Affirming Our Common Humanity: Regulating Landmines to Protect Civilians and Children in the Developing World

Mary A. Ferrer
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By Mary A. Ferrer*

I. Introduction

In January 1994 in Malanje, Angola, little Tunisia became yet another of the town’s orphans. The six month old baby was found still clinging to her mother’s corpse three days after she had been killed trying to harvest food.¹

Three siblings died near the Guazapa volcano last weekend when they stepped on a mine planted during the period of civil warfare. Ironically, their parents had returned to the area only a few days earlier. The children were four, six, and eight years old. Parts from the three children’s bodies were found as far as 30 metres from the explosion site.²

As the number of antipersonnel landmines³ has increased dramatically worldwide in the last twenty-five years, stories like these are more common, chronicling the rising number of civilians in developing countries injured from exploding landmines. According to the U.S. Department of State’s Office of International Security and Peacekeeping Operations, 80 to 110 million landmines are deployed

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². Id. (describing one accident discovered during the United Nations Children’s Fund’s (UNICEF) 1993 Mine Awareness Project in El Salvador).

³. Military use of landmines encompasses both antitank and antipersonnel landmines. See Richard H. Johnson, Why Mines? A Military Perspective, in CLEARING THE FIELDS 30 (Kevin M. Cahill, M.D. ed., 1995) (“The most common way to designate differences between land mines is by referring to them by types of target they are designed to attack.”). Unless otherwise indicated, this Note discusses only antipersonnel landmines, boobytraps, or similar explosive devices.
or stockpiled in sixty-two countries worldwide. Most of these landmines were laid or produced in the past twenty to twenty-five years. According to the United Nations, ongoing and new mine clearance operations extracted eighty thousand landmines worldwide in 1993. In that same year, another 2.5 million landmines were deployed.

Although some perceive landmines as purely military weapons targeting military combatants and objectives, the reality is that eighty percent of landmine casualties are civilians, not soldiers. It is estimated that landmines kill or maim approximately five hundred people every day. Even more disheartening is the fact that a large number of these civilian victims are children. The United Nations Children's Fund (UNICEF) estimates that there is one landmine for every twenty of the world's children.

Developing countries have been hardest hit by the global landmine crisis. Three developing countries, Cambodia, Angola, and Afghanistan, harbor approximately twenty-eight million landmines, which constitute eighty-five percent of the world's implanted landmines. The reasons for the current crisis are numerous. A growing number of producers, combined with increasingly sophisticated military technology, allow landmines to be scattered randomly

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5. HUMAN RIGHTS WATCH ARMS PROJECT AND PHYSICIANS FOR HUMAN RIGHTS, LANDMINES: A DEADLY LEGACY 51 (Human Rights Watch ed., 1993) [hereinafter DEADLY LEGACY]. According to U.S. Army Intelligence, 400 million mines have been emplaced or stockpiled since World War II. Id. at 50.

6. HIDDEN KILLERS, supra note 4, at 2.

7. Id.


9. HIDDEN KILLERS, supra note 4, at 1.


12. See infra Part V.

13. HIDDEN KILLERS, supra note 4, at 1.
and in larger quantities. Furthermore, armed conflict has changed in the post-Cold War era. A rising number of ethnic conflicts and outbreaks are local or regional conflicts taking place between government and rebel forces within one country, rather than internationally. Because these types of low intensity conflicts often take place in poor, developing countries, landmines are generally the weapon of choice due to their effectiveness and their low cost. Landmines have been deployed increasingly by government and guerrilla armies as an offensive weapon used to terrorize and control the movements of civilians, a use which clearly violates international humanitarian law.

The landmine crisis has had a devastating effect on the civilian populations in developing countries. Landmines wreak havoc on the economic, social, and political stability of such developing countries, long after armed conflict has ended. As UNICEF recognizes, "A mine has no target. A mine recognises no ceasefire. Unable to distinguish between the footfall of a soldier in battle, or a child playing, it lies in wait to kill and maim." Furthermore, landmines differ from other weapons by their long term consequences as a delayed reaction weapon and the particularly egregious type of injury they inflict on their victims.

Existing international law does not adequately protect the interests of civilian populations, especially those in developing countries. Although Protocol II of the Conventional Weapons Convention (the "Landmine Protocol") was established to regulate the use of landmines, it has done little to protect civilians in practice. In re-

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14. Id. at 6-11.
15. Id. at 9-10.
16. Id. at 9. For example, in Cambodia, Afghanistan, Mozambique, and Nicaragua, bitter internal conflicts have left millions of landmines hidden in their countries' landscapes. See id. at 44-52.
17. DEADLY LEGACY, supra note 5, at 18.
18. Id. at 23. For more detailed discussion of how landmine use violates international humanitarian law, see infra Part IV.
19. See infra Part V.
20. See infra Part V.
22. DEADLY LEGACY, supra note 5, at 5-7.
23. This proposition is discussed infra Part III.B.
Response to the global landmine crisis and the failures of the Landmine Protocol, a Review Conference of the Conventional Weapons Convention was convened in 1996, but with only limited success. Organizations such as UNICEF and the International Committee of the Red Cross (ICRC) advocate a complete and total ban on the production, use, stockpiling, sale, and export of antipersonnel mines as the only solution to the global landmine crisis and the only means to adequately protect civilian populations in developing countries from landmines' destructive and debilitating effects. Unfortunately, the Review Conference has failed to reach agreement on a total ban on the use and production of landmines. Their disagreement is rooted in the participants' differing opinions about the proper balance of humanitarian and military interests that should be represented in a revised Landmine Protocol.

This Note discusses the shortcomings of international law in regulating the use of landmines as military weapons. It illustrates the effects of these shortcomings on the civilian populations of developing countries, with special emphasis on the effect of landmines on children in developing countries. Part II provides a short summary of the arguments for and against a total ban on the use of landmines. Parts III and IV outline existing international regulation of landmine use, discussing both international humanitarian law and the Landmine Protocol, and conclude that current landmine use violates international humanitarian law. Part V describes how the inadequate regulation of landmine use has had detrimental effects on civilian populations in the developing world. Part VI discusses how the use of landmines violates children's rights under the United Nations Convention on the Rights of the Child. Finally, in Part VII, this Note proposes that the only solution to the landmine crisis in the developing world is a total ban on the use and production of landmines. Recognizing that the international community did not achieve a total ban during the recent Re-

27. ICRC Overview, supra note 4.
28. Vance & Okun, supra note 8, at 205. Many other nongovernmental organizations (NGOs), including the Physicians for Human Rights and Humans Rights Watch, have also taken this position. See generally DEADLY LEGACY, supra note 5.
29. See Jean, supra note 25.
30. Id.
view Conference of the Conventional Weapons Convention, Part VII also provides proposals for legal change in lieu of a total ban, and suggests implementation of humanitarian programs that specifically address the concerns of civilians in developing countries.

II. Basic Background on Antipersonnel Landmines

A. Landmines: What Are They?

A landmine 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." Antipersonnel landmines are those which target persons and combatants, rather than tanks or other military equipment. There are over 340 types of antipersonnel landmines produced in 48 countries worldwide. The explosive content found in antipersonnel landmines is purposely calculated to maim, not kill the victim.

Two basic categories of antipersonnel landmines exist. The most common category is the blast mine, which detonates when a person or animal steps on it or when a wheel or other object applies pressure. When blast landmines explode, there is a rapid air expansion that tears off the victim's leg, resulting in the need for traumatic amputation. The second most common type of landmine is the fragmentation landmine. When fragmentation landmines detonate, small pieces of metal fragments shatter either directionally, or in a radius surrounding the landmine. As a result, the blast victim suffers from multiple metal fragments embedded in his or her body.

B. A Total Ban: Basic Arguments

Opponents of a total ban on the use and production of landmines generally argue that the military utility of antipersonnel landmines is

32. DEADLY LEGACY, supra note 5, at 18.
33. Id. at 19, 48.
34. Antipersonnel Landmines: Interviews with Dr. Chris Giannou and Thomas McNamara (National Public Radio broadcast, Jan. 8, 1996) (tape on file with author) [hereinafter NPR Broadcast].
35. Id.
36. DEADLY LEGACY, supra note 5, at 19.
37. NPR Broadcast, supra note 34.
38. Id.
39. Id.; see also DEADLY LEGACY, supra note 5, at 19-20.
40. NPR Broadcast, supra note 34.
unparalleled and cannot be replaced by any other military weapon.\textsuperscript{41} In January 1994, the ICRC conducted a symposium of military experts to examine the utility of landmine use.\textsuperscript{42} They concluded: "No alternative meets military requirements in the way that anti-personnel . . . mines do," and that landmines are the "most cost-effective system available to the military."\textsuperscript{43} Opponents of a total ban prefer to focus on landmine removal techniques and export controls rather than implementation of a ban on the use and production of landmines.\textsuperscript{44}

Advocates of a total ban argue that their opponents do not consider humanitarian interests at all in their quest to preserve military use of antipersonnel landmines.\textsuperscript{45} They question the utility of military landmine use, especially considering their indiscriminate effects on civilian populations.\textsuperscript{46} Furthermore, they contend that military experts do not uniformly agree on the utility of landmines.\textsuperscript{47} One U.S. Marine Corps Commandant General at the ICRC military symposium stated that:

\begin{quote}
We kill more Americans with our mines than we do anybody else. We never killed many enemy [sic] with mines . . . I know of no situation in the Korean War, nor in the five years I served in Southeast Asia, nor in Panama, nor in Desert Shield-Desert Storm where our use of mine warfare truly channelized the enemy and brought them into a destructive pattern . . . . In the broader sense, I'm not aware of any operational advantage from broad deployment of mines . . . .\textsuperscript{48}
\end{quote}

Whatever their differences, both proponents and opponents of a total ban on landmines can agree that developing countries have been hardest hit by the recent proliferation of antipersonnel landmines worldwide.

\textsuperscript{41} See Johnson, supra note 3, at 38.
\textsuperscript{43} Id.
\textsuperscript{44} See Thomas E. McNamara, The U.S. Approach Toward Land Mines: A Realistic Policy for an Evolving Problem, in CLEARING THE FIELDS, supra note 3, at 60, 63-64.
\textsuperscript{45} See, e.g., DEADLY LEGACY, supra note 5, at 333-34.
\textsuperscript{47} DEADLY LEGACY, supra note 5, at 339.
\textsuperscript{48} Id.
III. Existing International Regulations on Landmine Use

The use of landmines during armed conflicts is regulated under both customary and conventional international law. The doctrine of *jus in bello* seeks to prevent humanitarian abuses during wars and is generally referred to as international humanitarian law. In order for international law to protect civilians effectively during armed conflicts, two factors must be present. First, there must be a perceived mutual interest among states supporting the movement to limit or eradicate a type of weaponry. Second, there must exist a widely shared belief among states that the specific type of weaponry is "at odds with the basic dignity and self-esteem of the military profession, and should be shunned." Existing international law regulating landmines fails to effectively protect civilian interests during armed conflicts, largely because military interests nearly always outweigh humanitarian interests in the formulation of international law regulating landmines.

A. Customary International Law Regulating Armed Conflicts

Four basic principles of international humanitarian law govern military tactics and weaponry during armed conflicts. First, the principle of discrimination requires that the tactic or weapon discriminate between civilian and military targets. Second, the principle of proportionality requires that the tactic or weapon only inflict harm that is proportionate to the military utility being achieved. Third, the principle of necessity mandates that military tactics or weapons inflict harm only as is necessary and relevant to the prompt realization of the

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52. Id.

53. Id.

54. ICRC Military Report, *supra* note 42. For example, at a January 1934 ICRC conference of professional military personnel, conference participants concluded that antipersonnel landmines are an essential part of military weaponry and actively resisted any generalized ban on landmines. Id. They were, however, willing to condition use on some generalized guidelines designed to encourage "all feasible precautions . . . to protect civilians from the effect of mines." Id.


