

CLINTON'S LANDMINE LEGACY

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SUMMARY AND RECOMMENDATIONS

“One of the biggest disappointments I've had as President, a bitter disappointment for me, is that I could not sign in good conscience the treaty banning land mines....”

President William Jefferson Clinton
October 6, 1999¹

President Bill Clinton has not fulfilled his pledge, first made in 1994, to lead the world to a total ban on antipersonnel landmines. Instead, the United States lags far behind most of the rest of the world, especially its closest military allies, in banning these indiscriminate weapons that continue to kill or maim more than 20,000 civilians each year. The U.S. is not among the 137 nations (more than two-thirds of the world) that have signed the 1997 Mine Ban Treaty that prohibits all use, production, trade, and stockpiling of antipersonnel mines.²

It is not too late for President Clinton to change his landmine legacy from one of good intentions but unfulfilled promises, to one of true global leadership. While laudably increasing resources for humanitarian mine action programs, President Clinton has not summoned enough political will on his watch to ban antipersonnel mines. Instead, he has deferred to a military that has agreed only reluctantly to get rid of the weapon six years from now, and then only if their conditions are met at that time.

Current U.S. policy, as announced in May 1998, is that by the year 2003 the United States will cease to use antipersonnel mines, except those contained in “mixed systems” with antitank mines, everywhere in the world except for Korea. By the year 2006, if alternatives have been found, the U.S. will cease all use of all antipersonnel mines and will join the Mine Ban Treaty.

The president has in essence left the decision to ban antipersonnel mines and join the Mine Ban Treaty to the next administration, or the one after that. By postponing the decision to join the treaty until 2006, the president has ceded leadership and abdicated responsibility on a crucial humanitarian issue that he in no small part personally brought to the attention of the rest of the world.

Unless President Clinton takes actions before departing office, his landmine legacy will include these elements:

- in refusing to join the Mine Ban Treaty now, the U.S. is keeping company with Russia, China, Iran, Iraq, Libya, North Korea, Burma, Syria, and Cuba;
- the U.S. is one of just two of NATO's nineteen nations that have not banned the use of antipersonnel mines;
- the U.S. still insists on the right to use antipersonnel mines in joint military operations with NATO and other military allies that are party to the Mine Ban Treaty, undermining the global movement toward a complete ban and possibly putting those nations at legal risk. The U.S. reserved the right to use antipersonnel mines during the Kosovo air war;
- the U.S. is one of just sixteen antipersonnel mine producing nations left in the world;
- the U.S. has the third or fourth largest stockpile of antipersonnel mines in the world, totaling more than 12 million, including 1.2 million of the long-lasting “dumb” (non-self-destructing) mines;
- the U.S. still maintains antipersonnel mine stockpiles in a number of countries that are party to the Mine Ban Treaty.

¹ The White House, Office of the Press Secretary, Remarks by the President at Comprehensive Test Ban Treaty Event, October 6, 1999.

² The formal title is the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction. Opened for signature in Ottawa, Canada on December 3, 1997. It is also sometimes called the Ottawa Convention or Ottawa Treaty.

Moreover, the president may leave office without stopping several disturbing developments under consideration that are clearly contrary to a ban:

- sometime in fiscal year 2001, the U.S. is to make a decision about producing at a cost of \$150 million a new mine system called RADAM that contains antipersonnel mines and would be prohibited under the Mine Ban Treaty;
- some in the Pentagon are insisting that the U.S. replacement munition for dumb mines contain a “battlefield override” feature that when used would revert the munition to dumb, indiscriminate status, and thus would be prohibited under the ban treaty. A production decision is expected in fiscal year 2002;
- the Air Force apparently has new plans to begin stockpiling Gator antipersonnel mines in Qatar, a party to the Mine Ban Treaty;
- the Air Force has plans to upgrade the dispensers carrying Gator antipersonnel mines in 2005, even though the stated objective is to have alternatives in place in 2006.

