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A Plea For The Total Ban Of Land Mines By International Treaty

NORMAN B. SMITH*

I. INTRODUCTION

A child picks up a curiously-shaped plastic object lying on the ground; her arms are blown off, she is blinded, and she receives horribly disfiguring facial wounds. A herdsman driving his cattle to water hears an ominous clicking noise underfoot, and, in a blinding flash, one of his legs is destroyed up to the knee, his other foot is mangled beyond repair, and his testicles are torn off. A woman, while gathering firewood, is suddenly enveloped in an explosive upsurge and suffers a spinal injury, rendering her a quadriplegic for life.

Victims of land mine¹ explosions are often innocent civilians,² who inadvertently cause the detonation long after military forces plant the mines.³ Unfortunately, in recent years, land mine warfare strategy has marked civilians as the intended targets, with the purpose to terrorize the population or to deny the use of territory.⁴

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1. Although the term "land mine" is used to refer to both antipersonnel and antitank mines, this Article focuses on antipersonnel mines. The term "mines" is meant to be synonymous with land mines and not to include underwater mines unless otherwise indicated.

2. Jack H. McCall, Jr., *Infernal Machines and Hidden Death: International Law and Limits on the Indiscriminate Use of Land Mine Warfare*, 24 GA. J. INT'L & COMP. L. 229, 231, 244-52 (1994).

3. These explosions sometimes occur months or even years after the mines have been placed. The American Claymore mine, for example, retains 70% effectiveness after more than twenty years in the ground. THE ARMS PROJECT OF HUMAN RIGHTS WATCH & PHYSICIANS FOR HUMAN RIGHTS, *LANDMINES: A DEADLY LEGACY* 66 (1993) [hereinafter THE ARMS PROJECT].

4. *Id.*

Regardless of whether civilian deaths and injuries are intended, or are simply reasonably expected by land mine warfare, such casualties conflict with well-established doctrines of international law. These doctrines condemn unnecessary infliction of suffering, casualties disproportionate to military advantages, failure to protect civilians, use of non-targeted and indiscriminate weapons, and unjustified taking of life and invasion of bodily integrity.

The 1980 Convention on Prohibition or Restrictions on the Use of Certain Conventional Weapons ("Conventional Weapons Treaty")⁵ aims, in part, to regulate land mines. A number of states that incorporate heavy usage of land mines in their military strategy, however, have not ratified the treaty.⁶ More importantly, the Conventional Weapons Treaty fails to regulate effectively the use of land mines.

This Article surveys the relentless tragedy wrought by the indiscriminate use of land mines and the conflict such use presents with principles of international law. Part II of this Article briefly describes the nature and types of land mines and discusses their toll in terms of human casualties and economic costs. Part III examines principles of customary international law in the context of the use of land mines. Part IV briefly outlines the shortcomings of the Conventional Weapons Treaty.⁷ Part V calls for a new international treaty that absolutely bans land mines and mentions encouraging steps recently taken by several nations to cease international trade of land mines. This Article concludes that in order to uphold the principles of customary international law, the International Conference on Conventional Weapons, convening in 1995, must produce a treaty that completely and effectively prohibits the production, possession, and use of land mines.

5. Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, *opened for signature*, Apr. 10, 1981, U.N. DOC. A/CONF.95/15, 19 I.L.M. 1529, 1530 (hereinafter Conventional Weapons Treaty).

6. See *infra* note 118 and accompanying text. The United States is one of these nations. United States military strategy incorporates the use of land mines. McCall, *supra* note 2, at 233 n.25 (quoting U.S. DEP'T OF THE ARMY, FM 5-100, ENGINEER COMBAT OPERATIONS 48 (1988)). The United States signed the Conventional Weapons Treaty; however, it did not ratify the treaty. *Id.* at 265.

7. For an extensive review of the Conventional Weapons Treaty as it relates to the use of land mines, see McCall, *supra* note 2, at 252-66.

II. LAND MINES AND THEIR UNCONSCIONABLE HUMAN TOLL

A "land mine" is defined as "any munition placed under, on, or near the ground or other surface area and designed to be detonated or exploded by the presence, proximity, or contact of a person or vehicle."⁸ Military forces employ many different types of land mines. Principal varieties of mines include blast mines, which explode when stepped upon; fragmentation mines, which disperse fragments in a certain radius or direction when a tripwire is engaged; and bounding mines, which are projected upwards by a small charge, expelling their fragments by means of a second explosion at the height of one meter or more.⁹

The U.S. arsenal of land mines reflects the diversity of land mines' purposes and mechanisms. The American-built Claymore Mine propels hundreds of steel balls that inflict fatal wounds from a distance of up to 50 meters and incapacitating wounds from a distance of up to 100 meters.¹⁰ The M16A1, another antipersonnel mine used by the United States Army, is designed to incapacitate rather than kill and is made of a plastic body that frustrates detection and clearance.¹¹

The low manufacturing cost of land mines makes them an extremely affordable commodity for units ranging from terrorist groups to well-equipped national armies.¹² China's popular Type 72 mines sell for less than \$3.00 each.¹³ Brazilian and Pakistani models range from \$6.00 to \$7.00.¹⁴ The United States' Claymore M18A1 sells for \$27.50.¹⁵

Over the past twenty-five years, land mines have been manufactured at a rate of five to ten million per year.¹⁶ During this same period, approximately 100 companies and government

8. Protocol on Prohibitions or Restrictions on the Use of Mines, Booby Traps and Other Devices, *annexed to* Conventional Weapons Treaty, *supra* note 5, at 1530.

9. THE ARMS PROJECT, *supra* note 3, at 19-20.

10. *Id.* at 66.

11. *Id.* at 68-69. "[A] wounded soldier will be a noisier and more morale-sapping distraction for his comrades than a dead soldier, and a burden to his own side's medical and logistic services." P.R. COURTNEY-GREEN, *AMMUNITION FOR THE LAND BATTLE 172* (1991).

12. THE ARMS PROJECT, *supra* note 3, at 18.

13. *Id.* at 56.

14. *Id.*

15. *Id.*

16. *Id.* at 49.

agencies produced more than 340 different types of antipersonnel mines.¹⁷ At least forty-one companies or government agencies in twenty-nine countries have exported land mines.¹⁸

The total number of mines that exist in the world today is estimated at more than 100 million, with some estimates exceeding 200 million.¹⁹ Current estimates of the number of deployed mines range from 65 to 200 million.²⁰ As many as twenty million mines may have been laid in the Angolan civil war; ten to thirty million land mines were planted in Afghanistan during the 1980's; four to seven million uncleared land mines remain in Cambodia; and the recent fighting in former Yugoslavia has left approximately two million mines in the soil.²¹ These deployments and others have emplaced mines in the soil of sixty-two nations.²²

Land mines kill or wound more than 7800 people per year.²³ In some parts of the world, land mine casualties have reached epidemic proportions. In 1990 alone, at least 6000 Cambodians suffered amputations resulting from land mine explosions.²⁴ The ratio of amputees from land mines to total population are 1:236 in Cambodia; 1:470 in Angola; 1:1000 in northern Somalia; and 1:2500 in Vietnam.²⁵ The carnage caused by land mines is not confined to these recently-mined third world countries where mine clearing operations have failed to remove most land mines. Land mines laid in Poland during World War II have resulted in approximately 4000 deaths and about 9000 injuries to civilians in recent years.²⁶

Depending upon a person's proximity to a land mine when it explodes, there are three common forms of bodily injury caused by land mine explosions. Traumatic or surgical amputation of one or both lower limbs usually occurs from standing on a buried mine

17. THE ARMS PROJECT, *supra* note 3, at 36.

18. *Id.* at 59.

19. *Id.* at 51.

20. *Id.* at 50.

21. *Id.* at 10, 51-52, 165.

22. THE ARMS PROJECT, *supra* note 3, at 50.

23. The American Red Cross estimates that 800 people are killed and 450 are injured each month by land mines. *Id.*, app. 6 (statement by Elizabeth Dole, President of the American Red Cross, on the Use of Antipersonnel Mines).

24. *Id.* at 166.

25. *Id.* at 126.