56. Id.

57. Id.
legitimate military objective.\textsuperscript{58} Fourth, the principle of humanity requires that the tactic or weapon does not cause injury or death in ways that result in cruel or gratuitous suffering, especially with regard to civilians and noncombatants.\textsuperscript{59}

Protocol I Additional to the Geneva Conventions of 1949, Relating to the Protection of Victims of International Armed Conflicts ("Additional Protocol I"),\textsuperscript{60} signed in 1977, codifies these principles specifically to protect civilian victims during international armed conflicts.\textsuperscript{61} The provisions of Additional Protocol I emphasize that "[i]n any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited."\textsuperscript{62}

1. The Principle of Discrimination

Article 51(4) of Additional Protocol I expressly prohibits "indiscriminate attacks," which are defined as "(a) those which are not directed at a specific military objective" and "(b) those which employ a method or means of combat which cannot be directed at a specific military objective."\textsuperscript{63} Article 51(5) further defines "indiscriminate" as referring to a tactic or weapon likely to produce "an incidental loss of civilian life, [or] injury to civilians . . . which would be excessive in relation to the concrete and direct military advantage anticipated."\textsuperscript{64}

\begin{thebibliography}{99}
\bibitem{59} Falk, \textit{supra} note 49, at 75.
\bibitem{61} \textit{Deadly Legacy}, \textit{supra} note 5, at 308-09.
\bibitem{62} Additional Protocol I, \textit{supra} note 60, art. 35(1), 1125 U.N.T.S. at 21, 16 I.L.M. at 1408.
\bibitem{63} Id. art. 51(4)(a)-(b), 1125 U.N.T.S. at 26, 16 I.L.M. at 1413.
\bibitem{64} Id. art. 51(5)(b), 1125 U.N.T.S. at 26, 16 I.L.M. at 1413.
\end{thebibliography}
2. The Principles of Proportionality and Necessity

Article 35(2) states that "[i]t is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering."65 Attacks are prohibited where they cause incidental loss of life and injury to civilians that would be excessive in relation to the military objective anticipated.65 Additional Protocol I also provides environmental protections as an element of the necessity or proportionality principle, stating that "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."67

Encompassed in these two principles is the requirement of minimizing harm to civilians during armed conflicts. This sentiment is further codified in the United Nations General Assembly Resolution 2444 of 1969.68 This resolution prohibits launching attacks against civilians and requires that distinctions be made at all times between combatants and members of the civilian population so that civilians may be protected to the fullest extent.69 This statement of international humanitarian law is generally perceived as authoritative and is recognized by the United States as such.70

Additional Protocol I codifies these protections for civilians during armed conflicts. Article 48 requires that military operations be directed only against military objectives, not civilians.71 Article 57(3) requires that when it is possible to choose between several military objectives, the choice should be made to select the least dangerous attack so as to minimize the injury and loss of life to civilian populations during the military operation.72

65. Id. art. 35(2), 1125 U.N.T.S. at 21, 16 I.L.M. at 1409.
66. See id. arts. 51(5)(b), 57(2)(a)(iii), 1125 U.N.T.S. at 26, 29, 16 I.L.M. at 1413, 1416.
67. Id. art. 35(3), 1125 U.N.T.S. at 21, 16 I.L.M. at 1409.
68. See DEADLY LEGACY, supra note 5, at 306 n.112 (discussing the “Respect for Human Rights in Armed Conflicts” resolution that was unanimously adopted by the General Assembly on January 13, 1969).
69. Id.
70. Smith, supra note 58, at 519 nn.82-83.
71. Additional Protocol I, supra note 60, art. 48, 1125 U.N.T.S. at 25, 16 I.L.M. at 1412; see also id. art. 51(2), 1125 U.N.T.S. at 26, 16 I.L.M. at 1413 (stating that the civilian population shall not be the object of a military attack).
72. Id. arts. 57(2)(a)(iii), 57(3), 1125 U.N.T.S. at 29, 16 I.L.M. at 1416.
3. *The Principle of Humanity*

In the 1868 Declaration of St. Petersburg, the international community established the following:

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

That this object would be exceeded by the employment of arms which uselessly aggravate the sufferings of disabled men or render their death inevitable;

That the employment of such arms would, therefore, be contrary to the laws of humanity.\(^7\)

Several classes of weaponry have been banned due to their infliction of superfluous suffering or injury in violation of this principle.\(^4\)

For example, the St. Petersburg Declaration banned the use of lightweight exploding projectiles, noting that there are "technical limits at which the necessities of war ought to yield to the requirements of humanity."\(^7\)

The Hague Convention (II) with Respect to the Law and Customs of War on Land banned the use of projectiles the purpose of which is to diffuse asphyxiating gases,\(^7\) and the banned use of expanding or "dum-dum" bullets.\(^7\)

More recently, the use, production, stockpiling, and transfer of chemical and biological weapons have been banned by the international community.\(^7\)

The 1925 Geneva Protocol prohibited the use of poisonous gas and bacteriological warfare, based on these weapons' infliction of unnecessary suffering and their inability to discriminate between military and civilian targets.\(^7\)

The 1972 Biological Weapons

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\(^4\) See Smith, *supra* note 58, at 532-33.

\(^7\) See, e.g., Explosive Projectile Declaration, *supra* note 73, 138 Consol. T.S. at 298; see also *Deadly Legacy*, *supra* note 5, at 312-13.

\(^7\) Declaration Concerning Asphyxiating Gases, July 29, 1899, 187 Consol. T.S. 456, *reprinted in The Laws of Armed Conflicts*, *supra* note 73, at 105-07. This Declaration restates the general principle of humanity and prohibits the use of "projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases." *Id.*


\(^7\) *Deadly Legacy*, *supra* note 5, at 314-15.

\(^7\) Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, Jan. 22, 1925, 26 U.S.T. 571, 571-75, 14 I.L.M. 49, 49-50.
Convention went even further and extended a ban on the development, production, stockpiling, and transfer of biological weapons. This was the first international agreement to ban not just the use but also the production, stockpiling, and transfer of an entire category of weapons. The Convention was enacted with the belief that any use of these weapons "would be repugnant to the conscience of mankind and that no effort should be spared to minimize this risk."81

B. Governing the Use of Landmines by Treaty: The Landmine Protocol

The international community recognized the need to specifically regulate landmines in the Landmine Protocol.82 The Landmine Protocol was intended to reduce the harm to civilians from mine warfare and to reinforce the fundamental principles of international humanitarian law in landmine regulation.83 Unfortunately, due to its many flaws, the Landmine Protocol has failed to achieve these goals.84 As a result, customary international law provides civilians greater protection with respect to landmine use than the Landmine Protocol.85 Furthermore, Human Rights Watch Arms Project has observed that "in the decade since the Landmine Protocol entered into force, [land]mine use has proliferated and attacks on civilians have multiplied manyfold."86 In response, members of the Conventional Weapons Convention, along with nongovernmental organizations such as the ICRC, engaged in a three-session review conference to discuss, among other things, how to address the shortcomings of the Landmine Protocol and the inadequacies of the Convention.87

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81. Id. preamble, 26 U.S.T. at 585, 11 I.L.M. at 309; see also DEADLY LEGACY, supra note 5, at 315-16.


83. DEADLY LEGACY, supra note 5, at 262.

84. See id. at 263 (stating that even the Landmine Protocol's "modest restrictions have not been followed in conflicts waged since its entry into force almost ten years ago.").

85. For detailed discussion of this point, see infra Part IV.

86. DEADLY LEGACY, supra note 5, at 353.

87. See ICRC Third Session, supra note 25. For further discussion of the Conventional Weapons Convention Review Conference, see infra Part III.B.2.
1. **Shortcomings of the Landmine Protocol**

Several factors contribute to the Landmine Protocol’s failure to protect civilians in developing countries from landmine injury.

a. **No Unanimous Membership or Enforcement Mechanisms**

Members of the international community who deploy landmines have not unanimously accepted the Conventional Weapons Convention and its three original protocols. Furthermore, the Convention does not establish an enforcement mechanism to ensure compliance by member states. In fact, the Landmine Protocol provides “no procedure for complaints, no mechanism for verification, [and] no consequences of noncompliance of even a flagrant character.”

b. **The History of the Landmine Protocol: Military Interests Trump Humanitarian Interests**

The failures of the Landmine Protocol are rooted in its historical development. During the Lucerne Conference, convened to draft the Conventional Weapons Convention, participants considered whether the use of landmines violated international humanitarian law; specifically, they considered whether landmine use violated the legal prohibition against weapons causing superfluous injury or unnecessary suffering. However, when drafting the Convention, the parties could not agree on the appropriate balance between humanitarian necessities and military interests to be incorporated in the provisions of the Convention. The majority of the participants believed essentially that landmines were “necessary defensive weapons,” despite the particular danger these weapons pose to civilians.

What is particularly alarming about the Lucerne Conference is that the participants “virtually ignored the most problematic features...
of mine warfare: the unique long-term risk to civilians created by the
delayed-action quality of landmines; the severity of mine injuries; and
the resulting massive devastation of civilian populations.\textsuperscript{94,95} The par-
ticipants also did not take seriously the inevitably indiscriminate ef-
facts caused by landmines' delayed-reaction feature.\textsuperscript{95} The economic
costs and practical difficulties of mine clearance were only cursorily
mentioned, while other humanitarian concerns relating to the social
and health effects on civilians from landmine use were virtually ig-
nored.\textsuperscript{96} The records of the Lucerne Conference disclose that military
interests favoring the continued availability of landmines as a weapon
of war severely outweighed humanitarian concerns.\textsuperscript{97}

This fundamental imbalance between humanitarian and military
interests continued to plague the Review Conference of the Conven-
tional Weapons Convention.\textsuperscript{98} Dissension as to the proper balance
between humanitarian and security issues persisted, varying from
country to country.\textsuperscript{99} This fundamental disagreement is one of the
primary points of controversy over which landmine regulation is con-
cerned and one of the principal reasons a total ban has not been
achieved to date.\textsuperscript{100} Military interests continue to trump civilian inter-
ests, effectively impeding consensus among participants of the Review
Conference. Until the balance tips towards humanitarian interests,
landmine regulation under the Conventional Weapons Convention
and the Landmine Protocol will fail to protect civilians from the de-
structive effects of landmines.\textsuperscript{101}

\textsuperscript{94} Id.
\textsuperscript{95} Id. at 274.
\textsuperscript{96} Id. at 274-75.
\textsuperscript{97} Id. at 272-73.
\textsuperscript{98} Jean, supra note 25. \textit{See infra} Part III.B.2 for a discussion of the Conventional
Weapons Convention's Review Conference.
\textsuperscript{99} Id.
\textsuperscript{100} See id. (discussing the results of the first session of the Review Conference and
quoting one participant as stating that the proper balance between humanitarian and mili-
tary requirements with respect to landmine regulation "is different for different
countries.").
\textsuperscript{101} For a more detailed discussion of this proposition, see Paul J. Lightfoot, \textit{Comment,
The Landmine Review Conference: Will the Revised Landmine Protocol Protect Civilians?},
18 \textit{Fordham Int'l L.J.} 1526, 1558 (1995) (concluding that these differences between mem-
ber states would result in inadequate protection for civilians in a revised Landmine
Protocol).
c. Lackluster Provisions in the Landmine Protocol Fail to Protect Civilians, Offering Less Protection than Additional Protocol I Mandates

The weak language of the Landmine Protocol provides civilians in developing countries with only minimal protection from landmines. Rife with internal conflicts and inconsistent language, the specific provisions of the Landmine Protocol fail to conform with humanitarian law requirements as codified in Additional Protocol I.102 Considering the Landmine Protocol’s historical development, it is not surprising that its provisions inadequately consider humanitarian interests and place noncombatants at an unnecessarily high risk of injury during armed conflicts.103 Its provisions suggest a bias favoring military interests that reflects the disagreement among the drafters regarding the military necessity of landmines.104 Although the Preamble of the Conventional Weapons Convention purports to protect “the civilian population and combatants” under “the principles of international law derived from established custom, and from the principles of humanity and from the dictates of public conscience,”105 the individual provisions of the Landmine Protocol do not adequately promote these concerns. As implemented, these provisions jeopardize civilian interests during armed conflicts and ignore the safeguards mandated by Additional Protocol I.106

The Landmine Protocol broadly prohibits “in all circumstances” any military action in which landmines107 are directed “either in offence, defence or by way of reprisals, against the civilian population as

102. For discussion of the international humanitarian law principles codified in Additional Protocol I, see supra Part III.B.
103. See DEADLY LEGACY, supra note 5, at 272-73 (discussing the Lucerne Conference). The authors noted that:
Although conference participants professed to strike a balance between humanitarian and military considerations, in fact their analysis was fatally incomplete. They placed unduly heavy emphasis on military need, in part because of now obsolete mine warfare. On the other hand, they seriously underestimated the human costs of landmine use . . . . Conference participants also failed to give full consideration to the inefficacy of seeking to apply the proportionality principle to the use of a delayed-reaction weapon.

