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**ANTI-PERSONNEL LAND MINES:
AN ANNOTATED BIBLIOGRAPHY**



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**ANTI-PERSONNEL LAND MINES:
AN ANNOTATED BIBLIOGRAPHY**



OCTOBER 1996

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PREFACE

Canada shares the grave concern of many within the international community over the long-term and pernicious effects of the widespread use of anti-personnel (AP) mines. Canada was an active participant in the review and amendment of Protocol II (land mines) of the Convention on Certain Conventional Weapons (CCW) and continues to provide both technical and financial assistance to mine clearance operations and land mine victim assistance. In an effort to find a enduring solution to the global land mine crisis, Canada has made the achievement of a global ban on AP mines one of its highest priorities in the field of international security and disarmament.

To explore ways to achieve such a ban, Canada is hosting in Ottawa an international strategy conference entitled "Towards a Global Ban on Anti-personnel Mines" from 3-5 October 1996 involving representatives from governments, international organizations and non-governmental organizations. This *Annotated Bibliography* has been prepared to assist in the deliberations of the Ottawa Conference as well as the future work of policy officials and researchers.

The views contained in this Bibliography and its annotations are those of the authors and do not necessarily represent those of the Department of Foreign Affairs and International Trade or of the Canadian Government.

Department of Foreign Affairs and
International Trade
Ottawa, Canada
16 September 1996

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INTRODUCTION

Scope:

This document is an annotated bibliography of publicly available material on the subject of the control of anti-personnel land mines (APMs).¹

The material selected for inclusion adheres to a broad definition of "control" that corresponds to the general nature of the policy prescriptions advanced in the literature. One body of work summarized in the *Bibliography* focuses on the future with suggestions to control the use of APMs and thereby prevent further deterioration in a legal/political sense. This body of literature, for example, suggests the implementation of a verifiable global ban on the use, sale, transfer and production of APMs, the imposition of use restrictions, or the institution of export moratoria. Another branch of the literature has a more immediate focus, concentrating on controlling the impact of these weapons today. This literature, for example, includes suggestions in terms of the provision of enhanced mine clearance and mine awareness programs, as well as increased victim/community assistance programs in the social, economic, and medical fields.

The material covered by this *Bibliography* was published between 1990 and August 1996. It is in the decade of the 1990s that APMs increasingly have become a major topic of discussion among academics, governments, and non-governmental organizations world-wide.

For the sake of consistency, the bibliography employs the following word constructions: land mines, anti-personnel, de-mining. Where necessary, titles and direct quotations have been altered accordingly.

Organization:

The bibliography is divided into six parts as follows.

Part A. Reports and Resolutions of International Organizations: This part consists of annotations of relevant reports and resolutions produced by selected international organizations: the United Nations, European Union, Organization of American States, and

¹ Anti-tank/anti-vehicle mines are mentioned in these sources primarily in the context of their being equipped with anti-handling devices, and for comparative purposes as part of discussions of military utility. Sources on sea mines have been excluded entirely.

Organization of African Unity. The entries for each organization are arranged in reverse chronological order, beginning with the most recent. National statements on land mines are not included.

Part B. Scholarly Publications: This part includes a series of annotations of scholarly publications which address substantively the issue of efforts to control anti-personnel land mines as defined above. These entries consist of books, articles, and reports which provide substantive analysis and assessment, as well as statistical information. Newspaper and magazine articles and other sources that are purely descriptive or simply report current developments are not included. Each annotation describes the scope of the source document and summarizes its major arguments and conclusions. For ease of reference, Part B is divided into sub-sections denoting the main issue areas which characterize the literature on land mines:

- 1) Overviews comprises sources that examine all or most of the issue areas relating to the control of land mines in some depth;
- 2) Legal / disarmament and arms control aspects, particularly in connection with Protocol II of the Convention on Certain Conventional Weapons (the bulk of the literature currently available does not take the revised Protocol II of May 1996 into account, but much of the analysis and many of the recommendations contained therein remain relevant);
- 3) Socio-economic and health care implications, as described primarily in country reports and case studies (the medical sources chosen deal mainly with the question of "proportionality" rather than merely describe surgical treatment of mine injuries); and
- 4) Military and technological dimensions including the question of the military utility of land mines and the implications for attempts to control them (rather than land mine warfare *per se*), the issue of making de-mining more effective and efficient, as well as the matter of technical control methods such as the use of self-neutralizing, self-destructing, and self-deactivating mines (but excluding the strictly technical literature on these two topics).

A brief note at the beginning of each of the last three sub-sections provides cross-references to annotations appearing elsewhere in the bibliography which also discuss that particular issue area in some detail.

Within each sub-section of Part B, citations are listed alphabetically by (first-named) author, and, in the case of multiple publications by the same author(s), by title. When a particular source also appears in whole or in part in another publication, the relevant bibliographic information is appended to the end of that annotation.

A serial number, appearing in the left-hand margin before each citation, has been assigned to each entry in Parts A and B, and corresponds to the numbers which appear beside the names listed in the author and country indexes at the end of this bibliography.

Part C. Internet Resources: This section provides descriptions of selected land mine web sites currently available on the Internet. These are arranged alphabetically by web site name. Those included were chosen for their comprehensiveness, abundance of information, and links to other land mine sites.

Part D. Annexes: Two annexes are included. The first reproduces the full text of the revised Protocol II on land mines of the Convention on Certain Conventional Weapons, of May 1996. The second is a reprint, also in its entirety, of the original 1980 text of the Protocol.

Part E. Author Index: This index lists, alphabetically, the authors (including institutions and organizations) of the documents annotated in Part B. Following each author's name is a list of the serial number(s) to the relevant annotations.

Part F. Country Index: This index lists, alphabetically, the mine-affected countries which are covered in Parts A and B. Following each country's name is a list of serial number(s) corresponding to the relevant annotations.

In using this *Bibliography*, readers will observe that there is a remarkable consensus on the need for some kind of controls on anti-personnel land mines. However, they should also note the existence of a few key debates in the literature, in particular the following:

- Should efforts to control APMs focus ambitiously on the long-term goal of achieving a total and unconditional ban, or should they concentrate on more modest objectives short of a ban designed to regulate the use and availability of these weapons and ameliorate their immediate effects, or should both approaches be pursued in a complementary fashion?
- Which approach is preferable: technical or political solutions to the land mine problem?
- To what extent are land mines an essential instrument of war?

PART A

REPORTS AND RESOLUTIONS OF INTERNATIONAL ORGANIZATIONS

Part A.1 United Nations

- A.100** "Review Conference Of The States Parties To 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", Final Document, Part I, Final Report of the Conference. CCW/CONF.I/16 (Part I), Geneva, 1996, 40 pp.

This is the final report of the Review Conference of the Convention on Certain Conventional Weapons (Vienna, 25 September to 13 October 1995; Geneva, 15 to 19 January 1996 and 22 April to 3 May 1996). It describes the organization and financial arrangements of the conference, lists the countries which participated in it, and provides a narrative and chronological summary of the work of the conference. The final report also presents the decisions and recommendations of the conference, which note the adoption by consensus of the amended Protocol II on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices, and urge states to become parties to the Convention.

The revised protocol is annexed to this document, as is the final declaration of the Review Conference. In the latter, *inter alia*, the parties to the Convention declare:

- i) their conviction that states should work for the eventual elimination of anti-personnel land mines (APMs);
- ii) their commitment to continue to work for a total ban on the transfer of all APMs in the context of their eventual elimination;
- iii) their commitment to keep the provisions of Protocol II under review;
- iv) their commitment to prohibit all remotely delivered mines which lack effective self-deactivation features and either self-destruction or self-neutralization mechanisms, and their recognition of the need to work for a ban on all remotely delivered APMs as feasible alternatives are developed that markedly lessen the risk to civilians;
- v) their recognition of the importance of applying the prohibition on the use of non-detectable APMs in terms of facilitating and acceleration mine clearance;

vi) their commitment to reinforce international co-operation for mine clearance, the development and dissemination of more effective mine clearance technologies, and the transfer of technology to facilitate the implementation of Protocol II prohibitions and restrictions; and

vii) their commitment to assist impartial humanitarian de-mining missions as much as possible, particularly by providing information on the location of minefields

A.101 "Protocol On Prohibitions Or Restrictions On The Use Of Mines, Booby-Traps And Other Devices As Amended On 3 May 1996 (Protocol II As Amended On 3 May 1996) Annexed To 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". CCW/CONF.I/14.

This is the revised text of the Land Mines Protocol resulting from the third and final session of the Review Conference of the 1980 Convention on Certain Conventional Weapons held in Geneva in April and May, 1996. In terms of major new provisions, among other things the Protocol now:

- i) applies to internal, as well as international, armed conflicts
- ii) prohibits the use of non-detectable land mines (with a grace period for compliance)
- iii) protects humanitarian workers operating in mined territory
- iv) clearly acknowledges a responsibility for mine clearance once hostilities have ceased
- v) includes a prohibition on transfers of non-detectable mines; and
- vi) encourages the manufacture and use of self-destructing/self-deactivating mines

The amended Protocol does not prohibit any specific type of mine, institute full export moratoria, establish a verification and compliance scheme, or invoke a total ban.

Note: The full text of the revised Protocol II is reprinted as Annex I in Part D of this bibliography.

A.102 *Moratorium on the Export of Anti-Personnel Land Mines. A/Res/50/70/O, December 12, 1995.*

This General Assembly resolution requests that the Secretary-General submit a progress report on the subject at its fifty-first session. *Inter alia*, it also:

- i) urges countries which have not yet done so to proclaim export moratoria;
- ii) further urges all states to comply fully and immediately with the rules of Protocol II; and
- iii) encourages additional international efforts to develop solutions to the problems caused by anti-personnel land mines, with a view to the eventual elimination of these weapons

A.103 Report of the Secretary-General. *Moratorium on the Export of Anti-Personnel Land Mines*, A/50/701, November 3, 1995, 19 pp.

This document responds to the General Assembly's request in Resolution 49/75/D that the Secretary-General prepare a report describing the measures being adopted by member states to implement moratoria on the export of land mines. It summarizes the initiatives which have been taken with regard to this subject on a unilateral level (fixed-term or indefinite moratoria on export, production, transfer, and/or use); a regional level (the European Union and the Organization of African Unity); and a global level (developments regarding export moratoria, assistance in mine clearance, and the Convention on Certain Conventional Weapons).

The report also reproduces the specific replies received from each of those governments which responded to the Secretary-General's *note verbale* asking them to provide information relevant to drawing up his report (Argentina, Australia, Brazil, Canada, Chile, Ecuador, European Union, Japan, Jordan, Malta, Poland, Slovenia, Spain, Switzerland, Ukraine, United Kingdom, United States).

A.104 Report of the Secretary-General. *Assistance in Mine Clearance*, A/50/408, September 6, 1995, 27 pp.

This document responds to the General Assembly's request in Resolution 49/75/D that the Secretary-General prepare a report detailing the UN's activities in mine clearance assistance during the past year, and describing the operation of the UN's Voluntary Trust Fund for Assistance in Mine Clearance.

The report lists the various UN agencies involved in mine-related activities; reviews the UN's de-mining programs in specific countries (Afghanistan, Angola, Cambodia, Chad, El Salvador, former Yugoslavia, Georgia, Guatemala, Mozambique, Rwanda, Somalia, Yemen); discusses the elements which comprise the UN's integrated approach to mine clearance (creation of a national indigenous de-mining capacity, mine surveys, education and training in mine awareness, treatment and rehabilitation of victims); and explains how UN activities are co-ordinated funded, staffed, and equipped.

The report also considers the political actions that might be taken to halt the proliferation of land mines, focusing on the issues raised at the International Meeting on Mine Clearance convened in Geneva in early July of 1995.

The last section of the report updates the status of existing and planned UN de-mining initiatives, and consists of conclusions and recommendations. "The United Nations approach to a land mine problem ...", it sums up, "is based on the principle of ... assisting Governments to create sustainable national capacities that will continue as national development programmes after the direct support for mine-action programmes through the United Nations has ceased." The report calls on member states to "sustain their support for assistance in mine clearance." However, it also stresses that the land mine crisis will not be solved by mine clearance programs alone. Political initiatives (preferably a comprehensive ban on the use, transfer, production, and stockpiling of these weapons – the only sure solution) are essential.

A.105 *Assistance in Mine Clearance. A/RES/49/215, December 23, 1994.*

This is the General Assembly resolution requesting the Secretary-General to prepare the September 1995 report on mine clearance (50/408). *Inter alia*, it also:

- i) appeals to member states, as well as to intergovernmental and non-governmental organizations and foundations, to contribute to the newly created UN voluntary trust fund to finance mine-action activities;
- ii) invites all relevant multilateral and national programs or bodies to include, in co-ordination with the UN, mine clearance-related activities in their humanitarian, social, and economic assistance operations;
- ii) calls upon all states to provide the necessary information and technical and material assistance, and to remove or otherwise render ineffective minefields, mines and booby-traps according to international law;
- iv) calls upon member states and governmental and non-governmental organizations to promote scientific research aimed at the rapid advancement of mine detection and clearance technology; and
- v) notes the creation of a Mine Clearance and Policy Unit within the Department of Humanitarian Affairs, responsible for carrying out the Department's functions as a focal point

A.106 *Moratorium on the Export of Anti-Personnel Land Mines. A/RES/49/75/D,*
December 15, 1994.

This is the General Assembly resolution requesting the Secretary-General to prepare the November 1995 report on land mine export moratoria (50/701). *Inter alia*, it also:

- i) urges states which have not yet declared export moratoria to do so as soon as possible;
- ii) urges nations to adhere to the Convention on Certain Conventional Weapons; and
- iii) encourages additional international efforts to solve the land mine problem, with an eye to its eventual elimination

A.107 Report of the Secretary General. *Assistance in Mine Clearance, A/49/357,*
September 6, 1994, 31 pp.

This is the progress report which preceded that of September 1995 on the same subject (50/408). It examines "the nature and magnitude of the problem facing the international community, the efforts made and experiences encountered in providing assistance in de-mining and recommendations for strengthening the manner in which the United Nations can contribute to the solution of the problem." It describes current UN activities in Afghanistan, Angola, Cambodia, El Salvador, Georgia, Guatemala, Iraq, Liberia, Mozambique, Rwanda, Somalia, Yemen, and the former Yugoslavia.

The report argues that in order for the UN to deal with the land mine problem effectively, "additional financial and personnel resources are needed, the department currently serving as focal point for land-mine-related activities within the United Nations system [the Department of Humanitarian Affairs] must be strengthened and Member States must co-operate to stop the proliferation of land-mines." In particular, the report notes the creation of a central de-mining database at the UN for the collection of global data on the land mine problem, as well as the establishment of a voluntary trust fund for assistance in mine-action.

Note: A/49/357/Add.1 and A/49/357/Add.2 are addenda to the 1994 report comprised of further replies received from other governments.

A.108 Report of the Secretary-General, *Moratorium on the Export of Anti-Personnel Land Mines, A/49/275,* July 27, 1994, 17 pp.

This is the progress report which preceded that of November 1995 on the same subject (50/701), and which adopted an almost identical format. It includes the replies of fourteen countries (Argentina, Austria, Belgium, Canada, Finland, France, Germany, Greece, Israel, Malta, Spain, Turkey, Ukraine, United States). The report argues for a total ban on land

mines, but suggests that short of that the Land Mines Protocol of the Convention on Certain Conventional Weapons should be strengthened.

Note: A/49/275/Add.1 is an addendum to the 1994 report comprised of additional information received from other governments. Together with the original report, twenty states contributed information. Thirteen of them announced either indefinite or fixed-term moratoria.

A.109 *Moratorium on the Export of Anti-Personnel Land Mines. A/RES/48/75/K, December 16, 1993.*

This is the General Assembly resolution requesting the Secretary-General to prepare the July 1994 report on land mine export moratoria (49/275). It also:

- i) calls on states to agree to an export moratorium; and
- ii) urges them to implement such a moratorium

A.110 *Assistance in Mine Clearance. A/RES/48/7, October 19, 1993.*

This is the General Assembly resolution requesting the Secretary-General to prepare the September 1994 report on mine clearance (49/357). *Inter alia*, it also:

- i) deplors the adverse consequences of the failure to clear mines, and notes the urgency of rectifying the situation;
- ii) stresses the need importance of UN co-ordination of mine clearance-related activities so as to improve their effectiveness;
- iii) invites all relevant programs and bodies to include, in an integrated fashion, such activities in their humanitarian, social, and economic assistance operations; and
- iv) requests the Secretary-General to consider the possibility of establishing a voluntary trust fund to finance information and training programs connected with mine clearance and to facilitate the initiation of mine-clearance operations

Part A.2 European Union

A.200 *Anti-Personnel Land Mines - Declaration by the European Union, May 13, 1996.*

This declaration was issued by the European Union (EU) upon the conclusion of the final session of the Review Conference on the Convention on Certain Conventional Weapons. It labels the achievements of the conference as being "significant steps forward", but also observes that the results "fall short", particularly with regard to the absence of an effective and binding verification mechanism and the presence of lengthy periods of deferral of compliance.

Inter alia, the declaration also indicates that the member states of the European Union will continue to work toward the eventual elimination of anti-personnel land mines; seek early ratification of the amended Protocol II; and continue to contribute to international mine clearance efforts.

A.201 Resolution on Anti-Personnel Land Mines and the Vienna International Conference on the Review of the Convention on Certain Conventional Weapons, B4-0330/96, March 14, 1996.

In this resolution, *inter alia*, the European Parliament calls on the Council of the European Union to adopt a new joint action on anti-personnel land mines (APMs) before the final session of the CCW Review Conference which would see a provision for extension of scope to apply in all circumstances as well as a provision for regular automatic review conferences, and which would also include the following provisions to be inserted in Protocol II:

- i) a statement that its articles are aimed at the complete elimination of APMs as soon as feasible;
- ii) verification both of suspected use violations and of the manufacture according to technical specifications;
- iii) a ban on all anti-handling devices; and
- iv) a ban on advertising APMs

The resolution also recommends that the new joint action include provisions that would see EU member states ban APMs regardless of the outcome of the Review Conference (and ensure that EU companies operating outside EU territory also respect this ban), and proceed to destroy existing stocks of APMs.

In addition, the resolution calls on member states to decide unilaterally to ban all APMs, and calls on member states and the EU to increase their financial contribution to the international mine clearance and victim support effort.

A.202 *Resolution on the Failure of the International Conference on Anti-Personnel Mines and Laser Weapons*, B4-1360/95, November 16, 1995.

In this resolution, *inter alia*, the European Parliament:

- i) reiterates its demand for a complete ban on anti-personnel mines and spare parts, to cover the production, storage, transfer, sale, export, and use of such weapons, and calls on all member states to establish immediately such a ban in the European Union as a joint action under the Common Foreign and Security Policy; and
- ii) calls on the Council and the Commission to implement a special program to clear mines and rehabilitate the civilian populations devastated by the effects of such weapons

A.203 *Resolution on Land Mines and Blinding Laser Weapons*, A4-0119/95, June 29, 1995.

In this resolution, *inter alia*, the European Parliament:

- i) declares its support for a comprehensive ban on anti-personnel mines and spare parts, encompassing production, stockpiling, transfer, sale, export, and use;
- ii) calls on the Council of the European Union to amend and extend the scope of its joint action on land mines by making more specific the provisions on anti-personnel mines (eg. they may not contain anti-handling or anti-detection devices and must be self-destructing; introduction of effective provisions restricting transfer of mines), and strengthening the Convention on Certain Conventional Weapons (eg. extension to apply in all circumstances; introduction of provisions for effective implementation and compliance);
- iii) stresses that de-mining is not a satisfactory solution to the problem of anti-personnel mines and that therefore a complete ban is essential;
- iv) calls for the joint action to include an EU-wide ban on production of anti-personnel on its territory or by companies registered within the Union, as well as the stockpiling (including the maintenance of existing stockpiles), transfer, sale and use of these weapons regardless of the outcome of the Review Conference, and calls on member states to introduce the requisite national legislation as early as possible; and

v) calls on member states to suspend technological research related to the production and/or improvement of land mines and to take steps to ensure the reconversion of mine-producing firms

A.204 *Resolution on Anti-Personnel Land Mines: A Murderous Impediment to Development*, A4-0149/95, June 29, 1995.

In this resolution, *inter alia*, the European Parliament:

i) calls on member states to enact at once national legislation prohibiting the production, stockpiling, transfer, sale, import, export, and use of anti-personnel land mines and/or their component parts, and calls for the destruction of existing stockpiles;

ii) calls on member states to suspend technological research aimed at manufacturing/modernizing land mines and to go about converting mine-manufacturing industries;

iii) calls on the Council and Commission to do more to prevent the dissemination of mines and to concentrate more resources on rehabilitation programs in affected areas;

iv) urges the Council to instigate a joint action involving a commitment to ban the production and marketing of anti-personnel mines throughout the European Community;

v) calls upon the European Union and its member states to expand mine clearance programs, to exert influence within the UN in order to expand programs, and to consider a possible role for the Western European Union in clearance;

vi) requests that sufficient resources be channelled into research on producing safer and more cost effective mine detection and mine clearance techniques, and that such research funds not go to arms manufacturers;

vii) urges the European Commission to establish with its partners in rehabilitation and mine clearance projects, ways of improving the management and co-ordination of their work; and

viii) proposes that additional resources be directed towards non-governmental organizations and local communities engaged in various mine-related activities

A.205 Committee on Development and Co-operation, *Report on Anti-Personnel Land Mines: A Murderous Impediment to Development*, PE 212.804/fin., June 21, 1995, 13 pp.

This report is divided into two parts. Part A is a motion for a resolution of the European Parliament on "Anti-Personnel Landmines: A Murderous Impediment to Development". Part B consists of an Explanatory Statement which highlights the development issues related to anti-personnel land mines.

The report points out that the issue of anti-personnel land mines is not simply a foreign policy or military problem but a key factor with regard to development policies, and that civilians -- mainly women and children -- make up the majority of victims. Moreover, land mines impede rural economic development in many developing countries, thereby forestalling the creation of food security or any other type of viable economic activity, and resulting in dependency on foreign aid. The report also observes that mine clearance is in itself a major problem, and recommends that priority be given to the training of local de-mining teams in affected countries and that the rehabilitation of de-mined areas be given significant attention so that normal activity might be restored. In addition, better medical care must be afforded to mine victims. The levying of taxes on mine producers to cover the costs of destroying their mines should be seriously considered as well.

A.206 Committee on Foreign Affairs, Security and Defence Policy, *Report on Land Mines and Blinding Laser Weapons*, PE 212.696/fin., May 24, 1995, 20 pp.

This report is divided into two parts. Part A is a motion for a resolution of the European Parliament on "Land Mines and Blinding Laser Weapons". Part B consists of an Explanatory Statement which provides an overview of the problem of land mines and discusses the relevant international law. In particular, Part B focuses on the European Union's joint action on anti-personnel mines, highlighting its shortcomings and advancing proposals for how they might be rectified. The latter are incorporated in the recommendations contained in the resolution on "Land Mines and Blinding Laser Weapons", which are summarized in annotation A.203.

A.207 *Council Decision of 12 May 1995 concerning the joint action adopted by the Council on the basis of Article J.3 of the Treaty on European Union on anti-personnel mines, 95/170/CFSP.*

The European Union's joint action on anti-personnel mines (APMs) is described as consisting of three elements:

- i) a common moratorium comprised of a complete ban on exports of non-detectable APMs and non-self-destructing APMs to all destinations, as well as a ban on exports of all other types of APMs to those countries who have not yet ratified the Convention on Certain Conventional Weapons (CCW);

ii) active preparation of the CCW Review Conference primarily through a commitment by member states to strengthen Protocol II by: extending its scope to non-international armed conflicts, substantially strengthening restrictions or bans on APMs (including those on transfers), including an effective verification mechanism, and including provisions on technical assistance for mine clearance; and

iii) a contribution by the European Union to international mine clearance by: making a contribution to the UN Voluntary Trust Fund for Assistance in Mine Clearance, undertaking mine clearance operations and pursuing research activities related to de-mining, and providing assistance (eg. information and training) for mine clearance undertaken in certain third countries

A.208 Joint Assembly of African, Caribbean and Pacific States and the European Union (ACP-EU), *Resolution on Mines*, 1419/95, February 2, 1995.

In this resolution, *inter alia*, the ACP-EU Joint Assembly:

i) calls urgently on the European Union to ban the manufacture and sale of anti-personnel mines on its territory;

ii) supports the request for the establishment of a internationally administered fund to further and finance mine clearing and the rehabilitation and compensation of victims; and

iii) calls for the swift creation of a specific fund in the EU's budget to finance various social and medical programs in mine-affected countries

A.209 *Resolution on the Injuries and Loss of Life Caused by Mines*, B3-1744/92, December 17, 1992.

In this resolution, *inter alia*, the European Parliament:

i) calls on member states which have not yet ratified the Convention on Certain Conventional Weapons to do so;

ii) urgently calls for a five year European moratorium on the sale, transfer, and export of anti-personnel mines and all related military assistance save for operations designed to reduce risks or remove and destroy mines;

iii) stresses the need to guarantee that the requisite resources be allocated to specialist military units and non-governmental organizations involved in de-mining operations that will enable them to continue and expand their activities;

iv) calls on member states which are members of the UN Security Council to raise the question of how to ensure that mine removal is addressed as a matter of supreme urgency; and

v) stresses that economic recovery, particularly in primarily agricultural or rural societies, is made impossible by the presence of large numbers of mines

Part A.3 Organization of American States

A.300 *The Western Hemisphere as Anti-Personnel Land Mine-Free Zone, AG/doc.3421/96, June 7, 1996.*

In this resolution, *inter alia*, the OAS General Assembly resolves to:

i) adopt as goals the global elimination of anti-personnel land mines and the creation of the Western Hemisphere as Anti-Personnel Land Mine-Free Zone;

ii) call upon member states that have yet to declare and implement moratoria on the production, use, and transfer of all anti-personnel land mines in the Western Hemisphere to do so as soon as possible;

iii) urge member states that have yet to do so to become parties to the UN Convention on Certain Conventional Weapons, especially the amended Protocol II, and urges member states already parties to the Convention to ratify the amended protocol as soon as possible;

iv) request the OAS Permanent Council to establish a complete and integrated registry of anti-personnel mines; and

v) urge member states to take steps aimed at halting the spread of anti-personnel land mines, and encourage member states to pass legislation to prohibit the private possession and transfer of these weapons

A.301 *Mine-Clearing Programs, AG/RES 1343 (XXV-O/95), June 9, 1995.*

In this resolution, *inter alia*, the OAS General Assembly resolves to urge member states and permanent observers, as well as the international community, to continue co-operating with and providing financial support to the OAS and the Central American countries concerned in their efforts to complete their mine-clearing programs.

