

The Problem of Anti-Personnel Landmines and the Ottawa Treaty: Illusion or Reality?

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Résumé de l'article

L'utilisation massive des mines anti-personnelles dans la guerre moderne a créé un défi humanitaire qu'aucun pays ne peut résoudre seul. La signature du Traité d'Ottawa représente un véritable progrès en droit international humanitaire. Toutefois, il existe plusieurs obstacles auxquels la communauté internationale doit faire face afin de respecter le but et l'esprit du Traité.

Cet article traite des dangers posés par l'utilisation des mines anti-personnelles et des difficultés qui s'y rapportent. Dans un premier temps, l'article déterminera la nature de cette arme et les conséquences de son utilisation. L'article analyse ensuite les principaux énoncés du Traité d'Ottawa et du Protocole II de la Convention d'Armes. Finalement, on conclut en analysant les principales difficultés reliées à l'imposition des règles internationales.

The Problem of Anti-Personnel Landmines and the Ottawa Treaty : Illusion or Reality?

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ABSTRACT

The indiscriminate use of landmines in modern warfare has created a serious humanitarian challenge that individual countries cannot solve all by themselves. The signing of the Ottawa Treaty represents a major step in the progress of international humanitarian law. Nevertheless, there are many obstacles that the international community has to overcome in order that the spirit of the Ottawa Treaty can become effective and meaningful.

This article will deal with the dangers posed by the use of anti-personnel landmines and the major difficulties that arise from it. In the first part, the study will determine the nature of landmines and the outcome that results from their use. The second part analyses the main ideas of the Ottawa Treaty and the existing Protocol II of the Weapons' Convention. Finally, the article concludes with an analysis of the practical difficulties that should be considered in the enforcement of international rules.

RÉSUMÉ

L'utilisation massive des mines anti-personnelles dans la guerre moderne a créé un défi humanitaire qu'aucun pays ne peut résoudre seul. La signature du Traité d'Ottawa représente un véritable progrès en droit international humanitaire. Toutefois, il existe plusieurs obstacles auxquels la communauté internationale doit faire face afin de respecter le but et l'esprit du Traité. Cet article traite des dangers posés par l'utilisation des mines anti-personnelles et des difficultés qui s'y rapportent. Dans un premier temps, l'article déterminera la nature de cette arme et les conséquences de son utilisation. L'article analyse ensuite les principaux énoncés du Traité d'Ottawa et du Protocole II de la Convention d'Armes. Finalement, on conclut en analysant les principales difficultés reliées à l'imposition des règles internationales.

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INTRODUCTION

Since the beginning of this century, landmines¹ have emerged as one of the most fearsome and inhumane weapons of modern time. Small, relatively inexpensive, simple to operate and viciously “effective”, anti-personnel mines have assumed an almost unparalleled role as a killer of innocent civilians and acrippler of fragile socio-economic structures in many impoverished nations. If nuclear warheads were traditionally considered as weapons of mass destruction and the ultimate expression of human madness, a similar analogy can also be drawn with the indiscriminate use of landmines. These devices have been proved effective in shattering the economic viability of affected countries, demoralizing any reconstruction efforts, and creating terror within the civilian population.

1. The term “landmine” refers exclusively to anti-personnel landmines, rather than anti-tank or sea mines. These non-antipersonnel mines pose risks of their own, but we will limit our discussion exclusively to anti-personnel mines. “Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction”, [<http://www.mines.gc.ca/treaty-e.htm>].

Article 2(1) and 2(2) of this Convention (hereinafter the *Ottawa Declaration*) defines “Anti-personnel mine” as a mine “designed to be exploded by the presence, proximity or contact of a person and that will incapacitate, injure or kill one or more persons”. “Mine means a munition designed to be placed under, on or near the ground or other surface area and to be exploded by the presence, proximity or contact of a person or a vehicle”.

Indeed, the mere presence of mines can literally bring a nation's agricultural economy to its knees.²

Approximately sixty to a hundred million landmines are scattered in sixty-nine different countries,³ most of them in the developing world. It is figured that four to five hundred people are killed, maimed or gravely injured around the globe every week.⁴ Other staggering statistics show that there have been an estimated one million mine casualties since 1975, mostly civilians.⁵ There are presently some 250,000 landmines amputees worldwide.⁶ From these frightening figures, we can assert that the littering of landmines across our already fragile planet constitutes an incredible humanitarian and developmental challenge.