Id.
104. Id.
106. See DEADLY LEGACY, supra note 5, at 306-10.
107. Because the scope of this Note is limited to discussion of antipersonnel landmines and their effects, this section will only refer to the Landmine Protocol provisions regulating antipersonnel landmines. However, the Landmine Protocol also applies to the use of
such or against individual civilians.” Nevertheless, subsequent provisions in the Landmine Protocol effectively undermine the power of this broad prohibition, rendering it meaningless in practice.

For example, Article 3 of the Landmine Protocol addresses general restrictions on the use of landmines, enumerating several prohibited “indiscriminate” uses predicated on the distinction between civilian objects and military objectives. However, this distinction “is difficult to maintain once a military target has moved away from a mined area, leaving behind antipersonnel mines.” Furthermore, Article 3 requires only that parties in an armed conflict take “all feasible precautions” necessary “to protect civilians from the effects of” landmines. It defines “feasible” as “those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations.” In practice, however, “feasible” is a weak term open to considerable interpretation by military forces laying landmines.

mines, booby traps, and other devices, as specifically defined in Article 2. Landmine Protocol, supra note 24, arts. 2(2)-(3), 3(1)(a)-(e), 1342 U.N.T.S. at 168-69, 19 I.L.M. at 1530. 108. Id. art. 3(2), 1342 U.N.T.S. at 169, 19 I.L.M. at 1530. 109. Article 3(3) of the Landmine Protocol prohibits three “indiscriminate” uses of landmines, defined as any placement:
(a) which is not on, or directed at, 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.

Id. art. 3(3), 1342 U.N.T.S. at 169, 19 I.L.M. at 1530.

110. The Landmine Protocol defines “military objective” as “any object which by its nature, location, purpose or use makes an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.” Id. art. 2(4), 1342 U.N.T.S. at 169, 19 I.L.M. at 1530. “Civilian objects” are defined by the Landmine Protocol as “all objects which are not military objectives as defined in paragraph 4.” Id. art. 2(5), 1342 U.N.T.S. at 169, 19 I.L.M. at 1530.

111. Sandoz, supra note 50, at 188. Furthermore, it is arguable that landmine use is prohibited by the terms of the Landmine Protocol itself. Indiscriminate is defined as any landmine placement “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.” Landmine Protocol, supra note 24, art. 3(3)(c), 1342 U.N.T.S. at 169, 19 I.L.M. at 1530. Landmine use in any capacity has not just “incidental” effects, but leaves a devastating impact on civilian populations both during and after the armed conflict. See infra Parts V and VI.


113. Id.

114. Sandoz, supra note 50, at 188.
a result, this language significantly undercuts the broad duty to protect civilians promulgated in Article 3(2).\textsuperscript{115}

Article 4 of the Landmine Protocol is similarly inconsistent, addressing nonremotely delivered mines specifically:

It is prohibited . . . [to lay mines] 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, \textit{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.\textsuperscript{116}

Although this provision begins with a strong prohibition against landmine placement in civilian areas, the two exceptions to this prohibition essentially nullify the prohibition, thereby failing to effectively protect civilians from the effects of landmines delivered by hand.

Article 5 of the Landmine Protocol prohibits the use of remotely delivered landmines except where “their location can be accurately recorded” or where they are equipped with “an effective neutralizing mechanism . . . designed to render a mine harmless or cause it to destroy itself.”\textsuperscript{117} Riddled with these exceptions, this provision fails to adequately protect civilians because there is no guarantee that remotely delivered landmines will actually self-destruct or self-neutralize.\textsuperscript{118} Furthermore, installing these mechanisms is very costly.\textsuperscript{119} Many developing countries resist such a requirement, arguing that it would place them at a military disadvantage to wealthier countries who can better afford to purchase landmines equipped with expensive mechanisms.

\textsuperscript{115} See id.

\textsuperscript{116} Landmine Protocol, \textit{supra} note 24, art. 4(2)(a)-(b), 1342 U.N.T.S. at 169, 19 I.L.M. at 1531 (emphasis added).

\textsuperscript{117} Id. art. 5(1)(a),(b), 1342 U.N.T.S. at 169, 19 I.L.M. at 1531.

\textsuperscript{118} Self-destructing or neutralizing mechanisms often malfunction, thereby failing to neutralize or destroy the landmine; their failure rate is estimated to be about 10%. Vance & Okun, \textit{supra} note 8, at 207. In contrast, humanitarian mine clearance, in comparison to military mine clearance, finds any number less than 99.9% unacceptable; in other words, landmines must be destroyed or neutralized 99.9% of the time, a mere 10% rate is entirely inadequate. \textit{Deadly Legacy, supra} note 5, at 236-37. Such a high percentage is necessary to offer civilians peace of mind and freedom from any possible landmine injury. See Vance & Okun, \textit{supra} note 8, at 208.

\textsuperscript{119} Sandoz, \textit{supra} note 50, at 190.
self-destruct or self-neutralize features. Unfortunately, it is developing countries "that suffer most from the effects of mines, and in which the concept of the 'military utility' of these weapons becomes absurd in view of the economic and social costs to which they give rise." Therefore, as a practical matter, Article 5 offers minimal protection of civilian interests.

Additionally, the recording requirement in Article 5 is significantly undercut by the recording provisions of Article 7 that only require parties to record the location of "all pre-planned minefields laid by them." Furthermore, Article 7 merely suggests that parties "endeavour to ensure the recording of the location of all other minefields ... which they have laid or placed in position." This weak language does not consider the interests of the civilian returning to farm his or her land, unaware that landmines lay in his or her fields. Moreover, the Landmine Protocol does not recognize that even when landmine fields are recorded by parties, their maps are frequently inaccurate, due to human error or simply because mines can move from their original location over time. Since the Landmine Protocol was enacted, no armed force is known to have consistently and accurately recorded the locations of their minefields.

Article 9 of the Landmine Protocol governs parties' plans for removing landmines at the conclusion of an armed conflict. Unfortunately, this Article does not impose an affirmative obligation to

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120. Id. at 189 (noting that "[i]t is thus the poorer countries that put up the most vigorous opposition to a total ban on antipersonnel mines or a general obligation to fit all mines with self-destruct or self-neutralizing mechanisms").

121. Id.

122. Landmine Protocol, supra note 24, art. 7(1)(a), 1342 U.N.T.S. at 170, 19 I.L.M. at 1532 (emphasis added). To add to the ineffectiveness of this provision, the Landmine Protocol provides no definition of "pre-planned." Sandoz, supra note 50, at 189.

123. Landmine Protocol, supra note 24, art. 7(2), 1342 U.N.T.S. at 170, 19 I.L.M. at 1532 (emphasis added).

124. Sandoz, supra note 50, at 190. One example of a recording failure is the case of the Falkland or Malvinas Islands. During the war between the United Kingdom and Argentina which ended in 1982, 117 minefields were recorded. Hidden Killers, supra note 4, at 22. However, the exact location of the mines on the Islands is unknown because "80% of the mines are laid in peat and beach sand, both of which are subject to movement." Id. It is likely that mines laid in 1982 have moved considerably and are no longer in their recorded areas. Id.

125. Smith, supra note 58, at 29.

126. Landmine Protocol, supra note 24, art. 9, 1342 U.N.T.S. at 171, 19 I.L.M. at 1539. Article 9 provides that "after the cessation of active hostilities, the parties shall endeavour to reach agreement, both among themselves and, where appropriate, with other States and with international organizations, on the provision of information and technical and material assistance—including, in appropriate circumstances, joint operations—necessary to re-
remove landmines, but only requires that parties "endeavour to reach agreement" on their removal.\footnote{127} Moreover, Article 9 does not require warring parties to offer assistance to international organizations that may be performing mine clearance. Rather, it asks only that the warring parties provide information "necessary" to remove mines.\footnote{128}

Finally, the Landmine Protocol is ineffective because until very recently, it did not apply to noninternational, or "unconventional" war.\footnote{129} This deficiency has seriously affected civilians in developing countries where "the rules of war are least likely to be obeyed."\footnote{130} Landmines are most often used against civilian populations as an offensive weapon during internal or civil wars.\footnote{131} Forces in these types of armed conflicts use landmines to overcome the "low force-to-space ratio typical of insurgency-counterinsurgency and many internal wars."\footnote{132} In order to control their movements, civilians are targeted and terrorized by both sides of the conflict.\footnote{133} Furthermore, because mines continue to injure and kill long after an armed conflict has ended, landmines act as destabilizing forces for the new political regime in power.\footnote{134} Therefore, the Landmine Protocol's failure to apply to internal conflicts has contributed to civilian landmine injuries incurred during post-Cold War civil wars in the developing world.\footnote{135}

The Landmine Protocol's less than satisfactory regulations provide only the most minimal consideration of civilians' interests. In general, observers have noted that "[c]omplex rules, discretionary language, and broad exceptions and qualifications further limit the utility of the Landmines Protocol."\footnote{136}

\begin{itemize}
  \item move or otherwise render ineffective minefields, mines and booby-traps placed in position during the conflict." \textit{Id.} (emphasis added).
  \item See id.; see also Sandoz, \textit{supra} note 50, at 190. Another shortcoming of Article 9 is its failure to discuss repatriation, land-reclamation, and other issues crucial to "a mine-devastated" country once a war has ended. \textit{Sandoz, supra} note 50, at 190.
  \item Landmine Protocol, \textit{supra} note 24, art. 9, 1342 U.N.T.S. at 171, 19 I.L.M. at 1539.
  \item See Jean, \textit{supra} note 25.
  \item J. Bryan Hehir, \textit{Land Mines: A Political-Moral Assessment, in Clearing the Fields, supra} note 3, at 97, 104.
  \item \textit{Deadly Legacy, supra} note 5, at 22-23.
  \item \textit{Id.} at 22. Landmines "are used principally as area denial weapons, useful in overcoming the low force-to-space ratio typical of such conflicts." \textit{Id.} at 9.
  \item \textit{Id.} at 23.
  \item \textit{Id.}
  \item See Hehir, \textit{supra} note 130, at 104-05 (discussing the rise in intrastate conflicts after the Cold War and how the use of landmines in these conflicts represents an indiscriminate method of war).
  \item \textit{Deadly Legacy, supra} note 5, at 8.
\end{itemize}

In light of the Landmine Protocol’s many shortcomings and against the backdrop of a global landmine crisis, the ICRC and state members of the Convention pushed for a meeting of the international community to amend and modify its articles. After two years of preparation, the 1995-1996 Review Conference [the “Review Conference”] began in Vienna on September 25, 1995. Comprised of three separate sessions, the Review Conference of the Conventional Weapons Convention produced some changes in existing landmine regulation, but failed to promulgate a total ban on the use and production of landmines, despite support for such a ban by nearly half of the fifty-one Convention member states present at the last session of the Review Conference. Underlying their disagreement was the continuing fundamental difference of opinion as to what the proper balance between humanitarian and military interests should be with regard to landmine use.

