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Mark J. T Caggiano

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THE LEGITIMACY OF ENVIRONMENTAL
DESTRUCTION IN MODERN WARFARE:
CUSTOMARY SUBSTANCE OVER CONVENTIONAL
FORM

*Mark J.T. Caggiano**

Laws are silent in time of war.

Cicero¹

I. INTRODUCTION

On January 22, 1991, during the Persian Gulf War, Iraqi armed forces deliberately released oil from two tankers into the Persian Gulf.² Several subsequent spills by the Iraqis increased the flow of oil into the Gulf.³ Initial estimates of the total amount of oil introduced into the Gulf ran as high as 11 million⁴ barrels,⁵ while later reports suggested that only 1.5 million barrels were spilled.⁶ One on-site investigator claimed that the figure was between 6 and 8 million barrels.⁷ Even assuming that the lowest estimate is correct,

* Production Editor, 1992-1993, BOSTON COLLEGE ENVIRONMENTAL AFFAIRS LAW REVIEW. The author would like to thank his wife Michelle for her patience and his newborn son Nicholas Christopher for his forbearance.

¹ *Pro Milone*, §4. While the laws of the nation, or *jus civile*, may have fallen silent in the wake of ancient wars, the laws of nations, or *jus gentium*, remained clear during the course of Roman combat. See, e.g. *infra* notes 34 & 35 and accompanying text. Special thanks to Dean Daniel Coquillette for his Latin translation and textual explanation.

² Abdullah Toukan, *The Gulf War and the Environment: The Need for a Treaty Prohibiting Ecological Destruction as a Weapon of War*, 15 FLETCHER F. WORLD AFF. 95, 96 (1991).

³ *Id.*

⁴ Amanda Brown, *Allies Begin to Clear-up World's Biggest Oil Slick*, Press Assoc. Ltd., Feb. 28, 1991, available in LEXIS, Nexis Library, Press Assoc. Newsfile.

⁵ A "barrel" contains approximately 42 gallons of oil. Interview with Richard Golob, Director of the *Oil Pollution Bulletin*, Jan. 22, 1992.

⁶ Charles Clover, *The Gulf War: Slick Threat Scaled Down By Saudis*, DAILY TELEGRAPH, Feb. 21, 1991.

⁷ Golob interview *supra* note 5. The normal manner of assessing the amount of spillage—

the effects of the spill upon the Persian Gulf marine ecosystem will be far reaching. The spill greatly curtailed fishing in the Gulf,⁸ threatened cormorant and sea turtle nesting areas,⁹ and poisoned rare mangrove trees.¹⁰ The giant oil slick posed a direct threat to the human population because of its anticipated destructive effects upon the Persian Gulf desalination plants which provide much of the potable water to the people of the arid Arabian Peninsula.¹¹

The oil release was only Iraqi President Saddam Hussein's first act of "environmental terrorism."¹² Toward the end of the Gulf conflict, during the February, 1991 retreat of Iraq's forces from Kuwait, Iraqi soldiers set ablaze 732 oil wells,¹³ presumably at the direction of President Hussein and his high command.¹⁴ Teams of observers estimated that the daily release of heat from these conflagrations was approximately 86 billion watts—similar to that of a five hundred acre forest fire.¹⁵ The fires created smoke clouds that stretched over hundred of miles, shrouding Kuwait, Qatar, Bahrain, the United Arab Emirates, and parts of Iraq, Iran, Oman, and Yemen with smoke and soot.¹⁶ The fires consumed approximately 4,600,000 barrels of oil daily and released 1,900,000 metric tons of carbon dioxide (CO²), 20,000 metric tons of sulfur dioxide (SO²), and 12,000 metric

gauging how much oil was in a tanker and then seeing how much is left in the tanker after the spill—was not applicable to the Gulf spill because oil was dumped from up to five different tankers and directly from an island pumping terminal. *Id.* Because there was no starting baseline for the oil spill calculations, the spill amount was extrapolated by experts from measurements of oil that collected on Saudi Arabian beaches to the south of the spill. *Id.*

⁸ Gilles Trequesser, *Prized Gulf Shrimp Latest Casualty of World's Worst Oil Slick*, Reuters, Feb. 18, 1991, available in LEXIS, Nexis library, Reuters file. Interestingly, one investigator claimed that although fish may have initially been adversely affected by the spill, the lapse in commercial fishing brought on by the fear of the war and contamination may have acted to increase the diminished fish population. Golob interview *supra* note 5.

⁹ Thomas Y. Canby, *After the Storm*, NAT'L GEOGRAPHIC, August 1991, at 16–17.

¹⁰ *Id.* at 25.

¹¹ See Canby *supra* note 9, at 14–15. It is important to note that these desalination plants also supplied water to the international coalition forces which threatened Iraq's position in occupied Kuwait. See, John M. Broder & Maura Dolan, *Iraq Unleashing Oil into Gulf*, L.A. TIMES, Jan. 26, 1991, at 1.

¹² Pat Towell, *The Oil Weapon*, 49 CONG. Q. WKLY. REP., 302, 302 (1991).

¹³ Golob interview, *supra* note 5.

¹⁴ Eyewitness accounts from Kuwaiti oil workers indicate that the detonation of the oil wells was a well coordinated strategy rather than a haphazard act of a defeated army. See Canby *supra* note 9 at 12. However, organization and premeditation do not necessarily transform Iraq's oil warfare from a concert of spite into a legitimate act of military necessity. See *infra* note 166 and accompanying text.

¹⁵ Sylvia A. Earle, *Persian Gulf Pollution: Assessing the Damage One Year Later*, NAT'L GEOGRAPHIC, Feb. 1992, at 129.

¹⁶ Earle, *supra* note 15 at 130.

tons of soot particles daily into the atmosphere.¹⁷ Nearly 10,000 workers from thirty-four countries, using 125,000 tons of equipment required eight months to extinguish all the fires.¹⁸ The Kuwaiti government estimated the value of the oil lost at \$12 billion (U.S.).¹⁹ Initial fears that the plumes of smoke would affect global weather patterns seem to have been unfounded,²⁰ although the smoke did effect local weather patterns.²¹ United States health and environmental agencies continue to monitor the effects of the oil spills and fires on the people of Kuwait as well as on the Persian Gulf environment.²² Experts can only guess at the long-term damage that this wide-spread environmental destruction has wrought.²³

With the end of hostilities in the Gulf War in February 1991, some members of the Congress have called for the establishment of a war crimes tribunal, to consider not only the abuses of human rights resulting from Iraq's invasion of Kuwait, but also for the environmental damage caused to the Persian Gulf environment.²⁴ The success of such efforts to prosecute President Hussein for "ecocide"²⁵ will depend in large part on whether his deeds are actionable under existing international law.

This Comment examines whether environmental destruction on the scale present in the Persian Gulf War is prohibited under existing

¹⁷ *Id.*

¹⁸ Matthew L. Wald, *Amid Ceremony and Ingenuity, Kuwait's Oil-Well Fires are Declared Out*, N.Y. TIMES, Nov. 7, 1991, at A1. The final well was actually extinguished on November 6th, but was reignited so the Emir of Kuwait could ceremoniously re-extinguish it. *Id.*

¹⁹ *Id.*

²⁰ Toukan, *supra* note 2, at 98-99.

²¹ *Id.* at 98; Earle, *supra* note 15 at 129. See D.W. Johnson *et al.* *Airborne Observations of the Physical and Chemical Characteristics of the Kuwaiti Oil Smoke Plume*, 353 NATURE 617, 621 (1991).

²² Earle, *supra* note 15, at 128-29. Some experts feel that it will be two or three years before the data is completely analyzed. *Id.* at 128.

²³ Golob interview, *supra* note 5.

²⁴ David Freed, *Hussein Trial Urged over Oil Damage*, L.A. TIMES, March 18, 1991, at A1 (Sen. John Kerry).

²⁵ "Ecocide" has been defined by one scholar as the use of certain acts with the "intent to disrupt or destroy, in whole or in part, a human ecosystem." RICHARD A. FALK, REVITALIZING INTERNATIONAL LAW, 188-89 (1989) ("Proposed Convention on the Crime of Ecocide"). Acts constituting ecocide include the use of weapons of mass destruction, whether nuclear, bacteriological, or chemical; attempts to provoke natural disasters such as volcanoes, earthquakes, or floods; the military use of defoliants; the use of bombs to impair soil quality or to enhance the prospect of disease; the bulldozing of forest or crop lands for military purposes; attempts to modify weather or climate as a hostile act; or the forcible and permanent removal of humans or animals from their habitual places of habitation on a large scale to expedite the pursuit of military or other objectives. *Id.* An expansive definition of "chemical weapons of mass destruction" could include crude oil.

customary and conventional international laws of war. Section II of this Comment explores the landscape of international law in general. Section III focuses in on the Law of War as embodied in conventions, treaties, and other international instruments. Section IV examines the role of customary international law in the context of armed conflict. Section V surveys the developing body of international law which prohibits the destruction of the environment by warring states. Section VI examines the applicability of this body of law to the Persian Gulf War and suggests some directions in which the international community may wish to look in order to address the ancient dilemma of environmental terrorism.²⁶

II. INTERNATIONAL LAW: CONVENTIONAL V. CUSTOMARY LAW

International law may be broken down into conventional law, which is based on treaties, conventions, or protocols—all equivalent terms—between nations; and customary law, which derives from the general practices of nations.²⁷ In such a document, states may agree upon certain issues regarding their respective responsibilities and may codify this consensus in written form.²⁸ The signing parties, or signatories, therefore clearly are aware of what is expected of them.²⁹

Some scholars have likened a treaty to a private law contract in that both simply create rights and obligations.³⁰ Under this analysis, treaties are contracts which use and reflect international law on a limited scale; reflect existing international law in a more elaborate manner—a declaratory or “codificatory” treaty—and create new ob-

²⁶ Even at the dawn of the Roman Empire, Roman troops razed the city of Carthage and sowed the surrounding land with salt. See *Saddam: Eco-criminal?*, 8 ENV'T L F. 10, 10 (1991).