26. WORKING PAPERS ON CERTAIN CONVENTIONAL WEAPONS WHICH MAY BE DEEMED TO BE EXCESSIVELY INJURIOUS OR TO HAVE INDISCRIMINATE EFFECTS 28 (1978).

which detonates.²⁷ Multiple fragments of a mine set off nearby causes random, penetrating injuries, often including injuries to the head, neck, chest, and abdomen, and injuries that may also require surgical amputation of limbs.²⁸ Injuries to the arm and face often result from handling mines.²⁹ Blindness and other eye injuries will often result from all three of these experiences.³⁰

Treatment of mine-inflicted injuries is complicated further by the severity of the wounds and the poor medical conditions that exist in many of the areas where mines are detonated. Many of these areas are highly contaminated.³¹ Additionally, because the victims often live in remote areas, transporting victims to facilities for proper medical care takes anywhere from six to thirty-six hours.³²

Mine clearance is an expensive, slow, dangerous undertaking that often fails to detect and remove mines. It is estimated that mine clearance costs between \$300 and \$1000 per mine.³³ These costs create heavy burdens for some economically disadvantaged third-world countries that render complete mine clearance impossible. For example, removing all emplaced land mines in Cambodia would require the combined income of all Cambodians over a period of five to seven years.³⁴

Contemporary minelaying is often accomplished by remote means, such as aircraft, artillery, and specialty vehicles, rather than by manual emplacement.³⁵ One mine scattering system can disseminate 1750 mines per minute.³⁶ The ratio of emplacement time to removal time for land-laid mines is about 1:100.³⁷

27. Robin M. Coupland & Adrian Korver, *Injuries from Antipersonnel Mines: The experience of the International Committee of the Red Cross*, 303 BRIT. MED. J. 1509, 1511 (1991). One study found the incidence of lower limb amputations to be 84%. Jorma Rautio et al., *Afghan War Wounded: Experience with 200 Cases*, 28 J. TRAUMA 523-25 (1988).

28. Rautio, *supra* note 27, at 523-25.

29. *Id.*

30. *Id.*

31. THE ARMS PROJECT, *supra* note 3, at 121.

32. *Id.* at 127.

33. *Id.* at 235.

34. *Id.* at 235, 251. Mine removal in Cambodia is not feasible; in fact, it has been estimated that it would take 100 years to remove all the land mines in Cambodia. *Id.* at 179.

35. *Id.* at 26.

36. THE ARMS PROJECT, *supra* note 3, at 41.

37. *Id.* at 235.

Clearing mines spread in a single hour by the Valsella system could take weeks or months.³⁸ At this rate, any substantial clearing of the 65 to 200 million mines now emplaced worldwide could take decades. Yet, thousands of new land mines are being laid daily, vastly exceeding the number being removed.³⁹

Complete and effective mine removal is complicated further by the construction of modern mines which have become virtually resistant to mine-clearing operations. In the Gulf War, Iraq used an Italian-produced mine that was impervious to blasting mine-clearing techniques. A newer Italian-produced model comes equipped with an electronic anti-disturbance device that detonates if one attempts to deactivate the mine.⁴⁰ At least eighteen countries have produced mines with low or minimum metal content, often making the mine undetectable by conventional mine detecting gear with magnetic sensors.⁴¹

Submunitions are the functional equivalent of land mines and must also be considered. Submunitions consist of bomblets, cluster bombs, and grenades delivered by aircraft, surface artillery, and rockets.⁴² Typically, thousands of submunitions are dispersed into a small area. It is estimated that thirty million submunitions were expended during the Gulf War. It is also estimated that the United States has manufactured 750 million submunitions for artillery and rockets alone.⁴³ As much as ten to twenty percent of dispersed submunitions fail to explode.⁴⁴ At the conclusion of the Gulf War, therefore, millions of small live explosive charges likely remained on the ground.⁴⁵ These charges, if stepped upon

38. *Id.*

39. *Id.* at 234. Mine clearing techniques include hand prodding, the most effective and widespread method in use, but a very dangerous one. Magnetic actuated mine detectors are frequently used, but are not effective against low or minimum metal mines. The latter types, however, can be located by specially trained dogs. Certain mechanical devices, such as flails, rollers, and plows, as well as explosives, are of limited reliability and are fairly expensive. *Id.* at 237-57.

40. *Id.* at 78.

41. THE ARMS PROJECT, *supra* note 3, at 27-28, 33 (stating that the latest mine detection equipment is 60-90% effective in finding minimum-metal mines), 43, 241-42.

42. *Id.* at 347.

43. *Id.*

44. *Id.*

45. *Id.* Ironically, some military authorities argue that unexploded submunitions pose such a great threat in and of themselves, that land mines are relatively less of a concern. U.S. ARMY PAPER ON THE UTILITY OF MINES 2 (1994) (on file with *Loyola of Los Angeles International and Comparative Law Journal*) [hereinafter U.S. ARMY PAPER].

or otherwise disturbed, could cause serious bodily injury or death.⁴⁶

III. CUSTOMARY INTERNATIONAL LAW APPLICABLE TO LAND MINES

In addition to treaties, customary international law plays an essential role in regulating the use of arms in warfare. As stated by the Nuremberg Tribunal, “[t]he law of war is to be found not only in treaties, but in the custom and practices of states which gradually obtained universal recognition and from the general principles of justice applied by jurists and practiced by military courts.”⁴⁷ Land mines pose such a threat to non-combatants that these weapons may violate principles of customary international law.

A. Humanity

Inflicting unnecessary suffering upon persons has long been recognized as a breach of international law. Direct references to this principle of humanity are contained in the 1868 Declaration of St. Petersburg (“1868 Declaration”),⁴⁸ the Convention (II) with Respect to the Laws and Customs of War on Land (“Hague II”),⁴⁹ and the Convention (IV) Respecting the Laws and Customs of War on Land (“Hague IV”).⁵⁰ The 1868 Declaration states, in part:

That the only legitimate object which states should endeavor to accomplish during war is to weaken the military force of the enemy;

These authorities expect that prohibition of land mines would lead to greater use of submunitions, resulting in greater numbers of civilian casualties from unexploded submunitions than from land mines. *Id.*

46. THE ARMS PROJECT, *supra* note 3, at 347.

47. *In re Goering and Others*, 13 Ann. Dig. 203, 209 (Int’l Military Trib., Nuremberg, Germany, 1946).

48. *1868 Declaration of St. Petersburg*, 1 AM. J. INT’L L. 95 (Supp. 1907) [hereinafter *St. Petersburg Declaration*].

49. Convention (II) with Respect to the Laws and Customs of War on Land, July 29, 1899, reprinted in THE LAWS OF ARMED CONFLICTS 69 (Dietrich Schindler & Jiri Toman eds., 3d rev. ed. 1988) [hereinafter Hague II].

50. Convention (IV) Respecting the Laws and Customs of War on Land, Oct. 18, 1907, reprinted in THE LAWS OF ARMED CONFLICTS, *supra* note 49, at 69 [hereinafter Hague IV].

That this object would be exceeded by the employment of arms which uselessly aggravate the sufferings of disabled men

.....

That the employment of such arms would, therefore, be contrary to the laws of humanity.⁵¹

Article 23(e) of Hague II prohibits the use of "arms, projectiles, or material of a nature to cause superfluous injury."⁵² Hague IV invokes "the principles of the law of nations, as they result from the usages established among civilized peoples, from the laws of humanity, and the dictates of the public conscience."⁵³

The constraints placed on warfare by the laws of humanity include the avoidance of unnecessary suffering and the minimization of the horrors of warfare.⁵⁴ Other important principles of the law of war flow from and build upon the basic concept of humanity. These include proportionality of the military objective to the damage inflicted, protection of civilians, avoidance of weapons or methods which are non-targeted or indiscriminate in their effect, as well as general rights of life and personal security.

This concept of humanity has inspired the drafters of some treaties to incorporate provisions that outlaw the use of certain types of weapons.⁵⁵ These weapons include: lightweight exploding projectiles, prohibited by the Declaration of St. Petersburg;⁵⁶ dum dum bullets,⁵⁷ outlawed by Hague II,⁵⁸ and poisonous gas

51. *Id.* at 69.

52. Hague II, *supra* note 48, art. 23(e)49, reprinted in THE LAWS OF ARMED CONFLICTS, at 83.

53. Hague IV, *supra* note 49, reprinted in THE LAWS OF ARMED CONFLICTS at 69. See also Corfu Channel, 1949 I.C.J. 4, 22 (Apr. 9) (referring to "elementary considerations of humanity" as a "general and well-recognized" principle and that such considerations are to be "more exacting in peace than in war . . .").