A.302 *Respect for International Humanitarian Law*, AG/RES 1335 (XXV-O/95), June 9, 1995.

In this resolution, *inter alia*, the OAS General Assembly resolves to urge member states that have yet to become parties to the Convention on Certain Conventional Weapons to consider the possibility of doing so, and to urge member states to participate in the Review Conference of that Convention, with a view to promoting the eventual prohibition of anti-personnel mines and the extension of the Convention's scope of application to non-international armed conflicts, and to consider the possibility of implementing measures domestically to prohibit the manufacture, sale, and export of these weapons.

A.303 *Regional Contribution to Global Security: Anti-Personnel Land Mines*, AG/RES 1299 (XXIV-O/94), June 10, 1994.

In this resolution, *inter alia*, the OAS General Assembly resolves to:

- i) call upon member states which have not yet become parties to the Convention on Certain Conventional Weapons to take the measures required to do so, and to participate actively at the Review Conference with the goal of fundamentally strengthening the Convention; and
- ii) to give impetus to global efforts to deal with the question of land mines by recommending to the OAS Special Committee on Hemispheric Security that it consider the issue

Part A.4 Organization of African Unity

A.400 *Resolution on the Revision of the 1980 United Nations Convention on Certain Conventional Weapons and Problems Posed by the Proliferation of Anti-Personnel Mines in Africa*, CM/Res.1628 (LXIII), February, 1996.

In this resolution, *inter alia*, and in addition to repeating the injunctions made in CM/Res.1628 (entry A.401 below), the Council of Ministers of the Organization of African Unity:

- i) calls on African sub-regional organizations to take appropriate measures at their respective regional levels aimed at banning anti-personnel mines;
- ii) appeals to the international community to continue supporting on-going national de-mining efforts in order to facilitate development in affected countries; and

iii) appeals to all member states to co-operate in developing and enhancing self-reliance with regard to technical capability of de-mining and humanitarian assistance to mine-victims

A.401 *Resolution on the 1980 United Nations Convention on Certain Conventional Weapons and Problems Posed by the Proliferation of Anti-Personnel Mines in Africa, CM/Res.1593 (LXII), June 23, 1995.*

In this resolution, *inter alia*, the Council of Ministers of the Organization of African Unity:

- i) condemns the blatant violation of international humanitarian law by the indiscriminate use of anti-personnel land mines;
- ii) urges OAU member states which have not yet acceded to the Convention on Certain Conventional Weapons to do so as soon as possible;
- iii) further urges member states to participate fully and actively in the Review Conference of the Convention, and to defend a common African position consisting of, among other things, a call for a complete ban on the manufacture and use of land mines and the mobilization of greater resources for clearance and rehabilitation of mined areas and assistance to victims;
- iv) appeals to the international community to give more support to national and regional institutions in Africa responsible for assisting mine-victims;
- vi) requests nations responsible for the presence of mines to provide the necessary resources and information, including maps of the location of mines, to affected African countries

PART B

SCHOLARLY PUBLICATIONS

Part B.1 Overviews

- B.100** Anderson, Kenneth. "An Overview of the Global Land Mines Crisis", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 17-23.

This piece is intended to provide the basic information required to understand the subject as a whole. It begins by emphasizing that the land mine problem is not restricted to a few severely mined countries but is increasingly a world-wide crisis. It points out as well that the problem is exacerbated because these weapons "accumulate", and that today's crisis has resulted from the accumulation of unsophisticated mines deployed during lengthy internal conflicts deliberately to injure civilians, or without regard for their effects on non-combatants. The author observes that land mines have evolved from "a tactical, defensive, battlefield weapon to an offensive, sometimes even strategic, weapon operating in [far larger] environments ...", primarily through the use of remotely delivered mines. Anderson further explains that land mines have far-reaching direct and indirect effects on development, health and social services, and the environment that are felt for decades. The problem of land mines has reached a crisis point also because these weapons are "a true commodity in the international arms market -- cheap to make and cheap to buy", with the vast majority of them being manufactured and then transferred abroad. Finally, as far as mine clearance is concerned, "no technological 'silver bullet' will cause the problem to go away."

Anderson concludes that "the land mine crisis has reached a critical point" and that the first step toward developing solutions to it is "a hard look at the facts of the current crisis and the reasons why it has come to be."

Note: This article draws on the same author's "Overview of the Problem of Anti-Personnel Mines" in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 13-17.

- B.101** Arms Project of Human Rights Watch and Physicians for Human Rights. *Land Mines: A Deadly Legacy* (New York: Human Rights Watch, October 1993), 510 pp.

This book is a comprehensive study of all facets of the land mine issue based on extensive research. Its aim is to provide a complete synthesis of information on the subject, and it serves as a reference tool for those interested in acquiring a thorough understanding of the global land mine crisis. It also contains seventeen appendices which reproduce key primary and secondary sources either in whole or in part.

The monograph begins with a short discussion of the development and use of land mines, both past and present, which observes that technological developments have resulted in "more land mines of greater lethality spread more quickly over larger areas of territory." It then furnishes a detailed description of the world-wide land mine manufacturing and sales industry, which identifies the production of almost 350 types of anti-personnel mines in approximately 50 nations by close to 100 companies and government agencies. This is followed by a summary of the existing mechanisms for injecting greater transparency into land mine transactions, which suggests that the UN Register of Conventional Weapons should be expanded to include land mines. The book next describes the detrimental medical and social effects -- both direct and indirect -- of land mines, as well as their steep economic costs.

The heart of the book consists of case studies of the land mine problem in seven different countries (Angola, Cambodia, El Salvador, Iraqi Kurdistan, Mozambique, Nicaragua, and Northern Somalia) which illustrates how pervasive it is in the developing world and demonstrates the weapon's "devastating" impact on civilians. The study also reviews modern de-mining techniques, advocating that more resources must be devoted to this task while also pointing out that "mine clearance can never keep pace with mine infestation." An in-depth analysis of the international law regulating land mines is provided as well. The authors assert that the existing legal regime is inadequate because it "does not properly apply the relevant standards of customary humanitarian law, and does not serve to diminish abuses against civilians." In addition, the monograph reviews national and international initiatives taken to control land mines. Lastly, the book considers what the future holds for land mines, in terms of technological developments and military utility, and predicts that the land mine problem will deteriorate further and perhaps very quickly.

The central argument of *Deadly Legacy* is that "the need is urgent to secure a worldwide ban on the production, stockpiling, transfer, and use of anti-personnel land mines", and that such a ban "is supported by international humanitarian laws prohibiting the use of weapons which cause indiscriminate and excessive injury, and by disarmament principles forbidding the production, stockpiling, and transfer of weapons which exact unconscionable human harm." A total ban not only constitutes a legal necessity, but is also politically and pragmatically feasible because of the growing recognition among states of the destructive nature of land mines (exemplified by the imposition of unilateral moratoria), and because it will be much easier to enforce than a series of complicated rules merely restricting use. The book recommends several interim measures that governments could implement as stepping-stones toward a total ban, such as:

- i) unilateral production and export moratoria;
- ii) increased funding for de-mining operations and research, improved training for mine clearers and better co-ordination of their activities, and more funds for rehabilitation and medical programs for mine victims;
- iii) compliance and verification regimes covering production, stockpiling, and export; and
- iv) restricting domestic manufacturers to the production and sale only of mines that are readily detectable, and allowing their armed forces to employ only such mines

In the end, though, resolving the global land mine crisis requires that mines be regarded as "a wholly illegitimate weapon of mass destruction", and they will carry that stigma only if they are totally banned.

Note: Chapter three of this book, "Global Production and Trade in Land Mines", also appears under the same title (by Stephen Goose) in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 31-61. Portions of it are adapted and updated in Steven Askin and Stephen Goose, "The Market for Anti-Personnel Land Mines - A Global Survey", *Jane's Intelligence Review*, vol. 6, no. 9 (September 1994), pp. 425-431. The gist of that article is itself summarized in Stephen Goose, "The Economics of Land Mines", *UNDIR Newsletter*, no. 28/29 (December 1994/May 1995), pp. 13-16.

B.102 Boutros-Ghali, Boutros. "The Land Mine Crisis: A Humanitarian Disaster", *Foreign Affairs*, vol. 73, no. 5 (September/October 1994), pp. 8-13.

This article by the Secretary General of the United Nations succinctly sets out the parameters of the global land mine catastrophe. It focuses particularly on the issue of mine clearance, and provides a description of the UN's approach to de-mining (programs of direct clearance, technical assistance, mobilizing public opinion, and aiding victims) in which he emphasizes the need for economic support for such activities.

Boutros-Ghali observes that the land mine crisis exists on three levels: individuals who are its victims, developing countries whose social and economic policies it curtails, and families, localities, and nations whom it encumbers with growing social and medical hardship. He claims that the UN's de-mining efforts are second to none, but desperately require greater financial backing along with "strong political and legal advocacy" through initiatives such as export moratoria, the strengthening of the Land Mines Protocol, and an effort to stigmatize land mines as chemical and biological weapons have been. Even so, the Secretary-General concludes, only the establishment of an international convention on mines, whose purpose would be to enact a comprehensive ban on the production, stockpiling, trade, and use of these weapons, will make significant inroads against this major problem.

- B.103** Cornish, Paul. *Anti-Personnel Mines: Controlling the Plague of "Butterflies"*, London, Royal Institute of International Affairs, 1994, 38 pp.

This discussion paper seeks "to provide an objective review of the issues and arguments" connected with the subject of anti-personnel land mines (APMs). It discusses the origins, course, and content of the campaign against land mines, while pointing out the sources, extent, and effects of the current crisis. Here, the author suggests that the accomplishments of the campaign should not be undervalued, as many countries (most notably the United States) have thrown their support behind it.

Cornish also examines the technical, military, ethical, and legal aspects of the debate about land mines. On the technical side, he explains that because most APMs are easily constructed, have a basic design which can be readily improvised, and do not require high technology, instituting a manufacturing ban or technology-distribution controls will be impossible. High technology APMs (those with self-neutralizing or self-destruct capabilities) are more controllable but also can be said to have legitimate military utility as defensive weapons. Finally, mine detection and clearance is a slow and expensive task and one for which military technology and practice offer little guidance. With respect to the military dimension, Cornish believes that APMs can have legitimate, defensible uses and that they will remain a fixture in the military arsenals of nation states. However, scatterable or remotely delivered mines do not fall into this category since they result in unmapped minefields which endanger civilians. Meanwhile, export moratoria and the international legal system will have minimal effect on APM use by irregular forces, mainly because the latter employ the least costly and most available weapons. In terms of ethical and legal considerations, Cornish suggests that the main problem is "to prevent legitimate military use from having illegitimate civilian effect ... [or] of balancing military necessity against noncombatant 'collateral damage'."

Cornish concludes that the options for dealing with the land mine crisis are not limitless and that radical solutions stand the smallest chance of succeeding. "While a complete, universal ban on everything to do with APMs has a certain appeal ... this is the least attainable goal", the author maintains. "A more fruitful ... approach might be to agree on a set of finite technological, legal and geographical objectives which can be achieved with the means currently available to governments", i.e. export moratoria and embargoes, intelligence sharing and transparency, multilateral export control systems, and de-mining skills and technology. Above all, though, political will and honesty must be present.

- B.104** Dörmann, Knut. *Humanitarian Assistance, Disaster Prevention and Disaster Preparedness as Means of Reducing Land Mine Casualties*, IFHV-Studien 7, Ruhr-Universität Bochum, 1994, 31 pp.

This study provides a short overview of the land mines issue through an examination of the technical aspects of land mine usage; the manner in which mines have been employed in recent conflicts; the humanitarian and socio-economic consequences of mine use; the legal regime governing their use; and the steps which the international community has thus far taken to deal with the problem which these weapons pose. Most of all, however, it seeks to demonstrate the significant impact which the question of land mine use has on the field of humanitarian assistance and disaster preparedness.

Dörmann argues that "there is an urgent need to concentrate on prevention and preparedness concepts in order to alleviate the suffering of the affected societies and to reduce the costs of humanitarian assistance operations." He makes several recommendations to this end. First, with regard to existing minefields, the author believes that "the idea that the land mine question is of common concern to all States" must be promoted. Mine eradication programs must be supported by individual countries as well as co-ordinated and initiated by international organizations, and they must have the consent of mine-affected nations whose own citizens should be involved in clearance activities. Mine awareness campaigns should be organized for the local population too, and improvements in the indigenous medical care system supported.

With respect to preventing/mitigating future land mine use, Dörmann recommends a strengthening of the existing legal regime, namely, a ban on land mines without self-neutralization and self-destruct mechanisms accompanied by a prohibition of non-detectable mines and of anti-lifting devices. Pressure should also be applied on governments to institute moratoria.

Finally, in terms of increased preparedness, Dörmann proposes several measures:

- i) the development of better de-mining technology
 - ii) the establishment of a comprehensive database containing "the known types of mines, their characteristics, the way to handle them, the countries where they could be employed, and the collected results of de-mining research"
 - iii) the organization and co-ordination of medical assistance required by mine victims, and perhaps the use of military medical facilities
 - iv) the creation of an "operational emergency structure" including "co-operation with local authorities and non-international organizations working in that country, the availability and provision of trained personnel and sophisticated equipment, a certain basic plan of action, and the development of effective mine-clearance and mine awareness programmes."
- Fund-raising will be crucial, and mine manufacturers and exporters should be compelled to contribute money.

According to Dörmann, the UN's Department of Humanitarian Affairs and the European Community Humanitarian Office must play a major role in all of this.

B.105 Doucet, Ian. "The Cowards' War: Land Mines and Civilians", *Medicine and War*, vol. 9, no. 4 (October-December, 1993), pp. 304-316.

This article seeks to publicize the nature and scale of the land mine problem. It describes how the weapon was first developed soon after World War I to counter the tank, was used extensively during World War II, and was made more deadly during the Vietnam war by the advent of remotely-delivered "scatterables" which continue to maim and kill today. The capacity to deliver such mines in substantial numbers has in fact increased since then. The author points out that the countries which suffer most grievously from land mines are located in the poorest parts of the world, whereas the main suppliers of the weapon are the industrialized nations of the North. Subsistence farming families, nomadic pastoralists, and refugees are prime victims, and especially children. Two deaths are usually estimated for every recorded land mine injury, but many are never reported; thousands have required amputations, and a lack of medical skill and resources has caused further physical trauma. In addition, land mines devastate local economies by denying access to cultivated land which increases poverty and thus disease, contributes to social disintegration, and triggers migration -- not to mention the large burden which the treatment of victims imposes on already inadequate health care facilities. Ironically, while mine-laying is relatively easy, the removal and destruction of land mines "remains at a very primitive, slow, ineffective, hazardous and untechnologized level." Moreover, many poorer countries do not possess the resources required to undertake de-mining. As for international law, the author argues that "legislation to prioritize civilian protection over military necessity must be accompanied by means of monitoring and adjudicating what happens in practice."

The article concludes with a description of the international campaign against land mines. The author sees two broad aspects to such a crusade. The first relates to dealing with the havoc which these weapons have already wrought, such as by sufficiently funding clearance operations and by compensating victims for material losses in order to make affected communities self-sustaining once again. The second involves preventing the land mines problem from continuing and further deteriorating by advocating new humanitarian laws together with monitoring and adjudicating mechanisms. Doucet contends that if adequately supported, a campaign against land mines could succeed in alleviating the suffering which indiscriminate use of these weapons causes for non-combatants.

B.106 Eliasson, Jan. "An International Approach Toward Humanitarian Assistance and Economic Development of Countries Affected by Land Mines", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 165-178.

This piece, written by the former UN Under-Secretary General for Humanitarian Affairs, revolves around the notion that the land mine issue is a multi-faceted one that has wide-ranging ramifications which extend into political, social, economic, moral, and medical areas, all of which are interrelated. Land mines also have deep psychological and environmental impacts. "To deal with the mine problem we need to develop not only a legal strategy but also a plan of action for training, development of appropriate technology, resettlement of the afflicted population, rehabilitation, and normalization of economic life", Eliasson asserts. He presents "a blueprint for urgent international action" to deal with the issue.

The author identifies three areas for action:

- i) putting a halt to mine proliferation;
- ii) developing a co-ordinated strategy to deal with mine clearance on the part of the United Nations, international financial institutions, the International Committee of the Red Cross, and non-governmental organizations; and
- iii) inculcating within the international community a clear sense of the long-term effects of land mines on the society and economy of affected nations, and of the need to alleviate them.

More specifically, Eliasson calls for:

- i) discussion of funding options such as a voluntary trust fund to finance de-mining-related initiatives;
- ii) UN-led co-ordination of mine-removal activities;
- iii) counter-land mine programs which address detection and clearance as well as awareness; and
- iv) adequately funded social and economic programs to assist post-conflict development of mine-affected countries

Eliasson concludes that a total ban on the production and use of land mines should be the ultimate objective, but also lists a number of interim measures that can be implemented beforehand (eg. placing land mines on the UN Registry of Conventional Weapons; export moratoria; expanding the restrictions in the Land Mines Protocol).

B.107 International Committee of the Red Cross. *Land Mines Must be Stopped* (1995), 62 pp.

The objective of this special brochure is to raise public awareness of the land mine crisis -- "a global catastrophe" -- by providing a summary discussion of the various aspects of the topic. Most of the information provided is taken directly from presentations made at the ICRC's symposium on land mines held in Montreux, Switzerland in 1993.

The brochure describes how and why land mines are employed (randomly and as "weapons of terror"); recounts their medical consequences (death and disability); and describes their impact on society (sapped economy, overloaded infrastructure, social ostracism of victims). It also describes the clandestine world of land mines manufacture and trade, in the process rejecting self-destruct and self-neutralization techniques as "half-measures". In addition, the brochure looks at the subject of mine clearance, noting that manual methods -- though very expensive -- are still considered much safer and more reliable than any mechanized techniques. Finally, it analyses the status of land mines in international law, concluding that the Convention on Certain Conventional Weapons is seriously flawed and has consequently had almost no effect on the use of anti-personnel mines, and stressing the importance of strengthening it.

The brochure's central theme is that "the only effective solution to this problem is a total ban", and its objective is to mobilize opinion in support of it.

Note: Much of the material in this brochure was originally published in the ICRC's *Land Mines: Time For Action, International Humanitarian Law* (1994), but the text was also updated in preparation for the 1995 Review Conference of the Convention on Certain Conventional Weapons.

B.108 Lord, Janet E. "Legal Restraints in the Use of Land Mines: Humanitarian and Environmental Crisis", *California Western International Law Journal*, vol. 25, no. 2 (Spring 1995), pp. 311-355.

This article is divided into three parts. Part One details the scope and impact of the "multi-dimensional social problems" which land mines cause by focusing on conditions in the Falkland-Malvinas Islands, Kuwait, Afghanistan, Angola, Cambodia, Croatia, and Mozambique. Part Two discusses the international humanitarian law which regulates the use of land mines. Part Three assesses how effective the present-day legal regime is and proposes areas that could be reformed.

In particular, the author calls for:

- i) extending the applicability of the Land Mines Protocol to internal conflicts;
- ii) including mine-clearance provisions in cease-fire agreements;
- iii) developing effective implementation measures and a compliance verification system; and

iv) facilitating international co-operation in mine clearance (enhancing closer co-ordination of de-mining operations among the various assistance and relief groups involved; expanding the role of international and non-governmental organizations; requiring technical changes in the manufacture of land mines)

Lord observes that the land mine crisis underlines the fact that "economic development must embrace the concept of environmental protection." She concludes that while the future may see a total ban, the international community and the United Nations must do everything within their power now "to ensure that economic development is not thwarted by the humanitarian and environmental destruction which land mines have sown." That means focusing on preventive measures such as mapping minefields, dissemination of mine-awareness information, and law of war provisions. It also entails the undertaking of thorough and co-operative de-mining operations once hostilities have ceased.

B.109 McCall, Jr., Jack H. "Infernal Machines and Hidden Death: International Law and Limits on the Indiscriminate Use of Land Mine Warfare", *Georgia Journal of International and Comparative Law*, vol. 24, no. 2 (1994), pp. 229-280.

McCall explores "the crisis of unrestricted land mine warfare, the dimensions of the human tragedy being wrought by [them] on civilian populations worldwide ... and the legal mechanisms by which mine warfare may be restricted." He begins by providing a short historical account of the development and use of land mines, together with a discussion of the impact of unrestricted mining on Angola, Cambodia, and Iraqi Kurdistan. The author next examines in detail the Land Mines Protocol of the Convention on Certain Conventional Weapons, as well as other international and unilateral efforts aimed at dealing with the global land mines crisis. The article concludes with an evaluation of the these proposals' prospects for success.

McCall believes that international law has the ability to restrain the use of land mines, although he does admit that even if they are ultimately declared illegal the pressure will have to be kept up on governments, producers, and military establishments around the world. Nonetheless, the time has come for the imposition and enforcement of a ban on these weapons, and the article concludes on an optimistic note. Revisions to the Land Mines Protocol (eg. the inclusion of verification, confidence-building, and monitoring mechanisms), the institution of global moratoria, and the strengthening of export controls may actually bring an end to mine warfare, or at least substantially curtail it. "With unified international action, with further legislation and more effective enforcement, and -- most challenging of all -- with changes in custom and use", the author asserts, "the era of unrestricted use of the anti-personnel mine as a weapon of terror may ultimately be drawing to a close."

B.110 Media Natura. "The Deadly Legacy: Report on Western Views of Land Mines and Ways of Restricting their Indiscriminate Use", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 271-283.

This report summarizes the thinking of European and American individuals and organizations professionally involved with the anti-personnel land mine issue on various levels (medical, legal, military, governmental, manufacturing, mine clearance), with a view to assessing the degree of support for assorted proposals designed to alleviate the suffering caused by these weapons. The findings are based on interviews and replies to a questionnaire.

The report reveals a marked difference of opinion on the merits of a total ban. Many non-governmental organizations argue that a comprehensive ban would delegitimize the use of an indiscriminate weapon that is often deliberately employed against non-combatants, and be easiest to enforce and verify. Others believe that such a ban is neither desirable nor achievable. Since many NATO governments consider land mines to have a legitimate defensive role, a ban represents a long-term goal at best and at worst would serve as an impediment to the implementation of less ambitious humanitarian reforms. More specifically, policy makers oppose a production ban because "a) it would breach the rights of freedom of enterprise, b) it would be difficult to monitor and enforce and c) production would move from the controlled countries to mavericks and field factories."

The report finds more agreement on the idea of prohibiting the use and export of mines which are unequipped with self-destruct and self-neutralizing mechanisms. Yet, a strong objection to this proposal points out that many producing countries would perceive such a ban as discrimination against their less complex and less expensive types of mines. "Thus the technological option while superficially attractive because it appears to be a moderate position vis a vis a total ban, could be counterproductive by bogging negotiators down in accusations of trade protectionism, as well as opening the big can of worms as to what type of self-destruct, self-neutralizing, self-deactivating technology to acquire."

The report also notes that there is unanimous agreement on the pressing need for improved financing and co-ordination for systematic mine clearance. However, it notes a lack of consensus about what constitutes the best approach to de-mining. Does it consist of training indigenous personnel, thereby spreading skills as well as mine awareness, and empowering the local population? Or should it entail military, commercial, or NGO teams performing the task with an eye to having the risks and responsibilities assumed by people from mine producing/supplying countries? Or is a combination of both these approaches, in the form of on-the-job training, preferable?

In addition, the report finds a general consensus in favour of better funding and better health facilities for mine victims. Nonetheless, it identifies a dissenting opinion that "this [is] not really the problem: the medical facilities [are] overwhelmed because of the scale and barbarity of the injuries." There was even the view that this proposal is counterproductive

unless "combined with a strategy for removing the mines and preventing further emplacement and use."

"The most important point emerging from the research is that now is a good time to achieve progress on the issue", the report concludes. The vast majority of those involved in the land mines issue see a need to act. Various interest groups advocate similar reforms, presenting an ideal opportunity for co-operative efforts at effecting solutions. A frank and vigorous public information campaign should be the first step, with the ultimate objective being the stigmatization of land mines as an unacceptable weapon.

B.111 Owsley, Brian. "Land Mines and Human Rights: Holding Producers Accountable", *Syracuse Journal of International Law and Commerce*, vol. 21 (Spring 1995), pp. 203-228.

This article discusses the land mine problem in general. It includes a legal and historical background section which asserts that the use of land mines constitutes a violation of the laws of war, and which notes how they have evolved from a defensive weapon to an indiscriminate one. Recent developments in international law, regarding both land mines and human rights, are also examined, and the author states that the 1980 Convention on Certain Conventional Weapons supports the notion that land mines violate the laws of war and basic human rights. In addition, he describes the nature and extent of the land mine crisis in various parts of the world (Southeast Asia, Africa, Latin America, the Subcontinent, the Middle East, and Europe), observing that the "tragedy of ... death and destruction is truly of global proportions in which almost no part of the world has been spared." The author examines the land mine industry as well, characterizing it as "a growing industry with booming business." He briefly reviews the initiatives that have been taken in the direction of banning these weapons, such as export moratoria.

Lastly, the article identifies potential solutions to the land mine problem. In particular, Owsley develops a legal case for holding the manufacturers of land mines accountable for the damage wrought by them, based primarily on the fact that these companies are clearly well aware of the indiscriminate harm to innocent civilians that results from their deployment. "Manufacturers must be banned from producing and exporting landmines", the author proposes, and "the many companies that manufacture land mines should be required to contribute to the cost of de-mining ..."