However, the participants to the Review Conference came to a consensus on several modifications of the Landmine Protocol that should offer civilians some additional protection from the effects of landmines. First, the members agreed to extend the Landmine Protocol to noninternational armed conflicts. Second, members agreed that the location of all mines must be mapped and recorded, extending this requirement beyond only “pre-planned” minefields as stated in the original provision. Another important change is the

138. Id.
140. ICRC Third Session, supra note 25 (noting that “only minimal restrictions on [landmine] use were adopted following two years of tortuous negotiations.”).
141. For a detailed discussion of why the Review Conference failed to implement protections for civilians, see Lightfoot, supra note 101, at 1558.
142. ICRC Third Session, supra note 25.
143. Id.
144. Id.
explicit assignment of responsibility for landmine clearance to those who deployed the mines.\textsuperscript{145} Furthermore, in an effort to improve compliance, the amended Landmine Protocol will require member states to enact penal legislation to deter serious violations of its provisions.\textsuperscript{146} The participants also agreed to improve the protection of humanitarian workers by requiring that heads of relief missions be provided with the location of minefields and other information.\textsuperscript{147}

Unfortunately, new regulations on landmine use are minimal. The use of both antihandling devices and remotely-delivered landmines is still permitted.\textsuperscript{148} So-called “dumb” landmines, those not equipped with self-destruction or neutralization devices, must be placed in fenced, marked, and guarded areas except when direct enemy military action prevents such activity.\textsuperscript{149} In contrast, “smart” mines, when deployed outside of marked, fenced, or guarded areas, must be equipped to self-destruct within 30 days with 90% reliability, self-deactivate within 120 days with 99.9% reliability, and be detectable.\textsuperscript{150} While these provisions might sound positive, it is unfortunate that they will not become effective until the next decade.\textsuperscript{151} In addition, all of the new regulations discussed above will not become effective until twenty states consent to be bound by the amended Landmine Protocol.\textsuperscript{152} The ICRC estimates that this process will take two to three years.\textsuperscript{153}

This complex regulatory scheme simply does not offer civilians the protection to which they are entitled under international humanitarian law and Additional Protocol I.\textsuperscript{154} Furthermore, without an enforcement system to verify compliance, mere modifications in the existing yet ineffective Landmine Protocol will do little to alleviate the severe effects of landmine use. By focusing only on restrictions rather than on a world ban on landmine use, the amended Landmine Proto-

\textsuperscript{145} Id.
\textsuperscript{146} Id.
\textsuperscript{147} Id.
\textsuperscript{148} Id.
\textsuperscript{149} Id.
\textsuperscript{150} Id.
\textsuperscript{151} Id.
\textsuperscript{152} Id. By its terms, the amended Landmine Protocol will only enter into force six months after 20 states declare their consent to be bound by it. Id.
\textsuperscript{153} Id.
\textsuperscript{154} See id.
col may “spark a new phase of armament.” Commenting on the progress of the Review Conference after the first session, a British defense journal noted that:

Many proposals in circulation [at the Review Conference] are aimed at alleviating the landmine problem with the increased use of self-destructing mines and new requirements for detectability. Though acknowledging this as somewhat of a step forward, agencies are still concerned that this method could lead to an overall increase in the use and transfer of mines, particularly if it is mistakenly believed that such mines are less threatening to civilians, or users attempt to compensate for [landmines'] short life through larger numbers being laid.

This prediction may prove correct. The ICRC suggests that the Review Conference has implicitly encouraged the “production, transfer, and use” of smart landmines and “promote[d] the development and use of new weapons.”

The Review Conference, like the Lucerne Conference convened to draft the Conventional Weapons Convention, was plagued by a fundamental imbalance: civilian interests continued to be outweighed by military interests in preserving the landmine as a weapon of war. By focusing on more complex technical restrictions on mine use rather than on a complete ban, the participants of the Review Conference failed to recognize and respond to the indiscriminate and destructive effect landmines have on civilians, both during and after an armed conflict. In sum, the amended Landmine Protocol offers little in the

155. ICRC Geneva Review Session, supra note 139, at 2. “[N]egotiations aimed at limiting the types of mines that can be manufactured and how they are deployed could only spark a new phase of armament with the weapons.” Id.

156. Jean, supra note 25.

157. ICRC Third Session, supra note 25.

158. See ICRC Geneva Review Session, supra note 139, at 3. Peter Walker of the International Federation accurately predicted “The debate [during the Review Conference] is in danger of being side-tracked. This is not a technical debate, it is a humanitarian one.” Id. at 2.

159. According to advocates of a total ban on the use of landmines, “these piecemeal negotiations are doomed” when one considers that “[m]apping minefields is ineffective when mines are strewed from helicopters . . . and regulating mines’ metal content is unenforceable.” John Mintz, A Global Bid to Ban Mines: Devices Kill or Wound 26,000 People Each Year, Wash. Post, Feb. 4, 1996, at A1 (noting that “the diplomats in Geneva are not discussing a mine ban, but more modest restrictions [on landmine use]”). Dr. Chris Giannou, a long-time ICRC war surgeon, explained that such technical restrictions on landmine use will ultimately fail to protect civilians because “[y]ou end up with a complex set of rules that won’t work.” Id.
way of additional protections for civilians, and might inadvertently promote the use of landmines in civilian areas.

IV. Landmine Use Violates International Humanitarian Law

As discussed above, the Landmine Protocol does not offer civilians meaningful protection from landmines, despite the Conventional Weapons Convention's broad incorporation of international humanitarian law as one of its guiding principles. The Convention's preamble states that civilian populations "shall at all times remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity, and from the dictates of public conscience." Landmine use clearly violates the principles of jus in bello. Therefore, landmines should be banned as a category of weapons based on the tenets of customary international law and the provisions of the Additional Protocol I.

A. Landmines Are Indiscriminate Weapons, the Use of Which Violates International Humanitarian Law

Additional Protocol I requires that parties to an armed conflict distinguish between military and civilian targets at all times during the conflict, and must only direct operations against military objectives. Where there is doubt as to status, Additional Protocol I provides a presumption of civilian status. It prohibits indiscriminate attacks that "are of a nature to strike military objectives and civilians or civilian objectives without distinction." Under its provisions "an attack which may be expected to cause incidental loss of civilian life, injury

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160. For a more detailed discussion of customary international law as applied to armed conflicts and landmine use, see supra Part III.


162. See supra Part III. See also Sandoz, supra note 50.

163. Additional Protocol I, supra note 60, art. 1(2), 1125 U.N.T.S. at 7. 16 I.L.M. at 1412 (stating that during warfare "civilians and combatants remain under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience").

164. Id. art. 48, 1125 U.N.T.S. at 25, 16 I.L.M. at 1412 ("In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and . . . accordingly shall direct their operations only against military objectives."); id. art. 51(2), 1125 U.N.T.S. at 26, 16 I.L.M. at 1413 ("The civilian population as such, as well as individual civilians, shall not be the object of attack.").

165. Id. art. 50(1), 1125 U.N.T.S. at 26, 16 I.L.M. at 1413.

166. Id. art. 51(4)(a)-(c), 1125 U.N.T.S. at 26, 16 I.L.M. at 1413 (giving three specific examples of what is considered an indiscriminate military attack).
to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated" is considered indiscriminate and is therefore prohibited.\footnote{167} However, the use of landmines has caused much more than an "incidental" loss of civilian life.\footnote{168} Accordingly, landmine use violates the principle of discrimination as described in Additional Protocol I.

First, the practice of delivering landmines by air is itself evidence of indiscriminate use.\footnote{169} Ideally, remotely-delivered landmines are dropped from airplanes and float to the ground where a military objective is targeted.\footnote{170} However, weather conditions and other factors often alter where the landmine finally falls, often placing it in civilian areas.\footnote{171} One remotely delivered landmine has been so widely deployed outside military areas that it is commonly known to civilians as the "green parrot."\footnote{172} As a practical matter, remotely delivered landmines cannot be accurately mapped so as to facilitate their removal once an armed conflict has ended.\footnote{173} Furthermore, the provisions of the Landmine Protocol permit the placement of landmines in civilian areas so long as measures are taken to "protect civilians from their effects."\footnote{174} However, no specific provisions describe what such measures should provide. The practice of remote delivery is only one example of how landmine use violates the principle of discrimination by failing to effectively distinguish between civilian and military objectives.

Second, landmines are indiscriminate weapons due to their delayed-reaction operation.\footnote{175} They are designed "not for immediate effect, but rather are primed, concealed, and lie dormant until triggered."\footnote{176} Because of the lag time between when the landmine is deployed and when it actually detonates, many landmines remain ac-

\footnote{167}{Id. art. 51(5)(b), 1125 U.N.T.S. at 26, 16 I.L.M. at 1413.}
\footnote{168}{For a discussion of the effects of landmines on civilians, see infra parts V and VI.}
\footnote{169}{See DEADLY LEGACY, supra note 5, at 273-76.}
\footnote{170}{Id. at 26.}
\footnote{171}{See id. at 26, 343-44.}
\footnote{172}{Id. at 298. The PFM-1 is a Soviet-made mine which is shaped like a small toy airplane with wings. Id. It floats to the ground where it can be detonated by any pressure on its body, caused by stepping on or handling the landmine. Id. Illustration can be found on page 158 of this Note.}
\footnote{173}{Id. at 344-45.}
\footnote{174}{Landmine Protocol, supra note 24, art. 4(2)(b), 1342 U.N.T.S. at 169, 19 I.L.M. at 1531.}
\footnote{175}{DEADLY LEGACY, supra note 5, at 5.}
\footnote{176}{Id.}
The Soviet-made PFM-1 is a small air-delivered plastic landmine known in Afghanistan as the "Green Parrot." Many Afghan children have been killed or maimed by this landmine, mistaking it for a toy.

tive in the ground long after the armed conflict has ended.\textsuperscript{177} The Human Rights Watch Arms Project noted that:

Unlike a bomb or artillery shell which explodes when it approaches or hits its target, a landmine lies dormant until a person, vehicle, or animal triggers its firing mechanism. Landmines are blind weapons that cannot distinguish between the footfall of a soldier and that of an old woman gathering firewood. They recognize no ceasefire and, long after the fighting has stopped, they can maim or kill the children and grandchildren of the soldiers who laid them.\textsuperscript{178}

Because the Landmine Protocol does not mandate self-destructing or self-neutralizing mechanisms on all landmines,\textsuperscript{179} the weapon's delayed reaction operation will continue to harm civilians who have no choice but to return to landmine-ridden areas once the fighting has stopped.\textsuperscript{180} Accordingly, the landmine's delayed reaction mechanism makes it an indiscriminate weapon of war.