Quite recently, the landmine problem has been the subject of intense international concern. Before the historical signing of the Ottawa Declaration in 1997, the issue has often been raised in diverse settings, including in the United Nations' General Assembly⁷ and other important diplomatic conferences, NGO bodies and agencies,⁸ the world's military forces,⁹ the media, and the international public.¹⁰ Many nations see the landmine crisis as a real threat to international peace and sustainable development. Others, like Canada or the Vatican, are incessantly pressuring the international community to achieve more concrete efforts in order to remedy this problem. But the crisis is far more serious than one can imagine. Until the signing of the Ottawa Declaration, the use of landmines in war

2. Various articles and studies have been written on the subject of landmines. See generally : J. MCCALL, "Infernal Machines and Hidden Death : International Law and Limits on the Indiscriminate Use of Landmine Warfare", (1994) 24 *Georgia Journal of International & Comparative Law*, 229-280; B. BOUTROS-GHALI, "The Landmine Crisis : A Humanitarian Disaster", (1994) 73 *Foreign Affairs*, 8-13; CANADIAN INTERNATIONAL DEVELOPMENT AGENCY, "Anti-personnel landmines and development : CIDA's approach", [<http://www.acdi-cida.gc.ca>]; J. WILLIAMS, "Landmines and Measures to Eliminate Them", (July-August 1995) 307 *International Review of the Red Cross*, 375-390; A. PARLOW, "Toward a Global Ban on Landmines", (July-August 1995) 307 *International Review of the Red Cross*, 391-410; J. LORD, "Legal Restraints in the Use of Landmines : Humanitarian and Environmental Crisis", (1995) 25 *California Western International Law Journal*, 311-355.

3. NATIONAL DEFENCE CANADA, "The DND/CF Role in the Anti-Personnel Landmine Ban Initiative", [<http://www.dnd.ca>].

4. H.S. LEVIE, "Landmines, A Deadly Legacy", (1994) 88 *American Journal of International Law*, 565-566. See also : K. ANDERSON and M. SCHURTMAN, "The UN Response to the Crisis of Landmines in the Developing World", (1995) 36 *Harvard International Law Journal* 359-371.

5. CIDA, *loc. cit.*, note 2.

6. *Ibid.*

7. UNITED NATIONS GENERAL ASSEMBLY, A/C.1/52/L.1 (22 October 1997).

8. Indeed, the International Committee of the Red Cross has been actively involved in the campaign against the use of landmines. See generally : "Succès des négociations sur les armes à laser aveuglantes, impasse sur les mines terrestres", (1995) 816 *Revue Internationale de la Croix-Rouge* 731-736. See also : *Landmines*, vol. 2.2, May 97, UN1 ST/DHA L12.

9. For a general understanding of the military view on landmines, see : C. SMITH, ed., *The Military Utility of Landmines... ? (North-South Defence and Security Programme)*, Centre for Defence Studies, King's College, University of London, June 1996, 104 pp.

10. K. ANDERSON and M. SCHURTMAN, *loc. cit.*, note 4, p. 360.

had never been banned *per se*¹¹ and international law provided no specific answers either in terms of responsibility for mine removal or in terms of enforcement of the existing regulations.

The signing of the Ottawa Declaration by more than a hundred or so countries has been welcomed as a major step towards an improved understanding of this world-wide problem. However, the notorious absence of important countries during the signature of the treaty, such as the United States, Russia, China or India (which also happens to be the main producers of landmines) leaves a lot to desire. One wonders, rhetoric put aside, about the political willingness of the major world powers to solve this tragedy.

This presentation is divided in three major parts. Part I details the scope of the landmine problem and the various consequences that arise from it. Part II explores the legal framework relevant to the use of landmines under international humanitarian law and the recent developments, such as the Ottawa Declaration and the amendments to the original Protocol II of the Weapons' Convention. Part III explains the difficulties and limitations to the international rules.

I. THE SCOPE OF THE ISSUE

Needless to say, the massive and irresponsible use of anti-personnel mines has created an alarming situation in various parts of the world. First, landmines produce injuries that are morally unacceptable and often unnecessary in the conduct of war. It is reasonable to assume that in a situation of war, putting the enemy out of combat or reducing their fighting capabilities are the main objectives in any military strategy. However, even during the conduct of war, the means available to attain military or strategic objectives cannot always be justified if they are used in a manner contrary to basic principles of international humanitarian law and produce indiscriminate effects, particularly among the civilian population. A conscientious military strategist should also remember that any short-term advantage gained through the use of weapons with indiscriminate effects will be offset if the same weapons are used against his own troops.¹² We will analyse the effects that are created by the use of mines. However, it should be noted that this discussion does not constitute an exhaustive list of the consequences of landmine use and other important problems also exist.

11. Before the Ottawa Declaration, the only rule governing the use of landmines in warfare was the Protocol II of the Weapon's Convention. This will be explained more in details in the section treating the Weapon's Convention. Protocol II was rather a codification of certain restrictions concerning the use of landmines at times of war. It was never intended to ban the use of landmines. See : J. MCCALL, *loc. cit.*, note 2, p. 230.

12. For instance, if country A decides to use a weapon with indiscriminate effects, such as landmines or toxic chemicals, against country B, the latter might eventually use the same weapon against country A. In many cases, that would be detrimental for country A because the losses incurred by its troops from those types of weapons might be far greater than the advantages obtained by using the same weapon against the troops of country B.

A. A CRUEL AND INHUMANE WEAPON

Landmines are notorious for their devastating effects on the human body.¹³ These are devices that not only kill, but are mainly intended to injure or maim the victim by destroying parts of the human body, such as its feet, chest and arms.¹⁴ They produce ravaging wounds, usually requiring traumatic or surgical amputations. Instant death can be rare in many cases, but the physical pain and long lasting suffering are simply unbearable.