54. Among the core rules from the Nuremberg Judgment is the prohibition against weapons or tactics that cause unnecessary or aggravated devastation and suffering. Burns H. Weston, *Nuclear Weapons and International Law: Illegality in Context*, 13 DENV. J. INT'L L. & POL'Y 1, 3-4 (1983).

55. THE ARMS PROJECT, *supra* note 3, at 264.

56. The St. Petersburg Declaration banned explosive or inflammable projectiles weighing below 400 grams. *St. Petersburg Declaration*, *supra* note 48, at 96.

57. "Dum dum bullets" owe their name to the British Indian Arsenal of Dum-Dum, near Calcutta, where they were first manufactured. DOCUMENTS ON THE LAWS OF WAR 39 (Adam Roberts & Richard Guelff eds., 1982). Such bullets "expand or flatten easily in the human body, such as bullets with a hard envelope which does not entirely cover the core or is pierced with incisions." Declaration (IV, 3) Concerning Expanding Bullets, July 29, 1899, reprinted in *id.*, at 40.

and bacteriological warfare, condemned by the Protocol for the Prohibition of the Uses in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare ("Protocol of 1925").⁵⁹

Land mine explosions can produce fatal injuries, and the resulting death may be torturous and prolonged. Although one may survive a land mine explosion, the victim is often left maimed and disfigured. As noted before, explosions from land mines sever limbs, produce paralysis, cause blindness, and sometimes drive their victims into irreversible psychosis.⁶⁰

The threat of horrible injuries, torture, and death from land mines often deters troops from entering the battlefield.⁶¹ This deterrent effect is one reason why many military strategists deem these weapons among the most important in their land warfare

58. Bullets which have incomplete hard outer casings and expand on impact are banned by Convention (VI) with Respect to the Laws and Customs of War on Land, July 29, 1899, *reprinted in* DOCUMENTS ON THE LAW OF WAR, *supra* note 57, at 40.

59. Protocol for the Prohibition of the Uses in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare ("1925 Geneva Protocol"), June 17, 1925, *reprinted in* DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 139. The First Hague Conference of 1899 adopted a declaration against the use of "projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases." Declaration (IV, 2) Concerning Asphyxiating Gases, *reprinted in* THE LAWS OF ARMED CONFLICTS, *supra* note 49, at 105. The Germans after World War I argued that they did not violate this provision because they spread gas by canister rather than by projectile. Although this argument has been accepted by one authority, Note, *The Law of Chemical Warfare*, 10 GEO. WASH. L. REV. 889, 908 (1942), it has been largely rejected by the scholarly community. Howard S. Levie, *Humanitarian Restrictions on Chemical and Biological Weapons*, 13 U. TOL. L. REV. 1192, 1194 (1982). Another treaty concerning the use of poisonous gas during war, The Treaty Relating to the Use of Submarines and Noxious Gases, was adopted in 1922. This treaty, however, never became effective because France did not ratify it. THE LAWS OF ARMED CONFLICTS, *supra* note 49, at 877. The 1925 treaty outlawing poison gas and germ warfare was recognized in the Nuremberg Judgment to be fully binding and enforceable. Weston, *supra* note 54, at 3-4. A 1970 United Nations resolution declared the use of any chemical or biological agents in an armed conflict to be contrary to generally recognized rules of international law. 24 U.N. GAOR, at 16, 24th Sess., Supp. No. 30, U.N. Doc. A/7630 (1970). In 1975, a treaty was entered into force totally banning production of bacterial warfare agents and requiring their destruction. Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons, and on their Destruction, *opened for signature*, Apr. 10, 1972, 26 U.S.T. 583, T.I.A.S. No. 8062. The production of chemical warfare agents, as distinguished from their use, continues to be permitted. Harry H. Almond, *Control over Chemical Weapons - Personal Perspectives on the Emerging United States Position*, 13 U. TOL. L. REV. 1203, 1205 (1982).

60. Robin M. Coupland et al., *Injuries from Antipersonnel Mines: The Experience of the International Committee of the Red Cross*, 303 BRIT. MED. J. 1509 (1991).

61. THE ARMS PROJECT, *supra* note 3, at 21.

arsenal.⁶² Land mines produce effects similar to those of small size exploding bullets and dum dum bullets. Accordingly, land mines may violate the international legal principle of humanity as do small size exploding bullets and dum dum bullets.

B. Military Necessity and Proportionality

The purpose of warfare is to destroy or to weaken the military strength of the enemy. "[O]nly such destruction [is authorized] as is necessary, relevant, and proportionate to the prompt realization of legitimate belligerent objectives."⁶³ The doctrine of military necessity was mentioned in the Instruction for the Government of Armies of the United States in the Field ("Lieber Instructions"), the first attempt to codify the laws of war.⁶⁴ The Lieber Instructions restricted the army to those measures "indispensable for securing the ends of war."⁶⁵ Customary international law also forbids infliction of harm that exceeds the military advantage sought to be gained.⁶⁶

Some invoke the principles of military necessity and proportionality to advocate against prohibition of land mines. They argue that mine fields serve important military goals by slowing or stopping enemy advances, channelling enemy movements into more easily-defended routes, conserving forces and firepower, and

62. U.S. ARMY PAPER, *supra* note 45, at 2.

63. MYRES MCDUGAL & FLORENTINO FELICIANO, LAW AND MINIMUM WORLD PUBLIC ORDER: THE LEGAL REGULATION OF INTERNATIONAL COERCION 72 (1961).

64. The *Lieber Instructions* were prepared by Francis Lieber during the American Civil War and promulgated by President Lincoln to govern the conduct of war by the Union Army. THE LAWS OF ARMED CONFLICTS, *supra* note 49, at 3. The *Lieber Instructions* strongly influenced Hague II and Hague IV. *Id.*

65. Instructions for the Government of Armies of the United States in the Field, art. 14, April 24, 1863, *reprinted in* THE LAWS OF ARMED CONFLICTS, *supra* note 49, at 6. The Lieber Code made it clear that the measures used must also be "lawful according to the modern law and usages of war." *Id.* Unquestionably, international law continues to require both military necessity and adherence to applicable humanitarian or other laws of war before a military action can be undertaken. In other words, the law of war is not overcome by "military necessity." See U.S. DEPT. OF THE ARMY FIELD MANUAL, FM 27-10, The Law of Land Warfare, para. 3a (1956) [hereinafter ARMY FIELD MANUAL]. Professor Francis Lieber had fought with the Prussians at Waterloo in 1815. H. MCCOUBREY ET AL., INTERNATIONAL LAW AND ARMED CONFLICTS 217 (1992).

66. JEAN PICTET, DEVELOPMENT AND PRINCIPLES OF INTERNATIONAL HUMANITARIAN LAW 62 (1985); EDWARD K. KWAKWA, THE INTERNATIONAL LAW OF ARMED CONFLICT: PERSONAL AND MATERIAL FIELDS OF APPLICATION 38-39 (1992); Bernard L. Brown, *The Proportionality Principle in the Humanitarian Law of Warfare: Recent Efforts at Codification*, 10 CORNELL INT'L L.J. 134 (1976).

minimizing casualties.⁶⁷ They further contend that proportionality is further achieved by adherence to the Conventional Weapons Treaty's requirements of reporting, recording, and marking and of using mines that automatically self-destruct.⁶⁸ Yet, the grave inadequacies of these requirements⁶⁹ demonstrate the fallacy of these arguments. These provisions have been widely disobeyed.⁷⁰ Moreover, land mine deactivation is never foolproof, and a substantial number of injuries and fatalities could result from the supposedly deactivated mines.⁷¹

Some military experts believe that land mines do not achieve important military goals. Former United States Secretary of Defense Robert McNamara reported that land mines killed one-fifth to one-third of all American soldiers in Vietnam, while relatively few enemy troops were killed or disabled by these weapons.⁷² At a 1993 symposium on land mines, former Marine Corps Commandant, General Alfred Gray, Jr., stated that he knew of no situation in Korea, Vietnam, Panama, or the Gulf War where mine warfare effectively channelized the enemy and brought them into a destructible pattern.⁷³ General Gray further stated that he was not aware of any operational advantage from widespread deployment of mines and cited many examples where American soldiers were trapped in their own mine fields.⁷⁴

There is no clear consensus that an army will necessarily gain a military advantage from the use of land mines. Yet in order to fully appreciate the principle of proportionality, one must consider the requirement that civilian casualties be minimized.