²⁷ Bernard Schafer, *The Relationship Between the International Laws of Armed Conflict and Environmental Protection: The Need to Reevaluate What Types of Conduct are Permissible During Hostilities*, 19 CAL. W. INT'L L. J. 287, 288 (1989) (footnotes omitted).

“There are two primary sources of international law: conventions and customs. Conventional international law consists of multilateral or bilateral treaties that set out in detail the responsibilities of signing parties. Customary international law is more difficult to define. It is said to be ‘international custom, as evidence of a general practice accepted as law.’ It consists of two elements: an empirical, or general practice among nations; and a psychological element, or *opinio juris*, which shows that these nations have accepted this general practice as international law.” *Id.*

²⁸ See *id.*; see also David Kennedy, *The Sources of International Law*, 2 AM. U. J. INT'L L. & POL'Y 1, 33 (1987) (“hard basis in consent”).

²⁹ *Id.*

³⁰ See, e.g. MAARTEN BOS, *A METHODOLOGY OF INTERNATIONAL LAW* 58 (1984).

ligations which in time may become general customary international law.³¹

Customary international law is more amorphous than conventional international law, springing both from the general practice, or perhaps behavior, of states and from the global acceptance of this practice as law.³² Some central elements of customary international law include a common practice by a number of states within the domain of international relations; a continuation or repetition of the practice over a considerable period of time; a conception that the practice is required by or consistent with, prevailing international law; and a general acquiescence by states toward the practice.³³

Treaties also may have a significance that transcends their status as contractual undertakings, because these documents may indicate state practice attended by a legal conviction as to the practice's binding force.³⁴ In this sense, some treaties are a source of customary law. For example, when a large number of states ratify a treaty for the purpose of declaring their understanding of current international law on a particular subject or to lay down new rules of conduct for states, this indicates a development in the body of customary international law.³⁵

One common forum for disputes arising under international law is the International Court of Justice (ICJ). The Statute of the International Court of Justice, as annexed to the United Nations Charter, defines what body of law shall be considered by that international judicial body.³⁶ In this system of precedence, conventional law, in the form of treaties, protocols, or conventions—again, all terms referring to international agreements—is preeminent over custom-

³¹ *Id.*

³² *See id.* at 2, Kennedy *supra* note 28 at 33.

³³ BOS *supra* note 30 at 62; *see also* Richard B. Bilder, *An Overview of International Human Rights Law*, in GUIDE TO INTERNATIONAL HUMAN RIGHTS PRACTICE 11 (Hurst Hannum ed. 1986). Some scholars have suggested a more expedient system of "instant customary law." *See* Louis B. Sohn, *The Development of the Charter of the United Nations*, in THE PRESENT STATE OF INTERNATIONAL LAW (Maarten Bos ed. 1973) (*quoted in* BOS *supra* note 30, at 63). Under such a system, the resolutions voted on by the General Assembly of the United Nations, rather than serving simply as recommendations as specified by the U.N. Charter, would bind members of United Nations as international law. *Id.* This theory, however, has met with criticism. *See e.g.* BOS, *supra* note 30, at 63.

³⁴ Antonio Cassese, *The Geneva Protocols of 1977 on the Humanitarian Law of Armed Conflict and Customary International Law*, 3 U.C.L.A. PAC. BASIN J. 55, 58 (1984).

³⁵ JAMES LESLIE BRIERLY, *THE LAW OF NATIONS: AN INTRODUCTION INTO THE INTERNATIONAL LAW OF PEACE* 59 (1955).

³⁶ Statute of the International Court of Justice, Article 38, *reprinted in* 1983 U.N.Y.B. 1334.

ary law, which is in turn preeminent over scholarly works on international law.³⁷ This system closely follows the American common law system: statute, common law, secondary authorities.

The distinction between conventional and customary international law is clouded, however, when a state contravenes the tenets of a treaty to which it was not a party. For example, by deliberately dumping oil into the Persian Gulf and by setting ablaze the oil wells of occupied Kuwait, Iraq contravened several express provisions of the 1977 Protocol (I) Additional to the 1949 Geneva Conventions.³⁸ Iraq, however, has not signed or ratified the Protocol and therefore is not a party to it.³⁹ As under any private law contract, a party is not responsible for contractual provisions it has not signed onto—unless however these provisions represent a conventional embodiment of otherwise generally binding customary law.⁴⁰

In keeping with the assertion that customary law may grow out of developments in conventional law, one commentator has suggested that the international Law of War and international environmental law have begun to converge and now share a common value system.⁴¹

³⁷ *Id.*

³⁸ Protocol (I) Additional of the Geneva Conventions of 12 August 1949 and Relating to the Protection of Victims of International Armed Conflicts, signed Dec. 12, 1977, 6 U.S.T. 3516, T.I.A.S. No. 3364, 16 I.L.M. 1391 [hereinafter "Protocol I"].

"Article 35

1) In any armed conflict, *the right of the Parties to the conflict to choose methods or means of warfare is not unlimited.*

2) It is prohibited to employ weapons, projectiles and materials and methods of warfare of a nature to cause *superfluous injury or unnecessary suffering.*

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

2. *Attacks against the natural environment by way of reprisals are prohibited.*" *Id.* (emphasis added). See *infra* notes 78-96 and accompanying text.

³⁹ INTERNATIONAL COMMITTEE OF THE RED CROSS, COMMENTARY ON THE ADDITIONAL PROTOCOLS OF 8 JUNE 1977 TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949 1556-57 (1987). [hereinafter "Commentary"]. Neither the United States nor Iraq are parties to this Protocol. *Id.* Great Britain, France, Kuwait and Saudi Arabia, other major members of the Persian Gulf War coalition, however, are parties. *Id.*

⁴⁰ Therefore, the treaty simply restates the law as it already exists in the form of a custom. See RESTATEMENT (THIRD) OF LAW, THE FOREIGN RELATIONS LAW OF THE UNITED STATES, Pt. VI, at 102 (1987) (discusses customary aspects of Law of the Sea Convention which U.S. did not ratify); see also Cassese *supra* note 34 at 59 (multinational treaties can codify customary law while also making additions).

⁴¹ Schafer, *supra* note 27 at 287.

This common value system could be used by members of a war crimes tribunal to interpret various passages of the Law of War as proscribing certain environmental damage during armed conflict and prohibiting the manipulation of the environment for hostile purposes.⁴² The chronological development of modern treaties pertaining to the Law of War provides insight into this suggested convergence between the Law of War and the law of the environment by highlighting the existing conventional prohibitions against environmental destruction. This examination of the evolution of conventional international policy also has significant bearing on the subsequent development of *customary* international law.⁴³

III. THE DEVELOPMENT OF CONVENTIONAL LAW OF WAR

A. *The Law of the Hague*

In 1874, the nations of Europe met at a conference at which Alexander II of Russia proposed that they endeavor to gain control of the forces of war which had been unleashed in a number of bloody conflicts.⁴⁴ A treaty was drafted, but the governments of the attending states rejected this document, which was perhaps inevitable given the inflamed passions recent events had produced on the Continent.⁴⁵

In 1899, many of the leaders of the world accepted the unsigned treaty of 1874 in the form of the 1899 Hague Convention with Respect to the Laws and Customs of War on Land.⁴⁶ Several years later, in 1907, further restrictions on warfare were made in a number of associated treaties again negotiated at the Hague.⁴⁷

Generally, the 1907 Hague Conventions are the source of law that defines crimes of war.⁴⁸ This series of four treaties enumerates impermissible methods of warfare and limits the extent to which a

⁴² *Id.*

⁴³ See *infra* notes at 101-72 and accompanying text.

⁴⁴ SHELDON COHEN, ARMS AND JUDGEMENT 4 (1988).

⁴⁵ *Id.* at 5 (Franco-Prussian War).

⁴⁶ 1 AM. J. INT'L. L. SUPPL. 129 (1907) [hereinafter "Hague 1899"].