B.112 Parlow, Anita. "Toward a Global Ban on Land Mines", *International Review of the Red Cross*, no. 307 (July-August 1995), pp. 391-410.

This article offers a broad survey of the various elements which comprise the land mine issue. The author describes the indiscriminate effects of mines, reviews recent and current

initiatives aimed at banning them, examines the relationship between "military strategy" and "humanitarian necessity", summarizes the relevant law, and discusses the question of de-mining.

The author observes that land mines severely disrupt civilian life, and posits that "[p]erhaps the most important work lies not in legal wrangling over the [Land Mines] Protocol but in devising workable mine-clearance programmes coupled with an effective regime of export controls." Parlow also suggests that commercial interests pose less of an obstacle to the banning campaign than do strategic interests. In addition, she asserts that the Land Mines Protocol has utterly failed to protect innocent civilians, and points out that while "mine technology is increasingly sophisticated, clearance technology has not kept pace."

Parlow believes that the international community must design "a humanitarian blueprint" to deal with the land mine problem that fully recognizes its human and economic costs. She sees that blueprint as flowing from a decision to "ban mine production, use and transfer, institute a verification regime and support technologies for mine detection and clearance that are sustainable in local communities."

Note: An earlier and slightly different version of this article is "Banning Land Mines", *Human Rights Quarterly*, vol. 16 (1994), pp. 715-739

B.113 Prokosch, Eric. *The Technology of Killing: A Military and Political History of Anti-Personnel Weapons* (London: Zed Books, 1995), 224 pp.

This book examines the topic of land mines within the wider context of anti-personnel weapons (APW) generally. More specifically, it places the contemporary discussion of APW in historical perspective, while also bringing the story up-to-date. Its objective is to generate public debate on the subject so that solutions to the problems created by these weapons can be found. In discussing the 1980 Convention on Certain Conventional Weapons and in looking forward to the 1995 Review Conference, the author stresses that the best hope for relieving the suffering inflicted by war lies in the application and development of international humanitarian law.

Prokosch illuminates the land mines issue by describing the origins and past development of these weapons, particularly the use of air-delivered (scatterable) anti-personnel mines during the Vietnamese conflict which had a deadly impact on civilians. He also focuses on the current international campaign aimed at banning their use, production, stockpiling, and export. According to the author, this crusade is "the most encouraging recent development for tackling the anti-personnel effects of modern warfare and trying to roll back the new technological capacity for inflicting widespread harm on civilians." It therefore deserves broad-based support.

B.114 Sandoz, Yves. "Turning Principles into Practice: The Challenge for International Conventions and Institutions", *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 179-97.

Sandoz begins from the premise that efforts made to address the land mine crisis must be complementary and mutually supportive rather than competitive -- "the problem is a complex one and should be tackled simultaneously on different fronts, with the accent on cooperation rather than confrontation."

To this end, the author discusses several practical measures which could be undertaken immediately to ease the land mine problem:

- i) increased mobilization of public opinion, especially within afflicted countries;
- ii) the setting of production and trade standards within the framework of disarmament negotiations and accompanied by verification procedures;
- iii) in the absence of a complete ban on land mines, fitting them with self-destruct or self-neutralization mechanisms and including detectable elements within them;
- iv) the transfer of technology and financial assistance from developed to developing nations;
- v) universal recognition of the rules of international humanitarian law;
- vi) making a more definite connection between the rules governing the use of certain types of weapons and the general instruments of international humanitarian law, and ensuring a flexible review procedure for those rules;
- vii) convincing nations to ratify or accede to the 1980 Convention on Certain Conventional Weapons;
- viii) extending applicability of any prohibition on mines to internal conflicts; and
- ix) greater efforts on the part of the entire international community to clear mines and assist mine victims

"Care must be taken ... to ensure that the different approaches do not appear contradictory", Sandoz reiterates by way of conclusion, "and that they are seen as a coherent attempt to achieve a common objective."

- B.115** Williams, Jody. "Land Mines and Measures to Eliminate Them", *International Review of the Red Cross*, no. 307 (July-August 1995), pp. 375-390.

This article recounts recent initiatives launched at both the national and international levels to control the proliferation and indiscriminate use of land mines, or to outlaw them altogether. It does so within the context of a wider treatment of the subject which includes a short history of land mines and their changing use, a brief synopsis of the governing law, and a general summary of the nature and scope of the land mine crisis.

In particular, the author discusses the international campaign to ban land mines mounted by non-governmental organizations. "NGO involvement in the issue of landmines has been critical to sparking widespread attention to the problem both by their governments and in the media", she maintains. In assessing its impact, Williams explains how several initiatives undertaken in Italy, Belgium, and Cambodia especially demonstrate the substantial contributions which the NGO campaign has made. She also reviews other efforts made by the global community to respond to the land mine problem. In addition, Williams comments on the then upcoming Vienna Review Conference of the 1980 Convention on Certain Conventional Weapons, and advocates specific changes designed to strengthen the Convention, in particular its amendment to cover the use of land mines in all circumstances. According to Williams, however, in the end the only real solution is "to eliminate land mines from the world's arsenals once and for all."

Note: A condensed version of this piece is "National Initiatives and Legislation to Limit and Restrict the Production, Use and Transfer of Land Mines", *UNIDIR Newsletter*, no. 28/29 (December 1994/May 1995), pp. 11-12.

Part B.2 Legal/Disarmament & Arms Control Aspects

Note: Legal and arms control aspects are discussed throughout the various reports and resolutions of international organizations annotated in Part A. The applicable international law is discussed as well in annotations B.300, B.312, B.322, B.326, B.328, and B.330.

- B.200** Anderson, Kenneth and Schurtman, Monica. "The United Nations Response to the Crisis of Land Mines in the Developing World", *Harvard International Law Journal*, vol. 36, no. 2 (Spring 1995), pp. 359-371.

The purpose of this article is to "show briefly how and why land mines are a crisis in the developing world, sketch out the various responses of the United Nations and other actors, and assess whether these responses are likely to alleviate the problem." It explains that land

mine use has reached crisis proportions for three interconnected reasons: i) "they are widespread and increasing in both absolute number and rate of emplacement"; ii) they obstruct solutions to other problems (economic, health, refugee, environmental) faced by developing countries affected by war; and iii) de-mining is slow, dangerous, and expensive. The article also describes how current attempts to solve the land mines problem have focused either on efforts to regulate the supply, availability, and cost of mines ("front-end" or "supply-side" proposals), or on those which are concerned with the manner in which mines are employed and with mine clearance ("back-end or "end-user" proposals").

The authors argue that a comprehensive ban on the use, transfer, stockpiling, and production of land mines "is by far the most sensible policy alternative". Other supply-side or user-side approaches -- whether used individually or in combination -- are unlikely to resolve the current crisis, though they could be used as interim measures toward a total ban. Moreover, only stigmatizing these weapons as morally unacceptable will result in them being "taken seriously in relation to the damage they cause", and this can be achieved only through a comprehensive ban. In the opinion of Anderson and Schurtman, this is not a utopian objective that expects total compliance by all parties. In fact, it is a realistic goal because imposing a total ban will create "an international atmosphere of universal ill-will", thereby serving to "raise the cost of landmines to end-users in the field", forcing them to "think about scarcity of resources", and thus "alter combatant behavior."

B.201 Austin, R.H.F. "Dealing with Land Mines: A Legal Strategy", in William Maley, ed., *Dealing with Mines: Strategies for Peacekeepers, Aid Agencies and the International Community* (Canberra: Australia Defence Studies Centre, University College, Australian Defence Force Academy, 1994), pp. 13-26.

Austin stresses the all-encompassing nature of the anti-personnel land mine problem. These weapons "threaten not only the purely humanitarian need to reduce unnecessary or inhumane killing and maiming in the immediate context of the conflict", he emphasizes, "they also jeopardise the long term search for stability and peace, as well as the preservation of scarce human and material resources wastefully used to cope with a vast scale of injuries in 'victimized' countries." The author maintains that existing international humanitarian law does not have the capacity to deal with this new challenge.

Austin proposes an additional legal strategy to cope with the land mine crisis. He suggests developing applicable rules of international customary law that could check the problem at its source. "[I]f States show that they are in fact convinced that the law demands, for example, that the maiming, destruction and undermining of aid and rehabilitation caused by anti-personnel mines must be ended by prohibiting their manufacture or export", Austin posits, "then such law in fact comes into existence as a rule of general international law." The key to the successful implementation of this strategy is a concerted effort by media and public opinion to make civilian political leaders keenly aware not only of the destructiveness of land mines, but also of their governments' ability to create such rules of law if they are so

willing. The strategy would be launched on national as well as international levels through a combination of unilateral acts and UN resolutions, both geared to instituting a comprehensive ban on these weapons.

B.202 Beach, Hugh. "Anti-Personnel Land Mines", *Bulletin of Arms Control*, no. 21 (April 1996), pp. 11-14.

This article makes the case for a global ban on the design, manufacture, storage, use, or sale of anti-personnel land mines (APMs). Its argument is based on two considerations. The first is humanitarian: APMs are "specially obnoxious" weapons because they are deliberately intended to kill and maim, and because their main target -- often by design -- is civilians.

Secondly, the military usefulness of land mines is questionable, and today their presence prevents intervention forces from carrying out their task of containing intra-state conflicts.

The author takes note of the then upcoming final session of the Review Conference of the Convention on Certain Conventional Weapons, but points out that "the number of parties to the Convention is still small, and, even if everyone joined, the provisions would remain feeble." He calls on the British government in particular not only to support the utmost strengthening of the Convention but to take the lead by proposing a total ban.

B.203 Buckley, Ian. "Land Mines - The Hidden Killers", *Pacific Research*, vol. 8, no. 3 (August 1995), pp. 9-11.

Written in the run-up to the autumn 1995 session of the Review Conference on the Convention on Certain Conventional Weapons, this article discusses the land mine issue in general before making some specific observations about official Australian policy.

Buckley notes that approaches to solving the land mine problem are "highly polarized". At one pole are the UN Secretary-General and UN agencies, the International Committee of the Red Cross, and various other groups which advocate a total ban on the use, trading, and production of land mines. At the other end of the spectrum are those in the mine industry and certain government and defence circles (including those in Australia) which want international trade in these weapons to continue, while placing restrictions on the types of mines used, how they are deployed, and which countries can purchase them. The author contends that the Australian government's opposition to total prohibition can be explained by the armed forces' desire to employ anti-personnel mines in their operations, by the government's wish to keep its policy in step with that of its major allies, and by its own commercial interest in mine production and export.

Buckley concludes that in spurning a total ban the Australian government is "in head-on collision" with its public position on human rights. "On this issue ... Australia has a clear choice", he points out. "It can take the side of the major industrial powers or, overcoming its current moral paralysis, it can become a diplomatic 'trail blazer', setting an example to other industrialized nations." Buckley clearly favours the second option.

B.204 Clements, Kevin P. "Banning the Production and Spread of Land Mines", in William Maley, ed., *Dealing with Mines: Strategies for Peacekeepers, Aid Agencies and the International Community* (Canberra: Australia Defence Studies Centre, University College, Australian Defence Force Academy, 1994), pp. 1-11.

In identifying the problems posed by anti-personnel land mines, the author asserts that their use cannot be justified either on humanitarian or military grounds, and that they are more costly than beneficial to civilians and soldiers alike.

After reviewing the shortcomings of past international efforts to address the land mine problem, Clements concludes that it requires a political rather than a technical solution. More specifically, he argues that an incremental approach should be replaced by the adoption of a "maximalist" strategy aimed at the "delegitimation of anti-personnel mines, promoting unilateral export controls and trying to negotiate a global ban on their production, stockpile and export." Clements acknowledges the difficult nature of this task but contends that it must be undertaken so that these weapons can be branded as totally unacceptable.

Note: A condensed version of this chapter is "Limiting the Production and Spread of Land Mines", *Pacific Research*, vol. 7, no. 1 (February 1994) pp. 3-6.

B.205 Doswald-Beck, Louise and Herby, Peter. "Land Mines: A Critical Examination of Existing Legal Instruments", *UNIDIR Newsletter*, no. 28/29 (December 1994/May 1995), pp. 5-7.

In summarizing both customary international humanitarian law regarding land mines and the 1980 Convention on Certain Conventional Weapons, this article assesses various proposals that have been advanced to help deal with the problem posed by these weapons. One of these in particular would require all mines employed outside marked and guarded minefields to be equipped with effective self-destruct mechanisms. The authors view this proposal as inadequate because it explicitly allows the continued production, sale, and use of non self-destruct ("dumb") mines for "classical" barrier minefields. Permitting the deployment of self-destruct mines might also imply that remotely-delivered (scatterable) mines are essential for military operations, and thus actually result in an increase in land mine trade and use. Moreover, many civilian casualties would still occur before mines self-destructed and as a result of their failure to self-destruct.

The authors believe that the only answer to the current crisis is a complete ban on land mines. It is therefore crucial that efforts to create a regime based on self-destruct mines does not impede progress toward this goal. "A more direct route towards achieving total prohibition might be a stringent requirement that anti-personnel mines only be used within marked, fenced and guarded minefields", they suggest, "coupled with an impartial and non-political verification regime to identify violators, and the appropriate use of sanctions ... accompanied by [an export] ban ..." The destruction of existing stockpiles could facilitate the process. According to the authors, such an approach "would be far less costly than future de-mining, treatment of victims and the rebuilding of afflicted communities."

B.206 Ekberg, Peter J. "Remotely Delivered Land Mines and International Law", *Columbia Journal of Transnational Law*, vol. 33, no. 1 (1995), pp. 149-178.

This article observes that remotely delivered mines with self-destruct mechanisms which fail to operate are a major contributor to the land mines crisis, and identifies "faulty manufacture of mines and submunitions, and the recourse to bilateralism in international dispute resolution" as being the main sources of the problem. It further claims that current international law is unable to deal with the challenges posed by remotely delivered mines.

Ekberg argues that the solution lies in "a more rigorous application of the principles [of international humanitarian law] as well as a stricter interpretation of current international law relating to land mines." He points out that the resulting increase in the cost of remotely delivered land mines -- particularly for poorer countries -- will create a major hurdle, but one that can be overcome. "By promoting approaches which seek to disseminate the technology of self-destruct mechanisms, even as the reliability and mandatory implementation of self-destruct mechanisms are examined", Ekberg asserts, "a movement toward controlling the harms caused by remotely delivered land mines is assured." The author believes that a strategy predicated on a more rigid enforcement of the relevant law on these weapons will accomplish the same objectives as the institution of a total ban.

B.207 Falk, Richard. "Walking the Tightrope of International Humanitarian Law: Meeting the Challenge of Land Mines", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 69-86.

The "tightrope" in question is the one which recognizes the military exigencies of war while simultaneously acknowledging the need to protect innocent civilians. In this regard, the author asks "whether the main regulatory effort should be made on behalf of an unconditional ban or should focus more modestly on strengthening existing legal constraints on land mine use."

Falk maintains that a direct approach that focuses on deployment and use of land mines by advocating the improved application of existing legal standards or a complete ban should be eschewed. Efforts along these lines have essentially failed largely because of the "professional military ethos" which views the disruption of civilian society as a key objective of war. Instead, the best prospects for alleviating the land mine crisis, at least in the short term, lay in the adoption of an indirect approach that concentrates on influencing their availability and design as well as their post-hostilities clearance. Such restraints "make no claim to impinge on battlefield assessments of land mine use, yet seek to diminish the harm inflicted on civilians." In other words, "shifting the regulatory focus to the before and after phases of combat removes most considerations of military utility from regulatory policy", Falk asserts, "and may thus weaken professional military objections."

In advancing this argument, the author particularly seeks to debunk the logic of military necessity since he considers the "professional military ethos" to be the largest obstacle in the way of reform and one not easily overcome by international law. Discussing the utility of land mines with military professionals should therefore be encouraged. As a corollary, the author also highlights the need to engage all belligerents -- especially non-state actors in internal conflicts -- in the dialogue on land mines.

B.208 Goldblat, Jozef. "Inhumane Conventional Weapons: Efforts to Strengthen the Constraints", in *SIPRI Yearbook 1995: Armaments, Disarmament and International Security* (Oxford: Oxford University Press, 1995), pp. 825-835.

This piece offers a summary discussion of the provisions of the Convention on Certain Conventional Weapons (CCW) relating to land mines as they existed prior to the Review Conference, as well as the proposals which were advanced at that time to strengthen them. It also rates the prospects of the Review Conference. "From the point of view of humanitarian law, a total prohibition on the use of anti-personnel mines would be the most desirable solution", the author suggests. He claims that a ban would prove less difficult to monitor than use restrictions, but concedes that it will not be easy to achieve in the face of the belief in some military circles about the "cost-effectiveness" of land mines as a tool of warfare.

Goldblat emphasizes the "intrinsic link" between humanitarian law and disarmament: "positive results achieved in restricting the use of certain conventional weapons [should] facilitate talks on disarmament with a view to halting the production, stockpiling and proliferation of these weapons." He adds, however, that disarmament also entails disposing of stocks as well as destroying (or converting) production facilities, and observes that since this does fall under the mandate of the CCW the appropriate negotiations must take place in a specialized forum, such as the Conference on Disarmament.

- B.209** Goldblat, Jozef. "Land Mines and Blinding Laser Weapons: The Inhumane Weapons Convention Review Conference", in *SIPRI Yearbook 1996: Armaments, Disarmament and International Security* (Oxford: Oxford University Press, forthcoming).

The author describes the main elements of the revised text of the Land Mines Protocol which was adopted during the concluding session of the Review Conference of the Convention on Certain Conventional Weapons in 1996. For one thing, the amended Protocol encourages the use of self-destructing and self-deactivating mines. However, Goldblat suggests, such design changes not only may take many years to implement but will also not dramatically decrease the number of mine-victims. Many governments favour a total ban on these weapons instead, but he points out that it is far from clear when and where -- if at all -- negotiations for such a ban would be conducted.

Note: This annotation is based on a chapter summary provided by Oxford University Press.

- B.210** Gowdey, David. "The Land Mine Crisis: The Humanitarian Dimension", *UNIDIR Newsletter*, no. 28/29 (December 1994/May 1995), pp. 17-19.

This piece describes recent efforts by UN humanitarian bodies to address the problem of land mines and also evaluates the ongoing process to revise Protocol II of the 1980 Convention on Certain Conventional Weapons (CCW). In particular, the author states that this process suffers from an "inherent weakness", i.e. the attempt by the international community to "address an enormous and growing humanitarian crisis with the disarmament mechanisms established during the cold war." Those mechanisms, he observes, were intended to deal with the control of nuclear weapons or the reduction of forces in Europe and not "with a problem that is killing people every day, and that is steadily growing worse." The result is that the draft protocol of the Group of Experts preparing for the Review Conference of the CCW "is quite obviously a document drawn up by international lawyers and military men, rather than by humanitarian personnel familiar with the problem." This can be seen in the fact that the draft addresses only the use of land mines (and not production and transfer as well), fails to specify permissible self-destruct times for self-destructing mines and for making mines detectable, and lacks effective verification and compliance enforcement mechanisms. Most notably, UN humanitarian personnel working in mined areas are given no legal protection.

Gowdey argues that despite the weakness of the revision process UN humanitarian agencies "cannot afford to take an all or nothing approach to the land mine problem [but] have a duty ... to seek the strongest possible provisions to protect civilians from land mines." Even so, he concludes, while filling the loopholes in the draft Protocol would enable it to become an important instrument in curtailing civilian casualties, the ultimate solution is the total elimination of these weapons. "Thus, from the humanitarian standpoint, whatever may come out of the CCW Review Conference is just a step along the way forward" to that goal.

B.211 Hampson, Françoise J. *The Long Shadow: Land Mines and the Law of Armed Conflicts*, Papers in the Theory and Practice of Human Rights, no. 12 (Human Rights Centre, University of Essex, 1995), 22 pp.

This study sets out to examine the nature and scale of the land mine problem (including the military utility of land mines), and to suggest how civilians might be better protected from these weapons. It does so by first looking at the applicability of international law in the situations in which land mines are employed, and then considering greater restrictions on their use and transfer.

The author makes several detailed and inter-connected proposals for changing the 1980 Land Mines Protocol which, she contends, "represent a balance between legitimate military considerations and humanitarian needs":

- i) make it applicable in all circumstances, and encourage respect for this by offering incentives (such as the possibility of lawful access to land mines);
- ii) incorporate additional restrictions on use, such as a ban on the remote delivery of land mines (i.e. land mines could only be used in marked minefields);
- iii) insert requirements designed to facilitate the removal of land mines (require all anti-personnel land mines to be equipped with self-detonating mechanisms but grant states a grace period of ten years in which they could use mines without such devices in marked minefields);
- iv) add provisions on transfers (specify that users can only obtain land mines if they pledge to use them in accordance with the revised Protocol, and that suppliers are to be held accountable for the end use of mines by parties which do not give such an undertaking); and
- v) include stipulations on verification, investigation, and enforcement (establish a body to monitor transfers, to investigate and determine allegations of unlawful use, and to supervise the implementation of mine-clearance agreements)

"It is possible to improve the practical protection afforded to civilians from both the immediate and the long-term effects of land mines", Hampson argues, "whilst allowing armed forces to meet their legitimate military needs."

B.212 Hehir, Bryan J. "Land Mines: A Political-Moral Assessment", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 97-111.

This piece examines the ethical and political-strategic aspects of the land mine problem, first generally and second in relation to U.S. policy. Hehir begins by observing how difficult it is to make an ethical argument in international politics, and by pointing out that the study of land mines is a case study in the ethics of war. He then proceeds to analyse the moral use of force before moving on to discuss the challenge which land mines pose to the Just War ethic because they are "inherently indiscriminate ... in terms of time and targets." According to Hehir, "the central moral problem of land mines" is that "they violate the principle of noncombatant immunity and thus strike at the very heart of the principle of limitation ... in the ethic of war." This moral argument is a key component in the campaign against land mines but it must be used in conjunction with other resources to produce a truly effective political strategy.

Hehir maintains that in the short- to medium-term efforts to deal with the land mine crisis will have to focus on the policies of states rather than operate at the level of the international system as a whole. As an example he evaluates American policy in terms of the "ethic of restraint" and the "ethic of advocacy". Here, the author sees a contradiction. "Current U.S. land mine policy exercises self-restraint in export but not use, while asking others to refrain from possession or use", Hehir observes. "For the United States to lead as a policy advocate toward a world banning land mines in toto", he suggests, "more restraint will have to be exercised across the board as the price of leadership." The author concludes firmly that "the price should be paid ... because the 'deadly legacy' of land mines is an affront to a humane order of politics."

B.213 International Committee of the Red Cross. *Report of the International Committee of the Red Cross for the Review Conference of the 1980 United Nations 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* (February 1994), 62 pp.

This report was intended to serve as a working document for the Group of Governmental Experts that prepared the Review Conference. Part II is "an analysis of the advantages and difficulties of the various proposals that have been made to amend Protocol II in order to achieve better regulation of land mines", including those amendments proposed during the ICRC's Montreux Symposium on Anti-Personnel Mines held in April 1993 (the conclusions of which are summarized in Annex I of this ICRC report) as well as during its Symposium of Military Experts on the Military Utility of Anti-Personnel Mines held in January 1994 (whose report is also reproduced in full in Annex II of the ICRC report, and for which this bibliography provides a separate annotation at B.414). The report points out what would be required to make each proposal most effective.

The report examines two groups of proposals. With regard to those suggesting the prohibition of the use of certain types of mines, it argues that "given the low price and widespread availability of mines ... any [such] prohibition ... must be accompanied by

appropriate arms control/disarmament measures in order to make the rule effective." For example, a total ban on use would have to be supplemented by a ban on manufacture and stockpiling, along with appropriate verification procedures. Similarly, prohibiting the use of scatterable mines that are not fitted with self-destruct mechanisms must be coupled with an agreement stipulating that only scatterable mines with self-destruct mechanisms can be manufactured, and appropriate verification measures implemented. The same consideration would need to apply to a prohibition of the use of anti-personnel mines that are not equipped with self-destruct mechanisms. There must likewise be verification that non-detectable mines are not being manufactured, to go along with any ban on the use of such mines. Finally, the modification of existing stockpiles to conform with the new law or, failing that, their destruction, is another arms control/disarmament measure that should be considered.

With regard to those proposals which have been made to further regulate the way mines are used during an armed conflict and cleared after hostilities, the report expresses some doubts. It claims, for instance, that extending the applicability of the Convention to internal conflicts "is even less likely to have the effect of ensuring respect for the rules than is the case in international armed conflicts." More violations of the law will undoubtedly occur in non-international conflicts, where mines will probably continue to be widely used, especially if they can be easily obtained. Therefore, only a total ban on use and manufacture could make them unavailable to the belligerents in such conflicts. In addition, the report is not optimistic that the introduction of stricter rules on the recording of minefields will be very effective because past experience -- especially in internal conflicts -- suggests that they would not be generally respected, that records are frequently lost in the confusion of war, and that the location of mines often changes as a result of rainfall and the movement of soil and sand. As for the proposal that self-destruct times and other minefield information should be declared to all parties at the end of hostilities, the report points out that states did not accept this rule at the time of the negotiations for the 1980 Convention, and that "[s]uch information will be available only if records have indeed been made and kept, and will be useful only if the mines have not been moved to any great degree."

Note: This report also appears in *International Review of the Red Cross*, no. 299 (March-April 1994), pp. 123-182.

B.214 International Committee of the Red Cross. *Stopping the Land Mines Epidemic: From Negotiation to Action*, July 1996, 6 pp.

In part, this paper provides an analysis of the revised Land Mines Protocol of the Convention on Certain Conventional Weapons. It argues that although the amended Protocol is a welcome advance over the original version it contains several key weaknesses:

i) the production, transfer, and use of "long-lived mines" may continue so long as they are laid in fenced, marked, and guarded minefields, despite the fact that such protective measures are rarely taken as well as difficult and expensive to implement;

ii) no specific restrictions are placed on the use of self-destructing mines, but given that vast numbers of them can be remotely delivered over large areas even more civilians may become mine-victims (especially since marking and mapping these "scatterable" mines is practically impossible);

iii) states are not obliged to institute the revised Protocol's provisions until nine years after it enters into force

Given "the weak restrictions on the use of anti-personnel mines, ... the excessively long 'grace period' for implementation of key provisions on use, and the absence of a mechanism to verify the fulfilment of technical requirements for self-destructing mines and to investigate possible violations of the restrictions on use", the ICRC concludes that on its own the new Protocol will not likely bring about a major decrease in the numbers of mine-victims. Therefore, while encouraging countries to adhere to it, the ICRC also urges them to go one step further and ban these weapons altogether.