It is universally acknowledged that in modern warfare civilians must be protected to the fullest extent possible and must

67. U.S. ARMY PAPER, *supra* note 45, at 3-5; William J. Fenrick, Note, *New Developments in the Law Concerning the Use of Conventional Weapons in Armed Conflict*, 19 CAN. Y.B. INT'L L. 229, 242 (1981).

68. U.S. ARMY PAPER, *supra* note 45, at 3.

69. See *infra* notes 124-41 and accompanying text.

70. THE ARMS PROJECT, *supra* note 3, at 293.

71. *Id.* at 28-29.

72. DEBORAH SHAPLEY, PROMISE AND POWER: THE LIFE AND TIMES OF ROBERT MCNAMARA 414 (1993). In 1965, an even higher figure of 65-70% of all Marine Corps casualties in Vietnam was attributed to land mines. THE ARMS PROJECT, *supra* note 3, at 18.

73. General Alfred Gray, Jr., U.S.M.C. ret., Address before the American Defense Preparedness Association, (Sept. 7-9, 1993), *partially reprinted in* THE ARMS PROJECT, *supra* note 3, at 339.

74. *Id.*

never become the deliberate targets of military weapons. This doctrine was recognized in *The Paquete Habana*,⁷⁵ where the United States Supreme Court held that a coastal vessel with no role in a war enjoys immunity from attack and capture.⁷⁶ The 1923 Hague Draft Rules of Air Warfare sought to limit non-battlefield targets to those that serve military purposes, such as military works, munitions and arms factories, military supplies, and military communication and transportation lines.⁷⁷ Armed forces manuals specify these same limitations.⁷⁸ Even when attacking military targets, unreasonable damage to civilian values must be avoided.⁷⁹ Moreover, armed forces must take all possible precautions to spare civilians and civilian interests.⁸⁰

United Nations General Assembly Resolution 2444 of 1969 ("Resolution 2444") clearly summarizes the international legal requirement of minimizing harm to civilians:

- (a) That the right of the parties to a conflict to adopt means of injuring the enemy is not unlimited;
- (b) That it is prohibited to launch attacks against the civilian population as such;

75. 175 U.S. 677 (1900).

76. *Id.* at 677.

77. Rules of Aerial Warfare, reprinted in DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 123-35. This treaty was never adopted, but is regarded to be an authoritative declaration of customary international law. DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 121. See also Protection of Civilian Populations Against Bombing From The Air In Case Of War, Sept. 30, 1938, reprinted in SCHINDLER & TOMAN, *supra* note 49, at 222 (recognizing that "[o]bjectives aimed at from the air must be legitimate military objectives and must be identifiable").

78. These military manuals specify that where the principle of proportionality applies: there must be a reasonable relationship between lawful destructiveness and ancillary or collateral efforts; injury to civilians must not be excessive to concrete and direct military advantage expected to be gained. ARMY FIELD MANUAL, *supra* note 65, at 3-4; U.S. DEPT. OF THE AIR FORCE, JUDGE ADVOCATE GEN. ACTIVITIES, INTERNATIONAL LAW: THE CONDUCT OF ARMED CONFLICT AND AIR OPERATIONS, 5-7 (1976) [hereinafter AIR FORCE PAMPHLET]. Military manuals are important sources of international custom. Theodor Meron, *Determining Customary International Law Relative to the Conduct of Hostilities in Non-International Armed Conflicts*, 2 AM. U. J. INT'L L & POL'Y 471, 491-92 (1987). International custom is a source of international law when it reflects established usage or practice, done pursuant to the legal conviction that it is required, as is reflected in the foregoing military manuals. Statute of the International Court of Justice, 1945 I.C.J. Stat., Art. 38(1)(b), 48.

79. FRITS KALSHOVEN, THE LAW OF WARFARE 61, 66 (1973).

80. Charles Allen, *Civilian Starvation and Relief During Armed Conflict: The Modern Humanitarian Law*, 19 GA. J. INT'L & COMP. L. 1, 30 (1989).

(c) That distinction must be made at all times between persons taking part in the hostilities and members of the civilian population to the effect that the latter be spared as much as possible.⁸¹

Resolution 2444 is generally regarded as authoritative,⁸² and is recognized by the United States as a correct statement of existing customary international law.⁸³

Likewise, Protocol I Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts to the 1949 Geneva Conventions for the Protection of War Victims ("Protocol I")⁸⁴ reiterates the requirement that civilian populations be protected from military operations. Protocol I states, in part:

Military operations shall be directed only against military objectives, and not against civilians.⁸⁵

The civilian population shall not be the object of attack.⁸⁶

Attacks are prohibited which cause incidental loss of civilian life and injury to civilians, that would be excessive in relation to the concrete and direct military advantage anticipated.⁸⁷

81. U.N. GAOR, 23d Sess., Supp. No. 18, at 50, U.N. Doc. A/7218 (1969). Clause (a) is taken literally from Article 22 of The 1899 Hague Convention (II).

82. Richard Bilder, *Rethinking International Human Rights: Some Basic Questions*, 2 HUM. RTS. J. 557, 559 (1969). See II HOWARD LEVIE, *THE CODE OF INTERNATIONAL ARMED CONFLICT* 81 (1986).

83. Arthur Rovine, *Contemporary Practice of the United States Relating to International Law*, 67 AM. J. INT'L L. 118, 122 (1973); Michael Matheson, *The United States Position on the Relation of Customary International Law to the 1977 Protocols Additional to the 1949 Geneva Convention*, 2 AM. U. J. INT'L L. & POL'Y, 419, 424-26 (1987).

84. Protocol I Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, Dec. 12, 1977, reprinted in DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 389 [hereinafter Protocol I]. Protocol I is generally agreed upon by scholars as the codification of customary international law. Danielle L. Infeld, Note, *Precision-Guided Munitions Demonstrated Their Pinpoint Accuracy in Desert Storm; But is a Country Obligated to Use Precision Technology to Minimize Collateral Civilian Injury and Damage*, 26 GEO. WASH. J. INT'L L. & ECON. 109, 118-19 (1992). The United States also acknowledges this, even though other major economic and military powers have not adopted Protocol I. *Id.* at 118; Michael Matheson, *supra* note 83, at 426; Thomas Murphy, *Sanctions and Enforcement of the Humanitarian Law of the Four Geneva Conventions of 1949 and Geneva Protocol I of 1977*, 103 MIL. L. REV. 3, 5 (1984). The rules from Protocol I are mirrored in armed forces publications. AIR FORCE PAMPHLET, *supra* note 78.

85. Protocol I, *supra* note 84, art. 48.

86. *Id.* art. 51.2.

87. *Id.* arts. 51.5(b), 57.2(a)(iii).

Injury and loss of life to civilians must be minimized in choosing the methods of attack.⁸⁸

When a choice is possible between several military objectives, the objective to be selected shall be the attack which is expected to cause the least danger to civilian lives.⁸⁹

Although a particular weapon is not specifically outlawed, it may be employed in a manner that violates the requirement of minimizing civilian casualties in war. In *Shimoda v. State*,⁹⁰ the District Court of Tokyo decided that the atomic bombings of Hiroshima and Nagasaki violated international law and, specifically, the Draft Rules of Air Warfare of 1923.⁹¹ The court stated, "[a]ny weapon the use of which is contrary to the customs of civilized countries and to the principles of international law should *ipso facto* be deemed to be prohibited even if there is no express provision in the law. . . ."⁹²

Military land mining practices are irreconcilable with the foregoing requirements to minimize harm to civilians from military operations. Practical limitations on mine clearance, due to scarce resources or inability to detect them, lead to the conclusion that mine use is inconsistent with the goals of minimizing harm to civilians. In addition to these limits on mine clearance, there is the problem of mines which fail to deactivate. Not all land mines contain deactivation devices. Those equipped with neutralization or self-destruction devices do not always deactivate.⁹³ Furthermore, deactivation, if effective, may take weeks or even months after mines are deployed.⁹⁴ This combination of non-deactivation and delayed deactivation results in an unacceptably high toll upon civilian life and limb. Clearly, land mine use is inconsistent with the goal of protecting non-combatants from harm.