⁴⁷ Of greatest interest for the purposes of Saddam Hussein and his environmental warfare is the Hague Convention Respecting the Laws and Customs of War on Land (IV), Oct. 18, 1907, 36 Stat. 2277, T.S. no. 539, reprinted in U.S. NAVY DEPT., HAGUE AND GENEVA CONVENTIONS (1911) [hereinafter "Hague Convention IV"].

⁴⁸ DONALD WELLS, WAR CRIMES AND LAWS OF WAR, 8 (1984).

state may wage war.⁴⁹ In the context of environmental protection, the most relevant sections are Articles 23(a), 23(b), and 23(h) of Hague Convention IV.⁵⁰ These “environmental” provisions prohibit, for example, the use of poisonous weapons and the unnecessary destruction or seizure of enemy property.⁵¹

It is difficult, however, to analogize from these treaties to a modern military context. For example, armies historically directed poison and poison weapons at soldiers in the field or civilians rather than directly at the environment, thereby making it difficult to ascertain whether the protection these provisions seemingly afford to the environment was simply incidental to the protection of human beings and personal property.⁵²

The Hague Convention IV also limited the powers of an occupying military power—such as Iraq in occupied Kuwait—particularly when the victorious occupying forces attempt to plunder the seized lands.⁵³ The convention establishes a trust-like relationship in which the occupying state may enjoy the profits of the land, but must otherwise safeguard these properties, presumably in anticipation of their return to the occupied state’s government.⁵⁴

For example, after World War II, German civilian administrators who had operated in occupied Poland were charged with war crimes for excessively exploiting the Polish forests for timber during the Nazi occupation.⁵⁵ These administrators had harvested the Polish

⁴⁹ *E.g.* Hague IV, 36 Stat. 2277, T.S. no. 539, *supra* note 47, at 58–62. Prohibited methods of war include poison weapons and use of a flag of truce for treachery. *Id.* at 59, 62. Limitations on the scope of warfare include declaring “no quarter,” the unnecessary destruction of property, and the bombardment of “buildings dedicated to religion, art, science, or charity, historical monuments, hospitals, and places where the sick and wounded are collected, provided they are not being used at the same time for military purposes.” *Id.* at 59–60.

⁵⁰ Hague Convention IV, 36 Stat. 2277, T.S. no. 539, *supra* note 47, at 58–59. These articles respectively prohibit, “employ[ing] poison or poisonous weapons. . .to kill or wound treacherously individuals belonging to the hostile nation or army,” and “destroy[ing] or seiz[ing] the enemy’s property, unless such destruction or seizure be imperatively demanded by the necessities of war.” *Id.* at art. 23(a), 23(b), & 23(h).

⁵¹ *Id.*

⁵² *See*, FALK, *supra* note 25, at 171. The neglect of the environment as a distinct concern seems consistent with the overall view that nature exists solely for the use of humankind. *Id.*

⁵³ Hague Convention IV, Art. 55, 36 Stat. 2277, T.S. no. 539, *supra* note 47. “The occupying State shall be regarded only as administrator and usufructuary of public buildings, real estate, forests, and agricultural estates belonging to the hostile State, and situated in the occupied country. It must safeguard the capital of these properties, and administer them in accordance with the rule of usufruct.” *Id.* A “usufructuary” may be defined as one who has the right of enjoying anything in which he has no property. BLACK’S LAW DICTIONARY 1544 (6th ed. 1990).

⁵⁴ FALK, *supra* note 25, at 171.

⁵⁵ *Id.*

forests beyond what was deemed necessary to preserve the woodlands of the country, and thus contravened Germany's legal obligation to sustain the resource base of occupied Poland.⁵⁶ In the case of the Persian Gulf War, for example, Iraq clearly did not adhere to this obligation to preserve the resources of occupied Kuwait.⁵⁷

B. *The Law of Geneva*

Military strategists during World War I rather emphatically ignored the Hague stricture against the use of poisonous weapons.⁵⁸ In response to these transgressions, the nations of the world drafted the 1925 Geneva Gas Protocol, reaffirming the earlier ban on chemical and bacteriological weapons.⁵⁹ Nations have complied almost universally with this direct prohibition against the use of poison gas, causing some commentators to argue that the Geneva Gas Protocol has slipped into the realm of customary law.⁶⁰ Interestingly, one of the few nations believed to have used chemical weapons since the Geneva Gas Protocol came into effect is Iraq, which is alleged to have used chemical weapons against Iranians during the Iran-Iraq War.⁶¹

After World War II—a devastating conflict even without the use of poison gas—the Allies drafted treaties which further expanded the Hague Conventions in response to the war crimes of Germany, Japan and Italy.⁶² These new treaties focused mainly on protecting

⁵⁶ *Id.* at 172.

⁵⁷ Iraqi soldiers went so far as to eat animals in the Kuwait City Zoo. Canby, *supra* note 9, at 16.

⁵⁸ Jozef Goldblat, *The Environmental Modification Convention of 1977: An Analysis*, in ENVIRONMENTAL WARFARE: A TECHNICAL, LEGAL AND POLICY APPRAISAL 49–50 (Arthur H. Westing ed. 1984) [hereinafter ENVIRONMENTAL WARFARE].

⁵⁹ Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, June 17, 1925, 26 U.S.T. 571, 94 L.N.T.S. 65 [hereinafter "Geneva Gas Protocol"].

⁶⁰ See William O'Brien, *Biological/Chemical Warfare and the International Law of War*, 51 GA. L. REV. 32, 35 (1962). Many state parties to the Gas Protocol, however, have reserved the right to use chemical irritants, such as tear gas, in warfare and in domestic law enforcement and have reserved the right to use herbicides during warfare. Goldblat *supra* note 58, at 50. Additionally, the "five powers" limited applicability of the Gas Protocol to "first use" of gas weapons, reserving the right to *retaliate* with these weapons. *Id.*

⁶¹ FALK, *supra* note 25, at 169. Iraq, however, when signing the Gas Protocol, made certain reservations to the effect that it would not be bound by the Protocol vis-a-vis a non-Party to the Protocol. DOCUMENTS ON THE LAWS OF WAR 144 (Adam Roberts & Richard Guelff, eds. 1982). Iran has never signed the treaty. See *id.* If the Protocol has become international customary law, however, Iraq's reservations would not protect it because every state would be bound by the Protocol. In any event, Kuwait is a Party to the treaty. *Id.* at 142.

⁶² WELLS, *supra* note 48, at 8.

civilians and the wounded rather than on limiting the conduct of belligerent states *per se*.⁶³

In the context of environmental destruction, the 1949 Geneva Convention IV⁶⁴ contains language very similar to that of the Hague Convention IV prohibiting the destruction of private or public property unless rendered absolutely necessary by military necessity.⁶⁵ Unfortunately, this similarity of language seems to serve only to reaffirm the established Hague principles rather than provide further protection for the environment.⁶⁶ Additional efforts have been made by the nations of the world, however, to expand the Law of War so as to proscribe environmental destruction in the course of warfare.

C. Modern Developments in the Conventional Law of War Regarding the Environment

1. The Environmental Modification Convention

The nations of the world first specifically addressed the problem of environmental destruction in the course of warfare in the 1977 Environmental Modification Convention (En-Mod Convention).⁶⁷ The nations of the world drafted this convention in response to the massive, albeit unsuccessful, attempts by the United States to use weather modification to harass the North Vietnamese during the Vietnam War.⁶⁸ The convention obligates its signatories not to engage in military or other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage, or injury to any other State Party.⁶⁹

⁶³ *Id.*

⁶⁴ Geneva Convention Relative to the Protection of Civilian Persons in the Time of War, Aug. 12, 1949, 6 U.S.T. 3516, 75 U.N.T.S. 287 [hereinafter "Geneva Convention IV"].

⁶⁵ Geneva Convention IV, art. 536, U.S.T. 3516, 75 U.N.T.S. 287. "Any destruction by the Occupying Power of real or personal property belonging individually or collectively to private persons, or to the State, or to other public authorities, or to social or cooperative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operation." *Id.* See, FALK, *supra* note 25 and accompanying text.

⁶⁶ See *supra* notes 48—50 and accompanying text. One author has suggested that the Geneva provisions are not applicable to the Iraqi occupation. Rex. J. Zedalis, *Burning of the Kuwaiti Oil Fields and the Laws of War*, 24 VAN. J. OF TRANSNAT'L L. 711, 714, 729 (1991).

⁶⁷ 1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, 31 U.S.T. 333, T.I.A.S. No. 9614. [hereinafter "En-Mod Convention"]

⁶⁸ See STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE (SIPRI), WEAPONS OF MASS DESTRUCTION AND THE ENVIRONMENT 59 (1977).

⁶⁹ En-Mod Art. I(1), 31 U.S.T. 333, T.I.A.S. No. 9614, *supra* note 67.