President Clinton will rightfully be able to claim that his legacy includes the fact that the U.S. spends more resources on mine clearance and victim assistance programs than any other nation, contributing more than \$300 million dollars during his term in office. He has also declared a permanent ban on the export of antipersonnel mines, destroyed three-fourths (3.3 million) of U.S. dumb mines, and put a cap on the U.S. inventory of all antipersonnel mines.

But it should be evident that President Clinton cannot claim to be a leader in the total eradication of antipersonnel mines when the U.S. continues to be one of the few nations insisting on the right to use and produce antipersonnel mines, and maintains more than 12 million mines with which to fight around the globe. The U.S. is a leader in treating the effects of the mine plague, by helping to remove mines from the ground and assisting victims, but it still accepts as necessary the cause of the plague—use of the weapon.

It appears very unlikely that the Pentagon will meet the 2006 target date if it proceeds as planned in its search for antipersonnel landmine alternatives. A reluctant and unenthusiastic Pentagon made very little progress from 1996 to 1998. Now, with prodding from Congress, the Pentagon has plans to spend more than \$820 million to develop alternatives. But it is still very uncertain if the search will be successful at all, and it is increasingly clear that it will not be completed by 2006. The search for alternatives for non-self-destructing mines is apparently producing results, but may be completely undermined by the inclusion of the “battlefield override” feature that would violate the treaty. The search for alternatives to self-destructing antipersonnel mines, particularly those in mixed systems, is still at the very early stages of identifying concepts.

On the positive side, the U.S. has increased its humanitarian contributions to mine affected countries across the world. The budget allocation for humanitarian mine action is important and reflects a commitment to alleviate human suffering. The U.S. is to be commended for its efforts in these areas. It should be noted, though, that about 20 percent of the funds U.S. officials cite as “humanitarian mine action” go to Pentagon research and development programs. Research and development aside, the bulk of spending on humanitarian mine action is done by the State Department, not the Defense Department. The State Department typically funds such things as establishment of mine action centers, mine surveys, mine awareness programs, and demining training programs.

It is little understood that U.S. military personnel are prohibited by law from entering minefields or removing mines during humanitarian demining missions. The Pentagon’s activities primarily consist of training deminers in other countries. Nearly eighty percent of the Pentagon’s appropriation for demining assistance is used for travel costs, allowances for U.S. military personnel, and other logistical aspects of moving personnel and equipment around the world. The percentage of U.S. funding that actually reaches the field and is used to directly support demining has never been quantified.

The focus of this report is the current status of U.S. landmine policy, landmine programs, and the actions taken in 1999 and 2000. For a detailed description of the history of U.S. mine policy and programs, see the U.S. country report written by Human Rights Watch in *Landmine Monitor Report 1999*.³

Recommendations

President Clinton still has the opportunity to vault the U.S. back into a leadership role in the international community on the landmine issue. As many other leaders around the world have done, President Clinton should exercise his authority to override the weak and flawed objections of the U.S. military and announce that the U.S. is prepared to join the Mine Ban Treaty.

- Before leaving office, President Clinton should submit the Mine Ban Treaty to the Senate for its advice and consent for accession, and should through executive actions begin immediate implementation of the treaty's provisions.⁴

Short of joining the treaty, there are other important steps in the right direction that President Clinton could take:

- Set a definitive deadline for joining the Mine Ban Treaty, not a conditional objective. Instruct the Department of Defense to develop plans to meet this deadline, using concrete milestones. Better still, make the deadline no later than 2003, instead of 2006. Current policy already calls for ending antipersonnel mine use by 2003, with exceptions for Korea and mixed mine systems. Removing those exceptions and joining the treaty would allow the U.S. to participate in the first Review Conference of the Mine Ban Treaty in 2004.
- Instruct the Department of Defense to begin the process of making the changes in war plans, doctrine, training, and manuals necessary for future combat without antipersonnel mines.
- Declare a ban or an indefinite moratorium on the production of antipersonnel landmines.
- Call upon Congress to make the declared permanent ban on the export of antipersonnel landmines a law this year.
- Commit the United States immediately to a policy of no use of antipersonnel mines in joint operations (NATO and otherwise) with states that have signed the Mine Ban Treaty. Similarly, commit the United States to a policy of no transiting of antipersonnel mines across the territory, air space or waters of Mine Ban Treaty signatory states.
- Instruct the Department of Defense to establish plans, procedures, and timetables for the destruction of all antipersonnel mines, and begin by placing in inactive status ADAM and other mines immediately.
- Instruct the Department of Defense to withdraw immediately all U.S. stockpiles of antipersonnel mines from countries that have signed the Mine Ban Treaty.
- Accelerate the Pentagon's search for alternatives for antipersonnel mines. The search should address not just new weapons and technologies, but also changes in tactics and operational concepts to achieve comparable military objectives.