B.215 Khlestov, Nikolay. "Review Conference of the 1980 Weapons Convention", *International Review of the Red Cross*, no. 307 (July-August 1995), pp. 368-374.

This article was written by the head of the Russian delegation at the sessions held by the group of government experts preparing the Review Conference. It maintains that the conference should take its cue from disarmament law and incorporate into the Convention provisions on the development, stockpiling, and transfer of land mines.

The author particularly stresses the need for an implementation mechanism applying both to the Convention and to Protocol II, based on a possibly compulsory reporting system. "It should regulate all problems relating to mines, including mine clearance, the sharing of experience in the field and the exchange of information on the production, stockpiling, development and export" of these weapons. A procedure by which violations would be investigated could also be set up, and perhaps a "code of conduct" might be developed to regulate the transfer of mines. A transitional period would allow states to adapt gradually to the new requirements.

B.216 Latham, Andrew. *Toward an Effective Verification Regime for the Convention on Certain Conventional Weapons: The Outline of an Incremental Approach* (Ottawa: Department of Foreign Affairs and International Trade, December 1994), 24 pp.

This report's goal is to forward proposals for a verification regime for the Convention on Certain Conventional Weapons (CCW), with a particular focus on land mines. Its main argument posits that an amended Convention will require an effective verification regime to assure parties to it that signatory states are in compliance.

More specifically, the author promotes the establishment of a two-track verification regime that could "create/reinforce the normative belief that the indiscriminate use of weapons such as land mines is 'inhumane'." The first track would apply to international armed conflicts and see the creation of a Verification Commission made up of representatives of participating states, as well as the use of on-site fact-finding missions to investigate allegations of non-compliance. The second track would apply to non-international armed conflicts (where land mines are most frequently employed in an indiscriminate and inhumane manner), and entail voluntary confidence-building measures.

Overall, then, a phased approach would be utilized in which a gradual strengthening of verification with respect to international conflicts would be followed by an incremental extension of the regime to non-international conflicts. "It is envisaged that, over time as all Parties become more comfortable with CCW verification, these two tracks will converge", Latham concludes. "The end product will be a verification regime that is both effective and comprehensive, and that enjoys the support and confidence of all the States Parties."

B.217 Leahy, Senator Patrick. "Land Mine Moratorium: A Strategy for Stronger International Limits", *Arms Control Today*, vol. 23, no. 1 (January/February, 1993), pp. 11-14.

This article calls on the United States government to assume a leadership role in controlling the land mine crisis, and suggests several ways in which it might do so. First, the Clinton administration should immediately ratify the Convention on Certain Conventional Weapons. Second, it should use the influence gained from American imposition of a unilateral moratorium on the sale, export, and transfer of anti-personnel land mines (APMs) to negotiate a comparable international ban. Leahy acknowledges that a total ban will not be easily attained. In that event, he proposes obtaining agreement among supplier countries to restrict transfers of APMs to states which have ratified the Land Mines Protocol, or give a bilateral undertaking to potential suppliers to abide by its terms.

Leahy also suggests how the Land Mines Protocol might be strengthened:

i) The absence of compliance and verification procedures should be rectified by the creation of an international registry, under UN auspices, of national stockpiles of numbers and types of APMs, a list of facilities where APMs are manufactured, and notification of sales or transfers of APMs. In addition, a consultative commission could be established to address questions of interpretation of treaty provisions as well as to resolve compliance issues. Finally, recourse to a voluntary "fact-finding" mechanism would help determine whether the Protocol was being observed;

ii) The provisions of the Protocol should be extended to internal conflicts; and

iii) The Protocol's specific limitations should be tightened to limit the types of APMs that may be manufactured and used, and the manner in which they are deployed (only self-deactivating mines should be allowed; remotely delivered mines should be prohibited)

The US, Leahy concludes, should take the lead in advancing these proposals, especially since the land mine issue is one that poses no risk to its national security and exerts an insignificant impact on the American economy.

Note: This article is reprinted as Appendix 4 in Arms Project of Human Rights Watch and Physicians for Human Rights. *Land Mines: A Deadly Legacy* (New York: Human Rights Watch, October 1993).

B.218 Lightfoot, Paul J. "The Land Mine Review Conference: Will the Revised Land Mine Protocol Protect Civilians?", *Fordham International Law Journal*, vol. 18, no. 4 (April 1995), pp. 1526-1565.

The author examines "the impact of land mine use on civilians, the effect of international law on land mine warfare, and the proposed changes to international law in response to the harm inflicted upon civilians." In particular, he assesses the proposals to amend the Land Mines Protocol adopted by the Governmental Experts Meetings held in preparation for the Review Conference of the Convention on Certain Conventional Weapons.

Based on his analysis of reports of the Experts Meetings, Lightfoot predicts that, as in the past, "humanitarian concerns will be given insufficient weight in proportion to military considerations" by the Review Conference and that it will not adopt a comprehensive ban. "The proposals aimed at satisfying humanitarian concerns ignore the reality of modern land mine warfare", the author maintains, "and will fail to protect civilians from the use of land mines." Restrictions on the use of these weapons are routinely ignored on the battlefield and do not strike at the root of the problem -- their availability. According to Lightfoot, only a "ban on the manufacture, use, transfer, and stockpiling of land mines, coupled with an effective verification and compliance scheme" can do that by raising the political and financial costs of using these weapons. Viewing the Experts' proposals -- however helpful they may be in the short-run -- as anything more than steps toward that ultimate goal could therefore be "dangerous and counter-productive".

B.219 Macintosh, Jim. *The Role of Confidence Building in the Convention on Certain Conventional Weapons* (Ottawa: Department of Foreign Affairs and International Trade, December 1994), 26 pp.

This paper examines the ways in which the scope and effectiveness of the Convention on Certain Conventional Weapons (CCW) could be enhanced by the confidence building

approach. More specifically, it discusses how confidence building measures (CBMs) can play a key role in a CCW verification regime for Protocol II.

The author argues that two kinds of CBMs are required for an effective verification regime. The first includes those which collect, organize, and disseminate information and knowledge about land mines, their use, and their removal (transparency measures). The second includes those which foster the development of shared standards of professional and humanitarian land mine use (norm-developing measures).

Among the CBMs of both types which Macintosh proposes are the following:

- i) data registries of mine types, mine clearing procedures, declared mine fields, mine production, and mine transfer;
- ii) mine clearance school;
- iii) joint mine clearing exercises;
- iv) personnel exchanges of mine professionals;
- v) annual experts seminars;
- vi) observations of mining/de-mining exercises and/or mine stock destruction; and
- vii) reports on incidents involving land mine use

"In the short term, the development and use of ... information-oriented [CBMs] ... could constitute a key step in the positive movement toward broader changes in thinking about land mine use and clearance", Macintosh concludes. "Of at least equal importance, the careful introduction of several key norm-developing CBMs could lay the ground-work in the CCW for the longer-term development of more comprehensive confidence building efforts", which, he suggests, might in turn lead to similar changes in thinking.

B.220 Massoud, Habib. "Land Mines: Verification and the Convention on Certain Conventional Weapons", in J. Marshall Beier and Steven Mataija, eds., *Proliferation in All its Aspects Post-1995: The Verification Challenge and Response, Symposium Proceedings* (Toronto: Centre for International and Strategic Studies, York University, 1995), pp. 71-75.

The author notes that creating a verification mechanism for the Convention on Certain Conventional Weapons (CCW) is in part a North-South issue. While industrialized nations perceive the use of anti-personnel land mines (APMs) as simply a humanitarian question, countries in the developing world view these weapons as a legitimate tool of self-defence and

fear that Northern countries will use a verification regime as a pretext to meddle in their internal affairs. The challenge, then, is to allay this mistrust.

Massoud suggests that a proposal made by the Canadian delegation to the CCW Experts Group meeting in January 1995 might bridge these differences. It recommends a verification regime initially geared to information-sharing on such things as the results of de-mining operations, the education of military personnel regarding their obligations under the CCW, and technical advances relating to APMs and their removal. These transparency measures, favoured by many non-aligned nations, would be coupled with the establishment of a Verification Commission comprised of States Parties as indicative of the kind of intrusive verification regime preferred by the North. The key element of this compromise proposal is a clause permitting participating states to opt out of the application of the verification mechanism to their internal conflicts until the next Review Conference. The verification regime would always apply in cases of international conflict, and the information-sharing transparency measures would be applicable in all cases.

According to the Canadian proposal, then, there would initially be a transition period whose main objective would simply be to build confidence in the efficacy of the verification regime and to reassure sceptics that no ulterior motives are involved. "If this transition phase is successful, it is hoped the doubters will become convinced of the merits of such a regime and stop opting out of the verification provisions of the Convention", Massoud explains. "In this way, the CCW can evolve into a useful, long-term instrument in the control of the use of anti-personnel land mines."

B.221 McNamara, Thomas E. "The U.S. Approach Toward Land Mines: A Realistic Policy for an Evolving Problem", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 60-65.

The author, at the time of publication acting assistant secretary of state for the Bureau of Political-Military Affairs, summarizes the Clinton administration's approach to the land mine crisis whose initiatives and persistence, he claims, have raised considerably the international profile of the issue. He explains that the American government has undergone a learning process which has led to the development of a four-track strategy to the problem of land mines -- encompassing de-mining, export moratoria, international controls, and strengthening existing law -- which is committed to finding solutions that will make an immediate impact. A ban on all land mines, for instance, would take too long to negotiate to have instant effects.

McNamara contends that to be effective a policy designed to deal with land mines must be "sober-minded and comprehensive, including both corrective and preventive elements [and] a time horizon that begins immediately and extends through the far term." Above all, U.S.

policy must continue to evolve as the learning process goes on in order to avoid idealism and remain practical as well as relevant.

B.222 Molander, Johan. "Strengthening International Humanitarian Law: The Review Conference of the 1980 Conventional Weapons Convention", *UNIDIR Newsletter*, no. 28/29 (December 1994/May 1995), pp. 8-11.

The author served as Chairman of the Group of Governmental Experts to prepare the Review Conference of the Convention on Certain Conventional Weapons (CCW). In this piece, he provides a descriptive summary of the Final Report of the Group as it pertained to revision of the Land Mine Protocol.

Molander also offers three personal reflections on the subject. First, he underscores the benefits of combining elements of humanitarian law with elements of disarmament law in tackling the land mine problem. Second, the author cautions that when it comes to potential verification or compliance provisions only governments themselves can ensure that the laws of war are respected. Third, he warns that "no rule of international law pertaining to use of a weapon will stand a chance to be observed if it is incompatible with perceived legitimate defence interests." Molander also suggests that regular review of the CCW and its Protocols may be "a means of keeping up the momentum of accession, aiming at universal adherence."

B.223 Nolan, Janne E. "Land Mines: The Arms Control Dimension", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 87-96.

The author observes that international law efforts designed to deal with land mines have sought to regulate only their use and have also been singularly ineffective in this regard. She consequently argues that "a verifiable arms control regime that covers production, stockpiling, and exports" is required as well.

Nolan describes the precedents set by nuclear, chemical, and biological treaties and discusses the difficulties standing in the way of establishing a similar regime for land mines. She concludes that political and technical constraints (eg. the sheer number of mines disseminated globally, and the increasing number of producers and exporters) preclude reaching an agreement on a total ban, and that therefore a more promising approach would be a series of interim steps undertaken internationally as part of a longer-term strategy:

- i) prohibitions on the design and sale of especially indiscriminate types of mines;
- ii) an export control regime;

iii) measures to promote transparency; and

iv) technical consultations about what a more comprehensive ban would entail

The author acknowledges the limitations of these steps but sees a clear value in them nonetheless. "Even with imperfect measures", she claims, "the development of a clear taboo can be encouraged by this process, which in itself can begin to serve as a deterrent against the misuse of mines." Even so, Nolan adds, a total ban should remain the ultimate goal since this would make it "easier to stigmatize land mines as an illegitimate instrument of warfare." Indeed, in her opinion, "the control of land mines ... may be feasible only if these weapons are delegitimized internationally, which is unlikely to occur if some uses remain acceptable under partial controls."

B.224 Parks, W. Hays. "The Humanitarian Law Outlook", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 45-59.

The author examines the land mine question from the perspective of international humanitarian law. He does so by looking at the connection between national defence and the need for land mines, the applicable law of war, and, in particular, the provisions of the land mines protocol of the 1980 Convention on Certain Conventional Weapons as well as the build-up to the 1995 Review Conference. He then goes on to discuss those issues which the Review Conference should address, such as technology, de-mining, and the applicability of the land mines protocol to internal conflicts.

Parks sees reason for "guarded optimism" that the law of war may offer part of the solution to the land mine problem. In his view, the key is "negotiation follow-up" or "promotion of adherence", that is, "encouraging nations to become a party to international humanitarian law treaties and to respect them." He maintains that the Convention on Certain Conventional Weapons provides the means to carry out such an "international dissemination program".

B.225 Peters, Ann. "Convention on Conventional Weapons Ends With Limited Results - Other Avenues Must be Sought to Ban Land Mines", *International Security Digest*, vol. 3, no. 7, May 1996.

The author describes the main changes that have been made to the Land Mines Protocol of the Convention on Certain Conventional Weapons (CCW) as a result of the Review Conference of the Convention, and discusses the criticisms which they have drawn. Peters refers to the new provisions of the revised Protocol as "meagre advances" on the 1980 version and "weaker than anticipated". In particular, she points out that the amended Protocol does not apply in all circumstances (eg. "situations of internal disturbances"), and that its land mines transfer provisions do not seem to be obligatory. While Peters

acknowledges that these and other provisions are "a first for the CCW", she contends that "they are far from a strict verification regime."

- B.226** Rogers, A.P.V. "Mines, Booby-traps, and Other Devices", *International Review of the Red Cross*, no. 279 (November-December 1990), pp. 521-534.

This article summarizes the content of each of the nine articles of original Protocol II of the Convention on Certain Conventional Weapons, and then discusses some of their implications.

In particular, the author observes that the experience of the Falklands war suggests that minefields laid hurriedly by untrained personnel will be much more difficult to clear after hostilities have ceased than mines sown by expert engineers, because the former "are unlikely to fall within the pre-planned category where recording is mandatory." He also points out that certain technical advances in mine warfare may not be covered by the Protocol. For instance, "off route" mines are not subject to the restrictions applying to remotely delivered mines, nor are they subject to the mandatory recording requirement since they are not likely to comprise minefields.

Nonetheless, the article concludes optimistically. Rogers takes note of the legal criticisms that have been made of the Land Mines Protocol but is unpersuaded by them. He believes that countries which adhere to it "accept that in their mutual dealings these are specific rules that they will apply in mine warfare", and thus groups himself among those who are "satisfied with a more relaxed interpretation" of the Protocol.

- B.227** Rogers, A.P.V. "The Mines Protocol: Negotiating History", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 227-265.

This paper is a narrative review of the negotiations which culminated in the original Land Mines Protocol to the UN Convention on Certain Conventional Weapons. It recounts the discussions and proposals made at two conferences of government experts organized by the International Committee of the Red Cross in 1974 and 1976, at two preparatory sessions of the UN conference in 1978 and 1979, and at two full sessions in 1979 and 1980.

Rogers states that the negotiations "resulted in only a small step forward." Nevertheless, he adds, "any advance that will help to save lives or prevent injury, however modest, is to be welcomed." And in this regard the Land Mines Protocol of 1980 was an innovative attempt "to reconcile the almost irreconcilable concerns to protect humanity yet preserve an important military option ..."

Annex A is a detailed examination of the evolution of the text of the Land Mines Protocol, in the form of an analysis of the various main versions studied before and during the 180 CCW conference.

B.228 Shropshire, Steve. *Controlling Anti-Personnel Mines: The Inhumane Weapons Convention Review Conference and Beyond* (London: Saferworld, July 1995), 19 pp.

Written on the eve of the first session of the Review Conference on the Convention on Certain Conventional Weapons (CCW), held in September-October 1995, this paper suggests ways in which the conference could strengthen the CCW by introducing tighter controls on the proliferation and use of anti-personnel mines (APMs). It also highlights several complementary measures that might be implemented beyond the Review Conference to help achieve a complete ban on the manufacture, stockpile, transfer, and use of APMs.

Overall, the paper proposes that the CCW apply not just to international conflicts but to all types of conflict.

The paper also makes a series of specific recommendations.

Regarding the use of APMs:

- i) the use of non-detectable APMs, mines fitted with anti-detection/handling devices, and remotely delivered APMs should be prohibited;
- ii) self-destruct APMs should not be used until a 1 in 1000 failure rate is guaranteed; and
- iii) all APMs should be placed in marked and fenced areas

Regarding transfers:

- i) the CCW should be extended to include transfers of APMs;
- ii) the transfer of self-destruct APMs should be prohibited until a 1 in 1000 failure rate is guaranteed; and
- iii) the transfer of non-detectable APMs and APMs with anti-disturbance mechanisms should be prohibited

Regarding verification:

- i) effective verification mechanisms (eg. a verification commission with the right of inspection to investigate non-compliance) should be incorporated into the CCW; and

ii) measures to compensate APM victims should be incorporated into the CCW

Regarding assistance for mine clearance:

i) states should adequately fund the UN voluntary trust fund; and

ii) mine clearance technology should be transferred from North to South at a no cost basis

The paper also outlines three initiatives which Western (EU/NATO) states could undertake:

i) make a commitment to research the military utility of APMs, and develop alternatives to them;

ii) support complementary control mechanisms (eg. strict moratoria on transfers of all types of APMs); and

iii) pursue additional verification mechanisms complementary to the CCW for greater transparency (eg. use of a UN database to register imports and exports, military holdings, and national production of APMs)

B.229 Vance, Cyrus and Okun, Herbert S. "Eliminating the Threat of Land Mines: A New U.S. Policy", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 198-210.

This piece, co-authored by a former U.S. Secretary of State and a former American ambassador to the United Nations, describes the nature and extent of the land mine crisis, and traces the evolution of American policy on the subject. However, the main thrust of this chapter is devoted to explaining why the United States should push for a total ban.

In the opinion of Vance and Okun, a complete ban on the use, transfer, possession, and production of land mines would be easier to enforce, verify, and monitor than a prohibition on use alone. Moreover, only a total ban will bring an end to civilian deaths and injuries because mines are such indiscriminate weapons. Stigmatizing them -- as has been done with chemical and biological weapons -- is the only way to prevent their use, especially because they are so inexpensive and easy to produce and transport. The United States should assume a leadership role in advocating such a ban because "as the world's most powerful nation, [it] has both a responsibility and an opportunity" to do so, and because of the substantial effect American leadership can have. In fact, taking the lead would be in the American national interest because a successful banning campaign would "make peacekeeping and humanitarian operations, be they American or UN, safer and less costly in both lives and human suffering. And by reducing the financial and human costs of both, the United States would take a giant

step forward on the road to a more peaceful and stable world." Vance and Okun argue forcefully that given determined American leadership, a comprehensive ban is attainable.

- B.230** Velin, Jo-Anne. "Diplomacy After the Negotiation: Protocol II and the Anti-Personnel Land Mine Ban", *Disarmament Diplomacy* (May 1996), pp. 9-14.

This piece focuses on the revised Land Mines Protocol to the UN's 1980 Convention on Certain Conventional Weapons. Appendix A offers a detailed article-by-article summary and assessment of the new protocol, while Appendix B reproduces selected statements and reaction regarding it. The article also comments on the question of the military utility of land mines, as well as reviews current and planned multilateral and regional initiatives in the anti-land mines campaign.

Velin claims that the amended protocol "is still a long way off" from an effective global ban, and she sees many countries as being unsure about what to do next. The effort to outlaw land mines calls for "stamina and a little lateral thinking" to sustain its momentum beyond the date when the new rules will come into force. For the present, however, the revised protocol "cannot and will not be enough to stop the humanitarian disaster" caused by land mines. For instance, she points out, it appears to encourage production, transfer, and use of the types of mines which the amended protocol permits, i.e., remotely-delivered self-destructing and self-deactivating mines.

- B.231** Wareham, Mary. *Clearing the Fields: New Zealand and Anti-Personnel Land Mines*, CSS Working Paper 3/95 (Centre for Strategic Studies, Victoria University of Wellington, 1995), 29 pp.

This paper looks at the part that various actors in New Zealand -- soldiers, politicians, diplomats, and non-governmental organizations -- have played in trying to deal with the land mine crisis. It also examines that crisis generally through a discussion of the nature of the problem and potential solutions to it.

Wareham observes that New Zealand has assumed a leadership position on this issue, and that its contributions to mine assistance programs are looked upon highly. Nonetheless, its initiatives to date have been "cautious and incremental". She argues that de-mining is only a partial solution and that the New Zealand government should take the next step and adopt a stronger moral position by advocating a complete ban at once. "The best way to move forward is by a total ban, supported by practical measures to alleviate the existing problem in the field", Wareham asserts. "The New Zealand Government and public can play a valuable role in this process in a variety of ways":

- i) support the creation of a land mines export control regime;

ii) lobby to have the UN Conventional Arms Register expanded to cover transfers of land mines;

iii) initiate an "Asia-Pacific Conference on the Prohibition of Land Mines"; and

iv) invoke a unilateral ban the development, production, trade, stockpiling, and use of land mines

Note: This paper is an extract from the same author's "Anti-Personnel Land Mines: An Assessment of the Political, Security, and Humanitarian Considerations Affecting A Possible Ban" (M.A. Thesis, Victoria University of Wellington, 1995).

Part B.3 Socio-Economic and Health Care Implications

Note: The socio-economic effects of land mines are also discussed in annotations A.205, B.418, and B.419.

B.300 Africa Watch, *Land Mines in Angola* (New York: Human Rights Watch, January 1993), 69 pp.

This booklet examines the land mine crisis in Angola in detail based in part on visits to the country. It begins with a short history of the wars that have been waged there over the last three decades which led to the sowing of countless mines. A technical assessment of minelaying in Angola including a discussion of the types of mines used, their origin, and the methods employed to disseminate them follows. The human cost is examined next, as the circumstances in which Angolans have become land mine victims are described, their medical care and rehabilitation recounted, and the problems faced by victims discussed. The booklet then looks at the social and economic impact of land mines on Angola by focusing on their effect on the return of refugees, before moving on to describe mine clearance initiatives in the country. It then turns to an overview of the international law governing land mines, particularly the 1980 Land Mines Protocol.

The report concludes that Angola faces an extremely severe land mine problem, to which all parties to the conflict have contributed as well as foreign suppliers of mines. The majority of mines are unmarked and many have been laid in a fashion that ensures civilian injuries. Even given a stable peace, the situation promises to worsen before it improves due to the return of refugees and displaced people. Facilities for evacuating, treating, and rehabilitating victims are deficient and not getting better. The end of hostilities notwithstanding, land mines will seriously hamper Angola's economic development, the provision of relief programs, and the return of refugees; large tracts of land will remain uninhabitable until

cleared. However, de-mining programs are inadequately equipped, financed and co-ordinated, and are not high on the agenda of the international community. Finally, none of the warring factions in the country has observed the provisions of the Land Mines Protocol or striven to minimize civilian casualties. In fact, they seem to have deliberately targeted civilians as an act of terror, with the result being that the Protocol has been completely ineffectual.

The report's general recommendation notes that "the experience of Angola has shown that anti-personnel land mines present a serious and long-term threat to civilians, far in excess of any short-term military advantage that may be gained", and calls for a complete ban on their use. It then recommends a number of specific measures which the Angolan government (creation of a systematic and co-ordinated mine clearance program), all combatant groups (provision of information on types and locations of mines used), and the international community (contributions to the cost of a national de-mining program) could implement to alleviate the problem.

B.301 African Rights & Mines Advisory Group, *Violent Deeds Live On: Land Mines in Somalia and Somaliland*, December 1993, 82 pp.

This report is based on research compiled during visits to Somalia and Somaliland undertaken between 1991 and 1993. As part of a discussion of the background to the wars which have been fought in the region it describes the sources of land mines as well as the specific kinds of mining which have been carried out. Widespread counter-insurgency and "terror mining" have taken place on an indiscriminate scale, and mines were often laid with the intention of disrupting the rural economy. The report also describes the human impact of land mines on various segments of society, as well as the numbers of casualties and care of the injured. Most of the victims are children, but farmers, herders, townspeople collecting firewood, and traders are severely affected as well. Returning refugees particularly fall prey to mines thus preventing their return from Ethiopia. Aid programs and economic reconstruction are significantly restricted by these weapons since large tracts of land and many miles of road are simply unusable. Medical care for victims is "rudimentary", physical rehabilitation "elementary", and they soon become an economic burden on society. In addition, the report reviews the various de-mining initiatives which have been implemented and the problems encountered. It claims that important lessons in humanitarian mine clearance can be learned from the experience in Somalia and Somaliland, such as the importance of community liaison, the significance of politically neutral de-mining programs, and the need for independent monitoring of contractor performance.

"Land mines have contributed hugely to the destruction of Somalia and Somaliland", the report sums up, with the poor bearing the brunt of the suffering. This is due in part to foreign manufacturers and exporters who, it is suggested, should consequently advocate and fund de-mining and victim-assistance programs there; the social and economic well-being of the region is dependent on mine clearance which is itself a form of famine prevention. In

addition, mine awareness projects should be launched to counter the widespread ignorance among the populace about these weapons, and aid to local hospitals -- whose mine-injury treatment and rehabilitation facilities are grossly inadequate -- must be stepped up. Finally, especially since the Land Mines Protocol has been completely ignored, a world-wide ban imposing "an unchallengeable moral duty on all nations to stop making, transacting or using land mines" is required to "ostracize" offenders.

B.302 Andersson, Neil; da Sousa, Cesar Palha; and Paredes, Sergio. "Social Cost of Land Mines in Four Countries: Afghanistan, Bosnia, Cambodia, and Mozambique", *British Medical Journal*, vol. 311, no. 7007 (September 16, 1995), pp. 718-721.

