

LAW REGARDING PROTECTION OF THE ENVIRONMENT DURING WARTIME

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Summary

Throughout history, war has harmed the environment; this has contributed in part to the untold human suffering it has caused. Since the beginning of the twentieth century, and especially since the end of World War II, the capacity of military technology to harm the environment has increased tremendously. In the wake of these advances in the capability for destruction have come advances in international law designed to reduce this destruction. Until the Vietnam War, protection of the environment was incidental to protection of property and, after World War II, of human rights. The unprecedented deliberate environmental destruction during the Vietnam War brought about a new body of law aimed specifically at the environmental consequences of war. This body of law is still in the very early stages of development, and its future direction seems uncertain. Insofar as there is a detectable trend, however, it is in the direction of increased environmental protection.

1. Introduction

Environmental damage has been part of war for as long as there has been war, and will probably continue to be part of war for as long as there continues to be war. Sometimes the environment itself is a target, as when the Romans sowed the soil of Carthage with salt or the retreating Iraqi forces ignited the oil wells of Kuwait. Sometimes the environment is attacked to prevent it from being used to the benefit of an enemy, as when the Americans defoliated the forests of Vietnam. More often, the environmental damage is incidental to the achievement of some military goal, as when the North Atlantic Treaty Organization (NATO) forces bombed the chemical storage facilities at Pancevo in Serbia.

The twentieth century brought about dramatic changes in the nature of armed conflicts and in the ability of those conflicts to damage the environment. In addition, the increase in human population and standards of living has placed a greater strain on the environment, making it more vulnerable. In the latter half of the century it became possible for warring parties to render countries, continents, and even the entire planet uninhabitable. International law has been forced to evolve to meet these new dangers; not surprisingly, that evolution is often a step behind advances in environmentally dangerous weaponry (see *International Law and the Use of Force* and *International Law Regarding the Conduct of War*).

2. Conventional International Law

2.1. The Hague and Geneva Regimes

Modern conventional international law regarding environmental damage during the conduct of war can be divided into two periods: before and after the Vietnam War. In that war, the forces of the United States carried out deliberate environmental destruction on an unprecedented scale. The war received an unprecedented level of media coverage; at the same time, well-organized environmental movements were emerging in the world's developed countries. The Vietnam War thus served as a watershed event in the development of this area of international environmental law.

Prior to this time, protection of the environment in international conventions regulating the conduct of war had been incidental. The environment had been protected, if at all, as part of more general limitations on the conduct of warring parties. The basic principle of restraint was expressed in the Declaration of St. Petersburg as early as 1868: “the only legitimate object which states should endeavor to accomplish during war is to weaken the military forces of the enemy.” At the outset of the twentieth century, it had already been incorporated into conventional international law: the 1899 and 1907 Hague Conventions Respecting the Laws and Customs of War on Land provided that “the right of belligerents to adopt means of injuring the enemy is not unlimited.” The 1907 convention also proscribed the destruction or seizure of the enemy's property, “unless . . . imperatively demanded by the necessities of war.” Since the environmental resources of a country are generally the property of a state or of its citizens, this provision might be construed as prohibiting wanton environmental destruction.

At the time of the Hague Conventions, weapons capable of causing massive environmental destruction already existed, although the technology for massive aerial bombardments did not. One particularly dangerous weapon was poison gas. The use of

poisons and poisoned weapons was prohibited by Article 23 of the 1907 Hague Convention. The earlier 1899 Hague Convention had produced a declaration (but not a convention) prohibiting the use of poison-gas projectiles, which were nonetheless used in Europe during World War I. After the war, the use of poison gas as a weapon was addressed much more effectively in the 1925 Geneva Gas Protocol.

This set a model that seems to have been followed repeatedly in the development of this area of international law, and perhaps others as well. First, a destructive technology is introduced or anticipated. The international community then imposes a weak prohibition on its use. The technology is used anyway, to disastrous effect. The international community then responds with a stronger, more effective prohibition.

The 1925 protocol, combined with the deterrent effect of retaliation in kind, was effective: poison gas has been used relatively rarely since then, and its use has almost always been condemned as a violation of international law. In preventing the use of other poisons, however, it has been less effective. Some theorists have argued that Iraq's release of oil during the Gulf War, when taken together with the subsequent burning of that oil to produce fumes, violated the 1925 protocol. This seems to extend the protocol beyond the purpose for which it was originally intended. However, the use by the United States of chemical defoliants on forests and agricultural lands in Vietnam and Laos during the Vietnam War probably violated the protocol, although the direct targets of the poisons were plants rather than people.

Perhaps the most significant technological change in the conduct of war during the twentieth century was the development of aircraft. From the end of World War I onward, aerial bombardment has made it relatively easy for military forces to attack targets well behind enemy lines, to such an extent that the concept of "lines" itself has become archaic. This has made it possible for civilian populations and industrial facilities to become targets on an unprecedented scale. In World War II, the United States, the United Kingdom, Japan, Germany, and Italy all carried out campaigns of aerial bombardment in which civilian populations were targets, as well as attacks on industrial facilities that led to massive environmental damage. World War II ended with the use of nuclear weapons against densely populated cities, with enormous loss of life and disastrous local environmental consequences. All of these attacks were carried out in violation of the spirit of the 1868 St. Petersburg Convention and the 1899 and 1907 Hague Conventions.