Third, the increasingly common use of landmines as an offensive weapon employed to terrorize civilian populations violates the principle of discrimination during armed conflicts. Such actions violate Additional Protocol I, which states that "[a]cts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited."\textsuperscript{181} Additionally, the Landmine Protocol exacerbated this problem because it did not extend to noninternational armed conflicts in its original form.\textsuperscript{182} As guerrilla warfare and internal insurgency conflicts have become increasingly common in the

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  \item \textsuperscript{177}Kenneth Anderson, \textit{An Overview of the Global Land Mine Crisis}, in \textsc{Clearing the Fields}, \textit{supra} note 3, at 17, 17. Landmine longevity is exemplified by World War II landmines, which continue to kill and maim people. Johnson, \textit{supra} note 3, at 2b. In France, since 1946, 630 de-miners have died, and 18 million artillery shells, 10 million grenades, and 600,000 aerial bombs have been found and destroyed; nevertheless, in 1991, 36 farmers died and another 51 civilians were injured by unexploded landmines. \textit{Id.} In Poland, 25 million mines have been cleared from the country to date. \textsc{Deadly Legacy}, \textit{supra} note 5, at 5-6. However, as late as 1977, 30 to 40 people were killed annually by exploding landmines laid in Poland during World War II. \textit{Id.}
  \item \textsuperscript{178} \textit{Id.} at 3.
  \item \textsuperscript{179} See \textit{supra} Part III.B. for a discussion of the Landmine Protocol's provisions.
  \item \textsuperscript{180} See \textsc{Deadly Legacy}, \textit{supra} note 5, at 286-94. Unfortunately, most landmines are not detonated immediately during the armed conflict, because "once several soldiers are killed after moving across the minefield, the rest bypass it." \textit{Id.} at 257-SS. This leaves many unexploded landmines for civilians returning to generally unmarked minefields which have now become a part of their homeland. \textit{Id.} Thus, the majority of landmines deployed during armed conflicts are detonated by civilians, after the conflict has ended.
  \item \textsuperscript{181} Additional Protocol I, \textit{supra} note 60, art. 51(2), 1125 U.N.T.S. at 2b, 16 I.L.M. at 1413.
  \item \textsuperscript{182} The participants of the Review Conference have agreed to extend the provisions of the Landmine Protocol to noninternational or internal armed conflicts. ICRC \textit{Third}
post-Cold War era,\textsuperscript{183} landmines are more frequently deployed as the offensive weapon of choice.\textsuperscript{184} To make up for a low number of combatants during guerrilla warfare, military leaders in these conflicts deploy landmines to compensate for “the low force-to-space ratio typical of insurgency-counterinsurgency and many internal wars.”\textsuperscript{185}

Although theoretically landmines can be directed exclusively at legitimate military targets, “they have shifted from being primarily a defensive, tactical battlefield weapon to an offensive, strategic weapon often aimed deliberately at civilians in order to empty territory, destroy food sources, create refugee flows, or simply spread terror.”\textsuperscript{186}

Using landmines as a way to terrorize and control the movement of civilians clearly violates the tenets of international humanitarian law.\textsuperscript{187} Although the Landmine Protocol will now apply to internal conflicts, it is unlikely that its provisions can be effectively enforced against nonprofessional military forces. Furthermore, there is no way to ensure such forces will adhere to its provisions voluntarily.

In light of these aspects of current landmine use, landmines should be banned under international humanitarian law as illegal, indiscriminate weapons. Current use of landmines, especially in developing countries, violates the principle of discrimination, because landmines are being used in these countries to terrorize, rather than protect, civilians during armed conflict.

\textbf{B. Landmine Use Produces Egregious Injury in Violation of International Humanitarian Law}

The injury inflicted by landmines is horrifyingly different from that inflicted by other military weaponry.\textsuperscript{188} ICRC war surgeon Chris Giannou explained that:


\textsuperscript{183} Hehir, \textit{supra} note 130, at 103-04.

\textsuperscript{184} \textit{See Deadly Legacy, supra} note 5, at 18, 22-23.

\textsuperscript{185} \textit{Id.} at 22. In Cambodia, the Cambodian government and resistance fighters call landmines “eternal sentinels” because they act like mechanical soldiers, always ready to attack and never requiring sleep. \textit{Id.}

\textsuperscript{186} \textit{Id.} at 9. The Human Rights Watch Arms Project noted that “[r]ecent evidence taken from a number of countries shows that mines are increasingly used as part of deliberate military strategies to spread terror among civilians and keep them away from their homes and sources of food.” \textit{Id.} at 5.

\textsuperscript{187} \textit{See supra} Part IV for a more detailed discussion of international humanitarian law.

Mine wounds are dirty and contaminated. The blast not only tears through tissues, burns, and coagulates; it also drives soil, grass, metal, or plastic fragments of the mine and pieces of shoes and clothing up into the leg, burrowing between tissue planes and often causing severe secondary infection. These same foreign materials, plus bone fragments of the shattered foot, can also be blown up into the patient's genitals, buttocks, or arms.\textsuperscript{189}

As a military weapon, landmines are deliberately designed to maim \textit{without killing}, and to burden an enemy's medical organization while deflating troop morale.\textsuperscript{190} The use of a weapon that inflicts this type of injury violates international legal principles of necessity and proportionality, by inflicting excessive pain and suffering on its victims.\textsuperscript{191} When civilians become the target of landmine use, violations of these principles become even more apparent.

Both the operation and effects of landmine use violate international humanitarian law. Due to the indiscriminate effects and infliction of excessive injury, the landmine should be categorically banned as a weapon of war.

\section*{V. Inadequate Landmine Regulation: Disproportionate Effects on Civilians in Developing Countries}

Because landmines are often used in internal conflicts, civilians in the developing world have become recurrent victims of the global landmine crisis over the last two decades.\textsuperscript{192} The continent of Africa is the most mined region of the world, with eighteen to thirty million mines laid in eighteen African countries.\textsuperscript{193} Afghanistan, Cambodia, and Angola have the largest landmine problem, collectively harboring approximately twenty-eight million landmines and suffering twenty-two thousand casualties every year.\textsuperscript{194} Due to the egregious injuries caused by landmines, civilians who step on them lose at least one limb to the exploding mine, if they survive the blast.\textsuperscript{195} As a result, amputees are common in developing countries, where landmines are most

\begin{footnotesize}
\begin{enumerate}
\item[189.] Id. at 140.
\item[190.] \textit{Deadly Legacy, supra} note 5, at 22 (noting that "[a]n injured soldier in a minefield crying for help can demoralize his comrades"). \textit{Id.}
\item[191.] \textit{See infra} Part III.A.
\item[192.] \textit{See Mintz, supra} note 159, at A1 (noting that landmine use "has become [more] widespread only since about 1980, as more third world nations began making them and their cost dropped.").
\item[193.] \textit{Deadly Legacy, supra} note 5, at 143.
\item[194.] \textit{Hidden Killers, supra} note 4, at 1.
\item[195.] \textit{See Deadly Legacy, supra} note 5, at 126.
\end{enumerate}
\end{footnotesize}
prevalent.\footnote{This statistic is based on figures available in 1989 and a U.S. population of 220 million people.} In Cambodia, 1 out of every 236 people is an amputee due to a mine explosion.\footnote{See Mintz, supra note 159, at A1.} In Angola, 1 in every 470 is an amputee due to a landmine injury.\footnote{Id.} By comparison, the amputation rate in the United States is 1 for every 22,000 Americans, and none are caused by landmines.\footnote{Id. at 14.}

As a result, the developing world must shoulder the high economic and social costs of civilian landmine casualties. Unfortunately, these poor countries are the least able to cope with landmines indiscriminately laid within their borders. Clearing landmines is very expensive, especially for poor, developing countries.\footnote{Vance & Okun, supra note 8, at 200. These deaths number greater than all the American troops killed in the Gulf War.} For example, a landmine can be purchased for $3 but can require nearly $1000 to remove.\footnote{Id.} Furthermore, approximately $5000 is necessary for the treatment and rehabilitation of each civilian landmine victim.\footnote{Id. at 1.} The United Nations estimates that with an average cost for mine clearance of $200 to $1000 per mine, every Cambodian would have to devote every penny of their $200 Gross Domestic Product per capita for the next one to five years in order to finance complete clearance of the 9 million mines currently laid in Cambodia.\footnote{Id. at 14.} Only Kuwait has been able to afford to de-mine much of its country, but that came only at a cost of $800 million and the lives of eighty de-miners.\footnote{Id. at 1.} Countries in the developing world cannot afford to do the same. As a result, civilians in poor, developing countries are especially vulnerable to injury from landmines that cannot be removed due to lack of government funds to pay mine clearance teams. Without better regulation or a total ban on the use and production of landmines, civilians will remain vulnerable to the indiscriminate effects of these weapons.

A. Landmines Prevent Peace-Building in Developing Countries

Due to their delayed-action operation, landmines prevent political stability because they continue to maim and kill long after the
armed conflict has ended.\textsuperscript{205} According to Boutros Boutros-Ghali, "by neutralizing essential infrastructure, mines present a virtually insuperable obstacle to post-conflict peace-building."\textsuperscript{206} The ICRC explained that: "Landmines make it more difficult for countries to negotiate the hazardous transition from conflict to peace and recovery."\textsuperscript{207} In an ICRC study,

[T]he presence of landmines in Central America [posed] an additional obstacle to the already difficult peace process taking place in various countries there. . . . Expensive mine-clearance activities must be added to the list of urgent budget priorities such as public health, unemployment, and education. Lack of funds for these social needs is already the cause of a soaring crime rate and general climate of insecurity. This is a political powder keg which, if solutions are not found, might destroy the fragile peace that has returned to this region.\textsuperscript{208}

In heavily-mined Mozambique, the U.S. Department of State has predicted that "nation-building efforts . . . will be heavily dependent upon the success of UN and other demining operations."\textsuperscript{209} Landmines therefore encourage political instability and undermine a new government's legitimacy.\textsuperscript{210} Furthermore, the continuing prevalence of landmines in developing countries prevents repatriation of refugees once the armed conflict has ended, further hindering post-conflict peace-building efforts.\textsuperscript{211}

\section*{B. Landmine Use Has Detrimental Effects on the Economy in Developing Countries}

Developing countries rely heavily on farming and other agricultural activities as the base for their economies:\textsuperscript{212}

[In underdeveloped, mainly rural countries where mine warfare is common, the presence of live mines means that agriculture and pastoral endeavors will be significantly restricted. The aggregate nega-

\textsuperscript{205.} \textit{Deadly Legacy}, supra note 5, at 23 (describing strategic placement of landmines in Afghanistan aimed at undermining civilian support for the Mujahideen).
\textsuperscript{206.} Boutros-Ghali, \textit{supra} note 4, at 8.
\textsuperscript{207.} ICRC \textit{Overview}, \textit{supra} note 4.
\textsuperscript{208.} Id.
\textsuperscript{210.} See Deadly Legacy, \textit{supra} note 5, at 23.
\textsuperscript{211.} Id. at 133-39. For a more detailed discussion of the effects landmines on refugee populations, see \textit{Hidden Killers}, \textit{supra} note 4, at 9-11.
\textsuperscript{212.} Id. at 133.
tive effect on national economies, particularly in countries without a large industrial base, of a reduction in such activities can be quite significant.\textsuperscript{213}

One development official in Cambodia noted that “[e]conomic development in Cambodia is heavily dependent on the speed in which mines can be cleared – and that could take not years, but decades.”\textsuperscript{214}

The indiscriminate use of landmines on farmland and grazing land disrupts a developing country’s food production and has dire effects on its civilians, who must return to their land to farm or graze animals in order to survive.\textsuperscript{215} After the armed conflict, civilians come home to landmine-ridden areas where they attempt to farm or send cattle to graze, only to be injured or killed by exploding mines.\textsuperscript{216}

In addition, where landmines are present, the land becomes unproductive, further contributing to both a loss of subsistence agriculture to civilians and a decrease in the national economy.\textsuperscript{217} Additional Protocol I prohibits military action that will “attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as food-stuffs, agricultural areas for the production of food-stuffs, crops, [and] livestock . . . .”\textsuperscript{218} The debilitating effect landmines have on arable land in developing countries stands in clear violation of Additional Protocol I.