This article delineates the impact of land mines on health and social conditions in four countries based on surveys taken in 1994-95. Its findings are derived from household questionnaires as well as data collected from individual informants, institutional reviews, and focus groups comprised of land mine victims from the same communities.

Among the authors' findings are the following:

- i) land mines affected the daily activities of between 25% and 87% of households;
- ii) one household in 20 reported a land mine victim, a third of them dying in the explosion; one in ten victims was a child;
- iii) the period 1980-3 to 1990-3 saw the incidence of land mine accidents more than double;
- iv) the total number of animals lost due to land mines represented a minimum cash value of nearly \$200 per household; and
- v) households with a land mine victim were 40% more likely to experience problems in providing food for the family

The study identifies "a substantial toll in physical, mental, and economic disability" from the employment of land mines in the affected countries, whose inhabitants already suffer from poverty, disease, and economic insecurity. It argues in favour of mine awareness programs which make use of local data regarding the number of mine incidents and their risk factors. "But efforts to reduce the social cost of land mines can be, at best, a holding strategy", the authors conclude. "Only a total ban on the manufacture, export, and use of these weapons can really help."

- B.303** Ascherio, Alberto; Biellik, Robin; Epstein, Andy; Snetro, Gail; Gloyd, Steve; Ayotte, Barbara; and Epstein, Paul R. "Deaths and Injuries Caused by Land Mines in Mozambique", *Lancet*, vol. 346, no. 8977 (September 16, 1995), pp. 721-724.

This article is based on household surveys conducted by a medical team in two of Mozambique's ten provinces during March of 1994. The authors' objective was to provide a more accurate estimate of the number and severity of civilian casualties caused by land mines in that country.

The authors found ratios of 8.1 and 16.7 casualties per 1000 living people in the two provinces, respectively. The prevalence of amputees was 3.3 and 2.3 per 1,000. These totals are significantly higher than hospital data suggest. In addition, the authors discovered a fatality rate of 48%, that 68% of victims were civilians, and that 81% were injured by anti-personnel mines.

The findings of this study substantiate evidence uncovered elsewhere that civilians make up the majority of land mine victims generally. More particularly, the authors conclude that the incidence of land mine casualties in Mozambique is greater than previously thought, and that they can be effectively prevented only by a complete ban on these weapons.

- B.304** Asia Watch and Physicians for Human Rights. *Land Mines in Cambodia: The Coward's War* (New York: Asia Watch and Physicians for Human Rights, September 1991), 129 pp.

This report is based on research conducted during missions to Cambodia and Thailand in March and April of 1991. The aim was to investigate land mine use in the region and its impact on civilians. The findings draw on information obtained from interviews in Cambodia with victims, doctors and relief workers, and government troops, as well as interviews in Thailand with refugees and resistance fighters. The report discusses the "devastating" social, medical, and psychological effects of land mines on civilians, evaluates their long-term impact on post-war rehabilitation, and examines the relationship between the land mine problem and repatriation of refugees.

The report observes that "the Cambodian conflict may be the first war in history in which land mines have claimed more victims -- combatants and noncombatants alike -- than any other weapon", and predicts that "unless the mines are cleared and destroyed, they will kill or maim Cambodians well into the next century." It recommends several measures designed to:

- i) halt the indiscriminate use of land mines (embargo on use and supply, and provision of technical information to clearance teams by manufacturers);

ii) eradicate the mines (de-mining program underwritten by the international community, under the auspices of the United Nations, and funded by foreign suppliers);

iii) safely repatriate Cambodian refugees in Thailand (mines survey in potential settlement areas inside Cambodia);

iv) improve medical treatment and rehabilitation of victims (supplemental training and exchange programs in surgery)

The report also calls for a re-assessment of the effectiveness of the Land Mines Protocol of the Convention on Certain Conventional Weapons, based in part on epidemiologic data on the use and effects of these weapons.

B.305 Chabasse, Philippe. "The Proliferation of Anti-Personnel Land Mines in Developing Countries: Considerable Damage in Human Terms and a Dramatically Insufficient Medico-Social Response", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 85-95.

This report statistically documents the scope of the land mine problem (particularly in terms of amputees), as well as the nature of "medico-social" response to it (especially in terms of activities carried out by NGOs in the field of prosthetics), for each of several countries or areas including Cambodia/Cambodia-Thailand border, Laos, Angola, Afghanistan, Mozambique, and Iraqi Kurdistan. Much of the information is compiled from the work done by Handicap International. It indicates, for instance, that the percentage of amputees is between 1.5 and 2 per 1,000 of the overall population in the countries which are particularly affected. It also suggests that the number of amputees is a low estimate of the overall number of serious mine injuries.

In addition, the report proposes what could be done to produce a better humanitarian, medical, and social response to the land mine problem. More specifically, it recommends:

i) improved initial care for patients, including the development of mine awareness programs;

ii) improved medico-surgical training, techniques, and instruments;

iii) improved early assistance in functional re-education;

iv) increased production of orthopaedic aids; and

v) improved social and professional rehabilitation.

By way of conclusion, the report notes how both the immediate needs of local populations as well as the budgetary constraints facing affected countries must be taken into consideration, and calls for two initiatives in particular to deal with this situation. The first is "the development and incorporation of integrated medico-social projects (prosthetics, physical, social and professional rehabilitation) into public structures ... based on the use of locally available material and human resources, on enlargement of capacity and proximity to the beneficiaries." The second is "the training of local personnel based on a global approach to the handicapped person and able to incorporate the medical, technical and social aspects of rehabilitation."

B.306 Coupland, Robin M. and Russbach, Rémi. "Victims of Anti-Personnel Mines: What is Being Done?", *Medicine and Global Survival*, vol. 1, no. 1 (November, 1994), pp. 18-22.

This article briefly recounts the ICRC's experience with anti-personnel land mine injuries to show that civilians are particularly at risk from these weapons. It also summarizes the results of the symposium of international experts on mines which the ICRC organized in Montreux, Switzerland in April 1993, and reviews related developments since then.

"The scale of the suffering caused by anti-personnel mines becomes increasingly evident", Coupland and Russbach observe. They argue that a piecemeal attack on individual aspects of the land mines crisis is insufficient. Rather, all concerned -- health professionals, soldiers, lawyers, manufacturers, and politicians -- must pool their efforts. "Only a unified multidisciplinary approach will be effective", the authors claim, "and then it will be many years before there are fewer mine victims."

B.307 Coupland, Robin M. and Korver, Adriaan. "Injuries from Anti-personnel Mines: The Experience of the International Committee of the Red Cross", *British Medical Journal*, vol. 303, no. 6816 (December 14, 1991), pp. 1509-1512.

The intention of this article is to "promote understanding of the management and plight of victims of anti-personnel mines." It attempts to do so by reviewing the records of approximately 750 land mine victims admitted to two International Committee of the Red Cross hospitals over the course of one year, with the aim of describing and quantifying their injury patterns in terms of distribution of injury, drain on surgical resources, and residual disability.

The article reveals that ICRC hospitals "see only a small proportion of the injured", and this does not include the most gravely injured. It concludes that the greatest disability is incurred by individuals -- civilians are most at risk -- who survive standing on a buried mine. It also

notes that the social and economic prospects of amputees after recovery are dismal in developing countries.

Note: This article is reprinted as Appendix 10 in Arms Project of Human Rights Watch and Physicians for Human Rights, *Land Mines: A Deadly Legacy* (New York: Human Rights Watch, October 1993).

B.308 Davidson, Jenny. "The Impact of Mines on Local Communities in Cambodia", in William Maley, ed., *Dealing with Mines: Strategies for Peacekeepers, Aid Agencies and the International Community* (Canberra: Australia Defence Studies Centre, University College, Australian Defence Force Academy, 1994), pp. 53-58.

The author describes the social effect of land mines on Cambodia. Land -- which is critically important in this feudal and agricultural society -- cannot be reclaimed, and thus the entire subsistence lifestyle is threatened and rural development impeded. Moreover, physical injuries have a far-reaching impact. "In a Buddhist society with a concept of 'wholeness', maimed boys cannot become monks; the less-than-perfect woman will never marry; the old cannot automatically depend on their family for the customary succour and support -- indeed, often the role is reversed." Moreover, mine victims swell the ranks of the beggars, homeless, and destitute in urban centres.

Davidson suggests that "just as it is the people who must reclaim their lives in Cambodia and deal with the menace of mines, it is imperative that basic solutions to the problem be made available to those people." Above all, this entails trying to "assist and equip the people in such a way that they can handle life in communities where the presence of mines is a given." Cambodians must be "empowered" with the ability, confidence, and skills to cope with the land mine danger until it is eradicated. Developing mine awareness programs, training local mine clearance teams, making low-cost and easily applied de-mining technology accessible to ordinary people, and providing funds to cover mine-related income loss are just some of the steps which the international community should take.

B.309 Davies, Paul with photographs by Nic Dunlop. *War of the Mines: Cambodia, Land Mines and the Impoverishment of a Nation* (London and Boulder, Colorado: Pluto Press, 1994), 172 pp.

This book describes the use of land mines in Cambodia in all its dimensions by drawing on existing research and primarily the first-hand experiences of the authors during their visit to the Rattanak Mondul district of the country, one of the most heavily mine-affected regions in Cambodia. It is based largely on interviews with inhabitants and is interspersed with the personal stories of victims, aid workers, and medical and military personnel alike. The text

and dozens of photographs document the impact of land mines on local communities, in the process providing insight into the nature of the problem and the solutions required.

The book places much emphasis on land mine injuries, but the authors also proceed from the premise that "with an insidious multiplier effect, mines shatter human potential and drain resources throughout the entire fabric of society." Therefore, the book takes a broad perspective by looking at "the medical implications of land mine warfare and the cultural and psychological problems associated with the physical handicaps suffered by the survivors of mine accidents."

The overarching theme of the book is that land mines in Cambodia constitute a grave humanitarian problem which is not only responsible for killing and maiming innocent civilians but, as the title states, is also impoverishing the entire nation by denying people access to agricultural areas. It argues that "because of their indiscriminate, enduring and multi-faceted impact", land mines -- like chemical and biological weapons -- should be perceived as being on a different plane than other conventional weapons, and that "nothing short of a complete ban on [their] manufacture, export and deployment ... will do." Davies and Dunlop present Cambodia as the quintessential example of the global land mines crisis.

Two of the book's appendices provide, respectively, statistics on survivors of land mine accidents as well as deaths by land mines.

- B.310** Giannou, Chris and Geiger, H. Jack. "The Medical Lessons of Land Mine Injuries", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 138-147.

The authors, two doctors, begin by making three interrelated points. One is that land mine injuries constitute a global epidemic. The second is that as with any epidemic, medical treatment of the individual is in and of itself inadequate to check the contagion since it fails to deal with its fundamental causes. Third, the attempt to find a solution must call on the co-ordination of a whole range of approaches including a public health one.

Giannou and Geiger present a rationale for a public health approach to the land mines crisis which emphasizes: the magnitude of the problem and the fact that it will persist for some time to come; the detrimental side-effects of land mine injuries on society and economy; and the nature, complexities, and costs of medical care. They suggest adopting a framework for mitigating the land mines crisis which parallels the "classic public health trilogy" of primary (reducing the incidence of injuries and promoting awareness of mine locations and types among local populations), secondary (speedy evacuation and treatment of victims), and tertiary (providing prostheses and rehabilitative therapy) prevention. Above all, they assert, "the key is the recognition of land mine injuries as a major public health problem, similar in

many respects to disease entities that are more familiar, and the mobilization of public health approaches and techniques in response."

B.311 Handicap International. *Land Mines in Vietnam: The Cowards' War* (Brussels: Handicap International Belgium, n.d.), 35 pp.

This study is based on fieldwork undertaken in July and August of 1994. It is a case study of the effects of land mines on Quang Tri Province in central Vietnam, a typical area of that part of the country. The research is derived in part from interviews with several inhabitants of the province whose own individual stories it recounts.

However, the report is not simply a record of how land mines affect the daily lives of ordinary people by threatening life and limb. It is also an investigation of the ways in which these weapons can impede the present and future socio-economic development of whole communities. "Areas of potentially rich farming land remain uncultivated or minimally cultivated to lower the risk of explosions", the report explains. "Reduced productivity affects incomes and food security. Those injured by land mines ... require additional resources and support from families, medical services and the state."

The study concludes that the international community bears a strong moral responsibility to assist in mine clearance through, for instance, the transfer of de-mining technology and perhaps joint ventures involving American, Australian, and Canadian militaries with their Vietnamese counterparts. In addition, non-governmental organizations should increase their advocacy and educational work on the land mine issue. Development projects which improve the economic lot of Vietnamese farmers thereby making it unnecessary for them to search for scrap to augment their incomes -- and thus expose themselves to mines -- must continue.

Note: This report was published under the original title, *Land Mines and Underdevelopment* by Jim Monan (Hong Kong: Oxfam Hong Kong, 1995).

B.312 Human Rights Watch/Africa. *Land Mines in Mozambique* (New York: Human Rights Watch, 1994), 119 pp.

This is an investigative report chronicling the effects of land mines on the civilian population of Mozambique as documented by fieldwork undertaken in that country. Mines have produced more than 10,000 casualties and remain numerous as well as easily obtainable. "The devastation caused by land mines in Mozambique -- not only to the many civilian victims, but also to the socio-economic well-being of the nation --", the report observes, "is undeniable and appalling." It will take decades to de-mine the country, and this is a task to which few resources have thus far been allocated. The report recounts how this situation

came to be, describes its continuing impact on the population, and reviews the steps being taken to ameliorate it.

More specifically, this study:

- i) provides a brief historical summary of Mozambique's wars;
- ii) identifies the kind of mines employed there (all from foreign suppliers), and describes how they have been used (indiscriminately as a weapon against civilians);
- iii) discusses the human impact of land mines (8,000 amputees);
- iv) examines the broader social, economic, and political effects (impaired development and reconstruction);
- v) reviews current mine clearance projects (few formal initiatives); and
- vi) evaluates the use of landmines in Mozambique in the context of international law (blatant abuse of the Land Mines Protocol)

"Mozambique has a serious land mines problem", the report sums up, one that appears destined to pose a long-term danger to the civilian population, and a crisis which the country is ill-prepared to face from a social and medical point of view. It calls for an international ban on the use, trade, stockpiling, and production of land mines, and concludes by making several specific recommendations to:

- i) the parties to the conflict in Mozambique (renounce the use of mines, prohibit/forego importation/acquisition of mines, destroy all existing stocks);
- ii) the United Nations (create a voluntary trust fund for mine victims); and
- iii) mine producers and exporters (contribute to the cost of mine clearance and victim assistance programs)

B.313 International Committee of the Red Cross. *Anti-Personnel Mines in Central America: Conflict and Post-Conflict* (1996), 26 pp.

This report studies the "heavy human toll" exacted by anti-personnel mines and the "long-lasting socio-economic repercussions of mine-infested regions" in five Central American countries (Nicaragua, El Salvador, Honduras, Costa Rica, Guatemala). It does so by providing the background to the situation in each country, identifying the areas affected by mines, describing de-mining programs, discussing land mine victims, and examining the connection between mines, de-mining, and the peace process.

The report underscores "the indiscriminate nature of mines even when they are used in accordance with standard military doctrine, and their all too easy misuse." It notes the "devastating effect" on civilians of mines deployed ostensibly for military purposes, and how they failed to affect the outcome of the fighting anywhere in Central America. The study also observes how heavily burdened the public health systems of the region have become by the medical and social management of mine injuries, and refers to anti-personnel mines as a "destabilizing factor and yet another obstacle on the already tortuous road of the peace process." The presence of mines forces already economically deprived peasant and agricultural societies to leave large tracts of fertile land uncultivated and exacerbates the demographic pressure on the available land; refugees and displaced persons cannot return to their homes. The report also reveals that mine clearance has become a major concern throughout Central America. More specifically, the situation in these countries highlights the difficulties and costliness of de-mining, as the additional resources required by mine clearance strain already financially strapped social services even further, in the process contributing to criminal and political violence. The report indicates that Central American countries have "on a diplomatic level ... learned a valuable lesson", as in the context of the Review Conference on the Convention on Certain Conventional Weapons at least two of them (Nicaragua and Honduras) have called for a complete ban on the production, transfer, and use of anti-personnel mines.

B.314 International Committee of the Red Cross. *The Deadly Legacy, in Figures: Afghanistan* (1996), 8 pp.

This study presents statistics in tabular form which indicate the relative importance of casualties due to mines in Afghanistan over the last five years. Surgical and orthopaedic teams and field nurses of the International Committee of the Red Cross working in the country are the source of these statistics.

The study estimates the total number of Afghanistan mine victims, both dead and wounded, to be approximately 4,000 for the year 1995 alone. In particular, it notes two "peaks" of mine casualties, one in 1992 coinciding with a large influx of returning refugees who entered mined areas without being fully cognizant of the danger, and the other in 1995 at the same time as an intensification of internal conflict. The study also points out that although the percentage of mine wounded may have decreased in certain years, the absolute numbers of mine victims remain high.

B.315 International Committee of the Red Cross. *The Scourge of Mines in Forgotten Wars: South Caucasus* (1996), 10 pp.

This study deals with the consequences of mine warfare in the conflict between Armenia and Azerbaijan over the territory of Nagorny-Karabakh, and with regard to the secessionist initiative of the region of Abkhazia in Georgia. Its findings are based on data collected by

International Committee of the Red Cross (ICRC) medical delegates during their visits to various health facilities, and statistics submitted by ICRC orthopaedic workshops in Azerbaijan and Georgia.

As far as the Nagorny-Karabakh conflict is concerned, the study demonstrates that while civilians do not comprise a high proportion of total war wounded (11.7% for the period July 1994-December 1995), a large percentage of civilian casualties are caused by mine explosions (53.2% for 1995). As for the conflict in Georgia, it observes that almost all mine victims there have been civilians (79.2% for July 1994-December 1995). "The use of anti-personnel mines has not determined the outcome of the fighting in the South Caucasus", the study concludes, "but has caused havoc for the civilian population, for international humanitarian workers, and for the peacekeeping troops deployed there."

B.316 International Committee of the Red Cross. *The Worldwide Epidemic of Land Mine Injuries: the ICRC Health Oriented Approach* (Geneva, September 1995), 8 pp.

This illustrated brochure takes a broad look at the whole panoply of Red Cross activities on behalf of victims of anti-personnel mines. It discusses the "challenges to the entire range of health services posed by anti-personnel mines -- from evacuation of the wounded and first aid, to surgery, the fitting of artificial limbs and rehabilitation -- and the wide-spread socio-economic effects of their use." The brochure also examines the "technical difficulties encountered in treating the victims of mines and in what ways their wounds are more pernicious than other war wounds." The statistical information presented is derived from the ICRC surgical database on 24,000 war-wounded patients (including 5,000 mine-injured) treated in five Red Cross hospitals. The brochure is also based on reports and studies by ICRC doctors, nurses, and orthopaedic technicians.

In terms of the demographics of land mine victims, the brochure reveals that the proportion of land mine injuries out of total wounded in any conflict varies according to the type of military activity and the nature of the terrain. More specifically, non-combatants (children, women, and elderly men) comprise 31% of all land mine victims in the ICRC database; relative proportions of civilians and combatants injured by land mines alter with changes in political and military situations. As far as patterns of injury are concerned, almost 50% of mine-injured recorded in the database were victims of fragment mines, 30% suffered blast injuries from standing or stepping on a mine, and 5% were the result of handling a mine. The database also demonstrates the delay in transportation for those patients who eventually made it to an ICRC hospital: about one-third of them took more than a full day to reach one, while the remaining 15% took more than three days to do so. Moreover, anti-personnel mines account for a disproportionate number (85%) of amputations amongst war-wounded, and almost 30% of land mine patients in the database underwent an amputation. Land mine victims also require a disproportionate amount of hospital resources, as the average hospital stay of all mine-injured patients is three weeks -- and almost five weeks for mine amputees --

as compared to two weeks for a patient with a bullet or shrapnel injury. The average number of operations is also higher for mine-blast victims. In addition, blood requirements are greater for land mine casualties -- the percentage of land mine victims requiring blood transfusions (30%) is twice that of people injured by bullets or shrapnel, and in the cases of land mine amputations 75% of patients need transfusions.

"The worldwide epidemic of land mine injuries is a classic example of a pathology which is not simply biological in scope", the brochure sums up; "like all epidemics, in their causes and consequences, it is a social, economic, health and political event which particularly targets the innocent, the weakest, and the least prepared."

B.317 Kakar, Faiz. *Direct and Indirect Consequences of Land Mines on Public Health* (World Health Organization, July 1995), 29 pp.

This study describes the public health impact of land mines and recommends certain health programs for the prevention, treatment, and rehabilitation of land mine injuries.

The study defines the direct health consequences suffered by land mine victims as being injuries both physical and/or emotional caused by the impact of the blast itself, including post-traumatic stress disorder (PTSD). Women and children make up between 30-40% of all land mine-traumatized victims, and their psychiatric disorders can have several effects on family health ranging from the inability of a mother to ensure the well-being of her children, to the risk of a child becoming a substance abuser.

The following indirect health consequences -- which involve a larger number of victims and thus have a greater impact on public health -- caused by land mines are identified:

- i) risk of waterborne diseases because, for instance, access to safe drinking water is mined;
- ii) malnutrition owing to the fact that minefields cannot be cultivated;
- iii) increase in infectious diseases resulting from the inability or reluctance of vaccination teams to vaccinate near mined areas;
- iv) the spread of blood-borne diseases because mine explosions increase the frequency of blood transfusion; and
- v) iodine deficiency disorders, including high perinatal mortality, because mined areas prevent the transport of iodine sufficient foods to iodine deficient villages

The disadvantaged poor, especially children, are at highest risk of the indirect health consequences of land mines.

The study proposes the following programs/activities to help prevent, treat, and rehabilitate victims of land mine injuries:

- i) mine awareness;
- ii) train selected villager(s) in first-aid techniques;
- iii) transport the land mine victim rapidly;
- iv) improve national capacity and health facilities in treating land mine injury, including PTSD;
- v) give priority to de-mining of areas leading to drinking water sources;
- vi) provide safe access to grazing land;
- vii) train mobile health workers/teams and send them to villages near land mined areas; and
- viii) establish decentralized prosthesis facilities

"The land mine epidemic ... is indeed a major public health problem", the study contends. "Thus a comprehensive and integrated health programme aimed at prevention, treatment and rehabilitation of land mine injuries, including treating the psychosocial consequences of land mines, is urgently needed."

B.318 King, Colin. "Land Mines in Cambodia - Part 1", *Jane's Intelligence Review*, vol. 7, no. 6 (June 1995), pp. 273-276.

This article, the first part of a two-part survey, examines the background to the land mine situation in Cambodia, the implications for the country, and the nature of the land mine threat.

The author points out that successive internal conflicts have seen mines sown in Cambodia on a large scale (between eight million and ten million mines) and in a haphazard fashion. This, coupled with the fact that most of the rural minefields are unmarked, has resulted in more than 900 casualties a month at times as destitute families have no alternative but to risk farming in such areas. All in all, the problem of uncleared mines is such that "much of the country cannot function efficiently, even as an agricultural economy." In describing the kind of anti-personnel mines used in Cambodia, King observes that they include "virtually the entire spectrum of operating principles and fusing types", which complicates the technical task of de-mining. Cambodia, he states, is "a graphic example of the devastation caused by the heavy and indiscriminate use of land mines."

B.319 King, Colin. "Land Mines in Cambodia - Part 2", *Jane's Intelligence Review*, vol. 7, no. 7 (July 1995), pp. 311-314.

The second in a two-part series, this article looks at how the severe land mine problem in Cambodia is being countered, concentrating particularly on the activities of the UN's Cambodian Mines Action Centre (CMAC).

The author notes that as a result of the combined efforts of the CMAC and various non-governmental organizations (NGOs) involved in mine clearance, the recent casualty rate has fallen from 300 to 200 people per month, which is itself down from 900 per month in previous years. Widespread mine awareness campaigns are primarily responsible for this improvement. "Cambodia is a prime example of successful de-mining under difficult circumstances", King concludes. "The key lies in a large, well-structured and adequately funded organization complemented by the small, versatile NGOs." He suggests that the Cambodian de-mining experience provides a useful model for other countries to follow in overcoming their own land mine problems.

B.320 McGrath, Rae. "Anti-Personnel Mines: Children as Victims", *Refugee Participation Network*, 16 (March 1994), pp. 4-6.

The author points out that children living in subsistence agricultural communities perform certain essential tasks which are among the most vulnerable to land mine injury and death. These include grazing livestock, water and firewood collection, and scavenging, which constitute the most common causes of mine-related casualties among children. However, simply playing games also makes them susceptible to becoming mine victims. Many children in mine-affected regions also collect mines.

The article outlines three solutions:

- i) well-planned village-based mine awareness programs;
- ii) adequately funded mine clearance operations geared to creating an indigenous de-mining capability; and
- iii) a global ban on the manufacture, sale, and transfer of anti-personnel land mines

"Agencies with a responsibility for the welfare of children in mine-affected communities have a clear moral duty to campaign for such action", McGrath argues.

- B.321** McGrath, Rae. *Landmines: Legacy of Conflict - A Manual for Development Workers* (Oxford: Oxfam, 1994), 86 pp.

This book is primarily designed to be used as a practical manual or training resource for fieldworkers. It seeks to "provide an understanding of the problems of living and working in mine-affected countries, and of the realistic precautions which should be taken." Above all, it makes suggestions about "how the community can be assisted and what steps can be taken to ensure the eventual eradication of the mines."

The author argues that an "effective and lasting solution" to the problem of land mines should be based on a two-pronged approach. On the local level and in terms of immediate needs, existing mines must be eliminated and mine victims assisted. Community mine awareness programs ought to form an integral part of any de-mining initiative, and adequate training, supervision, and support of indigenous mine clearance teams should be provided on a sustained basis. On a global level and looking to the future, the root of the problem -- the indiscriminate use of land mines -- must be addressed. Here, in particular, "it is vital that everyone who has seen the impact of anti-personnel mines on civilian communities takes every opportunity to make the world aware of the death and suffering inflicted on poor people by these hidden and persistent weapons", McGrath stresses. "It is only when the international community as a whole becomes aware of and takes responsibility for what is a major human tragedy that effective action to deal with the problem will become a possibility."