Environmental modification techniques include any techniques for *deliberately* changing the dynamics, composition, or structure of the Earth, including its biota, lithosphere, hydrosphere, and atmosphere, or of outer space.⁷⁰

Unfortunately, the En-Mod Convention has been interpreted by scholars as encompassing only a limited variety of environmental manipulations.⁷¹ The modifications which seem to be at the heart of the En-Mod Convention involve directly using nature's power to attack a hostile enemy, such as by seeding clouds with chemicals to bring about rain or by calling down artificial lightning on enemy positions.⁷² Other highly destructive techniques, such as bombing dams and other water works to create flooding, are not specifically prohibited and are more practically useful to the military.⁷³

Moreover, under the En-Mod Convention, the scope of the destruction resulting from prohibited environmental modifications must be *wide-spread, long lasting and severe*.⁷⁴ The existence of this prerequisite threshold of damage as a part of the treaty allows for limited usage of environmental modification in the context of military operations as long as the results of the manipulations do not exceed the threshold.⁷⁵ Non-hostile uses are completely exempt from the prohibition, even if they produce destructive results above the threshold.⁷⁶ These significant textual deficiencies may account for

⁷⁰ En-Mod Art. II, 31 U.S.T. 333, T.I.A.S. No. 9614, *supra* note 67.

⁷¹ "[S]eemingly only those techniques of environmental modification beyond the scope of rational war-making have been forbidden, [while] what is militarily attractive remains permissible, or at least not explicitly prohibited, whereas that which is of no evident relevance to war-making is diligently proscribed." FALK *supra* note 25, at 167.

⁷² Goldblat *supra* note 58, at 55; *see also* Arthur H. Westing, *Environmental Hazards of War in an Industrializing World*, in ENVIRONMENTAL WARFARE *supra* note 58, at 6.

⁷³ The classic example of such environmental warfare occurred during the Second Sino-Japanese War, when the Chinese dynamited the Huayuankow dike of the Yellow River in an attempt to halt the marching Japanese forces. Goldblat *supra* note 58, at 55. This military tactic succeeded in drowning several thousand Japanese soldiers and halting their advance into China along this front. *Id.* The resulting flooding, however, ravaged three provinces and inundated several million hectares of farmland. *Id.* The human costs were staggering: eleven cities and 4,000 villages were flooded, killing at least several *hundred thousand* civilians and leaving several million homeless. *Id.* This little known act of environmental warfare, performed by a defending army, is perhaps the single most devastating act in all human history in terms of the number of lives claimed. *Id.*

⁷⁴ *Id.* at 54. "Widespread" is defined as encompassing an area on the scale of several hundred square kilometers; "long-lasting" implies lasting for a period of several months, or approximately one season; and "severe" involves serious or significant disruption or harm to human life, natural and economic resources, or other assets. *Id.*

⁷⁵ *Id.* at 56.

⁷⁶ *Id.* at 53.

the limited acceptance of the En-Mod Convention by the nations of the world.⁷⁷

2. Protocol I to the 1949 Geneva Conventions

The International Committee of the Red Cross has made further strides to protect the environment from the dangers of modern warfare. Additional Protocol I to the 1949 Geneva Conventions Treaty (Protocol I)⁷⁸ stresses, extends, and clarifies the environmental controls expressed in the Hague and Geneva Conventions.⁷⁹ Under this protocol's provisions, combatants must protect the environment against widespread, long-term and severe damage and must avoid methods or means of warfare which are intended or may be expected to cause such damage to the environment.⁸⁰ Parties to the Protocol must refrain from targeting objects and structures that are essential to the subsistence of the civilian population⁸¹ or which contain dangerous forces⁸² and may not make the natural environment the target of reprisals.⁸³

This seemingly curative document, however, is in many ways more seriously flawed than the ineffectual En-Mod Convention.⁸⁴ For example, the almost identical thresholds for environmental damage used in these two treaties are subject to significantly different interpretations.⁸⁵ The En-Mod Convention requires the presence of only one of its three threshold criteria—widespread, long lasting, or severe damage—for the prohibition to come into effect, while Protocol I has been interpreted by scholars as requiring all three of its criteria—widespread, long-term, and severe damage—for the convention to be applicable.⁸⁶ The textual interpretation of such similar

⁷⁷ *Id.*

⁷⁸ Protocol I, 6 U.S.T. 3516, T.I.A.S. No. 3364, 16 I.L.M. 1391, *supra* note 38; reprinted in COMMENTARY *supra* note 39, at 3.

⁷⁹ COMMENTARY, *supra* note 39, at xxxiv.

⁸⁰ Protocol I, Art. 55, 6 U.S.T. 3516, T.I.A.S. No. 3364, 16 I.L.M. 1391, *supra* note 38.

⁸¹ *Id.* at art. 35.

⁸² *Id.* at art. 56 (e.g. nuclear reactors.)

⁸³ *Id.* at art. 56. "Reprisals are such injurious and otherwise internationally illegal acts of one State against another as are exceptionally permitted for the purpose of compelling the latter to consent to a satisfactory settlement of a difference created by its own international delinquency." H. LAUTERPACHT, OPPENHEIM'S INTERNATIONAL LAW: DISPUTES, WAR AND NEUTRALITY §33 (1948).

⁸⁴ See *supra* note 71 and accompanying text.

⁸⁵ Jozef Goldblat, *The Mitigation of Environmental Disruption by War: Legal Approaches*, in ENVIRONMENTAL HAZARDS OF WAR: RELEASING DANGEROUS FORCES IN AN INDUSTRIALIZED WORLD 52 (Arthur Westing ed. 1990) [hereinafter "Goldblat II"].

⁸⁶ *Id.*

terms as "long-lasting" and "long-term" is also wildly divergent between the two treaties.⁸⁷

Furthermore, the very strengths of the Protocol have served to limit its efficacy. Some nations, in particular the United States, have been unwilling to restrict their military options by becoming parties to the Protocol.⁸⁸ Military strategists and sympathetic scholars are particularly disturbed by the environmental protections afforded under the Protocol.⁸⁹ These observers see the Protocol's environmental provisions as ambiguous and subject to divergent interpretation.⁹⁰

Additionally, some scholars argue that there should not be what is seen as a "should have known" standard for military commanders whose actions result in environmental damage above the Protocol's threshold.⁹¹ Under such a wide-reaching prohibition, commanders could be subject to war crimes charges for incidental environmental damage resulting from military operations.⁹²

Similarly, the restriction against bombing structures which contain dangerous forces would protect objects that would be considered legitimate military objectives to many nations under existing international law.⁹³ Although the Protocol would allow an attack on, for example, a nuclear power plant that directly supported an enemy's military operations by generating electricity, the Protocol would not allow an attack against the same plant if it was being used to produce weapons grade plutonium ostensibly for peaceful uses.⁹⁴ Under existing international law, an attack on such facilities containing dangerous forces would be illegal only if the attack in fact resulted in such an excessive number of civilian casualties that it could only be interpreted as an intentional attack on the civilian population.⁹⁵ The

⁸⁷ Negotiators of the En-Mod Convention understood the term "long-lasting" as something lasting for a period of a month, or for approximately a season. *Id.* at 52. "Long-term" as used in Protocol I, on the other hand, has been interpreted as meaning lasting for decades. *Id.*

⁸⁸ See, e.g., Martin Dupuis et al., *The Sixth Annual American Red Cross-Washington College of Law Conference on International Humanitarian Law: A Workshop on Customary International Law and the 1977 Protocols Additional to the 1949 Geneva Conventions*, 2 AM. U. J. INT'L POL'Y & L. 415, 434 (statements of Michael J. Matheson, U.S. State Dept.).

⁸⁹ *Id.*; Guy B. Roberts, *The New Rules of Waging War: The Case Against Ratification of Additional Protocol I*, 26 VA. J. INT'L L. 109, 148 (1986).

⁹⁰ Roberts *supra* note 89, at 148.

⁹¹ See *id.*

⁹² *Id.*

⁹³ Dupuis *supra* note 88, at 468 (remarks of Judge Abraham D. Sofaer, Legal Advisor, U.S. State Dept., Jan. 22, 1987).

⁹⁴ *Id.* at 468-69.

⁹⁵ Roberts *supra* note 89, at 156. See *infra* notes 129-130 and accompanying text (doctrine of proportionality).

ambiguous environmental protections created under the Protocol are seen by more hawkish commentators as serving only to hinder the military in an area which international law already encompasses.⁹⁶

These arguments have a counter-intuitive, and quite disturbing, underlying rationale. A spokesperson for the United States government has stated that one of the reasons the United States is unwilling to ratify the Protocol is that the treaty's environmental provisions would prevent military strategists from balancing civilian losses against the military values of targets.⁹⁷ The very purpose for the development of the humanitarian Law of War, however, is to protect civilians and to prevent nations from engaging in such military calculations.⁹⁸

Given this more progressive view, the Law of War, almost by definition, will grow more restrictive as it evolves, both in the conventional and customary contexts.⁹⁹ Military decision-making must be tempered by the humanitarian laws of war.¹⁰⁰ Therefore, it is important to understand the legal evolution, or customization, of conventional humanitarian law in the context of modern warfare.