The prevalence of landmines also disrupts the infrastructure of developing countries and further destabilizes their national economies. Utilities and transportation systems are rendered unusable by landmines.\textsuperscript{219} In Mozambique, landmines have blocked the operation of twenty-eight roads in the country.\textsuperscript{220} The U.S. Department of State observed: “The disruption of the transportation system produced by even a few mines results in local scarcities of products, lessened ex-

\begin{itemize}
\item \textsuperscript{213} Id.
\item \textsuperscript{214} Id. at 134.
\item \textsuperscript{215} Id. at 118, 131-32.
\item \textsuperscript{216} See id.
\item \textsuperscript{217} \textit{Deadly Legacy}, supra note 5, at 117. Landmines render land unusable. Id. For example, in Libya during World War II, 87% of its rangelands were declared unusable due to the presence of landmines. Id. By 1980, only 67% could be declared safe. Id. In Afghanistan, the United Nations estimates that it will take 15 years to clear priority zones, using 31 de-mining teams. Id.
\item \textsuperscript{218} Additional Protocol I, supra note 60, art. 54(2), 1125 U.N.T.S. at 27, 16 I.L.M. at 1414.
\item \textsuperscript{219} \textit{Deadly Legacy}, supra note 5, at 133.
\item \textsuperscript{220} \textit{Hidden Killers}, supra note 4, at 48.
\end{itemize}
ports and balances of hard currency they bring, inflation, and sometimes famine.\textsuperscript{221}

Additionally, the high number of landmines in developing countries discourages foreign investment, which is much needed to help developing countries rebuild during the post-war period.\textsuperscript{222} Perhaps more unfortunately, humanitarian relief efforts are also discouraged from entering developing nations plagued by landmines, for fear of injury to their workers.\textsuperscript{223}

Finally, the concentration of landmines in developing countries has long-lasting destructive effects on the natural environment in these countries. This, in turn, negatively affects developing economies by reducing the quantity of productive land in these countries. Additional Protocol I prohibits methods of warfare “which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment”\textsuperscript{224} and “may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.”\textsuperscript{225} These provisions apply to the use of landmines and further justify a total ban on the use and production of landmines as the only way to protect the environment in developing countries from the destructive effects of landmine use.\textsuperscript{226}

C. Negative Social Effects Resulting from Landmine Use

Landmines also have devastating effects on a developing country’s social institutions and society. The egregious nature of the injury inflicted by landmines drains the already strained healthcare systems in developing countries.\textsuperscript{227} Surgery is very expensive, almost prohibitive for poor civilians, and specialized training is required to properly attend to the victims of landmines.\textsuperscript{228} In addition, poor transportation systems and the scant number of hospitals in developing countries

\textsuperscript{221} \textit{Deadly Legacy}, supra note 5, at 133.
\textsuperscript{222} See Mintz, supra note 159, at A1 (stating that analysts predict “landmines will discourage investors from rebuilding the country.”).
\textsuperscript{223} \textit{Deadly Legaey}, supra note 5, at 139-40.
\textsuperscript{224} Additional Protocol I, supra note 60, art. 35(3), 1125 U.N.T.S. at 21, 16 I.L.M. at 1409.
\textsuperscript{225} Id. art. 55(1), 1125 U.N.T.S. at 28, 16 I.L.M. at 1415. Article 55(1) provides that “[c]are 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 thereby to prejudice the health or survival of the population.” \textit{Id}.
\textsuperscript{226} \textit{Deadly Legacy}, supra note 5, at 310-12.
\textsuperscript{227} See Giannou & Geiger, supra note 188, at 142.
\textsuperscript{228} \textit{Deadly Legacy}, supra note 5, at 128.
contribute to increased infection among landmine victims, many of whom are delayed for as long as twenty-four hours before receiving medical attention.\textsuperscript{229} Once a victim arrives at the hospital, medicine and blood are in short supply.\textsuperscript{230} In Cambodia, families of landmine victims cannot rely on health insurance to cover medical costs.\textsuperscript{231} They must pay blood donors, doctors, nurses, and the cost of medicines themselves, an enormous strain on their average annual income of two hundred dollars.\textsuperscript{232}

In addition, most landmine victims who survive must undergo amputation of one or more limbs.\textsuperscript{233} Although amputees require artificial limbs, the cost is beyond the reach of most civilians in developing countries.\textsuperscript{234} In addition, societal discrimination against amputees is very strong in developing countries. Whereas in the United States, landmine victims may be described as “physically challenged” or “disabled,” in developing countries amputees are considered mutilated cripples whose disability poses a drain on society.\textsuperscript{235} Unable to find work, landmine amputees are perceived as unproductive members in a labor-intensive society.\textsuperscript{236} They are “viewed by government officials and police as an unpleasant nuisance to society and arrested, or even worse, ‘disappeared.’”\textsuperscript{237}

\textbf{VI. The Special Impact Landmines Have on Children}

Children are especially vulnerable to injury from landmines. They are at greater risk of physical injury from exploding landmines because their bodies are smaller and “closer to the centre of the blast.”\textsuperscript{238} With the estimated one hundred million landmines world-

\textsuperscript{229} Id.
\textsuperscript{230} Id.
\textsuperscript{231} Id.
\textsuperscript{232} Id. at 129. One Cambodian farmer who lost a leg during a landmine blast said he was not sure what was worse: losing a leg or knowing his wife had gone to relatives and friends to beg for money to pay for his hospital care. Id.
\textsuperscript{233} Id. at 126.
\textsuperscript{234} The average cost of an artificial limb is $125, and should be replaced every three to five years for adults. Id. at 130.
\textsuperscript{235} Giannou & Geiger, supra note 188, at 142. The authors explain that “[i]n the bleak poverty of war-ravaged societies of the Third World, no euphemism is possible. These people are seen (and see themselves) as cripples; they have been mutilated. They cannot help their families eke out an existence, or provide food or the fuel for its cooking . . . .” Id.
\textsuperscript{236} DEADLY LEGACY, supra note 5, at 132.
\textsuperscript{237} Id.
\textsuperscript{238} SCOURGE ON CHILDREN, supra note 11, at 7.
This six-year-old Cambodian refugee girl is only one of many Cambodians left amputees by landmine blasts.

wide, there is approximately one landmine for every twenty children in the world.\textsuperscript{239} In El Salvador, seventy-five percent of the landmine victims are children.\textsuperscript{240} In Angola, twenty thousand of the country's amputees are women and children.\textsuperscript{241}

In one British study of thirteen ICRC hospitals in Africa and Asia, many of the victims studied were children.\textsuperscript{242} The study noted that "children seem to be susceptible to [landmine injury], lending support to rumours that they may be used to walk ahead of combatants in areas where there is a risk of mines; other children may be tempted to pick up mines that have been dropped by air."\textsuperscript{243} With the indiscriminate use of landmines so prevalent in the developing world, children are at a greater risk of injury from landmines than ever before. In addition, children are particularly vulnerable to landmine injury because they are dependent on their parents for survival; if one or both parents is injured or killed by landmines, it is their children who will suffer.

A. The Growing International Movement to Protect Children During Armed Conflicts

In the last three years, an international movement\textsuperscript{244} has emerged, encouraging a ban on the use and production of landmines in the name of the world's children. In 1993, the United Nations Commission on Human Rights passed a resolution addressing, in part, the effect landmines have on children during armed conflict.\textsuperscript{245} The resolution notes "with distress that children are often among the main victims of . . . antipersonnel mines" and "invites [the international community] . . . to intensify their efforts to ensure that all possible

\textsuperscript{239} Id. at 5.
\textsuperscript{241} Id.
\textsuperscript{243} Id. at 438.
\textsuperscript{244} The international movement to protect children during armed conflict addresses not only the effect that landmines have on children, but also the practice of using children as soldiers when they are aged 15 and younger, and the practice of raping girls during warfare as a means of "ethnic cleansing." See Children 1996, supra note 4, at 14, 16, 18-19.
assistance is given to child victims of anti-personnel mines, who are often disabled for life, with a view to their physical and psychological recovery and social reintegration . . . . "246

In December 1993, the General Assembly passed a resolution commissioning a United Nations study of the impact of armed conflict on children.247 The study will address four areas of concern, including the protection of children in situations of armed conflict and the indiscriminate use of antipersonnel landmines on children.248 Headed by Graça Machel of Mozambique, the study is scheduled to issue its final report, to be considered by the U.N. General Assembly, in November 1996.249

UNICEF has been very active in campaigning against landmines on behalf of children. In its 1996 State of the World’s Children Report, UNICEF recognized the special danger posed by landmine use to the lives of children in developing countries.250 In response, UNICEF has presented an antiwar agenda in its report, advocating a ban on “the production, use, stockpiling, sale and export of antipersonnel mines” and establishing a boycott of “companies manufacturing or selling landmines.”251

B. Landmine Use Violates the Convention on the Rights of the Child

Children’s rights are protected under international law in the United Nations Convention on the Rights of the Child (the “Children’s Convention”).252 Article 38(1) of the Children’s Convention provides that “States Parties undertake to respect and to ensure respect for the rules of international humanitarian law applicable to them in armed conflicts which are relevant to the child.”253 Landmine use violates this and several other provisions of the Children’s Convention. Because the Children’s Convention has been almost unani-

246. Id.
248. Id.
249. Id.
250. CHILDREN 1996, supra note 4, at 41.
251. Id. at 26-29.
253. Children’s Convention, supra note 252, art. 38(1), 28 I.L.M. at 1470. Article 38 also protects children from being recruited as soldiers. Id.
mously adopted by the international community, it serves as another basis for implementing a total ban on the use and production of landmines.

1. The Right to Live and Play

Article 6 of the Children’s Convention ensures “that every child has the inherent right to life” and requires that members “shall ensure to the maximum extent possible the survival and development of the child.” Children’s small physical size makes them particularly vulnerable to the blast from an exploding landmine and therefore unlikely to survive once hit. Under Article 6 of the Children’s Convention, member states must ensure the survival of children. Implicit in this provision is a mandate to clear all mines in areas where children may be, and to provide children with mine awareness education programs to protect them from the dangers of landmines.

Encompassed in their right to life is children’s right to play. Article 31 of the Children’s Convention “recognizes the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child . . . .” Because landmines are laid indiscriminately and often land in civilian areas where children live and play, landmines “often injure children at play who are unaware, careless, or ignorant of the danger” posed by landmines.

Furthermore, the design of some landmines is particularly appealing to children. For example, the “butterfly mine” resembles a toy airplane because it is designed with wings and filled with explosives that allow it to float to the ground without detonating. In Afghanistan where these landmines were remotely-delivered by the millions, one million children were killed or injured by landmines. Children

255. Children’s Convention, supra note 252, art. 6, 28 I.L.M. at 1460.
256. SCOURGE ON CHILDREN, supra note 11, at 9 (noting that children “are unlikely to survive because their small bodies are so vulnerable. Most will be killed outright, but some will die in excruciating pain before medical treatment can be given.”). Id.
257. Children’s Convention, supra note 252, art. 6, 28 I.L.M. at 1460.
258. SCOURGE ON CHILDREN, supra note 11, at 10.
259. Children’s Convention, supra note 252, art. 31(1), 28 I.L.M. at 1460.
260. SCOURGE ON CHILDREN, supra note 11, at 13.
261. Id. at 17.
refer to these landmines as "green parrots" because of their toy-like shape. However, when pressure is applied to the wings of the landmine, it detonates and despite the small amount of explosives in these mines, it is enough to blow off a child's hand. Other landmines resemble toys, such as pineapples or stones. These intriguing shapes capture a child's inherent curiosity, ultimately placing children at risk of injury and violating their right to play in a safe environment.