To illustrate this,¹⁵ one should see what are some of the effects produced by an M18A1 Claymore mine (or similar variants), commonly used by regular, as well as irregular forces. This device, mounted above ground on four folding legs, is detonated by tripwire or remote control and spreads seven hundred 10.5-grain steel balls over an arc of sixty degrees wide, up to two metres high, and a killing range of fifty metres in front of the mine, but moderately effective up to a hundred metres.¹⁶ The flying steel balls produce terrifying physiological effects. Generally, when a high-velocity steel ball strikes the body, it sets up a motion that destroys tissues "far from the actual path of the fragment".¹⁷ The bone struck directly by a high velocity shrapnel can shatter or apparently explode when the fragment penetrates inside the bone. But bones can also suffer "indirect fractures" if a high velocity ball strikes nearby, while gas-filled pockets in internal organs can "rupture if the missile passes nearby".¹⁸ Instant pressure in the temporary cavity around the gas-filled pockets causes the gas to expand, exploding or severely damaging adjacent parts of the organ. The wound can also injure the infected area by driving dirt, bacteria, clothing or rests of fragments, often causing severe secondary infections.¹⁹ All this can result without necessarily killing the victim instantly. One can also imagine the mental or psychological trauma the victim of a landmine will have to endure.²⁰

Given these barbarous effects, we can argue that landmines are in fact cruel and inhumane weapons that have to be dealt with seriously. They cause excessive suffering which cannot be morally justified by any reasonable military necessity.

13. N. ANDERSSON, C. DA SOUSA & S. PAREDES, "Social Cost of Landmines in Four Countries: Afghanistan, Bosnia, Cambodia, Mozambique", (1995) 311 *British Medical Journal* 718-721.

14. T. GANDER, *Guerrilla Warfare Weapons*, New York, Sterling Publishing Co., 1989, p. 40.

15. The author acknowledges that this article is not intended to explain the technical details of the medical consequences of landmine injury. Indeed, some readers might find this section of the article to be "too graphic". However, it is important to have a clear understanding of the cruel nature of anti-personnel mines and what are the specific sufferings of landmine victims.

16. E. PROKOSCH, *The Technology of Killing*, London, Zed Books, 1995, p. 39.

17. *Id.*, p. 2.

18. *Ibid.*

19. E. STOVER, A.S. KELLER, J. COBEY, S. SOPHEAP, "Letter from Phnom Penh: The Medical and Social Consequences of Landmines in Cambodia", (1994) 272 *Journal of the American Medical Association* 331-336.

20. The above described effects on the human body are not the results of only the M18A1. Other types of landmines (Blast Mines, Bounding Fragmentation Mines, Stake Mines, etc.) produce similar injuries, depending on various factors, such as the proximity of the victim, the quantity of lethal charge, the physical characteristics of the victim, etc.

B. VICTIMS : MOSTLY CIVILIANS

The second major concern is the fact that roughly eighty to ninety percent of landmine victims are civilians.²¹ For instance in Cambodia, there are at least three mines planted for every inhabitant and one landmine related amputation occurs for every 236 people.²² In Mozambique, at least seven thousand landmine casualties have been officially reported, mostly civilians.²³ Given this alarming situation, the "restoration to functional capacity of civilians and their social integration has been an extremely difficult task",²⁴ because landmines are always a barrier to the repatriation of war refugees. Civilians refuse to go back to their homelands for fear that their returning place has become a minefield. Thus, people in refugee camps becomes a burden on their area of asylum and on the humanitarian reliefs. But their apprehensions are legitimate because the presence of landmines inhibits "the cultivation of farm land or the grazing of cattle, thus preventing rural populations in mined areas from pursuing their livelihood free from the fear of severe injury".²⁵ In many affected countries, vast amounts of productive land have been completely wasted and abandoned; "and even in areas where farming and herding do continue, casualties occur, leading to disruptions in food supply, causing malnutrition and local famine".²⁶

Another problem is that civilian victims of landmines represent an important economic burden to society, particularly in developing countries. Landmines not only render large parcels of agricultural land unusable (or dangerous to use), but also inflict severe loss to the country's labour market and economic activity. Mine victims require extended hospital stays and the surgery performed on them is time consuming and extremely demanding.²⁷ Also, their survival depends upon the provision of antibiotics and adequate blood supplies, which are not always available in countries poisoned with armed conflicts or civil wars. For example, patients with mine blast injuries require at least twice as much blood as patients wounded by other types of external injuries.²⁸ Likewise, this type of casualties are more likely to require amputation and remain longer in hospitals than other types of patients. Nevertheless, surgical services are often neglected in poor countries because of the expense that such procedures represent. Surgeons are not always available and resources have to be channelled to the provision of basic health care.²⁹ It is important to note that mine victims often cannot carry out a productive life. This worsens the economic imbalance that already exists in these particular societies, where legs, hands and muscle power means survival.

21. P. LIGHTFOOT, "Will the Revised Landmine Protocol Protect Civilians?", (1995) 18 *Fordham International Law Journal* 1526-1565. See also: Foreign Affairs & International Trade Canada, *The Ottawa Process & Canada's Position*, [<http://www.mines.gc.ca>].