D. The "Customization" of the Conventional Law of War

After World War II, the Nuremberg War Tribunal was established by the Allies to try Nazi war criminals.¹⁰¹ In the course of these prosecutions, the Tribunal recognized the Hague Conventions on Land Warfare of 1899 and 1907 as customary international law.¹⁰² Therefore, the law of the Hague would be binding even on states which had declined to ratify these treaties. Of particular significance, as outlined in the Hague Conventions, plundering public or private property or destroying cities and towns without adequate military justification became an actionable war crime under customary international law.¹⁰³

Additionally, some scholars have argued that certain portions of the 1949 Geneva Conventions have become customary law because

⁹⁶ Dupuis *supra* note 88, at 436.

⁹⁷ *Id.* at 468.

⁹⁸ See WELLS *supra* note 48, at 29.

⁹⁹ *See id.*

¹⁰⁰ *See id.*

¹⁰¹ FRANK M. BUSCHER, THE U.S. WAR CRIMES TRIAL PROGRAM IN GERMANY, 1946-1955 21 (1989).

¹⁰² See FALK *supra* note 25, at 169.

¹⁰³ *See supra* note 55-57 and accompanying text.

of the widespread acceptance of the treaties.¹⁰⁴ In fact, the ICJ has accepted certain portions of the Geneva Conventions as customary law.¹⁰⁵

Some writers, however, have criticized the ICJ's failure to discuss evidence in support of this significant legal transformation of convention into custom.¹⁰⁶ The large number of nations which accept the Geneva Conventions, rather than evidencing a development of well-accepted custom, may actually *obscure* the degree to which the treaties have become customary law.¹⁰⁷ As parties to the treaties, nations may be simply following their *conventional* obligations rather than forging new *customary* practices.¹⁰⁸ Because of this possibility, the Geneva Conventions paradoxically may remain conventional law rather than having evolved into customary law.¹⁰⁹ Presumably, customs cannot develop when widely subscribed to conventions already exist.¹¹⁰

Some scholars have even questioned the applicability of the law of the Hague, which has been generally accepted by the nations of the world as customary international law,¹¹¹ to some military situations.¹¹² Other writers have noted the unwillingness of some national courts to apply the Geneva treaties, even when the nation in question has ratified the treaties.¹¹³

For example, according to the Israeli Supreme Court, the law of the Hague, but not the law of Geneva, should apply to occupied areas of the West Bank and the Gaza Strip, even though Israel is a party to both the Hague and Geneva Conventions.¹¹⁴ The Israeli high court makes this distinction because the Geneva Conventions premise their applicability on the *sovereignty* of the land in question.¹¹⁵ Sover-

¹⁰⁴ "[I]f states parties comply with the Geneva Conventions in actual practice, verbally affirm their vital normative value, and accept them in *opinio juris*, states and tribunals will be reluctant to make and accept the argument that the law of Geneva is solely, or even primarily, conventional." Theodor Meron, *The Geneva Conventions as Customary Law*, 81 AM. J. INT'L LAW 348, 350 (1987). See also Esther R. Cohen, *Justice for Occupied Territory? The Israeli High Court of Justice Paradigm*, 24 COLUM. J. TRANSNAT'L L. 472, 483 (1986).

¹⁰⁵ Meron *supra* note 104, at 358.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 365.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ See *supra* note 102 and accompanying text.

¹¹² Nissim Bar-Yaacov, *The Applicability of the Laws of War to Judea and Samaria (the West Bank) and the Gaza Strip*, 24 ISRAEL L. REV. 485, 495 (1990).

¹¹³ Esther Cohen *supra* note 104, at 482-83.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

eighty over the West Bank and the Gaza Strip is a crucial issue in the Israeli-Palestinian dispute and therefore the law of Geneva is not applied by Israeli courts to these areas.¹¹⁶ Conversely, the law of the Hague does not contain such overt references to sovereignty, and as interpreted by the Israeli Supreme Court, does apply in the Palestinian situation.¹¹⁷

Additionally, some scholars have questioned the validity of the law of the Hague because of its technical obsolescence.¹¹⁸ The scope of military technology has outstripped the wording of the law of the Hague, and therefore scholars perceive the modern relevance of the treaty to be limited.¹¹⁹ This interpretation of obsolescence seems to hinge on an extremely static view of conventional international law. Even assuming this alleged lack of relevance, there remains a fundamental axiom from these early European treaties that acts of war should not cause unnecessary or disproportionate suffering with regard to the military advantages to be gained.¹²⁰ Such broad assertions do not stem from the pages of treaties but grow from the practice of nations.¹²¹ Although the wording of conventions may become obsolete with time, the development of custom surrounding these conventions creates a more timely and widely applicable source of law.¹²²

IV. CUSTOM AND THE LAW OF WAR

Although there is no single scholarly work which originated the principles of the customary Law of War, certain key principles governing the conduct of war can be readily identified by scholars.¹²³ These include the principles of *humanity*, *discrimination*, *proportionality* and *necessity*.¹²⁴

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ Hamilton DeSaussure, *Symposium on the 1977 Geneva Protocols: Introduction*, 19 AKRON L. REV. 521, 521 (1986).

¹¹⁹ *Id.*

¹²⁰ *Id.*; see *infra* notes 129–32 and accompanying text.

¹²¹ See generally *infra* notes 123–72 and accompanying text.

¹²² *Id.*

¹²³ Richard Falk, *The Environmental Law of War: An Introduction*, in ENVIRONMENTAL PROTECTION AND THE LAW OF WAR: A 'FIFTH GENEVA' CONVENTION ON THE PROTECTION OF THE ENVIRONMENT IN TIME OF ARMED CONFLICT 84 (Glen Plant ed. 1992) [hereinafter "Falk II"].

¹²⁴ *Id.* The author also posited that principles of *neutrality*—warfare may not injure neutral parties—and *inter-generational equity*—warfare may not risk harm to the unborn—are additional, well-grounded customary principles. *Id.*

The principle of humanity proscribes the use of methods of warfare which cause needless suffering in the form of protracted or painful death, or which are designed to inspire terror.¹²⁵ Poisonous, bacteriological, or teratogenic (gene-altering) weapons, for example, are unacceptable under this standard.¹²⁶

The principle of discrimination states that weapons and tactics clearly must discriminate between military objectives and civilian targets.¹²⁷ Indiscriminate attacks, which are illegal by definition, do *not* include attacks which indirectly cause collateral, or incidental, damage to civilians and their property.¹²⁸

The principle of proportionality requires that weapons and tactics must be geared proportionally toward their military objective.¹²⁹ Simply put, the military means employed must be balanced against the overall strategic end which is sought.¹³⁰

Similar to the principle of proportionality, the principle of necessity requires that military tactics involving the use of force must be reasonably necessary to the achievement of the desired objective.¹³¹ For example, a submarine attempting to avoid detection after torpedoing a ship may not kill the struggling members of the ship's crew, but must depart the area as quickly as possible.¹³²

One commentator has suggested that these four principles may be applied to instances of environmental destruction, whether done

¹²⁵ Falk II *supra* note 123, at 84.

¹²⁶ *Id.* See also WELLS *supra* note 48, at 34. Poison and perfidy—which encompasses treacherous acts such as the misuse of the flag of surrender—are two tactics which have generally been condemned as means of warfare. WELLS *supra* note 48, at 34. Of course, both poison and perfidy are techniques which give the weak power over the strong and, therefore, traditional notions of fairness may be rooted, in this instance, in traditional notions of the *status quo*.

¹²⁷ Falk II *supra* note 123, at 84. A military objective may be defined as, "those objects which by their nature, location, purpose, or use effectively contribute to military action. . . [and also] any object whose partial or total destruction, capture or neutralization offers a military advantage must be considered a military objective." L. Lynn Hague, *Identifying Customary International Law of War in Protocol I: A Proposed Restatement*, 13 LOYOLA L.A. INT'L & COMP. L. REV. 279, 300 (1990).

¹²⁸ *Id.*

¹²⁹ *Id.* Cf. Arthur W. Ravine, *Contemporary Practice of the United States Relating to International Law*, 67 AM. J. INT'L L. 118, 123-24 (1973). "[T]he war making potential of . . . [civilian] facilities may outweigh their importance to the civilian economy and deny them immunity from attack." *Id.*

¹³⁰ *Id.*

¹³¹ Falk II *supra* note 39, at 84. See also INGRID DETTER LUPUIS, *THE LAW OF WAR*, 336 (1987). "Where there is an alternative means of accomplishing the military goal, a more destructive option will not be sanctioned under military necessity." DETTER LUPUIS *supra* note 131, at 336.

¹³² DETTER LUPUIS *supra* note 131, at 336.

recklessly or intentionally.¹³³ In this regard, nations must examine the compatibility, and therefore the legality, of the use of new weapons with pre-existing principles of the Law of War.¹³⁴ For example, a new weapon or military tactic which has decidedly indiscriminate effects, causing uncontrollable harm to both military and civilian targets, is prohibited under the existing doctrine of discrimination.