³ International Campaign to Ban Landmines (ICBL), *Landmine Monitor Report 1999: Toward A Mine-Free World* (Washington, D.C.: Human Rights Watch, 1999), pp. 318-342. Human Rights Watch contributed the U.S. chapter of this global survey.

⁴ Since the treaty entered into force on March 1, 1999, governments can no longer sign the treaty, but must accede (in essence a one-step process of signing and ratifying). See articles 15 and 16 of the treaty.

- Take steps necessary to insure that any systems resulting from the Pentagon's landmine alternative programs are compliant with the Mine Ban Treaty.
- Remove from consideration the "battlefield override" feature of the non-self-destructing landmine alternatives program.
- Eliminate the RADAM program.

U.S. ANTIPERSONNEL LANDMINE POLICY

Current U.S. antipersonnel landmine policy is guided by Presidential Decision Directive (PDD) 64 issued on June 23, 1998. Although this document is classified, military and civilian officials have used details from it in many public forums and publications.⁵ The content is largely contained in a public letter from National Security Advisor Samuel Berger to Senator Patrick Leahy (Democrat, Vermont) dated May 15, 1998. The letter states that "the United States will sign the Ottawa Convention by 2006 if we succeed in identifying and fielding suitable alternatives to our anti-personnel landmines and mixed anti-tank systems by then." It also states that the U.S. will end the use of antipersonnel mines outside of Korea by 2003 (not including those in mixed systems),⁶ and will "aggressively pursue the objective of having APL alternatives ready for Korea by 2006" (including those in mixed systems).⁷ This built on the previous U.S. policy announcement in September 1997 by (1) including antipersonnel mines in mixed systems as part of the alternatives program and (2) stating for the first time that the U.S. intended to sign the treaty, albeit only if the search for alternatives were successful.⁸

The Pentagon has made clear that it considers the 2003 date as a "deadline," while the 2006 date is considered an "objective dependent on the on-going search for alternatives."⁹ The end of reliance on antipersonnel mines in mixed systems is considered to be a "goal" and the search for alternatives for them has "no deadline."¹⁰ In other words, the Pentagon retains the right to use munitions that contain a mix of antitank mines and antipersonnel mines without geographic or time restriction, while an open-ended and uncertain search for alternatives proceeds.

Antipersonnel landmine policy in the U.S. is made through an interagency process wherein representatives of the National Security Council evaluate the concerns of departments and agencies in order to make recommendations to the president for a decision. The Department of State, Department of Defense, and Joint Chiefs of Staff are the primary organs charged with implementing that decision.

There have been no changes in U.S. policy in the two years since PDD 64 was issued. Indeed there has been no further review of policy or consideration of changes, despite the rapidly spreading global embrace of a comprehensive ban. Today, the Mine Ban Treaty has been signed by 137 nations, more than two-thirds of the

⁵ See for example, "Anti-Personnel Landmine Alternatives (APL-A)," a briefing delivered by Colonel Thomas Dresen, the Project Manager for Mines, Countermine, and Demolitions to the National Defense Industrial Association's Forty-third Annual Fuze Conference, April 7, 1999, Slide 7. Hereafter cited as "Dresen APL-A Briefing."

⁶ Current U.S. policy refers to the antipersonnel components of mixed systems as "submunitions" despite their being type classified as antipersonnel mines during acquisition and explicit references to them as antipersonnel mines in official military publications regarding doctrine, tactics, training, and procedures.