C. *Eliminating Indiscriminate and Non-Targeted Weapons*

The principles of protecting civilians and of using methods of warfare proportionate to military objectives were developed into the doctrine that indiscriminate, non-targeted weapons must not be

88. *Id.* art. 57.2(a)(iii).

89. *Id.* art. 57.3.

90. *Shimoda v. State*, 32 INT'L L. REP. 626 (1963).

91. *Id.* at 630-31.

92. *Id.* at 629.

93. THE ARMS PROJECT, *supra* note 3, at 28-29.

94. *Id.*

used. One commentator stated that the prohibition of weapons and tactics that cause indiscriminate harm between combatants and non-combatants is a "core rule" derived from conventional and customary international law.⁹⁵ This rule was reflected in the Convention (VIII) Relative to the Laying of Automatic Submarine Contact Mines that, in part, prohibited unmoored undersea mines.⁹⁶ This treaty was to regulate the employment of mines in naval warfare after such mine use caused indiscriminate harms.⁹⁷ Protocol I also disapproves indiscriminate use of weapons.⁹⁸

Land mines are frequently deployed by aircraft and artillery.⁹⁹ This manner of emplacement provides much less control over location than laying mines by hand and impairs the ability to record and mark mine locations.¹⁰⁰ Imprecision in placement, coupled with failed and delayed activation, establishes the indiscriminate nature of land mine deployment and, therefore, the land mine is a weapon that is often non-targeted in its attack. Accordingly, land mine emplacement conflicts with customary international legal principles against the indiscriminate use of weapons.¹⁰¹

D. Rights of Life and Bodily Integrity

The Universal Declaration of Human Rights identifies the rights of life, liberty, security of the person, and freedom from cruel or inhuman treatment as rights protected by international

95. Weston, *supra* note 54, at 3.

96. Convention (VIII) Relative to the Laying of Automatic Submarine Contact Mines, Oct. 18, 1907, art. 1, reprinted in DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 87. Article 3 of this treaty requires precautions for the security of peaceful shipping, and Article 5 requires removal of mines at the close of hostilities. *Id.* arts. 3, 5.

97. These indiscriminate harms involved extensive damage to neutral shipping during and after the Russo-Japanese War that occurred from 1904 to 1905. DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 85.

98. "Indiscriminate attacks ["which cannot be directed at a specific military objective"] are prohibited." Protocol I, *supra* note 84, art. 51.4(a), (b), 1125 U.N.T.S. 25, 26 (1979).

99. THE ARMS PROJECT, *supra* note 3, at 10.

100. *Id.*

101. Fenrick, *supra* note 67, at 243-44. At least with respect to offensively-used land mines, one scholar has concluded they are illegal non-targeted weapons because there is no way of ensuring that they would not kill or injure persons protected by law from attack: "Mines used in this fashion are indiscriminate in their effects, and may as easily explode under a civilian . . . as under a soldier [or] a tank . . ." MORRIS GREENSPAN, THE MODERN LAW OF LAND WARFARE 363 (1959).

law.¹⁰² These same rights are reiterated in the International Covenant on Civil and Political Rights.¹⁰³ Customary international law fully recognizes these rights¹⁰⁴ and considers them non-derogable.¹⁰⁵

The United Nations General Assembly recognizes that these fundamental human rights must be protected during armed conflict. General Assembly Resolution 2675 (XXV) states, "Fundamental human rights, as accepted by international law and laid down in international instruments, continue to apply fully in situations of armed conflicts."¹⁰⁶ In *Nicaragua v. United States*,¹⁰⁷ the International Court of Justice condemned the laying of submarine mines in a manner likely to injure or kill innocent civilians. In doing so, the court stated that the prohibition of violence to life and person, including murder, mutilation, cruel treatment, and torture of non-combatants is a minimum standard applicable to both international and internal armed conflicts.¹⁰⁸

The same reasoning should apply to the laying of land mines that create the likelihood of civilian injury or death. The non-derogable individual values of life, liberty, personal security, and freedom from torture and cruel or inhuman treatment yield only

102. G.A. Res. 217A(III), U.N. GAOR 3d Comm., 3d Sess., pt. 1, U.N. Doc. A/810 (1948).

103. G.A. Res. 2200A, U.N. GAOR, 21st Sess., Supp. No. 16, U.N. Doc. A/6316 (1961).

104. Myres McDougal, *Law and Minimum Public World Order: Armed Conflict in Larger Context*, 3 U.C.L.A. PAC. BASIN L.J. 21, 30 (1984); Military and Paramilitary Activities (Nicar. v. U.S.), 1986 I.C.J. 114 (June 27).

105. A.H. ROBERTSON & J.G. MERRILLS, *HUMAN RIGHTS IN THE WORLD* 226, n.19 (1982); THOMAS BUERGENTHAL, *TO RESPECT AND TO ENSURE: STATE OBLIGATIONS AND PERMISSIBLE DEROGATIONS: THE COVENANT ON CIVIL AND POLITICAL RIGHTS* 72, 78-86 (L. Henkin ed., 1981).

106. G.A. Res. 2675(XXV), U.N. GAOR, 25th Sess., Supp. No. 28 at 76, U.N. Doc. A/8028 (1970).

107. 1986 I.C.J. 114 (June 27).

108. *Id.* This formulation is derived from Article 3 of the 1949 Geneva Conventions Relating to the Victims of International Armed Conflicts. Convention Relative to the Protection of Civilian Persons in Time of War, Aug. 12, 1949, 6 U.S.T. 3516; 75 U.N.T.S. 287 (1950). The prohibition is extended to non-international conflicts by Protocol II of 1977 to the 1949 Geneva Conventions. *Diplomatic Conference on Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts: Protocol Additional to the Geneva Conventions of August 1949 and Relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II)*, 72 AM. J. INT'L L. 502 (1981). Article 3 duties are mandatory and apply in all circumstances. Parties have not only the negative obligation to abstain from violating these duties, but also have the affirmative obligation to enforce them. A breach of these particular duties appears to require penal punishment.

to the taking of life and the infliction of injury for lawful military purposes.¹⁰⁹ In light of the elevated values ascribed to human life and bodily integrity by these human rights principles, laying land mines that are expected to maim or kill civilians can never serve a lawful military purpose.¹¹⁰

E. Domestic Law

Domestic laws of nations do not assist in interpreting international treaties. Nevertheless, domestic laws from legal systems that recognize and protect individual human rights doctrines may clarify the aforementioned international law principles of individual human rights, minimizing harm to civilians and use of proportionate force.¹¹¹

English common law originally permitted the use of mechanical devices, such as spring guns and booby traps, designed to cause death or great bodily harm to persons.¹¹² Anglo-American jurisdictions, however, eventually rejected the legality of these practices, imposing liability for killing or injuring an innocent person, regardless of the reasonableness of the plan to foil a

109. Allen, *supra* note 80, at 52.

110. Protection of the human environment is an additional principle of international law that should be mentioned. Article 35.3 of Protocol I of 1977 to the 1949 Geneva Conventions proscribes methods of warfare that are expected to cause widespread, long-term, and severe damage to the natural environment. Article 54.2 of this treaty prohibits rendering useless croplands and grazing lands, and Article 55.1 prohibits means of warfare that may be expected to cause damage to the natural environment and thereby to prejudice human health or survival. It reasonably can be maintained that the mining of livestock rangelands and arable fields, done with great frequency in recent years and resulting in tens of thousands of deaths and injuries to agricultural workers and subsistence farmers, is in contravention to these provisions of Protocol I. See G.A. Res. 71, U.N. GAOR, 35th Sess., 83d plen. mtg., Supp. No. 48 at 132, U.N. Doc. A/35/48 (1980) (recognizing that the presence of mines "on the territories of certain developing countries seriously impedes their development efforts and entails loss of life and property").

111. Mary Dominick, *Toward a Community Bill of Rights: The European Community Charter of Fundamental Social Rights*, 14 FORDHAM INT'L L.J. 639, 653-57 (1990-91); See David Edward, *Constitutional Rules of Community Law in ECC Competition Cases*, 13 FORDHAM INT'L L.J. 111, 113 (1989).