22. P. DAVIES, *War Of The Mines*, London, Pluto Press, 1994, p. 36.

23. "Anti-Personnel mines, the all-too-conventional weapon", *The Lancet*, vol. 346, n° 8977, (September 16, 1995), pp. 715-724.

24. J. LORD, *loc. cit.*, note 2, p. 318.

25. P. DAVIES, *loc. cit.*, note 22, p. 32.

26. CIDA, *loc. cit.*, note 2.

27. *Ibid.*

28. E. STOVER et al., *loc. cit.*, note 19, p. 332.

29. P. DAVIES, *op. cit.*, note 22, p. 36.

II. LEGAL FRAMEWORK RELEVANT TO THE USE OF LANDMINES

A general principle in international customary law as they relate to the use of weapons in armed conflicts provides that the "right of parties to an armed conflict to choose methods or means of warfare is not unlimited".³⁰ War is generally perceived as the pursuit of political objectives by military means. Nevertheless, the purpose of war is not necessarily "the total destruction but merely the defeat of the enemy in order to impose one's will or preserve one's independence".³¹ It is true that the objective of any military strategy is to neutralize the enemy by putting him out of combat. However, no moral or legal principle justifies a military action in order to make the enemy suffer beyond what is necessary to obtain his defeat. Although it is impossible to draw a clear line between unnecessary suffering and a legitimate need of neutralizing the enemy, there are various international provisions that regulate the conduct of armed conflict. For many years, international humanitarian law has prohibited the employment in armed conflicts of weapons, projectiles, munitions and materials or methods of warfare of such a nature to cause superfluous injury or unnecessary suffering. For instance, the use of *dum-dum* bullets has been banned since the nineteenth century, while chemical weapons are also banned by the Geneva Convention of 1925.³²

A. THE OTTAWA TREATY

The preamble of the Ottawa Treaty³³ affirms that the States Parties are "determined to put an end to the suffering and casualties caused by anti-personnel mines" and believes it necessary to "do their utmost to contribute in an efficient and coordinated manner to face the challenge of removing anti-personnel mines placed throughout the world and to assume their disposal and destruction".³⁴

The general obligations imposed on each State Party are defined in Article 1 of the Treaty. In it, each State Party undertakes never under any circumstances "to use, develop, produce, otherwise acquire, stockpile, retain or transfer to anyone, directly or indirectly, anti-personnel mines".³⁵ The Treaty also does not allow States "to assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under the Convention".³⁶ However, Article 3 provides that "the retention or transfer of a number of anti-personnel mines for the development of and training in mine detection, mine clearance, or mine destruction

30. L.G. GREEN, *Essays on the Modern Law of War*, New York, Transnational Publishers, 1985, p. 166.

31. *Id.*, p. 165.

32. "Chemical & Biological Disarmament", in *World Armaments and Disarmament*, SIPRI Yearbook, 1972, pp. 501-516.

For the history concerning the research of chemical and biological warfare in Canada, see : G. CARTER and G.S. PEARSON, "North Atlantic Chemical & Biological Research Collaboration : 1916-1995", (March 1990) Vol. 19 *Journal of Strategic Studies* 74-103.

33. "Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction", *loc. cit.*, note 1.

34. *Id.*, Preamble.

35. Art. 1(1).

36. *Ibid.*

techniques is permitted",³⁷ as long as it does not exceed the minimum number necessary for such purposes.

Articles 4 and 5 deal respectively with the destruction of stockpiled anti-personnel mines and the destruction of such devices in mined areas. Each State Party undertakes to destroy or ensure the destruction of all stockpiled anti-personnel mines it owns or possesses within less than four years after the entry into force of this Convention for that State Party".³⁸ If the destruction takes place in mined areas, it should be done within no less than ten years after the entry into force of this Convention for that State Party.³⁹ Concerning the latter, the State Party should make all possible efforts to "identify all areas under its jurisdiction or control in which anti-personnel mines are known or suspected to be emplaced and shall ensure as soon as possible that all anti-personnel mines in mined areas under its jurisdiction or control are perimeter-marked and monitored",⁴⁰ to ensure the effective exclusion of civilians of such areas. Nevertheless, if a State does not have the adequate means and "believes that it will be unable to destroy or ensure the destruction of all anti-personnel mines, it may submit a request to a Meeting of the State Parties or a Review Conference for an extension of the deadline for completing the destruction of such anti-personnel mines, for a period of up to ten years".⁴¹

The Convention also underlines the basic obligation of States to gradually increase international cooperation and assistance concerning the implementation of this Treaty.⁴² Furthermore, certain measures of transparency are imposed on each State Party. For instance, each State Party shall report to the Secretary General of the United Nations on valuable information such as : the national implementation measures by each Party, the total number of all stockpiled anti-personnel mines owned or possessed by it; the location of all mined areas under its jurisdiction; the technical characteristics of each type of anti-personnel mine produced or those currently owned or possessed by a State Party.⁴³ The main objective of this measure of transparency seems to be an attempt to encourage a better exchange of information in order to bring about more effective solutions in the removal or

37. Art. 3.

38. Art. 4.

39. Art. 5(1). The author believes that the time given to the State Parties to the cleaning and destruction of minefields is beyond the feasibility of many affected countries. Even with substantial international aid, it will be practically impossible to completely clear the minefields in such a short time.