⁷ Letter from National Security Advisor Samuel Berger to Senator Patrick Leahy, May 15, 1998.

⁸ The White House, Office of the Press Secretary, Fact Sheet: "U.S. Efforts to Address the Problem of Anti-Personnel Landmines," September 17, 1997.

⁹ Interview with Dr. James A. Schear, Deputy Assistant Secretary of Defense for Peacekeeping and Humanitarian Assistance, Office of Special Operations and Low Intensity Conflict, May 10, 2000. Also in attendance were staff members of the Office of the Secretary of Defense for Acquisition, Technology, and Logistics and the Joint Staff. Hereafter cited as "DoD Interviews, May 10, 2000."

¹⁰ DoD Interviews, May 10, 2000.

world, including all of NATO except the U.S. and Turkey, other major U.S. allies such as Japan, all of this hemisphere except Cuba, and all of the European Union except Finland. The treaty entered into force on March 1, 1999, faster than any major multilateral treaty ever, and continues to gain ratifications and accessions at a remarkable pace (ninety-six to date). The International Campaign to Ban Landmines' newly created global monitoring initiative (Landmine Monitor) reports that use of antipersonnel mines appears to have diminished significantly in recent years. Some twenty million antipersonnel mines have been destroyed from global stockpiles. Exports of antipersonnel mines worldwide have slowed to a trickle. The number of antipersonnel mine producing states has dropped from fifty-four to sixteen, though the U.S. is sadly still among the ranks of those refusing to ban production. The number of new mine victims is decreasing in heavily infested nations such as Afghanistan, Bosnia, Cambodia, and Mozambique.

Korea and Military Utility

The president cited the situation in Korea as the paramount reason for not signing the treaty in September 1997. Accepting the advice of the Joint Chiefs of Staff, the president declared that antipersonnel mines were critical to the defense of South Korea.¹¹ Several retired military leaders have questioned the utility of antipersonnel mines in Korea, citing the overwhelming technological superiority of U.S. weapons being able to compensate for having no antipersonnel mines. Lt. General James Hollingsworth, former commander of U.S. forces in Korea, has said, "There is indeed a military utility to APLs [antipersonnel landmines], but in the case of U.S. forces in Korea it is minimal, and in some ways even offset by the difficulty our own APLs pose to our brand of mobile warfare.... Not only civilians, but U.S. armed forces, will benefit from a ban on landmines. U.S. forces in Korea are no exception."¹²

The Pentagon reportedly validated its requirement for antipersonnel mines in Korea in a series of war games and computer simulations. The Pentagon has never made public the assumptions or techniques used in its models, citing the use of classified data. It is unknown if these models and their results were subjected to a peer review or competitive analysis. One report, citing Pentagon officials involved, has said that the computer war games were seriously flawed.¹³

President Clinton also cited the need for mixed mine systems as a key reason for not signing the treaty, noting that the antipersonnel mines are designed to protect the antitank mines from tampering or removal by enemy forces.¹⁴ One line of argument holds that antipersonnel mines delay an enemy force by twenty minutes from breaching a minefield containing both antipersonnel and antitank mines, thus allowing extra air strikes on the enemy.¹⁵ However, this applies only to a breach of a minefield by dismounted (on foot) forces. Antipersonnel mines have little to no utility against forces mounted in armored vehicles. Breaching a minefield by forces mounted in armored vehicles is the most common threat; the military's own doctrine acknowledges this by stating that "[b]ased on current technology, most breaching operations are accomplished by mechanical or explosive means."¹⁶

The president and others have often complained that during treaty negotiations in Oslo in September 1997 other states exempted their more dangerous antitank mines which were protected by antihandling devices (instead of antipersonnel mines) while purposefully excluding safer U.S. mixed mine systems. This is a fallacy. The treaty permits antitank mines with antihandling devices, but only if they explode from an intentional act (i.e., an

¹¹ The White House, Fact Sheet: "U.S. Requirements for Landmines in Korea," September 17, 1997.