112. *Simpson v. State*, 59 Ala. 1, 13 (1877).

burglary.¹¹³ The Supreme Court of Alabama explained the principle underlying this rule:

It is a settled principle of our law, that every one has the right to defend his person, and property, against unlawful violence, and may employ as much force as is necessary to prevent its invasion But when it is said a man may rightfully use as much force as is necessary for the protection of his person and property, it must be recollected the principle is subject to this most important qualification, that he shall not, except in extreme cases inflict great bodily harm, or endanger human life The preservation of human life, and of limb and member from grievous harm, is of more importance to society than the protection of property.¹¹⁴

A similar rationale can be applied in a rule prohibiting the use of land mines. Land mines serve to hinder the movement of an enemy force and its access to land and military bases.¹¹⁵ Such a purpose could justify the use of land mines to eliminate troops and weapons that threaten to destroy military installations. Land mines, however, cause death or great bodily harm to unwary and innocent persons in a manner similar to spring guns and booby traps. Such harm to civilians is not necessary for the protection of military facilities and the surrounding land. This rationale of domestic law, therefore, offers further support for the proposition that the use of land mines conflicts with individual human rights when they create a danger to non-combatants.

113. *Id.* at 13-14. One should note that an exception to liability for such an act was recognized in *United States v. Gilliam*, 25 Fed. Cas. 1319, No. 15, 205a (C.C.D.C. 1882) (recognizing an exception to justify the use of such devices in occupied dwellings at night). This exception, however, is not uniformly recognized in common law jurisdictions around the world. *See, e.g.*, Model Penal Code § 3.06(5) (allowing use of a protective device only if reasonable under the circumstances and the device is not designed to cause death or serious bodily harm); Wis. Stat. Ann. § 941.20(2)(b)(1958) (mandating a felony charge for setting a spring gun); Geoffrey W.R. Palmer, *The Iowa Spring Gun Case: A Study in American Gothic*, 56 IOWA L. REV. 1219, 1244-45 (1971).

114. *Simpson v. State*, 59 Ala. 1, 14 (1877).

115. THE ARMS PROJECT, *supra* note 3, at 21.

IV. 1980 CONVENTIONAL WEAPONS TREATY RULES ON LAND MINES

Protocol II of the Conventional Weapons Treaty¹¹⁶ deals with “mines, booby-traps, and similar devices.” Thirty-six nations ratified the Conventional Weapons Treaty, including Protocol II.¹¹⁷ The United States and the United Kingdom, however, have not ratified the Conventional Weapons Treaty. Additionally, a number of nations that either are recognized as being militarily-advanced or actively produce or deploy land mines have also failed to either sign or ratify the treaty.¹¹⁸ Furthermore, a combination of exceptions, limitations, loop-holes, and admonitory (as distinguished from prohibitory) clauses renders this treaty ineffective.¹¹⁹

The general restrictions enumerated in Article 3¹²⁰ reflect

116. Protocol II Additional to the Geneva Conventions of 12 August 1949 on Prohibitions or Restrictions on the Use of Mines, Booby Traps and other Devices, 1342 U.N.T.S. 163 (1983) [hereinafter Protocol II].

117. THE ARMS PROJECT, *supra* note 3, at 261 n.1.

118. MULTILATERAL TREATIES DEPOSITED WITH THE SECRETARY-GENERAL, STATUS AS AT 31 DECEMBER 1993, at 853-54, U.N. DOC. ST/LEG/SER.E/12, U.N. Sales No. E.94.V.11 (1994).

119. “The Protocol’s complex rules, discretionary language, and broad exceptions and qualifications to its general prohibitions further limit its utility.” THE ARMS PROJECT, *supra* note 3, at 263.

120. Article 3 provides:

1. This Article applies to:
 - (a) Mines;
 - (b) Booby-traps; and
 - (c) Other devices.
2. It is prohibited in all circumstances to direct weapons to which this Article applies, either in offence, defence or by way of reprisals, against the civilian population as such or against individual civilians.
3. The indiscriminate use of weapons to which this Article applies is prohibited. Indiscriminate use is any placement of such weapons:
 - (a) Which is not on, or directed against, a military objective; or
 - (b) Which employs a method or means of delivery which cannot be directed at a specific military objective; or
 - (c) Which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.
4. All feasible precautions shall be taken to protect civilians from the effects of weapons to which this Article applies. Feasible precautions are those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations.

Protocol II, *supra* note 116, art. 3, 1342 U.N.T.S. at 163.

many of the aforementioned customary international law principles. These include prohibitions against directing weapons against civilian populations, indiscriminate use of weapons, and disproportionate harm to civilians.¹²¹ Unfortunately, any benefit gained from these general pronouncements is overwhelmed by the extreme inadequacies of the specific provisions contained in Articles 4, 5, 7, and 9.

Article 4 prohibits the use of hand-laid mines¹²² in areas where civilians are concentrated, except where ground combat is occurring or imminent, where the area contains military targets,¹²³ or where warning signs or similar measures are employed. The prohibition, therefore, is virtually consumed by these exceptions.

Even these generally protective provisions contain an enormous flaw. Article 3.4 provides that only "all feasible precautions" need be taken to protect civilians. Military commanders, of course, should be expected frequently to take no measures at all to protect civilians by finding none were feasible under the circumstances. See Burns Carnahan, *The Law of Land Mine Warfare: Protocol II to the United Nations Convention on Certain Conventional Weapons*, 105 MIL. L. REV. 73, 81 (1984).

121. Art. 3, *supra* note 120.

122. Article 4 provides:

1. This Article applies to:
 - (a) Mines other than remotely delivered mines;
 - (b) Booby-traps; and
 - (c) Other devices.
2. It is prohibited to use weapons to which this Article applies in any city, town, village or other area containing a similar concentration of civilians in which combat between ground forces is not taking place or does not appear to be imminent, unless either:
 - (a) They are placed on or in the close vicinity of a military objective belonging to or under the control of an adverse party; or
 - (b) Measures are taken to protect civilians from their effects, for example, the posting of warning signs, the posting of sentries, the issue of warnings or the provision of fences.

Protocol II, *supra* note 116, art. 4, 1342 U.N.T.S. at 163.

The treaty is silent as to the meaning of civilian or civilian population. Because the Conventional Weapons Treaty was intended to supplement the general rules on conducting warfare in Protocol I of 1977 to the 1949 Geneva Conventions, and because the drafters of the treaty turned regularly to the latter document for definitions, it is regarded as influential in providing definitions for the Conventional Weapons Treaty. THE ARMS PROJECT, *supra* note 3, at 284-85 & n.67. In Protocol I of 1977, civilians are defined as persons not members of armed forces or organized armed groups. Art. 50. Thus, a person who gives food to members of the armed forces remains a civilian. THE ARMS PROJECT, *supra* note 3, at 285.

123. Military objective is defined in Article 2.1 to be any object which makes an effective contribution to military action, the elimination of which offers a definite military advantage.

Article 5 regulates the use of remotely delivered mines.¹²⁴ Pursuant to this article, remotely delivered mines may be used only in areas containing military targets.¹²⁵ Their location, in certain instances, must be recorded, or, alternatively, they must neutralize or self-destruct once “the mine will no longer serve the military purpose” for which it was emplaced.¹²⁶ Although these provisions take on a more mandatory character, Article 5 substantially defers to military interests and neglects the concern against harm to civilians. For example, the article requires advance warnings of dangers posed by deployed mines where civilians may be affected, “unless circumstances do not permit.”¹²⁷ Such advance warnings can, therefore, be simply neglected by reason of unfavorable circumstances. Furthermore, Article 5 does not explicitly set forth the manner by which civilians should be warned.¹²⁸

Employing self-neutralizing or self-destructing mechanisms is not necessarily a more effective alternative to recording remotely delivered mines. The failure rate of these mechanisms is often as high as ten percent.¹²⁹ Mine clearance has over a 99.5% success rate.¹³⁰ Self-neutralizing mines cannot confidently be handled as

124. Article 5 provides:

1. The use of remotely delivered mines is prohibited unless such mines are only used within an area which is itself a military objective or which contains military objectives, and unless:
 - (a) Their location can be accurately recorded in accordance with Article 7(1)(a); or
 - (b) An effective neutralizing mechanism is used on each such mine, that is to say, a self-actuating mechanism which is designed to render a mine harmless or cause it to destroy itself when it is anticipated that the mine will no longer serve the military purpose for which it was placed in position, or a remotely-controlled mechanism which is designed to render harmless or destroy a mine when the mine no longer serves the military purpose for which it was placed in position.
2. Effective advance warning shall be given of any delivery or dropping of remotely delivered mines which may affect the civilian population, unless circumstances do not permit.

