 2004) particularly because their formulation is general and abstract. The effect of wars on the environment and human beings in the cases of civil wars of Liberia, Sierra Leone, Congo, and the Allied Forces and Iraq wars of 1990/91 and 2002 (Oyeshola, 1998) are testimonies to the lack of application of normative principles at war times. Key terms are unspecified in existing treaty instruments especially 'un-limited, treacherously, unjustly condemned, widespread, long-term, severe, etc.'. For instance, Articles 22, 23 and of Hague Rules 1907 respectively state

*The right of belligerent to adopt means of injuring enemy is not unlimited ... (art.22)*

*To employ poison or poisoned weapons*

*To kill or wound treacherously individual belonging to the hostile nation or army.*

*To kill or wound an enemy who having laid down his arms, or having no longer means of defence, has surrendered at discretion ... (art.23)*

*It is forbidden to attack or bombard, by any means whatever, towns, villages, dwellings of building that are not defended (25).*

Geneva Protocol 1925 states that

*Protocol on Abolition of Lethal and Other Cases The undersigned plenipotentiaries, in the names of their respective governments; whereas the use in war of asphyxiating poisonous of other gases and of all analogous liquid materials or devices has been justly condemned by the general opinion of the civilized world and ...*

What do un-limited, not defended and justly condemned mean?

The application of these principles to concrete circumstances is susceptible to extreme subjectivity and selectivity. The operational circumstances of legal prohibitions as clearly and concretely as possible and designated procedures for third-party adjudication are grossly neglected if at all present. Compared to the humanitarian law of war, the environmental law of war is dependent on the application of customary principles and on the sweeping generalization of Article 35(3) of Geneva Protocol 1. Such a dependency is a major deficiency, as considerations of military expediency are especially difficult to constrain in the absence of treaty norms (Bunker, 2004), and even allegations about enemy conduct tend to sound propagandistic if based purely upon such general, vague, prescriptive principles. There are virtually no avenues open for the implementation of existing environmental law of war. Sanctions are not enforceable and neither is there an adequate mechanism of monitoring. The Geneva Protocol 1 environmental prohibitions are not regarded as 'grave breaches' in Article 85(3), and hence do not necessarily count as 'war crime' which would entail potential sanctions and individual responsibility on the part of responsible decision-makers. Violations of environmental prescriptions are not clearly or explicitly stigmatized as 'criminal' like 'crime against humanity' in the case of genocide or ethnic cleansing. Because of these shortcoming features, the pedagogic and preventive functions of the law of war i.e. providing clear guidance to political leaders and military commanders, orienting public opinion and expert commentary, is not at all well-served. Indeed, the history of modern warfare shows the subordination, if not abandonment of these customary principles in time of war with post-war assessments of 'illegality' confined generally to the practices of the losing side. Examples like the World War II, Invasion of Kuwait by Iraq 1989, Allied Forces versus Iraq 1990/91 and 2002 abound.

## **Conclusion**

Our civilization is yet to be robust enough to outlaw wars as a way of resolving conflict among nations and as an instrument of foreign policy of nation states. Here and there are references to laws and treaties establishing the limit and strategies of war in order to minimize the damage war can leash on the environment. It is in this light that a renewed call by Bloom *et al.* (1994) for a Geneva Convention is mandatory even now, Environmental Modification Techniques (ENMOD) of Geneva May 18, 1977 notwithstanding. The convention may include some of the following principles namely that:

- The environment must not be used as a weapon.
- Weapons such as nuclear, chemical and biological destroying the environment must be banned.

- Attacks on infrastructure that cause pollution must be banned, the use of precision-guided weapons notwithstanding if they are targeted on sanitation facilities.
- Attacks on installations causing the release of radio activities or poisonous substances must be banned.
- Nature reserves and areas of special ecological importance must be demilitarized zones.
- An agency for environmental protection in time of war, similar to that which exists for humanitarian purposes in time of war would clearly be necessary.

Such a legal instrument would be a milestone towards the abolition of war. It would be a means of placing greater emphasis on conflict resolution and a means of raising the threshold for the use of force. A lot of resources would be available for none military spending and our environment becoming wholesome.

## References

- Adeleke, K. (2003) *Nigeria: People, Environment and Development*, Ako Amadi (Community Conservation and Development Initiatives), Lagos, pp.6-39.
- Arkin, W. and J. Handler (1989) 'Naval Accidents 1945-1988', *Neptune Papers*, No.3 Greenpeace and the Institute for Policy Studies, Washington, D.C.p.7.
- Bunker, A.L. (2004) 'Protection of the Environment During Armed Conflict: One Gulf, Two Wars' *Reciel* 13 (2), Blackwell Publishing, Oxford p. 201-213.
- Bimie, P. and A. Boyle (1992) *International Law and the Environment*, Clarendon, Oxford, 419.
- Bloom, S, J, Miller, J, Warner, and P. Winkler (eds) (1994) *Hidden Casualties: The Environmental, Health and Political Consequences of the Persian Gulf War*, Earthscan, London, p.370.
- Cowell, A. (1990) 'Now, A Little Stream, Later, Maybe a Water War' *New York Times International*, 7 February 1990 p. A4.
- Ehrlich, P., R. Sagan, C. Kennedy, D. W. O. Roberts (1984) *The Nuclear Winter*, Sidgwick and Jackson, London.
- Falk, R. (1992) 'The Environmental Law of War: An Introduction' in *Environmental Protection and the Law of War*, Belhavan Press, London, pp.83; 84.
- Horgan, J, (1991) 'Up in Flames' *Scientific American*, 264, May, 1991, pp.17-24.
- Kanugi, T., M. Iokibe, T. Shinyo, K. Hashinto (1995) *Towards a more effective UN*. PHP research Institute, Tokyo. p1.
- Leggett, J, (1992) 'The Environmental Impact of War: A Scientific Analysis and Greenpeace's Reaction' in Plant, G. (ed.) (1992) *Environmental Protection and the Law of War*, Belhavan Press, London, pp.71; 74.
- Renner, M., (1991) 'Assessing the Military's War on the Environment' in Brown, L. (ed.), *State of the World*, Norton & Co. for the Worldwatch Institute London, pp. 132-52.
- Oyeshola, D. (1995) *Essentials of Environmental Issues: The World and Nigeria in Perspective*, Daily Graphics Publications, Ibadan, pp. 14-17; 22; 23.

- Oyeshola, D. (1998) *Politics of International Environmental Regulations*, Daily Graphics Publications, Ibadan, pp.108-110
- Pain, S. (1991) 'Is Kuwait's Foul Air Fit to Breathe?' *New Scientist*, 26 October 1991 p.13.
- Porter, G. and J. Brown (1996) *Global Environmental Politics* Westview, Boulder Oxford, p.112
- Small, R. (1991) *Environmental Impact of Damage to Kuwaiti Oil Facilities*. Report, prepared for the US Defense Nuclear Agency, Pacific-Sierra Research Corporation, Santa Monica, pp. 11-12.
- Thomas, C. (1992) *The Environment in International Relations*, Royal Institute of International Affairs, London, p.150.
- Westing, A (ed) (1988) *Cultural Norms, War and the Environment*, Oxford University Press, Oxford.