¹² See General Hollingsworth's Foreword to Demilitarization for Democracy, "Exploding the Landmine Myth in Korea," August 1997, p. ii. He also said, "To be blunt, if we are relying on these weapons to defend the Korean peninsula, we are in big trouble.... North Korea's mechanized assault can be destroyed well north of Seoul without the use of U.S. APLs. I never counted on our APLs to make much of a difference....", p. i.

¹³ Demilitarization for Democracy, "Exploding the Landmine Myth in Korea," August 1997, p. ii.

¹⁴ The White House, Fact Sheet: "Anti-Tank Munitions," September 17, 1997.

¹⁵ Cited in Lieutenant General [Ret.] Robert Gard Jr., "Alternatives to Antipersonnel Landmines," Vietnam Veterans of America Foundation's Monograph Series, vol. 1, no. 1, Spring 1999, p.15.

¹⁶ Department of the Army, Field Manual (FM) 20-32, *Mine/Countermine Operations*, May 29, 1998, chapter 2.

enemy soldier's attempt to tamper or remove); if they explode from an unintentional act of a person, they are considered antipersonnel mines and therefore banned. However, states parties to the ban treaty have yet to clarify precisely what constitutes an intentional or unintentional act, or what antitank mines and/or antihandling devices are permissible.

Others have argued that landmines have little to no utility in the war fighting principles currently being developed and adopted by the U.S. military for the 21st century. One argument notes that mines violate the tenets of dominant maneuver, precision engagement, and focused logistics that form the backbone of Joint Vision 2010, the foundation for the military's "revolution" in military affairs.¹⁷ Non-self-destructing mines would actually hinder implementation of Joint Vision 2010 because they are World War II technology and employed in ways not different than they were in that conflict and impose an inordinate burden on logistics assets. According to an assessment by the Defense Intelligence Agency, modern U.S. self-destruct antitank mines—the ones in mixed systems—may be obsolete by the end of this decade because of the proliferation of countermining systems that will be able to neutralize these mines that rely on magnetic influence fuzes.¹⁸

Following is a summary of U.S. actions regarding landmine policy in 1999 and 2000 in a number of different fora.

Congress

No free-standing legislation on landmine policy has been introduced since 1997. In 1998, the Defense Authorization Act for Fiscal Year (FY)¹⁹ 1999 contained an amendment offered by Senator Leahy that provided funding for the alternatives program.²⁰ It also called for two independent scientific studies on alternatives. The Act also contained a provision allowing the president to waive the one-year moratorium on antipersonnel mine use, beginning in February 1999, that was signed into law by President Clinton in 1996.²¹ This was part of an agreement reached between the administration and Senator Leahy in return for the qualified commitment to join the Mine Ban Treaty by 2006.

In 1999, the ban on U.S. antipersonnel mine exports, in place since October 1992, was extended until 2003. No new legislation regarding antipersonnel mines has been introduced in the current session of Congress.

Mine Ban Treaty

The U.S. sent Ambassador Donald Steinberg (the president's Special Representative for Humanitarian Demining) as an unofficial observer to the First Meeting of States Parties to the Mine Ban Treaty held in Maputo, Mozambique in May 1999. President Clinton also sent a message to the meeting, which was read aloud during the opening plenary. U.S. representatives have also participated as unofficial observers in some of the intersessional standing committees of experts meetings on mine clearance, victim assistance, and general status of the treaty, held in December 1999, March 2000, and May 2000.

The United States abstained in the vote on December 1, 1999 for United Nations General Assembly Resolution 54/54 B that called for the universalization and implementation of the 1997 Mine Ban Treaty. The vote was 139 nations in favor, one against, and twenty abstentions. Joining the U.S. in abstaining in this vote were Azerbaijan, China, Cuba, Egypt, India, Iran, Israel, Kazakhstan, Libya, Marshall Islands, Micronesia, Morocco, Myanmar, Pakistan, Russia, South Korea, Syria, Uzbekistan, and Vietnam. Lebanon voted against. The U.S. also

¹⁷ Dr. Edwin Deagle, Jr., "U.S. Military Alternatives to Antipersonnel Landmines," a study prepared for the Vietnam Veterans of America Foundation and presented to the National Academy of Sciences' Committee to Examine Alternative Technologies to Replace Anti-Personnel Landmines, May 24, 2000, slide 11.