Protocol II, *supra* note 116, art. 5, 1342 U.N.T.S. at 163.

125. *Id.*

126. *Id.*

127. *Id.*

128. It has been argued that the general rule in Article 3.4 of taking all feasible precautions to protect civilians could impose a post-mining notification duty. Carnahan, *supra* note 120, at 80.

129. THE ARMS PROJECT, *supra* note 3, at 345 n.22.

130. *Id.* at 237.

long as there is any question about the effectiveness of the neutralizing feature. Moreover, the explosive charge of these mines becomes increasingly dangerous as chemical degradation of the charge renders it unstable. Additionally, no method exists to prevent civilian casualties before and at the moment of self-destruction.¹³¹ These shortcomings of self-neutralizing or self-destructing mechanisms further demonstrate the inadequacy of Article 5.

The recording provisions of Article 7¹³² are also grossly inadequate. This article only requires the recording of pre-planned mine fields.¹³³ Such plans are extremely detailed and formulated well before the mines are actually laid.¹³⁴ Commentators have suggested that for the vast majority of mine fields, such detailed plans could not exist.¹³⁵ Furthermore, Article 7 fails to require

131. *Id.* at 53, 345 n.22.

132. Article 7 provides:

1. The parties to a conflict shall record the location of:
 - (a) All pre-planned minefields laid by them; and
 - (b) All areas in which they have made large-scale and pre-planned use of booby-traps.
2. The parties shall endeavor to ensure the recording of the location of all other minefields, mines and booby-traps which they have laid or placed in position.
3. All such records shall be retained by the parties who shall:
 - (a) Immediately after the cessation of active hostilities:
 - (i) Take all necessary and appropriate measures, including the use of such records, to protect civilians from the effects of minefields, mines and booby-traps; and either
 - (ii) In cases where the forces of neither party are in the territory of the adverse party, make available to each other and to the Secretary-General of the United Nations all information in their possession concerning the location of minefields, mines and booby-traps in the territory of the adverse party; or
 - (iii) Once complete withdrawal of the forces of the parties from the territory of the adverse party has taken place, make available to the adverse party and to the Secretary-General of the United Nations all information in their possession concerning the location of minefields, mines and booby-traps in the territory of the adverse party;
 - (b) When a United Nations force or mission performs functions in any area, make available to the authority mentioned in Article 8 such information as is required by that Article;
 - (c) Whenever possible by mutual agreement, provide for the release of information concerning the location of minefields, mines and booby-traps, particularly in agreements governing the cessation of hostilities.

Protocol II, *supra* note 116, art. 7, 1342 U.N.T.S. at 163.

133. *Id.* art. 7.1.(a).

134. Carnahan, *supra* note 120, at 84.

135. *Id.*

the recording of the composition and pattern of the mine field or the location of individual mines.¹³⁶

As inadequate as they may be, the record keeping provisions of the Conventional Weapons Treaty envision at least some militaries properly and effectively identifying mine fields in order to protect civilians. In practice, however, this objective has not been attained. Since the treaty's publication, no armed force is known to have consistently and accurately recorded the location of mine fields. The British in the Falklands War, for example, kept precise maps of mine fields.¹³⁷ Yet, these maps have proven to be grossly inaccurate.¹³⁸

Protocol II provides for mandatory disclosure of the location of mine fields. The treaty, however, contains phrases that allow parties to evade this requirement. Article 7, for example, provides that after cessation of hostilities the parties shall release information concerning the location of mine fields "*whenever possible by mutual agreement.*"¹³⁹ Article 9 provides that after cessation of hostilities, "the parties *shall endeavor* to reach agreement" to remove the mine fields or render them ineffective.¹⁴⁰ Such facially ineffectual rules are justly condemned as "merely formal" and "purely admonitory," their purpose being "to cover up the inability or unwillingness to . . . safeguard the minimum standard of civilization."¹⁴¹

A further limitation of the Conventional Weapons Treaty is that it only applies to international conflicts and certain wars of liberation.¹⁴² The treaty does not govern the use of land mines in civil wars and other internal conflicts.

The Conventional Weapons Treaty was drafted at two preparatory conferences, held in 1978 and 1979, and at a two-stage

136. *Id.*

137. THE ARMS PROJECT, *supra* note 3, at 262, 293.

138. *Id.*

139. MULTILATERAL TREATIES DEPOSITED WITH THE SECRETARY GENERAL, *supra* note 118, art. 7.3(c) (emphasis added).

140. *Id.* art. 9 (emphasis added).

141. 2 GEORGE SCHWARZENBERGER, INTERNATIONAL LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS 11 (1968); Carnahan, *supra* note 120, at 82-83.

142. Article 1 incorporates by reference Article 2 common to the Geneva Conventions of 12 August 1949 for the protection of war victims. Conventional Weapons Treaty, *supra* note 5, art. 1, § 3.

conference, which occurred in 1979 and 1980.¹⁴³ At these conferences, it was widely understood that land mines would be used as tactical defensive weapons with the primary purpose of channeling enemy forces into more easily-defended areas, denying to the enemy positions that could not be covered by friendly troops, and protecting friendly troops.¹⁴⁴ This expectation that land mines would be primarily used as defensive tactical weapons, however, is clearly outdated. In the 1980s and 1990s, mines have been used regularly as offensive weapons, often beyond the battlefield.¹⁴⁵ The conferences did not foresee the evolving technology of land mines, including the development of contemporary mines that are practically impossible to locate. Additionally, the conference delegates probably never imagined that technological advances would enable manufacturers to design mines that explode in response to any attempt to disarm them.¹⁴⁶

While the Conventional Weapons Treaty forbids, in general terms, indiscriminate use of land mines and limits their use in achieving military objectives,¹⁴⁷ the aforementioned provisions of the treaty render these prohibitions ineffective. The discussions preceding the treaty's publication did not focus on the potential widespread harm to civilians resulting from land mines.¹⁴⁸ These discussions also failed to address the fact that mines remain active for many years after the end of the conflict during which the mines were laid.¹⁴⁹ Most importantly, they failed to emphasize the shocking and excessive harm to human beings unleashed by these weapons.¹⁵⁰

In a practical sense, therefore, the provisions of the Conventional Weapons Treaty related to land mines have proved to be a dismal failure in carrying out the doctrines of customary international law. Land mines often are targeted purposely against

143. Carnahan, *supra* note 120, at 75. The conferences were preceded and influenced by two conferences of government experts in 1974 and 1976 convened by the International Committee of the Red Cross. THE ARMS PROJECT, *supra* note 3, at 265 n.9.

144. THE ARMS PROJECT, *supra* note 3, at 270.

145. *Id.* at 270. Customary international law permits defensive and prohibits offensive uses of land mines. Greenspan, *supra* note 101, at 363.

146. *See supra* note 40 and accompanying text.

147. MULTILATERAL TREATIES DEPOSITED WITH THE SECRETARY GENERAL, *supra* note 121, art. 3.

148. THE ARMS PROJECT, *supra* note 3, at 271.

149. *Id.*

150. *Id.* at 272.

civilians. Mines have been used without taking any precautions to protect civilians, even where harm to civilian interests outweighs any possible military advantage. The surging use of land mines, the developing technologies that render mines more difficult to detect, and the numerous civilian casualties from land mine explosions since the publication of the treaty clearly demonstrate that the Conventional Weapons Treaty has been unable to curb the atrocities that undermine established principles of international law.¹⁵¹

V. TOWARD AN ABSOLUTE BAN OF LAND MINES

Customary international legal principles, coupled with the provisions set forth in Article 3 of the Conventional Weapons Treaty, are irreconcilable with the less restrictive provisions of Articles 4 through 9. This view of the interaction between Article 3 and Articles 4 through 9, unfortunately, runs afoul of *expressio unius est exclusio alterius*,¹⁵² a widely-applied doctrine in international adjudication.¹⁵³ Furthermore, it can be argued that the flexibility of the less-restrictive provisions constitutes the essence of the treaty and accurately reflects the compromises reached by the delegates through debate and balloting during the conferences.¹⁵⁴ Perhaps a thoughtful and conscientious war crimes tribunal passing judgment upon actions of military commanders could resolve this interpretive dilemma. If defendants before such a tribunal strictly adhered to the provisions of Articles 4 through 9 of the treaty's Protocol II, but, nevertheless, violated principles of international law by causing the slaughter and maiming of a tremendous number of civilians, it is questionable that they would

151. *Id.* at 263, 353. Mines have been used in recent years for the purpose of terrorizing civilians and controlling their movements in Afghanistan, Angola, Cambodia, Somalia, Mozambique, Nicaragua, former Yugoslavia, Iraq, Kurdistan, and elsewhere. *Id.* at 23.