40. Art. 5(2).

41. Art. 5(4). This article of the Convention states that each request shall contain :

- a) The duration of the proposed extension;
- b) A detailed explanation of the reasons for the proposed extension, including :
 - (i) the preparation and status of work conducted under national demining programs;
 - (ii) the financial and technical means available to the State Party for the destruction of all the anti-personnel mines; and
 - (iii) circumstances which impede the ability of the State Party to destroy all the anti-personnel mines in mined areas;
- c) The humanitarian, social, economic, and environmental implications of the extension;
- d) Any other information relevant to the request for the proposed extension.

42. Art. 6.

43. Art. 7.

destruction of landmines. It can also help in the evaluation of potential progress (or worsening) of the problem by keeping track of recent developments in conflicts where landmines are used or suspected to be used.

Although the Ottawa Treaty does not provide in itself a clear and effective enforcement mechanism, Article 9 states that each State Party will take “all appropriate legal, administrative and other measures, including the imposition of penal sanctions, to prevent and suppress any activity prohibited to a State Party under this Convention undertaken by persons or on territory under its jurisdiction or control”.⁴⁴ If any dispute arises with regard to the application or the interpretation of this Treaty, the State Parties shall consult and cooperate with each other to settle, or bring any such dispute before the Meeting of the States Parties,⁴⁵ as provided in Article 11. Another important point to mention is that this Convention shall be of unlimited duration⁴⁶ and the Articles of this Convention shall not be subject to reservations.⁴⁷

Finally, each State Party has the right, in exercising its national sovereignty, to withdraw from this Convention. However, “it shall give notice of such withdrawal to all other States Parties, to the Depositary and to the United Nations Security Council.”⁴⁸ Such instrument of withdrawal shall include a full explanation of the reasons motivating this withdrawal”.⁴⁹ The withdrawal can only take effect six months after the receipt of the instrument of withdrawal by the Depositary. If, however, on the expiry of that six-month period, the withdrawing State Party is engaged in an armed conflict, the withdrawal shall not take effect before the end of the armed conflict”.⁵⁰

B. WEAPONS CONVENTION (PROTOCOL II)

Prior to the Ottawa Treaty, the United Nations adopted the “Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects”,⁵¹ [hereinafter “Weapons Convention”] on October 10, 1980. The United Nation’s original draft protocol on landmines was integrated into the Weapons Convention as the “Protocol on Prohibition or Restriction on the Use of Mines,

44. Art. 9.

45. Art. 10(1).

46. Art. 20(1).

47. Art. 19. This provision has been one of the main reasons on the reluctance by the United States to sign the Ottawa Treaty. The Americans believe that there should be a reservation on the use of anti-personnel landmines in the Korean peninsula. The author suggests that the American position cannot be accepted by the international community. First, because landmines, by its nature, are morally wrong in inflicting unnecessary sufferings to their victims. Secondly, the system of reservations can entail a “domino effect”: every country will try to set up their own reservations.

48. It should be noted that three out of the five permanent members of the Security Council have not signed the Ottawa Treaty (United States, Russia, China).

49. Art. 20(2).

50. Art. 20(3).

51. “Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects”, (1980) 19 *I.L.M.*, 1523, as amended on May 3, 1996. See : [<http://www.icrc.org>].

Booby-Traps and Other Devices”⁵² [hereinafter “Protocol II”]. This protocol represented the first attempt to establish an international regime intended to deal with the use of landmines in armed conflicts. It was subsequently amended on May 3, 1996, with some major modifications.

Protocol II applies to the use of landmines (whatever their type), booby traps and “other devices” on land. Article 2(1) and 2(2) defines “mine” in broad terms so as to include any possible type of landmine placed manually, as well as the so-called “scatterable mines” or “remotely-delivered mines” which can be delivered by aircraft, artillery, rocket, mortar, or similar means.⁵³ The definition given in article 2(1) also takes into consideration the wide array of mine laying techniques and the manner of detonation of modern landmines as it brings within its scope mines “placed under, on or near the ground or the other surface area and designated to be detonated or exploded by the presence, proximity or contact of a person or vehicle”.⁵⁴

The general restrictions concerning the use of landmines are found in article 3 of the Protocol. Article 3(7) prohibits directing any mines against the civilian population or individual civilians under any circumstances.⁵⁵ Article 3(3) forbids in all circumstances to use any mine, booby trap or other device which is designed or of nature to cause superfluous injury or unnecessary suffering. In addition, article 3(8) prohibits the indiscriminate use of the applicable weapons which is defined as any “placement which is not on or directed against a military objective”.⁵⁶ In case of doubt as to whether an object which is normally dedicated to civilian purposes, such as a place of worship, a house or other dwelling or a school, is being used to make an effective contribution to military action, it shall be presumed not to be so used.⁵⁷ It also prohibits employing a method or means of delivery which cannot be directed against a military objective or which may be expected to cause excessive injury to civilians or excessive damage to civilian objects and property.⁵⁸ Additional protection is accorded to civilians in article 3(10) which prohibits the use of mines in populated areas where ground combat is not taking place or imminent.⁵⁹

Article 6 restricts the use of remotely-delivered mines, such as the infamous “butterfly” which is scattered from aircraft and floats to the ground where it arms itself.⁶⁰ It is possible to use these types of mines provided that, to the extent feasible, they are equipped with an effective self-destruction or self-neutralization mechanism.⁶¹ In addition, these mines may only be used within an area which is clearly a military objective, but the inherent problem with recording the delivery of scatterable mines is that they are particularly susceptible “to the whims of

52. *Ibid.*

53. *Id.*, art. 2(1).