¹⁸ Deagle briefing, slides 18 and 19 citing a Joint Staff (J-8) briefing titled "Non-Material Landmine Alternatives," July 12-16, 1999.

¹⁹ Note to reader: U.S. Government fiscal years (FY) begin on the first day of October in the previous calendar year and end on the last day of September of the current calendar year.

²⁰ Public Law 105-261, Section 248.

²¹ Public Law 104-107, page 110 STAT. 751

abstained on pro-ban treaty U.N. resolutions in 1997 and 1998. No mention was made of antipersonnel mines in President Clinton's remarks to members of the fifty-fourth session of the U.N. General Assembly on September 21, 1999.

Although Human Rights Watch and other members of the U.S. Campaign to Ban Landmines have urged the U.S. to use its diplomatic clout to encourage others to join the Mine Ban Treaty as soon as possible, this does not appear to have occurred. There is also no recent evidence, however, that the United States has been actively trying to dissuade other governments from joining the ban treaty.

In January 2000, Democratic presidential candidate Senator Bill Bradley said the U.S. should accede to the ban treaty immediately. He said, "I have concluded that the time has come for the U.S. to join in strengthening the international ban on...antipersonnel landmines. At one time, the United States was a world leader in the effort to ban antipersonnel mines. Since then, however, we have abdicated our leadership position."²² He said, "As President I will sign the Ottawa Treaty and work for its ratification in the Senate."²³ In response, candidate and Vice President Al Gore simply endorsed President Clinton's policy. Senator Bradley subsequently withdrew from the race.

Convention on Conventional Weapons (CCW)

The United States ratified Amended Protocol II of the CCW on May 24, 1999, slightly more than three years after it was negotiated. For many in the U.S. government and U.S. military, the Protocol II approach to mines—not banning, but instead placing certain restrictions and technical requirements on certain uses of certain types of antipersonnel mines—remains the preferred approach. The U.S. participated in the First Annual Conference of States Parties to Amended Protocol II held in Geneva from December 15-17, 1999. In a report submitted at this conference, the U.S. declared that it has taken all steps required to be in compliance with the amended protocol. This included modifying 670,000 M14 antipersonnel mines by attaching metal washers to make them detectable.²⁴ These mines are designated for use in Korea.

At that meeting, as well as a subsequent meeting of governmental experts for Protocol II on May 31, 2000 in Geneva, the U.S. introduced a series of proposals for strengthened restrictions on antipersonnel and antitank (antivehicle) landmines. For antipersonnel mines, the U.S. proposed increasing the required reliability rate for self-destruction from 90 percent up to 95 percent and for self-deactivation from 99.9 percent up to 99.99 percent. The U.S. also proposed that all antivehicle mines be detectable, and that remotely-delivered antivehicle mines have self-destruct and self-deactivation features. The U.S. also proposed adding compliance procedures (possibly similar to those in the Mine Ban Treaty).²⁵

In his statement to the conference, the head of the U.S. delegation Michael Matheson of the State Department said, "In the view of the United States, the Amended Protocol is an essential part of the strategy needed to deal with the threat of indiscriminate use of landmines. This Protocol is an instrument that can attract adherence of all states, including those which are not able to accept a total prohibition on anti-personnel mines at this time.... [I]t has been our strong hope and expectation that all states can be brought to support and adhere to this Protocol, whether they are party to the Ottawa Convention or not."²⁶

²² Arms Trade Insider no. 26, "Bradley Supports Ottawa Treaty Banning Landmines," January 19, 2000.

²³ Quoted in the email newsletter of the US Campaign to Ban Landmines, January 24, 2000.

²⁴ United States of America, "National Annual Report CCW/AP.II/CONF.1/NAR.13," November 5, 1999, p. 4. This report is required under article 13 of the amended protocol.