Nations and their military operatives, however, may subvert these four limiting principles with a closely related yet antithetical doctrine, *military necessity*, which serves to validate rather than eliminate certain practices.¹³⁵ Military necessity is a subjective doctrine which "authorizes" military action when such action is necessary for the overall resolution of a conflict, particularly where the continued existence of the acting state would otherwise be in jeopardy.¹³⁶ Military necessity may therefore involve the balancing of military needs against lives, both military and civilian, in the overall context of war.¹³⁷

For example, during the Battle of Normandy in World War II, the Allied forces heavily bombed towns which contained both German soldiers and French civilians.¹³⁸ Although the loss of civilian life was great, these air battles provided the foothold the Allies needed to free France and later to conquer Nazi Germany.¹³⁹ Such a balancing of military needs over civilian lives is conceptually proper under the doctrine of military necessity.¹⁴⁰

Many commentators have criticized the problematic defense of military necessity.¹⁴¹ Many have decried the doctrine because it undermines the salutary effect of the humanitarian Law of War by

¹³³ Falk II *supra* note 123, at 84.

¹³⁴ *See id.*

¹³⁵ "There is no need to emphasize that [the doctrine of military necessity] is a dangerous and harmful doctrine, providing as it does a loophole, an excuse, for every conceivable situation." DETTER LUPUIS *supra* note 131, at 333. It is important to note that both the Hague and Geneva Conventions provide specific exceptions for military necessity. *Id.* at 334-35 (1907 Hague Convention IV, art. 23(g); 1949 Geneva Convention IV, art. 53).

¹³⁶ "When the existence or the necessary development of a state stands in unavoidable conflict with such state's treaty obligations, the latter must give way, for the self-preservation and development. . . of the nation are the primary duties of every state." BURLEIGH CUSHING RODICK, *THE DOCTRINE OF NECESSITY IN INTERNATIONAL LAW*, 44 (1928). The individual state's *sovereign* right of self-preservation, however, may not necessarily be recognized in an international forum as abrogating the state's conventional responsibilities in the greater forum of international law. *See id.*

¹³⁷ *See* COHEN *supra* note 44, at 29-31.

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *See, e.g.,* FALK *supra* note 25, at 168.

providing a defense for almost any breach.¹⁴² As long as military strategists alone determined what is militarily necessary, proportionality will remain mere prudence in the conservation of military resources rather than serve as a check against violence.¹⁴³ Furthermore, the doctrine does not serve as a regulatory limit in any real sense because a military commander's determinations of "necessity" made in the heat of battle will be almost impossible to second guess.¹⁴⁴ Only in retrospect, and then by the victorious judging the deeds of the vanquished, would wanton destruction create a basis for legal accountability.¹⁴⁵

The concept of military necessity is a great hindrance to international lawmaking because there is little reason, in the view of some scholars, for powerful, technologically advanced nations, such as the United States, to assume the burden of military restraints.¹⁴⁶ For example, American military planners consistently have resisted attempts—whether through conventional agreements or pronouncements of customary law—to limit "useful" military options that involve deliberate environmental destruction, such as the extensive use of herbicides in Vietnam.¹⁴⁷ Quite expectedly, attempts to limit the scope of the doctrine of military necessity also have not been well received by some scholars.¹⁴⁸

In fact, after the carnage of the world wars, some commentators noted that it had become almost impossible to judge exactly what military actions are excessive.¹⁴⁹ The concept of "total war" evolved

¹⁴² "The dictates of military necessity, as assessed by opposed leaderships, have taken consistent precedence over the laws of war in almost every critical aspect of belligerent policy." *Id.*

¹⁴³ WELLS *supra* note 48, at 29.

¹⁴⁴ FALK *supra* note 25, at 172. Some scholars have criticized what is seen as an inappropriate delegation of responsibility to field commanders for deciding in the heat of battle what is lawful and what is not. Goldblat II *supra* note 85, at 51-52; *see also* Lt. Col. Burrus M. Carnahan, *Additional Protocol I: A Military View*, 19 AKRON L. REV. 521, 544 (1986).

¹⁴⁵ FALK *supra* note 25, at 172 (discussing environmental destruction).

¹⁴⁶ *E.g.*, Richard A. Falk, *Environmental Disruption by Military Means and in International Law*, in ENVIRONMENTAL WARFARE: A TECHNICAL, LEGAL AND POLICY APPRAISAL 34 (Arthur H. Westing ed. 1984) [hereinafter "Falk III"].

¹⁴⁷ *Id.*

¹⁴⁸ For example, under Protocol I, potential targets that are not readily identifiable as military or civilian objects must be presumed to be civilian objects and therefore are not subject to attack. Roberts *supra* note 88, at 150-51. Some writers argue that such battlefield hesitation may have dire consequences for attacking military forces and that such presumptive civilian status would make modern warfare almost impossible. *Id.*

¹⁴⁹ "The conventional acts of war have become so barbaric that we are at a loss to identify the criterion by which excessive acts are to be identified. If Nazi concentration camps were excessive because they used cruel and excessive punishments, how does napalm escape such condemnation?" WELLS *supra* note 48, at 11.

from these two global conflicts in which the destruction of entire cities such as London, Berlin, Tokyo, Dresden, and most infamously Hiroshima and Nagasaki, became an acceptable military strategy.¹⁵⁰ For a nation, the final determining factor in a military conflict remains the survival of the state, and therefore the Law of War will fall before military necessity.¹⁵¹ Similarly, the German concept of *kriegsraison* broadly holds that any reason or necessity of war displaces the customs of war, and thus, potentially protecting the military success of even an individual operation or battle.¹⁵²

The doctrine of military necessity is a product of customary law and should therefore be subject to the same type of construction as other developing fields of international law.¹⁵³ Customary international law springs from a general consensus among nations, and therefore can serve to induce nations to act, or not to act, in certain ways.¹⁵⁴ Similarly, conventions, treaties, or other international agreements can assist in transforming a vague consensus or general feeling regarding proper state action into a precise legal norm that can be used as a measure for proper behavior, both by nations and by courts of law.¹⁵⁵ Even in cases not covered by existing military agreements, combatants and civilians remain under the protection of the principles of the law of civilized nations, the law of humanity, and the dictates of public conscience.¹⁵⁶ This broad-based protection was embodied in the Martens Clause of the Hague Conventions,¹⁵⁷ and it has long been accepted by scholars and international tribunals as customary international law.¹⁵⁸

The existence of customary law may in some ways be preferable to that of conventional law because the former exists generally for all parties, while the latter may require actuating legislation by the

¹⁵⁰ See FALK *supra* note 25, at 168.

¹⁵¹ *Supra* note 136 and accompanying text.

¹⁵² DETTER LUPUIS *supra* note 131, at 335. This doctrine has met with disapproval. *Id.*

¹⁵³ See *supra* note 135-45 and accompanying text.

¹⁵⁴ Jon Van Dyke, *The Riddle of Establishing Clear and Workable Rules to Govern Armed Conflict*, 3 U.C.L.A. PAC. BASIN J. 34, 36 (1984); see also Meron *supra* note 104, at 368 (development of Law of Geneva and parallel developments in customary law).

¹⁵⁵ *Id.*

¹⁵⁶ Goldblat II *supra* note 85, at 59.

¹⁵⁷ "Until a more complete code of the laws of war has been issued, the high contracting Parties deem it expedient to declare that, in cases not included in the Regulations adopted by them, the inhabitants and belligerents remain under the protection and the rule of the principles of the laws of nations, as they result from the usages established by civilized peoples, from the laws of humanity, and the dictates of public consciences." Hague Convention IV, 36 Stat. 2277, T.S. no. 539 (preamble); see also Hague 1899 (II) *supra* note 46, at 129 (preamble).

¹⁵⁸ Goldblat II *supra* note 85, at 59.

signatory, or signing party.¹⁵⁹ While a state party's failure to enact the necessary legislation to transform an international treaty into internal law cannot affect the international obligations of these countries, invoking a customary norm may be crucial in some situations for protection of the individuals concerned.¹⁶⁰ Commonly held beliefs or customs will be easier to pursue on a practical level, particularly in times of conflict, than the contractual subtleties of an international agreement.

In general, the customary Law of War rejects the claim that whatever is necessary for victory is acceptable.¹⁶¹ Although military necessity is a consideration, some weapons and tactics are forbidden absolutely, and remain criminal even if a war will be lost without their use.¹⁶² Military considerations cannot be the exclusive guide for military action, because such a characterization could be used by an aggressor to justify any action for almost any reason.¹⁶³ To allow military necessity to be the yardstick by which to measure military action forces the Law of War into a downward spiral of logical circularity—if it was done, it was necessary. Necessity is not an established fact, but an interpretation.¹⁶⁴

Following this unbridled view of military necessity, even the Nazi atrocities of World War II could be rationalized—Jews, gypsies, homosexuals and communists were viewed by the Nazis as posing an internal threat to Germany and therefore the systematic slaughtering of these groups was “militarily necessary.”¹⁶⁵ Similarly, the bombing of the Kuwaiti oil wells could be construed as a necessary covering action for the retreating Iraqi forces.¹⁶⁶ Such a broad in-

¹⁵⁹ Meron *supra* note 104, at 348–49.