54. J. LORD, *loc. cit.*, note 2, p. 333.

55. Protocol II, *loc. cit.*, note 51, art. 3(7).

56. Art. 3(8).

57. Art. 3(8)a).

58. J. LORD, *loc. cit.*, note 2, p. 334.

59. Protocol II, *loc. cit.*, note 51, art. 4.

60. P. EKBERG, “Remotely Delivered Landmines and International Law”, (1995) 33 *Columbia Journal of Transnational Law* 149-178.

61. Protocol II, *loc. cit.*, note 51, art. 6.

nature".⁶² For example, lightweight mines can shift in the wind and rain, or they may be carried away from their initial emplacement location by drifting or melting snow.⁶³ Article 6(4) of the Protocol also calls for effective advance warning to the civilian population where the delivery of such mines may affect civilians, "unless circumstances do not permit".⁶⁴ This would include the case of military necessity in the case of a surprise attack or the importance of safeguarding the aircraft responsible for dropping the mines.⁶⁵ In those cases, it would fall in the rank of "circumstances" that do not permit an advanced warning.

Article 9 requires the recording of the location of all "preplanned" minefields.⁶⁶ In addition, article 9(2) calls on the parties to retain the records and take "all necessary and appropriate measures to protect civilians from the effects of mines".⁶⁷ Each party is to make available to the other and to the Secretary General of the United Nations information concerning the location of mines in enemy territory or to make such information available after the complete withdrawal from enemy land.

An interesting provision is article 12(2) which requires a party to remove or render harmless, insofar as possible, landmines in an area where a United Nation's force or mission is in operation when asked to do so by the head of the United Nations project.⁶⁸ Measures must also be taken to protect the United Nation's force carrying out their tasks and to make available existing records relating to the location of mines.⁶⁹

Finally, article 11 of the Protocol concerns international cooperation in the removal of minefields. The article calls on parties to "endeavour to reach agreement, both between themselves and with other States and with international organisations, on the provision of information and technical and material assistance".⁷⁰

III. LIMITATIONS TO THE RULES

Until the entry into force of the Ottawa Treaty, in accordance with Article 17,⁷¹ Protocol II represents the only currently existing mechanism in international law intended to restrict the conduct of landmine warfare. Although Protocol II has been in effect for more than fifteen years, many of the most egregious examples of unrestricted landmine warfare have nonetheless occurred during its existence.

62. J. LORD, *loc. cit.*, note 2, p. 335.

63. *Ibid.*

64. Protocol II, *loc. cit.*, note 51, art. 6(4).

65. J. LORD, *loc. cit.*, note 2, p. 336.

66. Protocol II, *loc. cit.*, note 51, art. 9.

67. Art. 9(2).

68. Art. 12(2).

69. *Ibid.*

70. Art. 11.

71. Article 17(1) says that "this Convention shall enter into force on the first day of the sixth month after the month in which the 40th instrument of ratification, acceptance, approval or accession has been deposited".

The provisions in Protocol II uphold fundamental rules of the customary law of war. In essence, it is a codification of the existing rules of international humanitarian law as applied to landmines. Nevertheless, Protocol II's application has been seriously impeded by several significant flaws. These defects exist in the agreement's lack of clear examples and consistent definitions; its complete lack of adequate verification and enforcement mechanisms; and perhaps most importantly, in the international community's failure to enforce it.⁷² Several nations have bitterly criticized the Protocol for being too vague and lacking an effective framework to ensure the clearance of minefields. We will try to enumerate some of the innumerable difficulties that arise from existing international rules, but as we mentioned before, this is but a small portion of the major predicament posed by landmines.

A. FACILITY IN EXPORTING AND "IMPROVISING" LANDMINES

With the end of the Cold War, the international arms market became more subject to competitive market pressures than it was in the past.⁷³ Because the viability of many defense industries are now under threat, while others are facing major restructuring, the sale of weapons have become increasingly varied, with aggressive competition. Western nations now compete among themselves for arms sales overseas,⁷⁴ while in countries like Russia, China or North Korea, arms sales represent an important source of hard currency that cannot be ignored.⁷⁵ The types of weapons available on the international market can embark from 9 mm bullets to nuclear submarines, and landmines are not an exception.