152. "Expressio unius est exclusio alterius" means that when certain things or persons are specified in a law, contract, or will, there is an intention to exclude all others from its operation. BLACK'S LAW DICTIONARY 581 (6th ed. 1990).

153. LASSO OPPENHEIM, 1 INTERNATIONAL LAW § 554, at 954 (H. Lauterpacht ed., 8th ed. 1955).

154. Treaty provisions ordinarily are not to be held meaningless or ineffective. "[Y]et it must be borne in mind that on occasions the absence of a full measure of effectiveness is the direct result of the intention of the parties . . . [who] were unable to agree on a more complete degree of efficacy of the provisions of the treaty." *Id.* § 554, at 955.

be convicted.¹⁵⁵ The failure of existing international law to eliminate the harm caused by land mines necessitates the drafting and ratifying of a comprehensive treaty that abolishes the use of land mines.

The analogous character of poisonous gases or bacteriological warfare and land mines is readily apparent. The 1899 Hague Declaration 2 Concerning Asphyxiating Gases ("Hague Declaration 2") condemned projectiles used solely for spreading poison gas.¹⁵⁶ This treaty was first circumvented by the use of cylinders, instead of projectiles, to spread gas.¹⁵⁷ The widespread use of poisonous gases during World War I¹⁵⁸ shows that militaries eventually ignored the Hague Declaration 2. In 1925, 115 nations¹⁵⁹ adopted the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare ("1925 Geneva Protocol").¹⁶⁰ This treaty is regarded as a part of customary international law¹⁶¹ and only a few violations have occurred in the seventy years since its adoption.¹⁶² The ineffective control measures presented by the 1899 treaty on gas projectiles closely resembles the inadequate control of the Conventional Weapons Treaty on the use of land

155. At least two judges of an international tribunal that decided the fate of military officers charged of war crimes after World War II believed that waging aggressive war was not a crime in violation of international law if treaties do not clearly proscribe such an act. See *In Re Hirota*, 15 ANN. DIG. 356, 374-75 (1948) (Roling, J., dissenting) (concluding that "aggressive war, although perhaps the subject of moral condemnation, was 'not considered a true crime . . . for lack of those conditions in international relations on which such a view could be based.'"); *Id.* at 375-76 (Pal, J., dissenting) (expressing the view "that the General Treaty for the Renunciation of War of 1928 did not render criminal or unlawful any category of war and that the right of war was not justiciable according to any rule of customary or conventional international law; . . ." and "that the killing of enemy persons carried out under the authority of the State *amino belligerendi* in the course of waging an aggressive war cannot amount to murder").

156. 1899 Hague Declaration 2 Concerning Asphyxiating Gases, July 29, 1899, *reprinted in* DOCUMENTS ON THE LAW OF WAR, *supra* note 57, at 36.

157. *Levie*, *supra* note 59, at 1194.

158. DOCUMENTS ON THE LAWS OF WAR, *supra* note 55, at 35.

159. THE LAWS OF ARMED CONFLICTS, *supra* note 49, at 117-21.

160. 1925 Geneva Protocol, *reprinted in* DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 138.

161. DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 138.

162. The Italian government used poison gas in its claimed territory of Ethiopia in the 1930s. Japan is reported to have used poison gas in China in the 1930's. Use of poison gas during World War II has never been confirmed. Mustard gas is believed to have been used by Egypt (then United Arab Republic) in Yemen in 1967. Iraq used poison gas against its indigenous Kurdish population in the 1980s. *Levie*, *supra* note 59, at 1195-97.

mines. This ineffective measure of control invites evasion and violation. A treaty similar to the 1925 Geneva Protocol must be adopted to effectively curb the harm inflicted upon civilians. Like bacteriological agents, land mines can cause unintended, yet extremely injurious, effects on non-combatants. The 1925 Geneva Protocol also prohibited bacteriological warfare.¹⁶³ This prohibition has also been adhered to by militaries.¹⁶⁴ In 1972, 51 nations adopted the 1972 Biological Weapons Convention, which banned the production and possession of bacterial agents not designed for peaceful use, and their means of delivery.¹⁶⁵ Drawing from these examples, one should expect that an absolute prohibition on the possession and use of land mines would achieve similar recognition and adherence.

V. CONCLUSION

Individual nations have begun taking actions that may lead to a total ban on the possession and use of land mines. The Land Mine Moratorium Act, passed by the U.S. Congress in 1992, banned the sale, export, and transfer abroad of land mines.¹⁶⁶ The Land Mine Moratorium Extension Act, passed in 1993, extended the law for an additional three years.¹⁶⁷ Congress found that land mines "have been used indiscriminately in dramatically increasing numbers" and that "[n]oncombatant civilians, including tens of thousands of children, have been the primary victims."¹⁶⁸

In 1993, President Mitterand of France announced that his country would voluntarily abstain from exporting antipersonnel land mines and called on other states to proclaim a moratori-

163. 1925 Geneva Protocol, *reprinted in* DOCUMENTS ON THE LAWS OF WAR, *supra* note 57, at 140.

164. Levie, *supra* note 59, at 1195-96.

165. 26 U.S.T. 583, T.I.A.S. No. 8062. The development of this treaty stemmed from the fear that the 1925 treaty might not be adequate to deal with contemporary methods of warfare. BIOLOGICAL AND TOXIN WEAPONS TODAY 135, 138 (Erhard Geissler ed., 1986).

166. Pub. L. No. 102-484, § 1365, 57 C.F.R. 228 (1992) (amending National Defense Authorization Act for Fiscal Year 1993).

167. Pub. L. No. 103-160, § 1423, 32 C.F.R. 254.4 (1994) (amending National Defense Authorization Act for Fiscal Year 1994).

168. Landmine Moratorium Extension Act, Pub. L. No. 102-484, § 1365, 106 Stat. 2561 (1992).

um.¹⁶⁹ The Belgian government announced that it has stopped all production of antipersonnel land mines and will not permit their transportation within Belgium.¹⁷⁰ In 1994, the Italian Parliament passed legislation ceasing the production and exportation of land mines during the 1995 international conference to review the Conventional Weapons Treaty.¹⁷¹ Sweden also banned non-detectable and non-self-destructing mines.¹⁷² Ten other nations banned land mine exportation during 1994 and 1995.¹⁷³ The European Parliament passed a resolution in 1992 demanding that all member states declare a five-year moratorium on exporting mines and mine emplacement training.¹⁷⁴ Finally, the United Nations passed resolutions calling for a moratorium on the export of land mines and for the eventual elimination of these weapons.¹⁷⁵ These unilateral actions described above are a fitting prelude to multilateral prohibition of land mine use.

An international conference is scheduled in 1995 to review the Conventional Weapons Treaty.¹⁷⁶ This conference will present an historic opportunity for the adoption of a treaty that totally bans the production, possession, and use of land mines. No lesser measure will ensure adherence to fundamental doctrines of customary international law, and no action short of that will stop the needless slaughter and mutilation of civilians all over the world.

169. THE ARMS PROJECT, *supra* note 3, at 323-24.

170. CONG. REC. S11392 (Daily ed. 10, 1993) (reported by Sen. Leahy).

171. Evelyn Leopold, *United Nations: U.N. Assembly Asks For Worldwide Ban On Landmines*, RUETER GEN. NEWS, Dec. 16, 1993.

172. *Id.*

173. U.S. Mission to U.N., Press Release No. 165-(94), Nov. 3, 1994 (reported by Sen. Leahy).

174. THE ARMS PROJECT, *supra* note 3, app. 13. The resolution also asks member states to influence the United Nations Security Council to treat mine clearance as a matter of great urgency. *See id.*

175. U.N. GAOR 48/75 12/16/93; U.N. A/C. 1/49/L.19 12/15/94.

176. Members of the U.N. Conventional Weapons Convention will meet in Geneva in September, 1995 to discuss the treaty's land mine protocol. Theresa Hitchens, *U.S. Land Mine Plan Faces Two-Sided Criticism*, DEF. NEWS, Nov. 14, 1994, at 12.