The era after World War II saw the emergence of modern concepts of human rights law. Although the idea of a right to a healthy and undamaged environment had not yet emerged, the first glimmerings of an awareness of environmental rights can be found in the post-war human rights documents. The four Geneva Conventions of 1949, adopted primarily to embody the new awareness of human rights law and prevent a recurrence of some of the atrocities of World War II, also contained the beginnings of modern concepts of environmental protection during wartime. The conventions prohibit the extensive destruction of property when carried out unlawfully and wantonly and not justified by military necessity. They also prohibit willfully causing great suffering or serious bodily injury or injury to health. As with the earlier Hague conventions, any

protection for the environment in these documents is incidental; environmental protection is a by-product rather than a primary goal of the Geneva conventions.

On the other hand, the Nuremberg war crimes trials after World War II included what may have been the first recognition of a purely environmental war crime. Nine German civilian administrators in occupied Poland were charged with “ruthless exploitation of Polish forestry” including “the wholesale cutting of Polish timber to an extent far in excess of what was necessary to preserve the timber resources of the country.” This exploitation violated Germany’s duty as occupier to safeguard Poland’s property.

2.2. The Vietnam War and Its Aftermath

It was the conduct of the United States during the Vietnam War that brought about a widespread awareness of the danger to the environment from war. In an effort to prevent the use of Southeast Asia’s forests as cover by the Viet Cong and North Vietnamese Army, the U.S. forces in Vietnam used aircraft to spray 200 million gallons of the herbicides Agent Orange, Agent White, and Agent Blue on Vietnam and Laos. As much as 10% of the total land area of South Vietnam may have been sprayed, of which about 86% was forest and 14% was agricultural land. “Rome plows”—tractors with cutting blades—were also used to clear 750 000 acres of land between 1967 and the end of the war. The U.S. also seeded clouds in an effort to increase rainfall, rendering Vietnam’s unpaved roads more difficult to use. Napalm and conventional bombing also damaged large areas of forest and agricultural land. These tactics cause the loss of 8% of the region’s agricultural land, 14% of its forests, and half of its wetlands.

The Vietnam War era corresponded with a growth in environmental awareness worldwide and with considerable new activity in the area of international environmental law (see *Oil Supply, Oil Security, and Environmental Objectives in International Law*). Reaction to the attack on Vietnam’s environment led to the adoption of two international conventions: Protocol I to the Geneva Conventions of 1949, and the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD).

2.2.1. Protocol I

Protocol I was drafted by the International Committee of the Red Cross between 1974 and 1977. The United States signed the protocol in 1978, but has not yet ratified it. The United States does, however, take the position that much of Protocol I is customary law and thus binding.

Most of the environmental protection provided by Protocol I is indirect, like all such protection previously. Article 35(1) reiterates the Hague Convention principle that “In any armed conflict, the right of the Parties to the Conflict to choose methods or means of warfare is not unlimited . . .” Protocol I also contains direct protections, however. Article 35(3) makes the protection in Article 35(1) specifically applicable to the environment: “It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term, and severe damage to the natural environment.” The question that immediately arises when attempting to apply

this standard is the definition of “widespread, long-term, and severe.” Despite numerous proposals to define these terms more specifically, they remain open ended.

Article 54 prohibits attacking, destroying, or rendering useless “objects indispensable to the survival of the civilian population,” including water supplies, when done to deny the water “for its sustenance value to the civilian population or to the adverse party,” or when likely to “leave the civilian population with such inadequate food and water as to cause its starvation or force its movement.”

Article 55, the most purely “environmental” provision in Protocol I, provides that “Care shall be taken in warfare to protect the natural environment against widespread, long-term, and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended to or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.”

Finally, Article 56 prohibits or severely restricts attacks on facilities containing dangerous forces: “Works or installations containing dangerous forces, namely dams, dikes, and nuclear electrical generating stations shall not be made the object of attack, even where those objects are military objectives, if such attacks may cause the release of dangerous forces from the works or installations and consequent severe losses among the civilian population.” This protection may be lost, however, if the facility is used in regular and direct support of military operations and if such attack is the only feasible way to terminate such support.

Some commentators have been willing to expand the definition of “works or installations containing dangerous forces” to include facilities for the manufacture or storage of poisonous chemicals. It is not at all clear, however, that this interpretation has been incorporated into the practice of states.

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Biographical Sketch

Aaron Schwabach is a Professor of Law at Thomas Jefferson School of Law in San Diego, California. Professor Schwabach previously taught at the University of Miami School of Law and Gonzaga University School of Law. He is the author of three books and numerous articles on international law. His published articles on international environmental law and the law of war include two on the environmental consequences of the war in Yugoslavia: Environmental damage resulting from the NATO military action against Yugoslavia, *Columbia Journal of Environmental Law* **25**, 117 (2000), and Humanitarian intervention and environmental protection: the effect of the Kosovo War on the law of war, *Columbia Journal of Eastern European Law* **6**, 405 (1999). Professor Schwabach earned his B.A. at Antioch University in Yellow Springs, Ohio, and his J.D. at the University of California at Berkeley (Boalt Hall).