Contrary to many views,⁷⁶ the design, production and manufacturing of landmines is not necessarily a North-South question. Countries such as Egypt, Chile, Pakistan or Vietnam are important producers of anti-personnel mines.⁷⁷ The main reason is that anti-personnel mines do not require highly sophisticated technology nor huge capital investments. They are easy to manufacture and producers still obtain a good profit on their investment. Indeed, many companies have been making reasonable profits by exporting landmines to the world's hottest spots.⁷⁸ In addition, the absence of an effective international control over weapon transfers and the reluctance of many countries to be subject to such regulations only worsens the existing problems.⁷⁹

72. J. MCCALL, *loc. cit.*, note 2, p. 260.

73. D. MUSSINGTON, "The International Control of the Arms Trade", (1993) 26 *Revue belge de droit international* 43-57.

74. *Id.*, p. 44.

75. J. COLIJN and P. RUSMAN, "The Second-Hand Arms Market After the Cold War", (1993) 26 *Revue belge de droit international* 117-139. See also: D. MUSSINGTON, *loc. cit.*, note 73, p. 54.

76. See: I. DOUCET, "The Coward's War: Landmines and Civilians", (1993) 9 *Medicine and War* 304-316.

77. Handicap International, *Mines antipersonnel: la guerre en temps de paix*, Bruxelles, Éditions GRIP, 1996, p. 35.

78. B. OWSLEY, "Landmines & Human Rights: Holding Producers Accountable", (1995) 21 *Syracuse Journal of International Law and Commerce* 203-228.

79. See generally: P. LEAHY, "Landmine Moratorium: A Strategy for Stronger International Limits", (1993) 23 *Arm Control Today* 11-14; S. SHROPSHIRE, *Controlling Anti-personnel Mines: The Inhumane Weapons Convention Review Conference and Beyond*, London, Safeworld, 1995, 19 pp.

Another important problem that seems to be disregarded is the fact that "improvised" mines (commonly known as "booby traps") present similar, if not the same threat as conventional landmines. They are very simple to be set and with easily available materials. For instance, one can use a hand grenade or a mortar shell by "adapting" the detonating fuze to a tripwire or ground pressure. Although Protocol II deals also with booby traps and other devices, it is simply hard to imagine an international control on the export and use of devices such as hand grenades, mortar shells or "housemaid" bombs.

B. WHAT ABOUT "IRREGULAR" GROUPS?

First, the language of the Ottawa Treaty seems to indicate that only States are bound to undertake their respective obligations. Thus, armed opposition groups, such as national liberation movements,⁸⁰ warring factions or "private armies", are not obliged to comply with the provisions of the Ottawa Treaty. Many of these groups have not even signed any other international human rights instruments.⁸¹ This is no surprise to anyone. States have deliberately excluded from the obligations the non-state organizations for obvious political reasons. Allowing guerrilla groups or liberation movements to sign the Treaty would have amounted to an implicit recognition of a certain international personality to these groups, something which many States would not have found very pleasant. Ironically, it is precisely in places where guerrillas or warring factions operate that the mine problem is the most acute.

Although article 9 of the Ottawa Treaty stipulates that each State Party will take all appropriate measures to enforce the provisions of the Treaty, including the imposition of penal sanctions,⁸² this seems to be simply illusory in reality, especially if the guerrilla or warring faction is well-armed and beyond the control of the State.

On the other hand, Protocol II applies both to international and internal armed conflicts. This is a major improvement from the original Protocol II of 1980, which limited its application only to international conflicts. The new article 1(3) states that "in case of armed conflicts not of an international character, each party to the conflict shall be bound to apply the prohibitions and restrictions of this Protocol".⁸³ But the problem remains the following: How can the international community effectively enforce an international rule upon an organization or group without international personality? While various national liberation movements might be eager to comply with the international rules in order to gain more international recognition, other irregular groups will simply ignore these provisions if they are not to their advantage. Therefore, the need for a more effective enforcement mechanism should be addressed.

80. One exception concerns the national liberation movements specified in the First Protocol to the Geneva Convention on the Laws of War. These are armed groups fighting colonialism, alien domination or racist regimes. In those cases, international humanitarian law will be fully applied and the armed groups will have some sort of international recognition. See: D. MATAS, "Armed Opposition Groups", (1997) 24 *Manitoba Law Journal* 621-634.

81. *Ibid.*

82. Ottawa Treaty, *loc. cit.*, note 1, art. 9.

83. Protocol II, *loc. cit.*, note 51, art. 1(3).

C. "MILITARY NECESSITY" : TACTICAL CONSIDERATIONS

Another major problem we face is the claim from some armed forces, saying that they cannot undertake effective military operations without the use of landmines. The main purposes of landmines are to deny the enemy access to vital areas, to channel enemy forces towards open grounds so that they are more vulnerable to ambush, and to restrict their mobility while under attack.⁸⁴ In addition, anti-personnel mines delay and hinder the clearing of antitank minefields, harass infantry troops and delay their movement. The use of anti-personnel mines is also employed as a nuisance factor, contributing to the disruption of enemy supply lines and creating a demoralising effect among enemy troops.⁸⁵ Similarly, mine warfare has shifted from traditional defensive functions to new uses as offensive means of "long-term land-denial".⁸⁶ Thus, even the dispersing of a few hundred mines on the battlefield can have great psychological effects on enemy forces; a phenomenon called "force multiplier". Many nations still believe landmines can contribute to their military efforts and operations.