2. The Right to Special Care

Where children suffer landmine injury and survive, they generally become amputees. The Children's Convention grants disabled children the right to special care. Article 23 states that "a mentally or physically disabled child should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child's active participation in the community." As such, children in developing countries should enjoy the right to receive state assistance in obtaining artificial limbs. The cost of prosthetics is prohibitive for most poor families, and without some type of financial aid, children will have to go without. For example, a ten year-old with a life expectancy of forty to fifty years will need twenty-five artificial limbs in his lifetime. These limbs must be replaced every six months, because as the child ages, the bone of the amputation stump grows more rapidly than the surrounding skin and soft tissues. The child might also require additional surgery to fit the artificial limb over the stump. Therefore, over his or her lifetime, the price of a child's artificial limbs

263. Deadly Legacy, supra note 5, at 298.
264. Scourge on Children, supra note 11, at 17.
265. Id. at 13.
266. Id. Interestingly, although Additional Protocol I does not explicitly address children, the Landmine Protocol gives children special protection under its absolute prohibition against booby traps "attached to or associated with . . . children's toys or other portable objects or products specially designed for the feeding, health, hygiene, clothing or education of children." Landmine Protocol, supra note 24, art. 13, 1342 U.N.T.S. at 171, 19 I.L.M. at 1532.
267. See supra Part V (discussing the medical care of landmine victims).
268. Children's Convention, supra note 252, art. 23, 28 I.L.M. at 1465.
269. Id.
270. Giannou & Geiger, supra note 188, at 141.
271. Id.
272. Id.
273. Id.
will come to an estimated total cost of $3125, a financial impossibility for poor children and their families.\textsuperscript{274}

Furthermore, children in poor countries are already at greater risk of health problems and early death due to the strained and limited public healthcare systems in place in developing countries.\textsuperscript{275} Already, nine million children under the age of five, the majority of whom live in poor, developing countries, die every year from preventable disease, with one thousand of these children dying every hour.\textsuperscript{276} Because children are at greater risk of injury from landmines due to their smaller size, a child suffering the effects of a landmine blast will pose an additional burden on health care for children in these poor countries and will draw scarce resources away from current efforts to protect children through preventive healthcare.\textsuperscript{277} Future generations of children would be saved these social and economic costs if the international community were to adopt a total ban on the use and production of landmines.

3. \textit{The Right to Family Life}

The Preamble of the Children's Convention recognizes that "the child, for the full and harmonious development of his or her personality, should grow up in a family environment, in an atmosphere of happiness, love and understanding."\textsuperscript{278} During armed conflicts, many children are orphaned.\textsuperscript{279} The prevalence of landmines places children at risk of losing one or both of their parents to landmine explosions.\textsuperscript{280} Because children are dependent on their parents for survival, they are especially vulnerable to the effects landmines have on civilians. The prevalence of landmines in civilian areas of developing countries jeopardizes children’s right to family life. Additionally, the prohibitive cost of healthcare for landmine victims places the survival of the victim’s entire family at risk.\textsuperscript{281} The medical care for landmine victims can extend over a long period of time, and

\textsuperscript{274} \textit{Id.}
\textsuperscript{275} \textit{Id.} at 142.
\textsuperscript{276} See \textit{Giannou & Geiger, supra} note 188, at 142 (discussing the results of UNICEF's 1993 State of the World's Children report.).
\textsuperscript{277} \textit{Id.}
\textsuperscript{278} Children's Convention, \textit{supra} note 252, preamble, 28 I.L.M. at 1457.
\textsuperscript{279} \textit{CHILDREN 1996, supra} note 4, at 13 (stating that more than 1 million children have been orphaned or separated from their parents during armed conflicts in the last decade).
\textsuperscript{280} \textit{Id.}
\textsuperscript{281} \textit{SCOURGE ON CHILDREN, supra} note 11, at 13.
Affirming Our Common Humanity

For families without a regular income, difficult choices have to be made. A recent survey in Cambodia found that many hospitals required the victim’s family to provide all supplies and medicines needed, and even the fuel to run the generator during the operation. Livestock, sometimes the family’s only marketable asset, may have to be sold, thus putting the family’s very survival in jeopardy.282

Furthermore, Article 32 of the Children’s Convention mandates a safe working environment for children, where they are protected from performing any work that is hazardous to the child’s health.283 The prevalence of landmines in the rural areas where children work places them at great risk of injury in violation of Article 32. For example, in a 1993 ICRC study, it was discovered that child casualties in Kabul, Afghanistan were particularly high because the fields around the city where the children grazed their families’ flocks were heavily mined.284

In light of these provisions, landmines must be banned to ensure children are allowed to enjoy the rights to which they are entitled under the Children’s Convention. Therefore, to protect the children in the developing world as mandated by the Convention on the Rights of the Child, international humanitarian law, and Additional Protocol I, the international community must enforce a total ban on the use and production of landmines.

VII. Proposals for Change in the International Community: How to Protect Civilians and Children from Landmines

The only truly effective way to protect civilians and children in developing countries from the devastating effects of landmines is to enact a total ban on the use, production, transfer, stockpiling, and trade of antipersonnel landmines. The work of the ICRC and other nongovernmental institutions in the developing world has helped prevent civilian landmine injury. However, their work alone will not stop the global landmine crisis. The international community must recognize the magnitude of the landmine crisis in the developing world and fashion remedies to help civilians and children in these countries. Unfortunately, during the 1996 Review Conference of the Conventional Weapons Convention, the international community failed to consider the widespread effect of landmine use on civilians in the developing

282. Id.
283. CHILDREN’S CONVENTION, supra note 252, art. 32(1), 28 I.L.M. at 1468.
284. SCOURGE ON CHILDREN, supra note 11, at 14.
world, largely due to a focus on military, rather than humanitarian, concerns. In light of the Conference's failure to reach a total ban on the use and production of landmines, additional steps must be taken by the international community to protect civilians and children from the devastating effects of landmine use.

A. Proposed Legal Change

1. To Ensure Children and Civilians are Protected from Landmine Injury, a Total Ban on Use and Production Must be Enacted

The only way to ensure that children and civilians will be protected from landmines' destructive effects is to enact a total ban on the use, production, transfer, stockpiling, and trade of antipersonnel landmines. Just as various classes of weaponry have been banned from use because of their indiscriminate effects on civilians, landmines should also be banned.

In addition, production of landmines must be stopped in order to effectively halt the use and deployment of landmines in developing countries. Landmine production is big business, with an estimated value of $50 to $200 million per year. Even landmine clearance has become an industry. The United States, China, Italy, and the former Soviet Union are the leading developers and producers of anti-

285. The international community has categorically banned weapons considered to violate the principles of international humanitarian law: chemical and biological weapons have been banned based on these weapons' ability to inflict unnecessary suffering on their victims. Deadly Legacy, supra note 5, at 314. More recently, blinding laser weapons were banned from use during the 1996 Review Conference of the Conventional Weapons Convention. ICRC Third Session, supra note 25 (discussing the agreement of member states to ban both the use and transfer of laser weapons specifically designed to blind). In this legal tradition, landmines should be categorically banned as a weapon, the use of which is "repugnant to the conscience of mankind," Biological Weapons Convention, supra note 80, preamble, 26 U.S.T. at 585, 11 I.L.M. at 311, and "violates the principles of humanity and ... the dictates of public conscience." Additional Protocol I, supra note 60, art. 1(2), 1125 U.N.T.S. at 7, 16 I.L.M. at 1386-97.

286. The Human Rights Watch Arms Project estimates that at an average cost of $10 per mine, and 5 to 10 million mines sold per year, the total annual value of landmine sales would total $50 to $100 million. Id. at 57. UNICEF estimates that 10 million antipersonnel landmines are produced every year and valued at $200 million. Scourge on Children, supra note 11, at 21. These estimates are likely to be low, considering the secrecy normally associated with military trading. Id.

287. Many landmine producers are entering the profitable field of commercial de-mining. See Scourge on Children, supra note 11, at 21. For example, Kuwait awarded a $100 million de-mining contract to a subsidiary of Daimler-Benz in Germany. Id. The cost of such private de-mining contracts is out of the reach of poor developing countries who most need these services.
personnel landmines. Furthermore, many well-known companies contribute to landmine production by supplying parts to producers. So long as it is profitable to make and sell landmines, they will likely continue to be purchased and used in developing countries and therefore continue to put civilians at risk. The international community should support and join UNICEF’s boycott of these producers and companies who contribute to the production of landmines.

As long as landmines can be purchased cheaply on an open market, warring parties, especially in developing countries, will continue to use landmines because they act as cheap and effective force multipliers to compensate for and augment a shortage in soldiers. The international community cannot continue to allow landmine producers to profit from the production of this destructive weapon. Without a ban on both the use and production of landmines, developing countries will continue to bear the brunt of the landmine crisis, at an economic and social cost they cannot afford.

2. In Lieu of a Total Ban: Other Proposals for Legal Change

As previously discussed, the Review Conference of the Conventional Weapons Convention did not produce a total ban on the use and production of landmines. In the interest of children and other

288. DEADLY LEGACY, supra note 5, at 53-54. However, Italy has recently announced that it will “once and for all” end the production and export of antipersonnel landmines and begin destroying additional devices “in the hopes that such measures will lead to an international ban on production of landmines.” Evelyn Leopold, Italy Renounces Production, Export of Landmines, Reuters News Service, Sept. 26, 1996, available in LEXIS, News Library, Reuiland File (quoting Italian Foreign Minister Lamberto Dini in a speech to the United Nations General Assembly).

289. For example, Motorola has supplied parts for landmines used and deployed in Cambodia. NOVA: Landmines in Cambodia, (PBS television broadcast, Jan. 10, 1996) (transcript available in LEXIS, News Library, Jgtran File). In response to the NOVA television broadcast, Motorola recently pledged that the company will not “knowingly sell” one of its switches, that serves as an integral part of a landmine’s operation, to landmine manufacturers or to companies that supply them. Motorola Joins Land Mine Fight; Technology: New Policy Bans Sale of a Common Switch to Companies that Make or Supply the Weapons, L.A. TIMES, Oct. 1, 1996, at D19. Nevertheless, as of this writing, other well-known American companies continue to contribute to landmine production. Several U.S. companies, including Magnavox and RCA, participate in the manufacture or design of mines. DEADLY LEGACY, supra note 5, at 72-73. Alliant Technology, which has produced scatterable mines for the U.S. Army, is linked through cooperative research, production, and marketing agreements to other well-known companies, including IBM, Westinghouse, General Electric, and AT&T. Id. at 75.