¹⁶⁰ *Id.* For example, if the United States ratifies a treaty, but fails to enact federal legislation to initiate internal compliance with the treaty, the United States is still bound by the treaty. However, by arguing that the law is customary as well as conventional, the failure to enact the proper internal legislation is not even a procedural excuse because the customary law existed independently of the conventional codification.

¹⁶¹ COHEN *supra* note 44, at 35.

¹⁶² *Id.*

¹⁶³ FALK *supra* note 25, at 168.

¹⁶⁴ FRIEDRICH NIETZSCHE, *THE POWER TO WILL* §552(a) (Walter Kaufman ed. 1968).

¹⁶⁵ “For it will take a struggle [to establish a folkish state in Germany], in view of the fact that the first task is not to create a folkish state conception, but above all elimination [sic] of the existing Jewish one.” ADOLF HITLER, *MEIN KAMPF* 453 (1943); see also LUCY S. DAWIDOWICZ, *THE WAR AGAINST THE JEWS* 70 (1975) (“Elimination of the Jews from our community is to be regarded as an emergency defense measure.” Adolph Hitler).

¹⁶⁶ One expert, having witnessed the fires and the Iraqi defense in Kuwait, has questioned the underlying motivation for the fires. Golob interview *supra* note 5. While the Iraqis set hundreds of oil wells on fire, requiring a great deal of last minute time and effort by the retreating soldiers, they failed to ignite long trenches of crude oil, which had been carefully

terpretation of necessity, premised solely on the interpretations of military strategists, could sanction any military abomination and truly would make it impossible to regulate the conduct of war in any meaningful sense.¹⁶⁷

Although it seems clear that determinations of military necessity will always be fraught with problems of subjectivity, more stringent interpretations by scholars and by international tribunals would pressure military commanders to err in their decisions on the side of restraint.¹⁶⁸ The doctrine of military necessity, as a creature of international law, is only as broad as it is interpreted to be.¹⁶⁹ Therefore, customary practice regarding the extent to which a nation may inflict destruction on the environment must limit the doctrine of military necessity.¹⁷⁰ To leave determinations of military necessity solely in the hands of the belligerent parties would transform a powerful international check against violence into an ineffectual appeal to the conscience of a warring nation.¹⁷¹ The moral aspirations of scholars, whether in the form of feckless interpretations of the law or impotent conventions, serve no one.¹⁷² It is important to review modern developments in international law regarding the protection of the environment in addition to the Law of War in order to examine comprehensively the modern landscape of military necessity as it pertains to environmental destruction.

V. INTERNATIONAL ENVIRONMENTAL LAW

Several international tribunals have examined the question of whether a nation is free to use its territory for whatever purpose it

prepared as a defense against the American invasion. *Id.* This information seems to indicate that Saddam Hussein ordered the oil well fires to be set in one last hurried act of defiance rather than for military purposes.

¹⁶⁷ See FALK *supra* note 25, at 169.

¹⁶⁸ "Given the scarcity of actual practice, it may well be that, in reality, tribunals have been guided, and are more likely to continue to be guided, by the degree of offensiveness of certain acts to human dignity; the more heinous the act, the more the tribunal will assume that it violates not only a moral principle of humanity but also a positive norm of customary law." Meron *supra* note 104, at 361.

¹⁶⁹ See generally Schafer *supra* note 27 and accompanying text.

¹⁷⁰ See *id.*

¹⁷¹ "[T]he conscience of belligerents [is] frail support to rely on." JAMES LESLIE BRIERLY, *THE BASIS OF OBLIGATION IN INTERNATIONAL LAW AND OTHER PAPERS* 281 (1958). In fact, it has been suggested that the underlying legality of the belligerent's actions should be weighed in determining whether the exception of military necessity may be invoked at all. Zedalis *supra* note 66, at 751.

¹⁷² "While writers continued for generations to repeat that the law did make the distinction [between lawful and unlawful wars], their treatment of the matter took on more and more the aspect of a moral aspiration or of mere literary convention, and ceased to be an enunciation of a rule of law in the existence of which they genuinely believed." *Id.* at 282.

chooses, at the expense of nearby nations.¹⁷³ In the *Trail Smelter Case*, fumes from a Canadian smelting plant caused damage to land and citizens over the international border, in the United States.¹⁷⁴ An international tribunal convened to mediate the dispute held that, "no state has the right to use or [to] permit the use of its territory in such a manner as to cause injury by fumes. . . to the territory of another or the properties or persons therein."¹⁷⁵ Therefore, a nation may be held liable for its internal acts if the deleterious effects of these actions escape its territorial boundaries.¹⁷⁶

The ICJ has also issued certain decisions regarding the rights of nations which have been injured by another nation's use of its own property.¹⁷⁷ In the *Corfu Channel* case, two British warships were damaged when they struck Albanian mines.¹⁷⁸ The Albanian government did not report the presence of these mines to the world community.¹⁷⁹ The Court ruled, as a matter of customary international law, that Great Britain had a right to send its warships through the waters in question, and, more importantly, that it is every nation's obligation not to knowingly allow its territory to be used for acts contrary to the rights of other nations.¹⁸⁰ The ICJ's ruling confirms that the duty not to do harm to another, non-belligerent nation exists even in a military context.¹⁸¹

The international community has taken additional steps to respond specifically to environmental destruction in the course of warfare.¹⁸² In reaction to environmental abuses by the United States during the Vietnam War, the United Nations held an international conference on the environment in Stockholm.¹⁸³ At this conference, the partic-

¹⁷³ See e.g. *The Trail Smelter Case* (U.S. v. Can.) 3 REP. INT'L ARB. AWARDS, 1905 (1949).

¹⁷⁴ *Id.* at 1907.

¹⁷⁵ *Id.* at 1965. The case in question must also be of serious consequence and the injuries sustained must be established by clear and convincing evidence. *Id.*

¹⁷⁶ See *id.* at 1966.

¹⁷⁷ See, e.g. *The Corfu Channel* (U.K. v. Albania), 1949 I.C.J. 12 (vol.1).

¹⁷⁸ *Id.*

¹⁷⁹ Quincy Wright, *The Corfu Channel Case*, 43 AM. J. INT'L L. 491, 492 (1949).

¹⁸⁰ See *id.* The ICJ deemed the principles relied upon to be self-evident and stated them without precedent or authority. *Id.* at 494.

¹⁸¹ Many states which were not involved in the Persian Gulf hostilities, such as Iran and Yemen, were affected by the Iraqi oil spill and the Kuwait oil fires. Earle *supra* note 15, at 129.

¹⁸² See, e.g. *supra* note 67 and accompanying text. For a comprehensive, albeit cursory, survey of the modern military conventions which in some way deal with the environment, see Margaret T. Okorodudu-Fubara, *Oil in the Persian Gulf War: Legal Appraisal of an Environmental Warfare*, 23 ST. MARY'S L. REV. 123, 160-97 (1991).

¹⁸³ See SIPRI *supra* note 68, at 59. Some nations were particularly concerned by the United States' attempts at environmental modifications, that is cloud seeding and bombing dams and dikes to cause flooding, and its extensive use of herbicides on the Vietnamese jungles. *Id.*

ipants prepared twenty-six principles relating to the relationship and rights of humankind pertaining to the environment.¹⁸⁴

Soon after the preparation of the Stockholm Declaration, the General Assembly of the United Nations adopted the World Charter for Nature.¹⁸⁵ The Charter's provisions directly address the damaging effects warfare has upon the environment and specifically sought to limit environmental destruction in the course of warfare.¹⁸⁶ The General Assembly adopted the Charter almost unanimously, with only seventeen countries abstaining, mostly developing Third World nations, and a single vote against, cast by the United States.¹⁸⁷ Iraq, Kuwait, and Saudi Arabia did not even express reservations to the Charter.¹⁸⁸

Despite the overwhelming approval of these principles, General Assembly resolutions are not binding legislation in any sense, because they express recommendations rather than legal restrictions.¹⁸⁹ The wide consensus represented by these two United Na-

¹⁸⁴ Stockholm Declaration of the United Nations Conference on the Human Environment, June 16, 1972, U.N. Assembly Doc. A/Conf. 48/14/Rev. (1973); 11 I.L.M. 1416. [hereinafter the Stockholm Declaration]. Principles 6 and 7 are particularly relevant to the Gulf War problem:

6. The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, had to be halted in order to ensure that serious or irreversible damage was not inflicted upon ecosystems. The just struggle of the peoples of all countries against pollution should be supported.

7. States were to take all possible steps to prevent pollution of the seas by substances that were liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

Id. at 1418.

¹⁸⁵ 1981 U.N.Y.B. 1024-25.

¹⁸⁶ I. General Principles. . .

1. Nature shall be protected and its essential processes shall not be impaired. . .

2. Nature shall be secure against degradation caused by *warfare* or other hostile activities. . .

III. Implementation

14. The principles set forth in the present Charter shall be reflected in the law and practice of each State, as well as at the international level. . .