Military necessity has been one of the main American arguments for not signing the Ottawa Treaty. According to the United States, anti-personnel mines are necessary to protect American troops outside the Demilitarized Zone in the Korean peninsula from a possible North Korean invasion,⁸⁷ and also because anti-personnel mines protect the deployment of anti-tank mines from being cleared by the enemy. On the other hand, the Russians have maintained that landmines are necessary to guard nuclear installations and ICBM⁸⁸ silos. But recently, Russia expressed its intention to join the treaty.⁸⁹

D. FINANCIAL DIFFICULTIES TO UNDERTAKE MINE-CLEARING OPERATIONS

Despite the intensified demining efforts to stop the maiming and killing of civilians, the removing of mines is an expensive task that developing countries alone can hardly afford. Even with the help of the United Nations and the generous contribution of many Western countries and private persons, the costs of training and employing mine-removal personnel and of obtaining specialized mine-removal equipments are daunting and will remain so "until the entire nature of mine clearance is changed".⁹⁰

84. P. LIGHTFOOT, *loc. cit.*, note 20, p. 1532.

85. T. GANDER, *loc. cit.*, note 14, p. 41.

86. J. MCCALL, *loc. cit.*, note 2, p. 244.

87. M. ALBRIGHT, *The U.S. Position on Landmines, The Ottawa Citizen*, Saturday 29 November 1997, p. B-7; G. TOUPIN, *Un refus qui fait mal aux Américains, La Presse*, Jeudi, 4 décembre 1997, p. C-1.

88. It refers to Inter-Continental Ballistic Missiles.

89. *Russia appears ready to sign landmine ban, The Ottawa Citizen*, Tuesday, December 9, 1997, p. A-7. However, the author is still not sure about the full validity of this statement, given Russia's political situation.

90. J. MCCALL, *loc. cit.*, note 2, p. 251.

According to one estimate, the cost of producing each landmine goes from \$3 to \$20, while the average direct and indirect cost of removal ranges from \$300 to \$1000 a mine!⁹¹ At such excessive expense, it is virtually impossible for shattered economies to recover, and entire foreign aid budgets could be eaten up without even beginning to solve the problem. For instance, it would literally take a thousand years to clear the mines already laid in Cambodia at the current rate, providing no new mines are laid.⁹² Nevertheless, the reality is that many more landmines are placed than are removed. In 1995 alone, some 100,000 mines were removed, but another 2 million were planted.⁹³

The introduction of new technology and sophisticated hardware can substantially improve the current rate of mine removal and destruction. Indeed, various technology firms are aiming to sell their products or expertise on the growing de-mining market.⁹⁴ However, one should understand that there is no one single method that will perfectly work for all mines, in all places, under all conditions. What works in the jungle may well fall flat in the desert or in mountainous regions. Also, the mines or the shells that do explode litter the surrounding areas with millions of metal fragments, making the use of metal detectors in locating the landmines impossible. Many types of mines are also made of plastic or ceramic and they are extremely hard to detect, even with sophisticated equipments. Locating a modern mine is tricky and time consuming. Overall, the costs of demining are likely to remain huge,⁹⁵ because mine-clearance progress is measured not in "square kilometres, but in square metres".⁹⁶

CONCLUSION

In conclusion, there is no doubt anti-personnel mines represent a difficult humanitarian challenge and a real threat to international peace and development. Once set up, landmines become blind weapons that do not differentiate between the footsteps of a soldier and those of an innocent child. These weapons continue to kill and maim innocent victims, and the international community has been so far, unable to stop their use in combat. The Weapons Convention and Protocol II became impotent to "humanize" the use of landmines in war, while the will of power continued to be the only law of war. The Ottawa Treaty is a positive step towards a gradual reduction in the use of these infamous devices, but there are still some loopholes in the effective enforcement of its principles. Although more than a hundred twenty countries signed the said treaty, the conspicuous absence of important countries, such as the United States, Russia, China, Pakistan or Israel, remains

91. H. LEVIE, *loc. cit.*, note 4, p. 566.

92. P. LIGHTFOOT, *loc. cit.*, note 21, p. 1530.

93. INTERNATIONAL COMMITTEE OF THE RED CROSS, *Anti-Personnel Mines : Basic Facts*, (1996).

94. K. STANDEN, *Technology firms aim at de-mining market*, *The Ottawa Citizen*, Thursday, December 4, 1997, p. A-4. Also : J. CHIANELLO, *Firm blazes into market*, *The Ottawa Citizen*, Tuesday, December 2, 1997, p. A-4.

95. G. TOUPIN, *Le déminage et l'aide aux victimes coûteront des dizaines de milliards*, *La Presse*, Jeudi, 4 décembre, 1997, p. C-1.

96. K. ANDERSON and M. SCHURTMAN, *loc. cit.*, note 2, p. 365.

a serious weakness in the effectiveness of this Treaty. Also, the enormous economic and technological burden in clearing the already laid mines represent a difficult challenge to the international community. It is a problem that has to be shared by all countries, and not only by those that are affected. If nothing is done collectively at this stage, it is quite certain that these "silent sentinels" will permanently remain in place, waiting for their next prey to unwittingly unleash their destructive force.

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