290. See DEADLY LEGACY, supra note 5, at 22 (discussing the use of landmines in Cambodia to compensate for “the low force-to-space ratio typical of insurgency-counterinsurgency and many internal wars.”).
civilians who are at great risk of injury from landmines, the interna-
tional community should consider unilaterally implementing the fol-
lowing proposals for legal change that were rejected by the Review
Conference. Until a total ban is enacted, individual states should con-
sider unilaterally imposing these limitations on landmine use and
production.

a. Transparency on All Production and Transfer of Landmines
   Should Be Required

The participants of the Review Conference failed to implement a
better system for enforcing and verifying compliance with the provi-
sions in the Landmine Protocol.\(^{291}\) The international community, act-
ing through an international regulatory organization created for this
purpose, should impose a duty on member states to report the produc-
tion and sale of landmines throughout the world.\(^{292}\) This procedure
would identify those who produce and trade landmines, as well as
those who receive and purchase them. Furthermore, such a procedure
would ensure that all landmines produced and traded internationally
conform with regulations in the revised Landmine Protocol.

b. Self-Destructing or Self-Neutralizing Devices Should Be
   Required in All Landmines

Currently, the Landmine Protocol requires only self-destructing
or self-neutralizing mechanisms on remotely delivered landmines.\(^{293}\)
Although the revised Protocol requires self-destructing or self-neu-
tralizing devices on a greater number of landmines, the requirement
will not become effective for at least ten years, and then will only ap-
ply to landmines deployed outside marked, fenced, or guarded areas
and to remotely delivered mines that would be difficult or impossible
to record.\(^{294}\) Therefore, in order to be effective, states should act uni-
laterally to require implementation of self-destructing or self-neutral-
izing mechanisms on all landmines produced within their territory.
This action will help to reduce the risk of indiscriminate injury to chil-
dren and other civilians by eliminating landmines' delayed-reaction
operation. Unfortunately, merely placing such devices into landmines

\(^{291}\) See ICRC Third Session, supra note 25.
\(^{292}\) See Falk, supra note 49, at 83-84.
\(^{293}\) See Landmine Protocol, supra note 24, art. 5(1)(b), 1342 U.N.T.S. at 169, 19 I.L.M. at 1531. The effectiveness of this prohibition is questionable, however, in light of its broad
exceptions.
\(^{294}\) See ICRC Third Session, supra note 25.
may not adequately protect civilians because all too often these devices malfunction.\textsuperscript{295} Furthermore, adding self-destructing or self-neutralizing mechanisms to landmines significantly raises the price of the landmine, a concern harbored by developing countries that want to preserve the landmine as an inexpensive weapon of destruction.\textsuperscript{296} To remedy this situation and protect civilians in developing countries from the effects of landmines, minimum design standards for self-destructing or self-neutralizing mechanisms should be set by the international community and enforced by an international regulatory organization. To protect civilians effectively in poorer countries, the requisite technology for these mechanisms should be distributed to developing countries at a reduced price through a shared technology plan.\textsuperscript{297}

c. \textit{All Undetectable Landmines Should Be Banned}

An increasing number of landmines are being produced with very little metal content or with entirely plastic parts, making them nearly impossible to detect by mine clearance teams.\textsuperscript{298} Unfortunately, the Review Conference did not mandate that all landmines be detectable.\textsuperscript{299} The revised Landmine Protocol requires detectability only for "dumb" landmines, defined as, those not equipped with self-destructing or self-neutralizing devices. Requiring increased metal in landmines would facilitate mine clearing efforts.\textsuperscript{300} Individual countries should unilaterally require that landmines produced in their territory contain enough metal to be detectable by mine clearing teams. Admittedly, the effectiveness of such a requirement would be limited because most landmine clearance is performed by manually probing the ground for mines, rather than using metal detection devices to find

\textsuperscript{295} Because humanitarian mine clearance should require a 99.9\% rate of destruction of landmines, it is essential that such devices actually work. See \textit{Deadly Legacy}, supra note 5, at 29. However, at an ICRC Symposium of military experts in April 1993, mine experts cited a likely 10\% failure rate for self-destructing or self-neutralizing mechanisms. \textit{Id.} at 345 n.22.

\textsuperscript{296} See \textit{id.} at 345-46.

\textsuperscript{297} Falk, supra note 49, at 83.

\textsuperscript{298} \textit{Deadly Legacy}, supra note 5, at 342-43 (noting that "the next generation of antipersonnel mines may be completely undetectable by the present generation of electronic mine detectors."). All-plastic landmines are currently produced by several nations, including Italy and China. \textit{Id.} However, Italy recently has renounced the production and use of antipersonnel landmines. See Leopold, supra note 288.

\textsuperscript{299} See ICRC Third Session, supra note 25. See also Part III.B.

\textsuperscript{300} Sandoz, supra note 50, at 190-91.
mines. Nevertheless, requiring that landmines be detectable would assist future mine clearing efforts considerably.

d. Allocate Responsibility for Clearance of Landmines

Although the participants to the Review Conference allocated responsibility for clearance to those who deploy landmines, they did not go far enough. To protect civilian interests adequately after an armed conflict has ended, the international community must require that all sides of the armed conflict take responsibility for landmines that were laid during the conflict. Furthermore, both sides should be required to assist a specially-created international body in clearing all landmines laid during the war. This international mine-clearing body should be funded by the international community as a whole, with the majority of funds contributed by countries and private companies that are large producers and exporters of landmines. This organization should provide funds to subsidize the high cost of landmine clearance for developing countries, and to provide training to people in developing countries so that they will eventually be able to clear landmines without international assistance. Additionally, required transfers of mine clearing technology to developing countries at reduced cost would further protect civilians and children from landmines' effects.

B. Beyond Legal Change: Humanitarian Proposals to Protect Children and Civilians in Developing Countries from Landmine Injury

Recognizing the deficiencies in international regulation of landmine use, the international community must create and support humanitarian programs that will protect children and civilians in developing countries. The following programs should be funded by the international community, with the bulk of the financial burden placed on those countries who produce and export landmines to developing countries.

301. DEADLY LEGACY, supra note 5, at 343.
302. ICRC Third Session, supra note 25.
303. These training programs might be modeled after currently implemented mine clearance programs such as the Cambodian Mine Action Centre. See HIDDEN KILLERS, supra note 4, at 30-43 (describing several mine clearance programs worldwide).
304. See Thomas R. Evans, Technology Beyond the Probe, in CLEARING THE FIELDS, supra note 3, at 124, 127 (concluding that “modest investments in the transfer of low-technology systems developed by military forces can produce high return in the Third World... The investment of a few tens of millions of dollars could have major results...”).
1. International Mine-Clearing Programs

The international community must recognize the destructive effects of landmines and support all efforts to de-mine developing countries that cannot afford to pay the enormous price required. Although the United Nations and nongovernmental organizations such as the ICRC have established programs to help de-mine the most heavily mined developing countries they “cannot bear the burden of demining alone—they lack the resources and expertise. If humanity is to make an impact on the global problem with uncleared landmines it is imperative that the U.S., and the other industrialized nations, contribute technology, expertise, and resources.” Furthermore, an international program would only serve as a starting point or template for developing countries to implement their own de-mining programs. For example, successful demining programs in El Salvador and Cambodia were initiated through international action, but included training programs designed to help those countries maintain de-mining programs upon departure of the international program.

2. Educational Programs for Children and Civilians to Raise Awareness of Landmines and Their Dangers

Because of children's curiosity and the sheer number of landmines present in developing countries, children are especially susceptible to injury from landmines. Furthermore, because landmines are so prevalent in some developing countries, children often do not perceive landmines as dangerous and therefore do not hesitate to pick them up. Without education on the dangers of landmines, children remain extremely vulnerable to injury from a landmine blast.

The international community must fund and implement educational programs exposing the dangers of landmines. Such programs are of great benefit to children. One example of a successful education program is the United Nations’ and UNICEF’s Mine Awareness

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305. DEADLY LEGACY, supra note 5, at 259 (describing the U.S. Department of State’s position with respect to international mine clearance).
306. See Kate Taylor & Terry J. Gander, Mine Clearance in Cambodia, INT’L DEF. REV., Feb. 1, 1996, at 5, available in LEXIS, World Library, Jande File (describing the Cambodian Mine Action Centre); HIDDEN KILLERS, supra note 4, at 30-43 (describing the United States’ Demining Assistance Program and de-mining efforts by international organizations).
307. See supra Part VI.
308. Id.
309. See CHILDREN 1996, supra note 4, at 27.
and Accident Prevention Program in El Salvador. With the cooperation of both sides of the conflict, the program began by identifying areas where mines were prevalent. Next, the program attempted to warn the population of the dangers of landmines by distributing posters and signs illustrated with pictures of landmines and instructions on what to do upon encountering a landmine. In addition:

The posters were reinforced by an education and public awareness campaign, through the press, television and radio. But each community also needed individual contact. A team of educators traveled around meeting teachers, health promoters and NGO staff. These volunteers were trained in mine awareness so they could serve as ‘multipliers’ – visiting rural communities, giving talks illustrated by flip charts and distributing leaflets to each family.

This project resulted in a marked decrease in the number of injuries from landmines in El Salvador. In 1992, there were 579 victims; however, between January 1994 and May 1995, no landmine accidents were reported.

In addition to international clearance programs, individual countries should consider contributing to educational and mine-clearing activities in the developing world. Several countries have successfully implemented such programs, such as the U.S. Special Forces program in Cambodia. These educational programs are essential to prevent landmine injury to children and other civilians in the developing world.

3. Unilateral Moratoriums on the Transfer, Production, Use, or Sale of Antipersonnel Landmines

Although the international community as a whole may be unable to agree to a total ban on the use and production of landmines, individual countries can self-impose moratoriums to limit or completely ban the use and production of landmines. As of 1996, forty-three countries have expressed their support for a global ban on the production, stockpiling, transfer, and use of antipersonnel landmines. On

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310. See id.; see also Jean, supra note 25, at 5.
311. CHILDREN 1996, supra note 4, at 27.
312. Id.
313. Id.
314. Id.
315. Id.
316. See Terry & Gander, supra note 306.
March 2, 1995, Belgium became the first country to enact a law completely banning the manufacture, trade, use, and stockpiling of antipersonnel mines, or any other weapon built for the same purpose on its territory, even by its own army. The United States has declared a three-year moratorium on landmine exports. During the Geneva Session of the Review Conference, Switzerland announced its decision to renounce the use of antipersonnel landmines. Other countries have taken similar actions voluntarily, in response to the rising number of landmines in the world and the grave danger they present to civilian populations. Even in the absence of international agreement, individual countries should be encouraged to renounce unilaterally the use and production of antipersonnel landmines.

VIII. Conclusion

The proliferation of landmines in the last twenty-five years has had devastating effects on children and civilians in developing countries. Children are all too often the victims of exploding landmines:

In February 1992, two doctors from Physicians for Human Rights examined a six-year-old boy at a hospital in Hargeisa, Northern Somalia. Days earlier, the boy had picked up an object that looked...
like "the plastic top of a thermos bottle" on a road near his home. It turned out to be a small antipersonnel mine. The explosion blinded the boy in both eyes, destroyed his right hand which was subsequently amputated at the wrist, and left deep lesions on his face and knees. Years earlier, the boy had lost his father in the civil war. The boy's mother brought food to him at the hospital. She told doctors she had four other children at home and was destitute.  

Unless the production and use of landmines is stopped, children and other civilians in developing countries will continue to be injured by these "weapons of mass destruction in slow motion." A total ban on the use, production, stockpiling, sale, and export of antipersonnel landmines must be enacted by the international community, or enforced unilaterally by individual countries.

The United Nations estimates that at the current rate of mine clearance, it will take 1100 years and cost $33 billion to clear the 110 million landmines currently deployed worldwide, assuming an immediate halt in the current practice of placing between 2 to 5 million new mines every year. The gravity of the global landmine crisis is real. Every moment the international community fails to act, the situation becomes more serious.

The ICRC has been the foremost supporter of a total ban and one of very few protectors of civilians in the developing world. In urging the international community to adopt a total ban on the use, production, and trade of antipersonnel landmines, Cornelio Sommaruga, the president of the ICRC, said recently: "As with chemical weapons, success may take years or, as with apartheid, it may require decades, but together we will succeed and in struggling to do so we will not only be upholding fundamental norms of civilization, but also affirming our own common humanity."

322. Deadly Legacy, supra note 5, at 118-19.
323. Id. at 11 (emphasis added).
324. Jean, supra note 25, at 3.
325. See Vance & Okun, supra note 8, at 205 (stating that "[t]he ICRC, which for years has provided medical aid to land mine victims around the world, has been a leading force against landmines."); Jan Eliasson, An International Approach Toward Humanitarian Assistance and Economic Development of Countries Affected by Land Mines, in Clearing the Fields, supra note 3, at 165, 173 (discussing ICRC contributions to the fight against landmine injury in Cambodia).
326. Jean, supra note 25, at 3.