- B.322** Middle East Watch, *Hidden Death: Land Mines and Civilian Casualties in Iraqi Kurdistan* (New York: Human Rights Watch, October 1992), 67 pp.

Based on an extensive field mission conducted in the region, this report discusses the problem posed by the thousands of land mines laid in Iraqi Kurdistan by the Iraqi Army during the Iran-Iraq and Gulf Wars. It begins by setting the context with a brief historical background. Subsequent chapters present a survey of individual minefields complete with maps and illustrations, discuss Iraq's mine distribution and mapping strategies based on interviews with former Iraqi Army officers, indicate the sources of land mines, identify those civilian occupations most vulnerable to the land mine threat using case histories, detail the medical aspects of land mines by recounting the situation in particular hospitals in northern Iraq, outline control, eradication, marking and awareness initiatives in the region, and summarize the relevant legal principles at work.

The report concludes that because Iraq did not de-mine Kurdistan, its land mine practice there was indiscriminate under customary international law. Moreover, the mines are not only uncleared, they are unmarked, unrecorded, and non-non-degradable, thus posing a continuing danger to the people of the region. It appears that a vast number of mines -- certainly more than were required for military reasons -- were laid simply because large quantities were available. The report contends that the motive behind this policy of

irresponsible creation and abandonment of minefields was to render sizable parts of Kurdistan forever uninhabitable as part of the Iraqi government's long-held program of ethnic oppression of the Kurds. In addition, and on a more practical note, mine clearance in the region has been made especially dangerous and difficult because of the particular design of land mines employed by the Iraqis, one that runs counter to the spirit of the Land Mines Protocol and a situation for which foreign manufacturers and distributors -- and thus other governments -- must share the blame.

The final section of the report recommends alleviating the land mine crisis in Iraqi Kurdistan specifically through:

- i) educating Kurdish refugees and returnees about the land mine hazard;
- ii) initiating a program of affixing minefield marking signs;
- iii) organized clearance of land mines; and
- iv) providing maximum technical and financial support to Kurdish-run medical facilities

The report concludes with a plea to the United Nations, European Community, and the International Committee of the Red Cross to consider an unconditional ban on the manufacture, possession, transfer, sale, and use of anti-personnel land mines in all international and internal conflicts. "While such a prohibition may not entirely eliminate the use of mines", the report explains, "it would stigmatize them in much the same way that chemical and biological weapons are now vilified."

B.323 Mines Advisory Group, *Report of the Afghanistan Mines Survey*, 1991, 63 pp.

The main goal of this survey was "to obtain first-hand community information regarding land mine dissemination and its effects over a broadly representative area of rural Afghanistan." Information was compiled through approximately 850 village questionnaires filled out by enumerators based on their interviews with local respondents, and was collected by October 1990. The statistical data are presented in thirteen different sections, each one focusing on a single province. The findings of supplementary surveys conducted to assess the wider impact of mines are also summarized. An extremely high incidence of amputations due to mine-blasts, and substantial changes in the traditional migratory patterns of nomadic groups, the loss of seasonal grazing areas, and a depletion of livestock holdings were reported, as well as a thriving trade in land mines. The survey also charts the progress which has been made in mine eradication on a nation-wide level, concluding in part that "either, far more could have been achieved with the funds expended to date, or conversely, what has been achieved could have been accomplished with a much reduced budget."

The survey concludes that land mines in Afghanistan are "a crisis rather than a mere problem", one which in some areas has reached "emergency proportions" and which cannot be divorced from the issue of refugee repatriation. In fact, most communities have some level of knowledge of locally emplaced mines "but the daily demands of rural life, the need to perform tasks essential to existence ... expose even the most aware of Afghans to an unacceptable risk." There is a wide diversity of land mine types in the country, and they have typically been used as weapons of "mass area-denial" which have affected civilians as much as if not more than combatants. This has rendered mine eradication extremely problematic, and underlined the threat which the wide dissemination of mines poses to economic growth. The survey makes a number of proposals for remedial action, especially with regard to developing a viable mine clearance strategy:

i) all those countries which, directly or indirectly, sold or donated land mines for use in Afghanistan must fully assist in their removal;

ii) all parties to the conflict in Afghanistan should begin marking minefields for eventual clearance;

iii) "a technical working group consisting of recognized experts from the military, commercial and general engineering sectors" should be formed "to identify and design suitable strategies for de-mining ... with minimum risk, maximum effectiveness and within a realistic timescale"; and

iv) reconstruction and rehabilitation programs inside the country should be closely co-ordinated with mine clearance activities, and verification and recording of completed de-mining operations must be improved

B.324 N'Dormadjingar, Dillah. "The Scourge of Land Mines: Africa Battles a Plague", *Disarmament: A Periodic Review by the United Nations*, vol. 19, no. 1, 1996, pp. 95-106.

The author discusses the indiscriminate use of land mines in Africa, describes their social, economic, and environmental consequences for that continent, and outlines potential solutions (humanitarian mine clearance, use restrictions, stopping production, destroying stockpiles) to the problem which they pose.

N'Dormadjingar explains that Africa is more heavily saturated with land mines than any other continent (27% of the world's total) because of its legacy of independence wars, as well as inter- and intra-state armed conflicts. The result is a heavy toll on socio-economic development. Although he considers the situation alarming, the author's optimism is buoyed by the increasing public awareness of the magnitude of the crisis. N'Dormadjingar concludes by noting that a ban on chemical and bacteriological weapons has been implemented. Why cannot the same be achieved with land mines? "A firm commitment on

the part of the international community to prohibiting the use, production and stockpiling of land mines", he argues, "is the only means of ridding the world in general, and Africa in particular, of these engines of death."

B.325 Physicians for Human Rights. *Hidden Enemies: Land Mines in Northern Somalia* (Boston: Physicians for Human Rights, November 1992), 51 pp.

This report is based on the findings of a medical team sent to northern Somalia (Somaliland) in February and March of 1992 to evaluate the scope and nature of the land mine problem resulting from the 1988-1991 civil war -- especially its medical consequences for non-combatants -- and to ascertain what steps could be taken to alleviate it. Information for the study was obtained from questionnaires distributed to victims and doctors, interviews with medical and relief personnel, and data regarding mine-related injuries gathered from hospitals.

The report notes that northern Somalia is "infested" with land mines which continue to kill and maim many civilians, including women and children. Moreover, Somaliland's health care system is inadequate to deal with the needs of victims. Land mines have also caused economic damage, block the return of hundreds of thousands refugees, and threaten the very way of life of nomads fearful of reoccupying their traditional grazing lands.

The report concludes that "the widespread presence of land mines in northern Somalia must be considered a humanitarian emergency, separate from, and regardless of, the other crises facing the Somali people." It calls for:

- i) the commitment of greater international resources for de-mining operations;
- ii) the implementation of a mine awareness program;
- iii) the provision of acute care facilities and appropriate training opportunities for Somali surgical personnel; and
- iv) increased assistance for rehabilitation services

In addition, Somali refugees should be barred from uncleared areas.

Above all, the report observes, "[t]here is an urgent need for planning and coordination of the aid program for de-mining, mine awareness, and the care and rehabilitation of mine victims in Somaliland and other countries." The UN should take the lead.

B.326 Roberts, Shawn and Williams, Jody. *After the Guns Fall Silent: The Enduring Legacy of Land Mines*, first edition, (Washington, DC: Vietnam Veterans of America Foundation, 1995), 554 pp.

This report is a detailed study of the immediate and long-term impact of land mines on several severely mined countries. It provides an exhaustive examination of the land mine problem faced by Afghanistan, Angola, Cambodia, Mozambique, Croatia, and Bosnia-Herzegovina -- where almost one-third of the world's land mines are located -- based on household interviews and field missions. The report also offers short descriptions of the conditions in El Salvador, Iraqi Kurdistan, Kuwait, Libya, Nicaragua, Somalia, and Vietnam.

The report explores the human, socio-economic, and environmental costs associated with the presence of land mines in each of these countries. Based on that research, it concludes that:

- i) the "problem of land mines and their long-term impact on society ... cannot be solved through limited arms control measures";
- ii) land mines are "indiscriminate weapons that target civilian populations, and ... their impact on those civilian populations is not proportionate to their military utility"; and
- iii) "the post-conflict humanitarian cost of continued land mine use is ... a social and economic disaster for millions of people ... around the world."

The report includes several appendices which discuss related topics such as the status of land mines in international law.

Note: A similar but briefer study is Jody Williams, "Social Consequence of Widespread Use of Land Mines", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 69-80.

B.327 Rupiah, Martin R. "A Historical Study of Land Mines in Zimbabwe, 1963-1995", *Zambezia*, vol. 22, no. 1 (1995), pp. 63-78.

This article examines the subject of land mines in Zimbabwe from a historical perspective while also bringing the saga up to date. It recounts the story of mine-laying by both the Rhodesian Army and nationalist forces during the country's war of independence. The author also describes the status of each of the major minefields that still exist there, which altogether contain 1.5 million mines and cover almost 800 kilometres of territory. Lastly, he briefly outlines the current options available for mine clearance.

"Several sectors of Zimbabwean society continue to be seriously affected by the existence of land mines", Rupiah concludes. "These include communal areas, tourism, parts of commercial farming areas as well as forestry harvesting concerns." Only 10% of the country's minefields have been cleared and the remaining 90% are no longer marked or fenced. Civilians are particularly endangered since almost 90% of the minefields lay astride communal areas. "The question is ... what effective option is available to rid the nation of

the scourge of land mines in the shortest possible time at the minimum cost." The answer, Rupiah reveals, is the source of continuing debate.

- B.328** Russbach, Rémi. "Casualties of Conflicts and Mine Warfare", in Kevin M. Cahill, ed., *A Framework for Survival: Health, Human Rights, and Humanitarian Assistance in Conflicts and Disasters* (New York: Council on Foreign Relations and Basic Books, 1993), pp. 121-137.

The author, Chief Medical Officer and Founder of the Medical Division of the Red Cross, looks generally at the activities of the International Committee of the Red Cross with the war-wounded. More specifically, he focuses on its work with land mine victims, but also widens the discussion by describing the provisions of international humanitarian law which apply to them and by outlining the measures that can be implemented to reduce the number of casualties and ease their suffering.

Drawing on his own field experience, Russbach concludes that "the use of mines in current warfare is generally planned without any regard for existing regulations [and undertaken] solely in order to terrorize local inhabitants." According to the author, "[T]he result is disastrous from the humanitarian standpoint, since these mines not only cause the death of many of their victims but also result in major handicaps ... [which] represent a long-term burden that war-impooverished communities are simply unable to bear." Russbach contends that simultaneously initiating a wide-ranging series of complementary actions -- from developing and enforcing international humanitarian law, to fostering attempts at de-mining and mine awareness, to transporting the wounded to hospitals and rehabilitating amputees -- could prove effective in the long run.

- B.329** Stover, Eric; Keller, Allen S.; Cobey, James; and Sopheap, Sam. "Letter from Phnom Penh: The Medical and Social Consequences of Land Mines in Cambodia", *Journal of the American Medical Association*, vol. 272, no. 5 (August 3, 1994), pp. 331-336.

The authors travelled throughout Cambodia in March and April of 1991 and again in June of 1993 to assess the medical and social effects of land mine use on civilians in that country. They also studied how Cambodia's health system was dealing with the crisis. This article is based on a survey of hospital admission records as well as interviews undertaken with mine victims, surgeons, United Nations officials, and members of non-governmental organizations.

The authors state that their findings are consistent with what studies of the impact of land mines on civilians in other countries have concluded. They observe that "land mines continue to be a major public health hazard", especially to the rural poor -- and women and children in particular -- who live far away from proper medical facilities. Land mines also

place a significant strain on the already inadequate health care infrastructure by diverting scarce resources. The authors suggest what can be done to help cope with this problem:

- i) improved record-keeping in hospitals as an aid to de-mining;
- ii) more data-gathering on mine-related deaths and injuries; and
- iii) better access to rehabilitation services and job training for victims

However, the authors believe that there can be no substitute for a global ban on the use, sale, and production of land mines.

B.330 Woods, Jeffrey W. "Remnants of War: The Land Mines Crisis in Cambodia", M.A. Research Paper, Norman Paterson School of International Affairs, Carleton University, 1996, 119 pp.

This research project has two objectives. One is to define the security threats which the land mine crisis poses. The other seeks to assess policy recommendations that would contribute to a resolution of the crisis, or help reduce its effects. It attempts to fulfil these objectives by first examining the impact of the land mine problem on Cambodian society at the levels of both the individual/community and the state, and then by focussing on the international system as a source of possible solutions.

The paper highlights the inadequacy of international law to address fully the land mine crisis, and suggests several measures that would potentially assist in ameliorating it:

- i) concentrated efforts to develop significantly faster and safer mine clearance methods;
- ii) external financing and training to meet the demands for effective social services for mine victims; and
- iii) future research on the military utility of land mines by official military sources, rather than simply studies of the issue conducted by humanitarian organizations and ex-military officers involved in de-mining activities

"The land mines crisis in Cambodia is a complex problem, requiring an elaborate array of interdependent solutions [and a] more comprehensive, multi-faceted approach", the paper concludes.

Part B.4 Military and Technological Dimensions

Note: On military utility, see also annotations B.207, B.211, B.230, and B.224. On de-mining, see also annotations A.104, A.105, A.107, A.110, A.301, B.301, B.312, B.313, B.319, B.322, B.323, B.325, and B.330.

B.400 Biddle, Stephen D., Klare Julia L., and Rosenfeld, Jaeson. *The Military Utility of Land Mines: Implications for Arms Control*, Alexandria, Virginia: Institute for Defense Analyses, IDA Document D-1559, June 1994, 75 pp.

This study "evaluates the military utility of land mines in high intensity, mechanized land warfare and draws implications from this for land mine arms control." It does so through computer modelling of a series of simulated battles.

The authors make three main observations. First, land mines are militarily useful on the battlefield in terms of "canalizing attacks, providing economy of force, increasing attacker losses, and decreasing defender losses ..." However, and second, the degree of utility depends strongly on the kind of combat engaged in and the types of mines employed. For instance, defenders benefit most from mines. Moreover, anti-personnel mines not only require special conditions for significant impact, that impact may be considerably smaller than anti-tank mine impact even where such conditions exist. Third, the most effective substitutes for land mines are "asymmetric" (increased numbers of direct fire systems or improved artillery fire effectiveness) rather "symmetric" (increased artillery fire or non-explosive obstacles) in nature, though any attempt to substitute fully for the defensive contribution of land mines will be expensive.

Based on these findings, the authors conclude that, "concerns for lost military utility in high intensity conflict need not preclude consideration of any form of land mine arms control."

Note: Another piece by Biddle and Klare which draws on this study is "Military Utility and the Control of Land Mines", *UNIDIR Newsletter*, no. 28/29 (December 1994/May 1995), pp. 22-23.

B.401 Blagden, Patrick. "The Use of Mines and the Impact of Technology", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 112-123.

The senior de-mining advisor to the United Nations, Blagden discusses the relationship between land mines and technology. He explains how technology can assist in mine clearance, describes the practical problems associated with that task, summarizes existing mechanisms and technologies, outlines the limitations on the use of technology, and suggests

what the objectives of new technologies should be. "If technology is so important to mine clearance", he observes, "it is astonishing that so little research into mine clearance technology has actually taken place, and that clearance techniques have advanced so little since 1942."

The author stresses that a serious mine clearance problem exists and is rapidly deteriorating. The capability to locate and remove land mines safely, quickly and inexpensively must be dramatically enhanced. Increasing the numbers of mine clearers is impractical; new technologies need to be formulated. In particular, "the mechanism by which these new technologies will be researched and developed, and fielded for use by mine clearance staffs worldwide", must be created and, most importantly, "a mechanism by which new technology R&D will be monitored, coordinated, and funded" established.

Note: A similar version of this chapter is "Mine Clearance", *UNIDIR Newsletter*, no. 28/29 (December 1994/May 1995), pp. 20-22. The chapter annotated above also draws on the same author's "Summary of United Nations De-mining", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 117-123.

B.402 Bonsignore, Ezio. "Land Mines - No More?", *Military Technology*, 4/94, pp. 68-72.

This article looks at the military and strategic consequences of a ban on the production and use of land mines. It notes, for instance, that "the military will have to be dragged into [it] kicking and screaming, for the simple reason that they regard land mines as a very useful tool."

More to the point, however, the author comments on the feasibility of a ban and in doing so takes a reserved view. While agreeing fully that the "massacre" of innocent civilians due to mines must be halted, he is dubious that a ban can achieve that end. He fears that it "would be little more than a way for Western countries to clean up our conscience; we will no longer be producing, selling and using such things, and if others continue to do so (as they will without doubt), that's too bad but we cannot help." Bonsignore also suspects that some players might have a "side agenda" different than those who are motivated by humanitarian considerations. A UN-sponsored global de-mining initiative, for example, would mean millions of dollars in business for those involved. "[W]ith the 'tidal wave' of not always rational anti-mines feelings mounting ... [people] should keep their eyes open, and their brains working", Bonsignore concludes. "All that glitters is not gold."

B.403 Cauderay, Gérald C. "Anti-Personnel Mines", *International Review of the Red Cross*, no. 295 (July-August 1993), pp. 273-287.

The author examines "the different types of mines currently in use, their technology, the means of detecting and neutralizing them, and the possibility of equipping them with self-neutralizing or self-destruct mechanisms." He also looks at the difficulties created by the trade in anti-personnel mines.

Cauderay observes that the uncontrolled use of anti-personnel mines, which can remain active long after they are laid, "smacks more of terrorism than of proper battlefield conduct." He considers their military utility to be highly questionable, asks whether those who have laid mines should be compelled to remove them after the cessation of hostilities and whether mine manufacturers should be made to help finance de-mining operations, and suggests that a ban on non-detectable mines as well as those which are neither self-destructing nor self-neutralizing should be seriously considered (although the latter are prone to malfunctioning).

"In view of the difficulty of clearing them once hostilities are over and the dramatic consequences for the civilian population", the author concludes, "the effects of these mines are clearly disproportionate to the military advantages which are claimed for them."

B.404 Craib, Alistair. "Mine Detection and De-mining", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 147-152.

This piece notes that mines continue to kill and maim civilians long after the cessation of hostilities, and that the process of their post-conflict removal depends on detection and clearance techniques.

However, the author indicates, it is not always obvious where mines have been laid -- the development of scatterable mines, mine-laying by inadequately trained and ill-disciplined armies, and the indiscriminate use of mines as a "terror weapon" mean a low quality of marking and recording of minefields. Moreover, more mines are being manufactured in non-metallic materials, usually plastic, which renders them undetectable by normal means. Craib points out that research on technologies to locate these mines has been carried out, mostly under defence contracts, but it is unlikely to continue owing to the reduction of defence budgets which has accompanied the end of the Cold War. The problem of post-war mine clearance is more humanitarian and less military, but private industry will probably be unwilling to invest large amounts of capital without the assurance of success. Craib contends that the only solution may be the creation of "a consortium of interested parties -- military, humanitarian (NGO and Donor), industry and government -- all working together, possibly under the leadership of an internationally recognised humanitarian agency."

The author also states that well-supervised hand clearance will in most cases produce better results than mechanical techniques. Humanitarian agencies are nevertheless faced with a

dilemma: de-mine small areas thoroughly -- but slowly -- by hand, or clear large areas rapidly -- but not as effectively -- using a mechanical technique.

"[T]he biggest difficulty we face in the future is our inability to detect ... minimum metal mines", Craib concludes. "Until a solution is found large numbers of people will remain at risk -- the populations of countries contaminated with them and those trying to clear them."

B.405 Craib, Alistair. "Mine Detection - The Military Necessity to Render Anti-Personnel Mines Non-Detectable", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 207-210.

This paper acknowledges the serious problem posed for humanitarian de-mining by mines with low metallic content and, as a contribution to discussion of a possible solution, sets out to determine whether the military actually want undetectable anti-personnel mines.

As regards professional armies, the author observes that these normally mark their minefields and are not overly concerned about whether the enemy is aware of their location. Moreover, most advanced armies attempt at least to some degree to follow the dictates of international law. The post-conflict havoc wrought by left-over mines is not usually sought by professional armed forces, and is not therefore a consideration which will determine their choice of which mine to deploy.

As for guerilla/insurgent forces, the author admits that their indiscriminate use of mines against non-combatants might make the undetectable variety more attractive to them. However, he claims, this is not substantiated by any specific evidence. At any rate, such forces often obtain their supply of mines from foreign countries through military aid programs and thus may not have any say about what type they receive. Once again, that "undetectability" is a procurement factor is not suggested by the evidence.

"There appears to be no reason why the military want anti-personnel mines to be undetectable", Craib concludes. "That many are is a consequence of manufacturing preference sometimes combined with the technical requirements of a delivery system. The need to save weight and cost will be a far greater influence [than] some doubtful tactical advantage."

B.406 Evans, Thomas R. "Technology Beyond the Probe", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 124-137.

The author describes the grave extent of the global de-mining problem and notes that it continues to worsen. He also points out that because little time and money have been

devoted to the development of countermine technology (unlike the case with mine deployment), sappers probing for mines often remains the best means of mine clearance even though such a method is both slow and dangerous, and despite the fact that military de-mining efforts have developed new technologies.

Evans argues that the civil de-mining problem can be solved by the implementation of two complementary programs. The first, a short-term program, would concentrate on transferring low-technology military de-mining systems to the civilian sector. The second, a long-term project, would seek "to apply the widest possible range of recent technological advances to provide an integrated solution to the civilian de-mining problem." If the probe-equipped sapper is to be replaced and larger areas of the Third World more quickly and successfully de-mined, Evans concludes, "the technological capabilities of the developed countries must be put to the task of providing affordable improvements." The financial cost will be high but the alternative -- "the loss of lives, homelands, and hope" -- pales by comparison.

B.407 Heyman, Major Charles. *Trends in Land Mine Warfare* (Coulsdon, Surrey: Jane's Information Group, 1995), 161 pp.

In discussing developments in the battlefield use of land mines, this study also comments on the current political debate regarding the control of these weapons. With respect to the military utility of land mines, it claims that they "remain one of the most effective systems of defence", and foresees their importance as growing in the future. The study notes the high civilian casualty rate associated with the use of land mines, and pronounces itself generally in favour of measures designed to reduce it. Nonetheless, it claims that the result would mostly likely be "a massive covert trade in these weapons ..."

The study does, however, acknowledge the need for the incorporation of technology that will make land mines politically acceptable, and claims that self-destructing mines can now be easily and cheaply produced. It further suggests that in this regard countries could be pressured to meet UN standards by means of a system of military sanctions.

Given that the use of land mines may be assigned an even greater priority in the future, and that large numbers of these weapons will continue to be produced in the decades to come, the study asks whether it would "be too much to suggest that some of the larger and more responsible manufacturers could assist in the design and subsidised production of a standard and possibly more 'civilian friendly' anti-personnel mine." In this way, nations could retain a mine warfare capability.

B.408 International Committee of the Red Cross, *Anti-Personnel Land Mines: Friend or Foe?* (Geneva: International Committee of the Red Cross, March 1996), 75 pp.

This is a study of the military use and effectiveness of anti-personnel (AP) mines which draws on the personal experience and knowledge of high-ranking military experts, both active and retired. The study provides an historical analysis of the employment of land mines as a weapon of war over the last half-century and in 26 different conflicts. It also examines the implications of current technological innovations for future mine warfare, evaluates proposed technical solutions to the humanitarian problems caused by land mines, and reviews the alternatives to them. Its conclusions were unanimously agreed at the Meeting of Military Experts convened by the ICRC in February 1996.

The study maintains that in the vast majority of cases anti-personnel land mines have been used in a manner that is inconsistent with international law and military doctrine, and that based on the historical record there is little reason to believe that their deployment will be carefully controlled in the future. Moreover, they have hardly proved indispensable as a tool of war. Indeed, they have been of dubious military value, never having exerted a major impact on the course of a conflict. Their effect on the outcome of hostilities has been marginal at best and perhaps even counterproductive -- in the past land mine warfare has proved both physically dangerous and financially expensive to mine-laying forces.

"The limited military utility of AP mines is far outweighed by the appalling humanitarian consequences of their use in actual conflicts", the study concludes. "On this basis their prohibition and elimination should be pursued as a matter of utmost urgency by governments and the entire international community", especially given the lethality of remotely delivered anti-personnel mines. Other solutions (such as the increased use of self-destructing and self-deactivating mines) are inadequate because of their unreliability. Some options (fences, physical obstacles, better intelligence, etc.) have proven effective but improved mine clearance technologies are still urgently required to provide a disincentive to land mine use.

B.409 Jefferson, Paul. "Technical Aspects of Anti-Personnel Mines", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 103-110.

According to the author, this report is "a layman's guide" to the subject. In particular, it discusses "first, the different possibilities for self-destruct and self-neutralising mechanisms; and second, methods for rendering mines detectable." It does so from the humanitarian point of view.

Jefferson concludes that "[t]he technological capability to produce mines with a comparatively reliable self-destruct [SD] or self-neutralising [SN] mechanism is certainly available." This is, however, mainly true in industrialized, western countries whereas anti-personnel (AP) mines are used in the developing world which finds the standard types of them -- unlike few other modern weapons -- cheap and easy to produce. Conversely, SD and SN mines are more expensive and complicated to manufacture, not to mention less satisfactory from a military standpoint if equipped with a long time delay. Moreover, the

military use such mines for very specific purposes, while humanitarian groups demand that all mines, including general purpose ones, possess such capabilities. All in all, then, "there are some major conflicts of interest to be reconciled between the humanitarian requirement for AP mines with self-destruct or self-neutralising capability and the military and production requirements of nations or groups involved in low-intensity guerilla warfare."

As for the issue of detectability, the report similarly observes that "[e]nsuring that non-magnetically detectable mines are not manufactured is clearly a matter of enforcing legislation rather than of overcoming technical problems." It contends that the latter could be done at minimal cost and inconvenience.