20. *Military activities damaging to nature shall be avoided.*

Id. at 1025, 1026 (emphasis added).

¹⁸⁷ *Id.* at 1026. The U.S. expressed difficulties with certain passages of the Charter that 1) suggested that the United Nations could in some way work to prevent natural disasters (paragraph 13), and 2) sought to create individual obligations under the Charter (paragraph 24). *Id.* at 1024.

¹⁸⁸ *See id.* at 1023-24.

¹⁸⁹ "[T]he General Assembly may *recommend* measures for the peaceful adjustment of any situation," Art. 14, Charter of the United Nations, *reprinted in* 1970 U.N.Y.B. 1001, 1003 (emphasis added).

tions documents, however, indicates that the world community, with one notable exception, agrees that the environment deserves protection from the ravaging effects of war. In the context of these documents and the instructive decisions in the *Trail Smelter Case* and *Corfu Channel*, it is clear that the world community should not countenance Iraq's military actions against the environment.¹⁹⁰

VI. THE LEGALITY OF THE ENVIRONMENTAL DESTRUCTION IN THE PERSIAN GULF WAR AND BEYOND

Iraq is not a party to the major military conventions which specifically prohibit environmental destruction. Iraq has not ratified either the En-Mod Convention or Protocol I to the 1949 Geneva Conventions.¹⁹¹ Iraq is, however, a party to both the Hague Conventions and the 1949 Geneva Conventions, which contain certain provisions which have been construed by scholars as protecting the environment.¹⁹² Although the specific environmental protections afforded by the more recent conventions, specifically the En-Mod Convention and Protocol I, are not applicable to Iraq, the earlier provisions are sufficient to address the environmental offenses committed in Kuwait.¹⁹³

This characterization of the early conventional law is particularly appropriate given the preexisting *customary* law limitations on warfare.¹⁹⁴ The customary Law of War contains numerous limitations on the extent to which parties may wage war.¹⁹⁵ An expansive interpretation of the laws of the Hague and Geneva which precludes the "oil warfare" of the Gulf War is both appropriate and defensible.¹⁹⁶ Although the existing law, conventional and customary, does not specifically proscribe the Iraqi actions, international law may be readily interpreted to encompass these military operations. A court

¹⁹⁰ See *supra* note 173-81 and accompanying text. Although I run the risk of being relegated to an intellectual "Camp" as propounded by a recent book on the environmental destruction of the Gulf War, the Law of War as it presently exists is broad enough to encompass the actions of the Iraqi military. Compare Glen Plant, *Introduction*, in ENVIRONMENTAL PROTECTION AND THE LAW OF WAR *supra* note 123, at 21. Although a new convention which serves to clarify the Law of War regarding environmental destruction would be a welcomed development, a reformulation of the law would have to be applied in an unacceptably *expos factos* manner to Iraq. See *id.*

¹⁹¹ COMMENTARY *supra* note 39, at 1556-57.

¹⁹² *Id.*

¹⁹³ See *supra* note 47 and accompanying text.

¹⁹⁴ *Supra* note 123-32 and accompanying text.

¹⁹⁵ *Supra* note 156 and accompanying text.

¹⁹⁶ See *supra* notes 173-91 and accompanying text.

of law, such as the International Court of Justice, or a war crimes tribunal, such as the Nuremberg tribunal, can be convened to weigh the evidence against Iraq and to apply the existing humanitarian laws of war.¹⁹⁷

There remain, however, several sticking points. Even if the nations of the world universally condemn the intentional destruction of the environment as a means of warfare, this abstract interpretation must be actualized. The United States and its allies soundly defeated Iraq and the Iraqi soldiers were forcibly ejected from Kuwait. Unfortunately, the world community has taken no steps to bring war crimes charges against the Iraqi government or individual soldiers for their deeds.¹⁹⁸

This hesitancy by the world community to enforce the laws of war allows nations acting under the guise of self-defense to wreak havoc on neighboring states. This reticence is particularly troubling now that Iraq has begun to once again defy the international mandate of the United Nations Security Council.¹⁹⁹ Saddam Hussein's forces have harassed Iraqi Kurds in the north and have bombed and strafed Shi'ite rebels in Iraq's southern marshes.²⁰⁰ The world remains tense in the wake of Saddam Hussein's continued aggressions towards Kuwait and the United States.²⁰¹

Moreover, the world community's failure to prosecute Iraqi war criminals seems to have set, or perhaps reinforced, an unacceptable precedent against pursuing war crimes prosecutions. In the wake of this global indecision, ethnic wars have overwhelmed the world theater. Serbian military forces have slaughtered civilians in Sarajevo and have imprisoned starving Bosnian muslims in concentration camps.²⁰² Rival Somalian clans squabble over humanitarian food shipments while children starve by the thousands.²⁰³ South African black political parties wage internecine warfare as the white government

¹⁹⁷ See, e.g., *supra* notes 177-81 and accompanying text.

¹⁹⁸ Although this article is chiefly concerned with the environmental crimes committed during the Gulf War, there were many instances of egregious human rights violations committed by the Iraqis prior to the allied military intervention in Kuwait. See generally L. Hague *supra* note 127.

¹⁹⁹ J.F.O. McAllister, *The Other Player*, TIME, August 10, 1992, at 30 (Saddam Hussein defies U.N. weapons inspectors and President Bush and then "retreats").

²⁰⁰ *Id.*

²⁰¹ Brian Duffy, *Saddam Hussein: The Energizer Bully*, U.S. NEWS & WORLD REPORT, Jan. 25, 1993 at 58.

²⁰² See J.F.O. McAllister, *Atrocity and Outrage*, TIME, August 17, 1992, at 21-24; Thomas C. Palmer Jr., *A Lesson Unlearned in Yugoslavia*, BOSTON GLOBE, August 9, 1992 at 69.

²⁰³ James Walsh, *Dilemma for the World*, TIME, August 17, 1992 at 29.

struggles to maintain its control over a predominantly black nation.²⁰⁴ The American victory in the Gulf War was expected to herald in a new world order, not precede a year of murderous ethnic intolerance.

VII. CONCLUSIONS

The nations of the world must act swiftly and resolutely to stem this growth of violence. The United Nations must establish a war crimes tribunal to investigate and to prosecute the Iraqi offenses against Kuwaiti, Kurdish and Shi'ite civilians as well as against the environment. The Nuremberg war tribunal stands as an example by which such a body could be designed.²⁰⁵

Some commentators may balk at the creation of such a tribunal because of the risk of visiting "victor's justice" upon the loser of a conflict.²⁰⁶ To minimize such a hazard, the judges of the Gulf War tribunal should be chosen from nations which took part in the war against Iraq, thereby limiting any victor's bias. Many countries took no part in the Gulf War coalition. Although there may remain a minimal degree of bias on the tribunal against Iraq, this must be risked. To allow otherwise would effectively immunize war criminals whose acts universally offended the world community: paradoxically, the more heinous the act as perceived by the world community, the less likely that the act will be questioned for fear of judicial bias against the perpetrators.

The prosecution of Iraqi war criminals also would send a signal to aggressor nations and political groups that their actions may be subject to the rigorous scrutiny of an international tribunal which has the power to convict and to punish. To reinforce this message, an international war crimes tribunal should remain in place as an integral part of the United Nations.

This international hesitancy to accuse war criminals seems to result from a perversion of the biblical admonition against casting the first stone.²⁰⁷ Many nations could be subject to similar human rights scrutiny and therefore any move to establish a war crimes tribunal might be seen as an invitation to self prosecution. Because of this seemingly guilt driven inertia, war crimes go unpunished and the continuing cycle of violence is reinforced.

²⁰⁴ Scott MacLeod, *Part of the Solution?*, TIME, August 10, 1992 at 42.

²⁰⁵ See *supra* notes 55-57 and accompanying text.

²⁰⁶ See FALK *supra* note 25, at 172.

²⁰⁷ "Let the man among you who has no sin be the first to cast a stone at her." *John* 8:8.

The Law of War exists, however, and it should be enforced. Civilians, as well as the environment, will suffer from continued abuses of the law. New conventions can be drafted and even ratified, but without proper enforcement, international law will remain an intellectual exercise rather than a normative force.

The time has come to put aside fears of being judged, as hard and impractical as that may sound. Only in this way will a stable situation come to pass in the post-Cold War era. To legitimize a move toward enforcement, the United States should be willing to submit to the jurisdiction of any proposed international war crimes tribunal. If America's leaders are willing to decry the Iraqi offenses and to denounce Serbian aggression, they should in fairness place America's own actions under similar international scrutiny.

If the United States cannot withstand such an international inquiry, perhaps it is time that the United States leadership re-examined its military policies and prepared itself for a new, and more peaceful, world order. America's leaders must decide whether the United States will herald in such global order, or will remain a passive harbinger of chaos. If the United States does not become an architect of a global solution, it risks remaining a key figure in the environmental problem.