B.410 Jefferson, Paul. "An Overview of De-mining, Including Mine Detection Equipment", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 125-132.

This report seeks to "present a comprehensive background picture for the layman" of mine clearance and detection by looking at existing methods and possible future developments. It points out that hand clearance remains the most commonly applied technique, as well as the most effective and dependable when undertaken by experienced, properly trained, and well-equipped individuals.

The author asserts that although mine clearance is confronted by various difficulties, these can be overcome. The development of two pieces of equipment in particular would greatly assist humanitarian de-mining operations. One is detection equipment capable of reliably locating plastic, non-metallic, and minimum-metal mines. The other is incendiary equipment which would destroy mines more quickly, efficiently, and cheaply than the conventional demolition charges currently employed. "Every mine removed is one less potential casualty", Jefferson observes. "Is this a task beyond the capability of a species which has put one of its kind on the moon?"

B.411 Johnson, Richard H. "Why Mines? A Military Perspective", in Kevin M. Cahill, ed., *Clearing the Fields: Solutions to the Global Land Mines Crisis* (New York: Basic Books and the Council on Foreign Relations, 1995), pp. 24-44.

A retired U.S. Army officer with extensive experience in the field, Johnson explores the question of the utility and disutility of land mines. He begins with "A Brief Primer on Mines" which explains how they work, means of emplacement, their detectability and activation, and the various classifications of mines. The author then describes the military tasks which mines are intended to perform. Next, Johnson analyses the advantages and disadvantages which mines offer to military operations from personal, historical, and

doctrinal perspectives. Lastly, future developments in mine usage in both the short- and long-term are delineated.

Johnson observes that the need to balance the military imperative to achieve victory with minimal casualties against the humanitarian impulse to protect non-combatants is a complex issue. He argues that mines have generally proved to be an effective military tool. To contend that mines are "no good" because they have not always produced successful results as an instrument of war misses the point. The "real problem" is how to undertake post-hostilities mine clearance. In his opinion, "the need is to frame a go-forward strategy focused on 'the art of the possible'", and professional military and mine producers should be recruited to help develop a realistic plan.

B.412 King, Colin. *The Mine Conundrum: The Threat to Mine-Clearance Operations*, *Jane's Intelligence Review*, Special Report No. 8 (1995), 24 pp.

This report seeks to explain why mine clearance operations are so problematic. First, it outlines the basic characteristics of land mines (simplicity, versatility, lack of discrimination, and longevity) which in and of themselves complicate the task of mine clearance. Second, the report describes various mine counter-measures (lifting by hand, probing, flails, rollers, high explosives, fuel-air explosive, metal detectors), and demonstrates how each one has been overcome (incorporation of blast resistance, anti-disturbance and booby traps, decrease in metallic content). Mines laid in dense vegetation and shallow water, or placed above ground level, and the fact that they can be activated in several ways (tripwire, command, pressure), are factors which further contribute to the dilemma posed by these weapons.

In sum, the wide variety of mines and the range of different environments in which they can be found limit the effectiveness of counter-measures. As a result, "a combination of different equipment and techniques are required, and ... these must be closely tailored to the specific threat in each minefield." This does not really apply to military mine clearance, which concentrates simply on creating a breach in a minefield. But it is absolutely essential for humanitarian mine clearance, which requires that each mine be disposed of individually. "Unless legislation can effectively curb the diversity of the mine, counter-measures will continue to be defeated by new design", the author concludes, leading to "an escalation of the disaster already gripping the inhabitants of mined countries."

B.413 McGrath, Rae. "The Reality of the Present Use of Mines by Military Forces", in International Committee of the Red Cross, *Report of the Symposium on Anti-Personnel Mines*, Montreux, April 21-23, 1993, pp. 7-11.

This paper makes two central points. First, it argues that in both conventional war and counter-insurgency campaign scenarios, "mines are deployed using strategies that target enemy forces in such a manner as to ensure that a long-term humanitarian problem will exist in the post-combat period." The conventional war scenario involves the "deep strike" use of

mines in the enemy's rear areas, as well as the deployment of these weapons to "cut off" retreating or advancing forces. Since both strategies involve the use of scatterable mines, they lack any dependable methods of recording, mapping and marking their concentrations. The counter-insurgency scenario involves the random and widespread mining of agricultural and community land, the deliberate use of mines as a "terror weapon" against civilians, and the mining of villages, water sources, religious shrines, etc.

The second major observation of this paper is that "mine-laying strategy has become manufacturer/design-led" rather than being conceived according to military needs. This is evidenced by the development of scatterable or unrecorded mines (which actually pose as much of a danger to one's advancing troops as to those of the retreating enemy), and the production of undetectable mines (which are undetectable not only by one's enemy but by one's own forces too).

"[T]he military, by perpetuating and refining minelaying strategies which will inevitably kill and maim non-combatants during the period of combat and continue to kill and maim civilians following a ceasefire, and lead to the long-term denial of land to rural communities", McGrath summarizes, "have shown a total disregard for humanitarian law, principles and simple human decency."

Note: This article is reprinted as an appendix in Paul Davies and Nic Dunlop, *War of the Mines: Cambodia, Land Mines and the Impoverishment of a Nation* (London and Boulder, Colorado: Pluto Press, 1994).

B.414 "Results of the Symposium of Military Experts on the Military Utility of Anti-Personnel Mines", Annex II of *Report of the International Committee of the Red Cross for the Review Conference of the 1980 United Nations 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* (February 1994), pp. 50-62.

This is the report drafted by the military specialists during the meeting hosted by the ICRC in January 1994 on the military utility of anti-personnel (AP) mines, the viability of alternative systems, and the options available in the way of technical control measures.

The report claims that mines are highly efficient and effective weapons, but also stresses that all feasible precautions should be taken to safeguard non-combatants from their effects. The AP mine is "the most cost-effective system available to the military", the report observes. "The alternatives require more resources and are less effective." However, the military experts also acknowledge that among all the alternatives AP mines "create the worst post-war effects unless they have self-destructed, self-neutralized or been removed." They recognize that from a humanitarian point of view and given the huge cost of mine clearance, equipping mines with a self-destruct mechanism is "highly desirable and ultimately cost-effective."

Similarly, humanitarian considerations associated with de-mining make it vital that mines can be detected, and there are few negative consequences associated with detectability.

The report concludes with several recommendations regarding Protocol II of the 1980 Convention on Certain Conventional Weapons. In particular:

- i) all remotely delivered mines should self-destruct and, where possible, be used in fenced or marked areas;
- ii) self-destruct times -- along with all other minefield information -- should be declared to all parties upon the cessation of hostilities;
- iii) with a few exceptions, future AP mines should self-destruct, despite the increased acquisition costs; and
- iv) all future AP mines should be detectable

Note: The military experts' report also appears in *International Review of the Red Cross*, no. 299 (March-April 1994), pp. 170-182.

B.415 Smith, Chris., ed. *The Military Utility of Land Mines ... ?* (North-South Defence and Security Programme, Centre for Defence Studies, King's College, University of London, June 1996), 104 pp.

This study is the first instalment of a larger project which intends to produce a world-wide survey of how land mines are perceived by military institutions and irregular forces, and which "seeks to understand in more detail the arguments in favour of retaining [anti-personnel mines] and, furthermore, to assess critically the validity of these arguments." It is based on both desk research as well as interviews with defence planners in various countries.

This report provides background and context, furnishes a short history of the anti-personnel land mine, describes current trends in land mine technology, and discusses possible alternatives to land mines. However, the bulk of the study analyses the military doctrines associated with the use of anti-personnel land mines in the Czech Republic, Finland, Sweden, Germany, and the United Kingdom.

The report concludes that the utility of anti-personnel land mines (APM) has been "overestimated" and is "very debatable", noting in addition that the kind of conflict in which they could be effectively employed -- such as a major European war -- is unlikely to occur. Land mines "can be used to great effect if they are used in an irresponsible way", the report sums up. "The only way to use [them] well is to use them badly." Nonetheless, its case studies demonstrate that defence planners are very loath to abandon this weapon as an

instrument of war. "The only conceivable route towards a global ban on APM", the report suggests, "is for European countries to take the lead and apply bilateral pressures and leverage to achieve unilateral or regionally negotiated bans on the production, export and use [of] APM."

- B.416** SNC Industrial Technologies Inc. *The Convention on Certain Conventional Weapons: Final Report of a Study of the Technological and Cost Implications of Retrofitting Land Mines with Fuses Incorporating Self-Destruct or Self-Neutralizing Devices* (Ottawa: Department of National Defence, December 1994), 211 pp.

This report examines existing land mines used by the Canadian Forces as well as those employed world wide in order to assess the technological challenges and costs associated with re-equipping them with self-destruct and self-neutralizing mechanisms. It does so partly on the basis of information from international companies connected with mines.

The report finds that while a wide variety of anti-personnel mines (APMs) are available on the market, only a few of them contain self-destruct or self-neutralizing devices. It concludes that it is economically impractical to retrofit them with such mechanisms because this would require re-design of most their components. The report recommends instead that they be replaced with a new generation of APMs having a self-destruct capability.

- B.417** St. John, R.K. *Deadly Sentinels: Coping with Land Mines in the Aftermath of War* (Kingston: National Defence College, June 1994), 29 pp.

The author, a Colonel in the Canadian Forces, outlines the scope of the global land mine problem and reviews the attempts made by the international community to address it, including technological advances, sanctions and moratoria, as well as mine clearance and awareness programs. In particular, St. John critically explores Canada's capabilities and possible contributions in this area in the context of current and future national interests. His main objective is "to determine options whereby Canada may be able to realize a significant, international return for a relatively small investment in this vital humanitarian cause."

St. John observes that Canada should help solve the land mine problem for more than just humanitarian reasons. First, as a trade-dependent nation, global stability is fundamental to its national well-being. This requires that Canada "devote more attention to the suffering and unrest of the millions of refugees who have been dislocated by regional conflicts and are unable to return home due to the dangers posed by widespread and indiscriminate mining." Second, budget cuts and reductions in personnel numbers necessitate that the Canadian forces restrict its operations to specialized missions if Canada is to maintain its proud reputation as a middle power. De-mining fits the bill perfectly. It does not demand an overwhelming allocation of resources, and is an area where Canada has the expertise and capability to make

a major contribution since Canadian "sappers are widely recognized for their technical skill, experience and exceptional record of performance ..."

Canada could contribute in several specific ways:

i) by undertaking missions similar to those which it has already supported, such as the Afghan Mine Awareness and Clearance Training Program and the UN Mine Action Centre in Cambodia;

ii) by monitoring and supporting "international, diplomatic initiatives to eliminate mine exports, restrict their use and compel mine producing countries to conform to strict standards concerning detectability and self-neutralization";

iii) by encouraging and actively contributing to the establishment of an international automated mine database; and

iv) by co-operating in technical training to provide countries with their own de-mining instructors

When it comes to the global land mine crisis, "Canada possesses the capability to make a profound, humanitarian contribution by committing resources to the resolution of this pernicious problem", St. John asserts, "while at the same time achieving international recognition and stature out of all proportion to the investment."

B.418 United States Department of State, *Hidden Killers: The Global Land Mine Crisis* (1994 Report to the US Congress on the Problem with Uncleared Land Mines and the United States Strategy for De-mining and Land Mine Control), 61 pp.

This is the American government's second and updated report on land mines. The information presented is a compilation of reports filed from American embassies world-wide, collected from government ministries, hospitals, medical authorities, as well as international and non-governmental organizations in each country. The report outlines the nature and scope of the land mine problem, which is greatest in Africa. Between 80 and 110 million land mines -- most of them emplaced during the last 15 years -- are implanted in 64 countries, and they maim and kill approximately 500 people per week, the majority of victims being innocent civilians. It provides a brief military history of the weapon, noting how the role of anti-personnel mines has grown over time. The report also identifies their deleterious effects on refugee populations, peacekeeping operations, and economic development, and examines current mine warfare from the perspective of both American practice and international law.

The bulk of the report, however, focuses on de-mining. Included are a country-by-country regional analysis of mine clearance activities in Africa, Asia, the Middle East, the Americas, and Europe, as well as case studies of de-mining operations in Afghanistan, Cambodia, Mozambique, and Nicaragua. In particular, the report describes the United States' three-pronged strategy for dealing with the land mine crisis by: i) leading the effort to strengthen existing international law; ii) imposing a unilateral moratorium on the export of land mines and urging other countries to do likewise; and iii) proposing a multilateral control regime to regulate the production, export, and stockpiling of these weapons. It explains the criteria for American de-mining assistance, the role of the US military in de-mining, its mine clearance/mine awareness training programs, and current and projected American de-mining funding. The world response to mine clearance is also summarized, specifically the activities of the United Nations, the International Committee of the Red Cross, the Organization of the American States, as well as private voluntary and non-governmental organizations. A discussion of research and development into cost-effective mine clearance techniques is also presented.

The report observes that "the land mine problem is getting worse", and argues that "[t]he world must take stronger steps to address this problem, and the United States will remain at the forefront of that effort."

Included among the report's appendices is one which describes current de-mining technology.

B.419 United States Department of State. *Hidden Killers: The Global Problem with Uncleared Land Mines* (A Report on International De-mining), 1993, 185 pp.

This comprehensive analysis of the land mines issue is the first report on the subject produced by the American government, and is coupled with a description of United States policy. Most of the document is given over to a detailed survey of the numbers, types, and locations of uncleared land mines in dozens of countries, based on information collected by American embassies and consulates. The report also examines more closely specific aspects of the land mines problem (mine warfare, de-mining technology, land mines and refugees). One of the report's appendices describes US army countermine equipment.

The report observes that uncleared land mines are "the most toxic and widespread pollution facing mankind" and that they are "the weapons most consistently dangerous to noncombatants." Moreover, they hinder the return of refugees, obstruct economic development, isolate indigent populations, and constitute an ongoing source of instability. Most of all, while land mines are cheap and easy to lay, detecting and removing or destroying them is a slow, costly, and dangerous process. That said, the report asserts, the United States should take a leading role in providing de-mining assistance because many severely mined countries are vital to American national interests. There is also the humanitarian imperative created by the fact that the US is one of the few countries with the technology, expertise, and resources to assist in mine clearance operations. It argues that

Washington can best contribute to such activities by offering help in four general areas: education, technical expertise, equipment and technology, and diplomatic efforts to limit the sale and use of land mines. "It is the empowerment of the ... countries with land mine problems to deal with this problem themselves that is, and should be, the goal of US de-mining policy", the report maintains.

B.420 Waschl, John. "A Review of Land Mine Detection", in William Maley, ed., *Dealing with Mines: Strategies for Peacekeepers, Aid Agencies and the International Community* (Canberra: Australia Defence Studies Centre, University College, Australian Defence Force Academy, 1994), pp. 27-44.

This piece is premised on the belief that "[t]he enormity of the problem that the detection of land mines presents in both a conflict and in peacetime necessitates that improved techniques be developed to locate these land mines." The author consequently summarizes existing techniques for mine detection and discusses several potential new ones to deal with the problem of locating small, plastic, and low metallic content mines.

Waschl concludes that electronic induction, ground probing radar, X-ray backscatter, and infrared imaging are the most promising technologies for future application in land mine detection. Due to the fact that each of these technologies has its limitations, he recommends the employment of more than one detection method -- "future de-mining will require the use of a number of selected detectors that work in conjunction to increase the detection probability and to reduce the false alarm rate." The author adds that any combination of detection methods will be dependent on assistance from the intelligence community in pinpointing mined areas. "Only with such a synergistic approach will the rapid detection and subsequent clearance of mines be possible", he argues.

PART C

INTERNET RESOURCES

C.1 Ban Land Mines Project

URL: <http://www.web.apc.org/~pgs/pages/ldmn0.html>

This site is offered by Physicians for Global Survival (PSG), the Canadian affiliate of International Physicians for Prevention of Nuclear War. PSG members "participate in regular ongoing discussions on how to respond to the world wide scourge of land mines, the terrible personal consequences, and the disgracefully wasteful social, economic and environmental consequences." This site is a source of general information, announcements, news, and updates. It also provides access to other land mine web sites.

C.2 Centre for Defense Information Arms Trade Database

URL: <http://www.cdi.org/atdb>

Select "CDI's Arms Trade Database", and then choose the "Anti-Personnel Land Mine Proliferation" directory.

Select "Links to other Arms Trade Sites on the Web" to access numerous additional "Land Mine Sites".

This site is part of the Washington-based Centre for Defense Information's Conventional Arms Trade Project, whose purpose is to "inform the public, media, scholars, and government officials about the conventional arms trade." It supplies much up-to-date material on land mines (news articles, statements and speeches, government documents), related particularly to the United Nations, recent American policy, and the activities of non-governmental organizations. It also contains a regularly updated bibliography on the subject.

C.3 Humanitarian Foundation of People Against Landmines

URL: <http://www.dsk.de/mgm>

This organization was founded in January 1996 as Germany's first specialized non-governmental organization for humanitarian de-mining. This web site provides general information on land mines, specific information on de-mining, as well as "De-mining News Forum" and "Library" pages to which browsers are encouraged to mail announcements, reports, and research projects. It also contains a links page to the web sites of other humanitarian de-mining organizations.

C.4 International Committee of the Red Cross
URL: <http://www.icrc.org/icrcnews/2bce.htm>

This is the ICRC's Land Mines Homepage. It provides an abundance of current and background information on all aspects of the subject through excerpts from selected publications, descriptions of the world situation, case studies, and medical statistics. It also specifically covers developments in the ICRC's own campaign against anti-personnel land mines.

C.5 Land Mine Awareness Education
URL: <http://www.pitt.edu/~ginie/lm>

This site is jointly sponsored by the Global Information Network in Education (GINIE) project at the University of Pittsburgh's Institute for International Studies in Education and the International Bureau of Education at UNESCO in Geneva. GINIE is "a place for world wide experts to exchange and discuss their experiences in order to collaborate and enhance the ways of dealing with the problem of land mine awareness education." This site includes a Land Mine Expertise Contact List, as well as lists of land mine links and references. It also contains a page to share personal stories related to land mine awareness.

C.6 Land Mines Homepage
URL: <http://www.hk.super.net/~asiabox/mineslow.htm>

This site is still under construction. It is being set up by Rodolfo Canete Jr., a Filipino documentarist, activist, and digital artist, using material from a variety of sources, mainly Oxfam Hong Kong. It is "an illustrated collection of reference materials and articles on the global land mine crisis", and provides a wealth of information regarding the effects of land mines, the international campaign to ban them, and the de-mining efforts of both government agencies and non-governmental organizations. A glossary of terms, a "quick facts" section, and a comprehensive bibliography are also being compiled. Links to other web sites on the subject are included as well.

C.7 Land Mines Special Report
URL: <http://www.oneworld.org/landmines/index.html>

This site is offered by OneWorld Online, which is produced by the One World Broadcasting Trust, a British charity linking development and broadcasting. "OneWorld Online and its partners give you the facts about land mines, examine the arguments for banning them, report on the UN review conferences and what action you can take." The site also contains background information, the latest news, and links to other land mine web sites.

C.8 NGO Committee on Disarmament

URL: <http://www.igc.apc.org/disarm/landmine.html>

This site belongs to the principal service organization for non-governmental organizations involved with disarmament in the United Nations context, and its general purpose is "to link issues, networks, and activist campaigns." It is a regularly updated page which focuses on key events and campaigns regarding land mines. More specifically, it offers "information from print and on-line sources relating to international efforts to control and eliminate land mines."

C.9 United Nations De-Mining Database

URL: <http://www.un.org/Depts/Landmine/index.html>

This database was established by a General Assembly Resolution in 1994. It is "a regularly updated repository designed to keep the global public informed about the problem of uncleared land mines." The site includes updates on UN de-mining programs, country and area reports, and the latest casualty data.

PART D

ANNEX I

Protocol on Prohibitions or Restrictions on
the use of Mines, Booby-Traps
and Other Devices as Amended on 3 May 1996
(Protocol II as Amended on 3 May 1996)
Annexed to 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

ARTICLE 1: AMENDED PROTOCOL

The Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices (Protocol II), annexed to 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 ("the Convention") is hereby amended. The text of the Protocol as amended shall read as follows:

Article 1

Scope of application

1. This Protocol relates to the use on land of the mines, booby-traps and other devices, defined herein, including mines laid to interdict beaches, waterway crossings or river crossings, but does not apply to the use of anti-ship mines at sea or in inland waterways.
2. This Protocol shall apply, in addition to situations referred to in Article 1 of this Convention, to situations referred to in Article 3 common to the Geneva Conventions of 12 August 1949. This Protocol shall not apply to situations of internal disturbances and tensions, such as riots, isolated and sporadic acts of violence and other acts of a similar nature, as not being armed conflicts.
3. In case of armed conflicts not of an international character occurring in the territory of one of the High Contracting Parties, each party to the conflict shall be bound to apply the prohibitions and restrictions of this Protocol.
4. Nothing in this Protocol shall be invoked for the purpose of affecting the sovereignty of a State or the responsibility of the Government, by all legitimate means, to maintain or re-establish law and order in the State or to defend the national unity and territorial integrity of the State.
5. Nothing in this Protocol shall be invoked as a justification for intervening, directly or indirectly, for any reason whatever, in the armed conflict or in the internal or external affairs of the High Contracting Party in the territory of which that conflict occurs.

6. The application of the provisions of this Protocol to parties to a conflict, which are not High Contracting Parties that have accepted this Protocol, shall not change their legal status or the legal status of a disputed territory, either explicitly or implicitly.

Article 2

Definitions

For the purpose of this Protocol:

1. "Mine" means a munition placed under, on or near the ground or other surface area and designed to be exploded by the presence, proximity or contact of a person or vehicle.
2. "Remotely-delivered mine" means a mine not directly emplaced but delivered by artillery, missile, rocket, mortar, or similar means, or dropped from an aircraft. Mines delivered from a land-based system from less than 500 metres are not considered to be "remotely delivered", provided that they are used in accordance with Article 5 and other relevant Articles of this Protocol.
3. "Anti-personnel mine,, means a mine primarily designed to be exploded by the presence, proximity or contact of a person and that will incapacitate, injure or kill one or more persons.
4. "Booby-trap" means any device or material which is designed, constructed, or adapted to kill or injure, and which functions unexpectedly when a person disturbs or approaches an apparently harmless object or performs an apparently safe act.
5. "Other devices" means manually-emplaced munitions and devices including improvised explosive devices designed to kill, injure or damage and which are actuated manually, by remote control or automatically after a lapse of time.
6. "Military objective" means, so far as objects are concerned, 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.
7. "Civilian objects" are all objects which are not military objectives as defined in paragraph 6 of this Article.
8. "Minefield" is a defined area in which mines have been emplaced and "mined area" is an area which is dangerous due to the presence of mines. "Phoney minefield" means an area free of mines that simulates a minefield. The term "minefield" includes phoney minefields.
9. "Recording" means a physical, administrative and technical operation designed to obtain, for the purpose of registration in official records, all available information facilitating the location of minefields, mined areas, mines, booby-traps and other devices.
10. "Self-destruction mechanism" means an incorporated or externally attached automatically-functioning mechanism which secures the destruction of the munition into which it is incorporated or to which it is attached.
11. "Self-neutralization mechanism" means an incorporated automatically-functioning mechanism which renders inoperable the munition into which it is incorporated.

12. "Self-deactivating" means automatically rendering a munition inoperable by means of the irreversible exhaustion of a component, for example, a battery, that is essential to the operation of the munition.
13. "Remote control" means control by commands from a distance.
14. "Anti-handling device" means a device intended to protect a mine and which is part of, linked to, attached to or placed under the mine and which activates when an attempt is made to tamper with the mine.
15. "Transfer" involves, in addition to the physical movement of mines into or from national territory, the transfer of title to and control over the mines, but does not involve the transfer of territory containing emplaced mines.

Article 3

General restrictions on the use of mines, booby-traps and other devices

1. This Article applies to:
 - (a) mines;
 - (b) booby-traps; and
 - (c) other devices.
2. Each High Contracting Party or party to a conflict is, in accordance with the provisions of this Protocol, responsible for all mines, booby-traps, and other devices employed by it and undertakes to clear, remove, destroy or maintain them as specified in Article 10 of this Protocol.
3. It is prohibited in all circumstances to use any mine, booby-trap or other device which is designed or of a nature to cause superfluous injury or unnecessary suffering.
4. Weapons to which this Article applies shall strictly comply with the standards and limitations specified in the Technical Annex with respect to each particular category.
5. It is prohibited to use mines, booby-traps or other devices which employ a mechanism or device specifically designed to detonate the munition by the presence of commonly available mine detectors as a result of their magnetic or other non-contact influence during normal use in detection operations.
6. It is prohibited to use a self-deactivating mine equipped with an anti-handling device that is designed in such a manner that the anti-handling device is capable of functioning after the mine has ceased to be capable of functioning.
7. It is prohibited in all circumstances to direct weapons to which this Article applies, either in offence, defence or by way of reprisals, against the civilian population as such or against individual civilians or civilian objects.
8. The indiscriminate use of weapons to which this Article applies is prohibited. Indiscriminate use is any placement of such weapons:

(a) which is not on, or directed against, a military objective. 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;

(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.

9. Several clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects are not to be treated as a single military objective.

10. All feasible precautions shall be taken to protect civilians from the effects of weapons to which this Article applies. Feasible precautions are those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations. These circumstances include, but are not limited to:

(a) the short- and long-term effect of mines upon the local civilian population for the duration of the minefield;

(b) possible measures to protect civilians (for example, fencing, signs, warning and monitoring);

(c) the availability and feasibility of using alternatives; and

(d) the short- and long-term military requirements for a minefield.

11. Effective advance warning shall be given of any emplacement of mines, booby-traps and other devices which may affect the civilian population, unless circumstances do not permit.

Article 4

Restrictions on the use of anti-personnel mines

It is prohibited to use anti-personnel mines which are not detectable, as specified in paragraph 2 of the Technical Annex.

Article 5

Restrictions on the use of anti-personnel mines other than remotely-delivered mines

1. This Article applies to anti-personnel mines other than remotely-delivered mines.

2. It is prohibited to use weapons to which this Article applies which are not in compliance with the provisions on self-destruction and self-deactivation in the Technical Annex, unless:

(a) such weapons are placed within a perimeter-marked area which is monitored by military personnel and protected by fencing or other means, to ensure the effective exclusion of civilians from the area. The marking must be of a distinct and durable character and must at least be visible to a person who is about to enter the perimeter-marked area; and

(b) such weapons are cleared before the area is abandoned, unless the area is turned over to the forces of another State which accept responsibility for the maintenance of the protections required by this Article and the subsequent clearance of those weapons.

3. A party to a conflict is relieved from further compliance with the provisions of sub-paragraphs 2 (a) and 2 (b) of this Article only if such compliance is not feasible due to forcible loss of control of the area as a result of enemy military action, including situations where direct enemy military action makes it impossible to comply. If that party regains control of the area, it shall resume compliance with the provisions of sub-paragraphs 2 (a) and 2 (b) of this Article.

4. If the forces of a party to a conflict gain control of an area in which weapons to which this Article applies have been laid, such forces shall, to the maximum extent feasible, maintain and, if necessary, establish the protections required by this Article until such weapons have been cleared.

5. All feasible measures shall be taken to prevent the unauthorized removal, defacement, destruction or concealment of any device, system or material used to establish the perimeter of a perimeter-marked area.

6. Weapons to which this Article applies which propel fragments in a horizontal arc of less than 90 degrees and which are placed on or above the ground may be used without the measures provided for in sub-paragraph 2 (a) of this Article for a maximum period of 72 hours, if:

(a) they are located in immediate proximity to the military unit that emplaced them; and

(b) the area is monitored by military personnel to ensure the effective exclusion of civilians.

Article 6

Restrictions on the use of remotely-delivered mines

1. It is prohibited to use remotely-delivered mines unless they are recorded in accordance with sub-paragraph 1 (b) of the Technical Annex.

2. It is prohibited to use remotely-delivered anti-personnel mines which are not in compliance with the provisions on self-destruction and self-deactivation in the Technical Annex.

3. It is prohibited to use remotely-delivered mines other than anti-personnel mines, unless, to the extent feasible, they are equipped with an effective self-destruction or self-neutralization mechanism and have a back-up self-deactivation feature, which is designed so that the mine will no longer function as a mine when the mine no longer serves the military purpose for which it was placed in position.

4. Effective advance warning shall be given of any delivery or dropping of remotely-delivered mines which may affect the civilian population, unless circumstances do not permit.

Article 7

Prohibitions on the use of booby-traps and other devices

1. Without prejudice to the rules of international law applicable in armed conflict relating to treachery and perfidy, it is prohibited in all circumstances to use booby-traps and other devices which are in any way attached to or associated with:

- (a) internationally recognized protective emblems, signs or signals;
- (b) sick, wounded or dead persons;
- (c) burial or cremation sites or graves;
- (d) medical facilities, medical equipment, medical supplies or medical transportation;
- (e) children's toys or other portable objects or products specially designed for the feeding, health, hygiene, clothing or education of children;
- (f) food or drink;
- (g) kitchen utensils or appliances except in military establishments, military locations or military supply depots;
- (h) objects clearly of a religious nature;
- (i) historic monuments, works of art or places of worship which constitute the cultural or spiritual heritage of peoples; or
- (j) animals or their carcasses.

2. It is prohibited to use booby-traps or other devices in the form of apparently harmless portable objects which are specifically designed and constructed to contain explosive material.

3. Without prejudice to the provisions of Article 3, it is prohibited to use weapons to which this Article applies in any city, town, village or other area containing a similar concentration of civilians in which combat between ground forces is not taking place or does not appear to be imminent, unless either:

- (a) they are placed on or in the close vicinity of a military objective; or
- (b) measures are taken to protect civilians from their effects, for example, the posting of warning sentries, the issuing of warnings or the provision of fences.

Article 8

Transfers

1. In order to promote the purposes of this Protocol, each High Contracting Party:

- (a) undertakes not to transfer any mine the use of which is prohibited by this Protocol;

(b) undertakes not to transfer any mine to any recipient other than a State or a State agency authorized to receive such transfers;

(c) undertakes to exercise restraint in the transfer of any mine the use of which is restricted by this Protocol. In particular, each High Contracting Party undertakes not to transfer any anti-personnel mines to States which are not bound by this Protocol, unless the recipient State agrees to apply this Protocol; and

(d) undertakes to ensure that any transfer in accordance with this Article takes place in full compliance, by both the transferring and the recipient State, with the relevant provisions of this Protocol and the applicable norms of international humanitarian law.

2. In the event that a High Contracting Party declares that it will defer compliance with specific provisions on the use of certain mines, as provided for in the Technical Annex, sub-paragraph 1 (a) of this Article shall however apply to such mines.

3. All High Contracting Parties, pending the entry into force of this Protocol, will refrain from any actions which would be inconsistent with sub-paragraph 1 (a) of this Article.

Article 9

Recording and use of information on minefields, mined areas, mines, booby-traps and other devices

1. All information concerning minefields, mined areas, mines, booby-traps and other devices shall be recorded in accordance with the provisions of the Technical Annex.

2. All such records shall be retained by the parties to a conflict, who shall, without delay after the cessation of active hostilities, take all necessary and appropriate measures, including the use of such information, to protect civilians from the effects of minefields, mined areas, mines, booby-traps and other devices in areas under their control.

At the same time, they shall also make available to the other party or parties to the conflict and to the Secretary-General of the United Nations all such information in their possession concerning minefields, mined areas, mines, booby-traps and other devices laid by them in areas no longer under their control; provided, however, subject to reciprocity, where the forces of a party to a conflict are in the territory of an adverse party, either party may withhold such information from the Secretary-General and the other party, to the extent that security interests require such withholding, until neither party is in the territory of the other. In the latter case, the information withheld shall be disclosed as soon as those security interests permit. Wherever possible, the parties to the conflict shall seek, by mutual agreement, to provide for the release of such information at the earliest possible time in a manner consistent with the security interests of each party.

3. This Article is without prejudice to the provisions of Articles 10 and 12 of this Protocol.

Article 10

Removal of minefields, mined areas, mines, booby-traps and other devices and international cooperation

1. Without delay after the cessation of active hostilities, all minefields, mined areas, mines, booby-traps and other devices shall be cleared, removed, destroyed or maintained in accordance with Article 3 and paragraph 2 of Article 5 of this Protocol.
2. High Contracting Parties and parties to a conflict bear such responsibility with respect to minefields, mined areas, mines, booby-traps and other devices in areas under their control.
3. With respect to minefields, mined areas, mines, booby-traps and other devices laid by a party in areas over which it no longer exercises control, such party shall provide to the party in control of the area pursuant to paragraph 2 of this Article, to the extent permitted by such party, technical and material assistance necessary to fulfil such responsibility.
4. At all times necessary, the parties shall endeavour to reach agreement, both among themselves and, where appropriate, with other States and with international organizations, on the provision of technical and material assistance, including, in appropriate circumstances, the undertaking of joint operations necessary to fulfil such responsibilities.

Article 11

Technological cooperation and assistance

1. Each High Contracting Party undertakes to facilitate and shall have the right to participate in the fullest possible exchange of equipment, material and scientific and technological information concerning the implementation of this Protocol and means of mine clearance. In particular, High Contracting Parties shall not impose undue restrictions on the provision of mine clearance equipment and related technological information for humanitarian purposes.
2. Each High Contracting Party undertakes to provide information to the database on mine clearance established within the United Nations System, especially information concerning various means and technologies of mine clearance, and lists of experts, expert agencies or national points of contact on mine clearance.
3. Each High Contracting Party in a position to do so shall provide assistance for mine clearance through the United Nations System, other international bodies or on a bilateral basis, or contribute to the United Nations Voluntary Trust Fund for Assistance in Mine Clearance.
4. Requests by High Contracting Parties for assistance, substantiated by relevant information, may be submitted to the United Nations, to other appropriate bodies or to other States. These requests may be submitted to the Secretary-General of the United Nations, who shall transmit them to all High Contracting Parties and to relevant international organizations.
5. In the case of requests to the United Nations, the Secretary-General of the United Nations, within the resources available to the Secretary-General of the United Nations, may take appropriate steps to assess the situation and, in cooperation with the requesting High Contracting Party, determine the appropriate provision of assistance in mine clearance or implementation of the Protocol. The Secretary-General may also report to High Contracting Parties on any such assessment as well as on the type and scope of assistance required.

6. Without prejudice to their constitutional and other legal provisions, the High Contracting Parties undertake to cooperate and transfer technology to facilitate the implementation of the relevant prohibitions and restrictions set out in this Protocol.

7. Each High Contracting Party has the right to seek and receive technical assistance, where appropriate, from another High Contracting Party on specific relevant technology, other than weapons technology, as necessary and feasible, with a view to reducing any period of deferral for which provision is made in the Technical Annex.

Article 12

Protection from the effects of minefields, mined areas, mines, booby-traps and other devices

1. Application

(a) With the exception of the forces and missions referred to in sub-paragraph 2 (a) (i) of this Article, this Article applies only to missions which are performing functions in an area with the consent of the High Contracting Party on whose territory the functions are performed.

(b) The application of the provisions of this Article to parties to a conflict which are not High Contracting Parties shall not change their legal status or the legal status of a disputed territory, either explicitly or implicitly.

(c) The provisions of this Article are without prejudice to existing international humanitarian law, or other international instruments as applicable, or decisions by the Security Council of the United Nations, which provide for a higher level of protection to personnel functioning in accordance with this Article.

2. Peace-keeping and certain other forces and missions

(a) This paragraph applies to:

- (i) any United Nations force or mission performing peace-keeping, observation or similar functions in any area in accordance with the Charter of the United Nations; and
- (ii) any mission established pursuant to Chapter VIII of the Charter of the United Nations and performing its functions in the area of a conflict.

(b) Each High Contracting Party or party to a conflict, if so requested by the head of a force or mission to which this paragraph applies, shall:

- (i) so far as it is able, take such measures as are necessary to protect the force or mission from the effects of mines, booby-traps and other devices in any area under its control;
- (ii) if necessary in order effectively to protect such personnel, remove or render harmless, so far as it is able, all mines, booby-traps and other devices in that area; and
- (iii) inform the head of the force or mission of the location of all known minefields, mined areas, mines, booby-traps and other devices in the area in which the force or mission is performing its functions and, so far as is feasible, make available to the head of the

force or mission all information in its possession concerning such minefields, mined areas, mines, booby-traps and other devices.

3. Humanitarian and fact-finding missions of the United Nations System

- (a) This paragraph applies to any humanitarian or fact-finding mission of the United Nations System.
- (b) Each High Contracting Party or party to a conflict, if so requested by the head of a mission to which this paragraph applies, shall:
- (i) provide the personnel of the mission with the protections set out in sub-paragraph 2(b)(i) of this Article; and
 - (ii) if access to or through any place under its control is necessary for the performance of the mission's functions and in order to provide the personnel of the mission with safe passage to or through that place:
 - (aa) unless on-going hostilities prevent, inform the head of the mission of a safe route to that place if such information is available; or
 - (bb) if information identifying a safe route is not provided in accordance with sub-paragraph (aa), so far as is necessary and feasible, clear a lane through minefields.

4. Missions of the International Committee of the Red Cross

(a) This paragraph applies to any mission of the International Committee of the Red Cross performing functions with the consent of the host State or States as provided for by the Geneva Conventions of 12 August 1949 and, where applicable, their Additional Protocols.

(b) Each High Contracting Party or party to a conflict, if so requested by the head of a mission to which this paragraph applies, shall:

- (i) provide the personnel of the mission with the protections set out in sub-paragraph 2 (b) (i) of this Article; and
- (ii) take the measures set out in sub-paragraph 3 (b) (ii) of this Article.

5. Other humanitarian missions and missions of inquiry

(a) In so far as paragraphs 2, 3 and 4 of this Article do not apply to them, this paragraph applies to the following missions when they are performing functions in the area of a conflict or to assist the victims of a conflict:

- (i) any humanitarian mission of a national Red Cross or Red Crescent society or of their International Federation;
- (ii) any mission of an impartial humanitarian organization, including any impartial humanitarian demining mission; and
- (iii) any mission of enquiry established pursuant to the provisions of the Geneva Conventions of 12 August 1949 and, where applicable, their Additional Protocols.

(b) Each High Contracting Party or party to a conflict, if so requested by the head of a mission to which this paragraph applies, shall, so far as is feasible:

- (i) provide the personnel of the mission with the protections set out in sub-paragraph 2 (b) (i) of this Article; and
- (ii) take the measures set out in sub-paragraph 3 (b) (ii) of this Article.

6. Confidentiality

All information provided in confidence pursuant to this Article shall be treated by the recipient in strict confidence and shall not be released outside the force or mission concerned without the express authorization of the provider of the information.

7. Respect for laws and regulations

Without prejudice to such privileges and immunities as they may enjoy or to the requirements of their duties, personnel participating in the forces and missions referred to in this Article shall:

- (a) respect the laws and regulations of the host State; and
- (b) refrain from any action or activity incompatible with the impartial and international nature of their duties.

Article 13

Consultations of High Contracting Parties

1. The High Contracting Parties undertake to consult and cooperate with each other on all issues related to the operation of this Protocol. For this purpose, a conference of High Contracting Parties shall be held annually.
2. Participation in the annual conferences shall be determined by their agreed Rules of Procedure.
3. The work of the conference shall include:
 - (a) review of the operation and status of this Protocol;
 - (b) consideration of matters arising from reports by High Contracting Parties according to paragraph 4 of this Article;
 - (c) preparation for review conferences; and
 - (d) consideration of the development of technologies to protect civilians against indiscriminate effects of mines.
4. The High Contracting Parties shall provide annual reports to the Depositary, who shall circulate them to all High Contracting Parties in advance of the conference, on any of the following matters:

- (a) dissemination of information on this Protocol to their armed forces and to the civilian population;
- (b) mine clearance and rehabilitation programmes;
- (c) steps taken to meet technical requirements of this Protocol and any other relevant information pertaining thereto;
- (d) legislation related to this Protocol;
- (e) measures taken on international technical information exchange, on international cooperation on mine clearance, and on technical cooperation and assistance; and
- (f) other relevant matters.

5. The cost of the Conference of High Contracting Parties shall be borne by the High Contracting Parties and States not parties participating in the work of the conference, in accordance with the United Nations scale of assessment adjusted appropriately.

Article 14

Compliance

1. Each High Contracting Party shall take all appropriate steps, including legislative and other measures, to prevent and suppress violations of this Protocol by persons or on territory under its jurisdiction or control.
2. The measures envisaged in paragraph 1 of this Article include appropriate measures to ensure the imposition of penal sanctions against persons who, in relation to an armed conflict and contrary to the provisions of this Protocol, wilfully kill or cause serious injury to civilians and to bring such persons to justice.
3. Each High Contracting Party shall also require that its armed forces issue relevant military instructions and operating procedures and that armed forces personnel receive training commensurate with their duties and responsibilities to comply with the provisions of this Protocol.
4. The High Contracting Parties undertake to consult each other and to cooperate with each other bilaterally, through the Secretary-General of the United Nations or through other appropriate international procedures, to resolve any problems that may arise with regard to the interpretation and application of the provisions of this Protocol.

Technical Annex

1. Recording

- (a) Recording of the location of mines other than remotely-delivered mines, minefields, mined areas, booby-traps and other devices shall be carried out in accordance with the following provisions:
 - (i) the location of the minefields, mined areas and areas of booby-traps and other devices shall be specified accurately by relation to the coordinates of at least two reference

points and the estimated dimensions of the area containing these weapons in relation to those reference points;

- (ii) maps, diagrams or other records shall be made in such a way as to indicate the location of minefields, mined areas, booby-traps and other devices in relation to reference points, and these records shall also indicate their perimeters and extent; and
- (iii) for purposes of detection and clearance of mines, booby-traps and other devices, maps, diagrams or other records shall contain complete information on the type, number, emplacing method, type of fuse and life time, date and time of laying, anti-handling devices (if any) and other relevant information on all these weapons laid. Whenever feasible the minefield record shall show the exact location of every mine, except in row minefields where the row location is sufficient. The precise location and operating mechanism of each booby-trap laid shall be individually recorded.

(b) The estimated location and area of remotely-delivered mines shall be specified by coordinates of reference points (normally corner points) and shall be ascertained and when feasible marked on the ground at the earliest opportunity. The total number and type of mines laid, the date and time of laying and the self-destruction time periods shall also be recorded.

(c) Copies of records shall be held at a level of command sufficient to guarantee their safety as far as possible.

(d) The use of mines produced after the entry into force of this Protocol is prohibited unless they are marked in English or in the respective national language or languages with the following information:

- (i) name of the country of origin;
- (ii) month and year of production; and
- (iii) serial number or lot number.

The marking should be visible, legible, durable and resistant to environmental effects, as far as possible.

2. Specifications on delectability

(a) With respect to anti-personnel mines produced after 1 January 1997, such mines shall incorporate in their construction a material or device that enables the mine to be detected by commonly-available technical mine detection equipment and provides a response signal equivalent to a signal from 8 grammes or more of iron in a single coherent mass.

(b) With respect to anti-personnel mines produced before 1 January 1997, such mines shall either incorporate in their construction, or have attached prior to their emplacement, in a manner not easily removable, a material or device that enables the mine to be detected by commonly-available technical mine detection equipment and provides a response signal equivalent to a signal from 8 grammes or more of iron in a single coherent mass.

(c) In the event that a High Contracting Party determines that it cannot immediately comply with sub-paragraph (b), it may declare at the time of its notification of consent to be bound by this Protocol that it will defer compliance with sub-paragraph (b) for a period not to exceed 9 years from the entry into force of this

Protocol. In the meantime it shall, to the extent feasible, minimize the use of anti-personnel mines that do not so comply.

3. Specifications on self-destruction and self-deactivation

(a) All remotely-delivered anti-personnel mines shall be designed and constructed so that no more than 10% of activated mines will fail to self-destruct within 30 days after emplacement, and each mine shall have a back-up self-deactivation feature designed and constructed so that, in combination with the self-destruction mechanism, no more than one in one thousand activated mines will function as a mine 120 days after emplacement.

(b) All non-remotely delivered anti-personnel mines, used outside marked areas, as defined in Article 5 of this Protocol, shall comply with the requirements for self-destruction and self-deactivation stated in sub-paragraph (a).

(c) In the event that a High Contracting Party determines that it cannot immediately comply with sub-paragraphs (a) and/or (b), it may declare at the time of its notification of consent to be bound by this Protocol, that it will, with respect to mines produced prior to the entry into force of this Protocol, defer compliance with sub-paragraphs (a) and/or (b) for a period not to exceed 9 years from the entry into force of this Protocol.

During this period of deferral, the High Contracting Party shall:

- (i) undertake to minimize, to the extent feasible, the use of anti-personnel mines that do not so comply; and
- (ii) with respect to remotely-delivered anti-personnel mines, comply with either the requirements for self-destruction or the requirements for self-deactivation and, with respect to other anti-personnel mines comply with at least the requirements for self-deactivation.

4. International signs for minefields and mined areas

Signs similar to the example attached and as specified below shall be utilized in the marking of minefields and mined areas to ensure their visibility and recognition by the civilian population:

(a) size and shape: a triangle or square no smaller than 28 centimetres (11 inches) by 20 centimetres (7.9 inches) for a triangle, and 15 centimetres (6 inches) per side for a square;

(b) colour: red or orange with a yellow reflecting border;

(c) symbol: the symbol illustrated in the Attachment, or an alternative readily recognizable in the area in which the sign is to be displayed as identifying a dangerous area;

(d) language: the sign should contain the word "mines" in one of the six official languages of the Convention (Arabic, Chinese, English, French, Russian and Spanish) and the language or languages prevalent in that area; and

(e) spacing: signs should be placed around the minefield or mined area at a distance sufficient to ensure their visibility at any point by a civilian approaching the area."

ARTICLE 2: ENTRY INTO FORCE

This amended Protocol shall enter into force as provided for in paragraph 1 (b) of Article 8 of the Convention.

ANNEX II

Protocol on Prohibitions or Restrictions on the Use of Mines, Booby Traps and Other Devices (Protocol II) Original 1980 Version

Article 1

Material scope of application

This Protocol relates to the use on land of the mines, booby-traps and other devices defined herein, including mines laid to interdict beaches, waterway crossings or river crossings, but does not apply to the use of anti-ship mines at sea or in inland waterways.

Article 2

Definitions

For the purpose of this Protocol:

1. "Mine" means 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, and "remotely delivered mine" means any mine so defined delivered by artillery, rocket, mortar or similar means or dropped from an aircraft.
2. "Booby-trap" means any device or material which is designed, constructed or adapted to kill or injure and which functions unexpectedly when a person disturbs or approaches an apparently harmless object or performs an apparently safe act.
3. "Other devices" means manually-emplaced munitions and devices designed to kill, injure or damage and which are actuated by remote control or automatically after a lapse of time.
4. "Military objective" means, so far as objects are concerned, 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.
5. "Civilian objects" are all objects which are not military objectives as defined in paragraph 4.
6. "Recording" means a physical, administrative and technical operation designed to obtain, for the purpose of registration in the official records, all available information facilitating the location of minefields, mines and booby-traps.

Article 3

General restrictions on the use of mines booby-traps and other devices

1. This Article applies to:
 - (a) mines;
 - (b) booby-traps; and
 - (c) other devices.
2. It is prohibited in all circumstances to direct weapons to which this Article applies, either in offence, defence or by way of reprisals, against the civilian population as such or against individual civilians.
3. The indiscriminate use of weapons to which this Article applies is prohibited. Indiscriminate use is any placement of such weapons:
 - (a) which is not on, or directed 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.
4. All feasible precautions shall be taken to protect civilians from the effects of weapons to which this Article applies. Feasible precautions are those precautions which are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations.

Article 4

Restrictions on the use of mines other than remotely delivered mines, booby-traps and other devices in populated areas

1. This Article applies to:
 - (a) mines other than remotely delivered mines;
 - (b) booby-traps; and
 - (c) other devices.
2. It is prohibited to use weapons to which this Article applies in any city, town, village or other area containing a similar concentration of civilians in which combat between ground forces is not taking place or does not appear to be imminent, unless either:

(a) they are placed on or in the close vicinity of a military objective belonging to or under the control of an adverse party; or

(b) measures are taken to protect civilians from their effects, for example, the posting of warning signs, the posting of sentries, the issue of warnings or the provision of fences.

Article 5

Restrictions on the use of remotely delivered mines

1. The use of remotely delivered mines is prohibited unless such mines are only used within an area which is itself a military objective or which contains military objectives, and unless:

(a) their location can be accurately recorded in accordance with Article 7(l)(a); or

(b) an effective neutralizing mechanism is used on each such mine, that is to say, a self-actuating mechanism which is designed to render a mine harmless or cause it to destroy itself when it is anticipated that the mine will no longer serve the military purpose for which it was placed in position, or a remotely-controlled mechanism which is designed to render harmless or destroy a mine when the mine no longer serves the military purpose for which it was placed in position.

2. Effective advance warning shall be given of any delivery or dropping of remotely delivered mines which may affect the civilian population, unless circumstances do not permit.

Article 6

Prohibition on the use of certain booby traps

1. Without prejudice to the rules of international law applicable in armed conflict relating to treachery and perfidy, it is prohibited in all circumstances to use:

(a) any booby-trap in the form of an apparently harmless portable object which is specifically designed and constructed to contain explosive material and to detonate when it is disturbed or approached, or

(b) booby-traps which are in any way attached to or associated with:

(i) internationally recognized protective emblems, signs or signals;

(ii) sick, wounded or dead persons;

(iii) burial or cremation sites or graves;

(iv) medical facilities, medical equipment, medical supplies or medical transportation;

(v) children's toys or other portable objects or products specially designed for the feeding, health, hygiene, clothing or education of children;

(vi) food or drink;

- (vii) kitchen utensils or appliances except in military establishments, military locations or military supply depots;
- (viii) objects clearly of a religious nature;
- (ix) historic monuments, works of art or places of worship which constitute the cultural or spiritual heritage of peoples;
- (x) animals or their carcasses.

2. It is prohibited in all circumstances to use any booby-trap which is designed to cause superfluous injury or unnecessary suffering.

Article 7

Recording and publication of the location of minefields, mines and booby-traps

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

Article 8

Protection of United Nations forces and missions from the effects of minefields, mines and booby-traps

1. When a United Nations force or mission performs functions of peacekeeping, observation or similar functions in any area, each party to the conflict shall, if requested by the head of the United Nations force or mission in that area, as far as it is able:
 - (a) remove or render harmless all mines or booby traps in that area;
 - (b) take such measures as may be necessary to protect the force or mission from the effects of minefields, mines and booby traps while carrying out its duties; and
 - (c) make available to the head of the United Nations force or mission in that area, all information in the party's possession concerning the location of minefields, mines and booby traps in that area.
2. When a United Nations fact-finding mission performs functions in any area, any party to the conflict concerned shall provide protection to that mission except where, because of the size of such mission, it cannot adequately provide such protection. In that case it shall make available to the head of the mission the information in its possession concerning the location of minefields, mines and booby-traps in that area.

Article 9

International co-operation in the removal of minefields, mines and booby traps

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 remove or otherwise render ineffective minefields, mines and booby-traps placed in position during the conflict.

Technical Annex to the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby Traps and Other Devices (Protocol II)

Guidelines on recording

Whenever an obligation for the recording of the location of minefields, mines and booby traps arises under the Protocol, the following guidelines shall be taken into account.

1. With regard to pre-planned minefields and large-scale and pre-planned use of booby traps:
 - (a) maps, diagrams or other records should be made in such a way as to indicate the extent of the minefield or booby-trapped area; and

(b) the location of the minefield or booby-trapped area should be specified by relation to the coordinates of a single reference point and by the estimated dimensions of the area containing mines and booby traps in relation to that single reference point.

2. With regard to other minefields, mines and booby traps laid or placed in position:

In so far as possible, the relevant information specified in paragraph 1 above should be recorded so as to enable the areas containing minefields, mines and booby traps to be identified.

PART E

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