²⁵ U.S. "non-paper" titled "Possible Improvements to the Convention on Conventional Weapons," obtained by Human Rights Watch October 27, 1999. See also, U.S. Information Service, "U.S. Wants to Strengthen Landmine Protocol to Make Mines More Detectable," June 1, 2000.

²⁶ Statement of Michael J. Matheson to the First Annual Conference of Parties to the Amended Mines Protocol, December 15, 1999.

Conference on Disarmament

Since 1997, U.S.-backed efforts at negotiating any type of international agreement on antipersonnel mines at the Conference on Disarmament (CD) have failed. Predictably, no progress occurred during the 1999 session. Several proposals for the appointment of a special coordinator for antipersonnel mines were made, but none were adopted by the conference. The agenda item under which antipersonnel mines are addressed has again been adopted for the 2000 session.²⁷ U.S. Representative to the CD Ambassador Robert Grey affirmed that the U.S. still seeks a “role for the Conference in negotiating a comprehensive ban on the transfer of antipersonnel landmines.”²⁸ The impasse in the CD over issues relating to nuclear disarmament and other topics continue to stall any action on antipersonnel mines in 2000.

ALTERNATIVES TO ANTIPERSONNEL MINES²⁹

In May 1996, the U.S. began a search for alternatives to antipersonnel landmines so that the military could completely eliminate their use “as soon as possible.” A little more than a year later, a target date of 2006 was established for fielding alternatives. From 1996 to 1998 a reluctant and unenthusiastic Pentagon made little progress. Though a serious effort appears underway today, it seems unlikely that the Pentagon will succeed in identifying alternatives for all antipersonnel mines, especially those in mixed systems, before 2006, let alone fielding the alternatives into the combat forces by then.

Of even greater concern, the Mine Ban Treaty would clearly prohibit some alternatives under consideration. What can only be characterized as disturbing interpretations have apparently been made inside the Pentagon during the bureaucratic process to implement the President’s policy. For example, the deputy secretary of defense, in a March 1999 memorandum setting out the program objectives for one of the alternatives programs stated that the effort should “provide a range of system activation and target discrimination capabilities.”³⁰ It did not rule out target (victim) activated systems or explicitly instruct compliance with the Mine Ban Treaty.

The Defense Authorization Act for FY 1999 required the secretary of defense to submit to Congress an annual report describing the progress made in identifying technologies and concepts for landmine alternatives.³¹ The first report was submitted by April 1, 2000.

While there have apparently been numerous internal Pentagon studies on landmine alternatives concepts, there has yet to be an independent evaluation of the available technologies and solutions for replacing antipersonnel mines on the modern battlefield. Section 248 of the National Defense Authorization Act for FY 1999 requires that the Pentagon enter into two contracts with appropriate scientific organizations, to study existing and new technologies and concepts that could serve as landmine alternatives.³² The National Academy of Sciences is currently conducting one of the studies. Their report is due by the end of 2000. Lawrence Livermore National Laboratory and Los Alamos National Laboratory are conducting the second study. The date for the submission of their report is not known.

The Pentagon is focused on material solutions as landmine alternatives. Each of the three “tracks” it is pursuing seems destined to have the Pentagon acquire a new weapon. But, alternatives to antipersonnel mines can take many forms. Not all of the solutions would necessarily require a material solution such as the procurement of a new or modified weapon. Non-material solutions to compensate for the removal of antipersonnel landmines

²⁷ Agenda for the 2000 Session, CD/1603, January 18, 2000.

²⁸ UNOG Press Release, February 17, 2000.

²⁹ See Human Rights Watch Backgrounder, “U.S. Programs to Develop Alternatives to Antipersonnel Mines,” April 2000.

³⁰ Deputy Secretary of Defense, “Memorandum: Landmine Alternatives,” March 23, 1999 obtained by Human Rights Watch in a Freedom of Information Act (FOIA) request, May 16, 2000.

³¹ Public Law 105-261, p. 112 STAT. 1958.

³² Ibid.

from the U.S. inventory could include changing tactics and doctrine, increasing the number of other weapons systems, or retro-fitting existing mine systems to remove the antipersonnel mine component.

Numerous retired military leaders have stated that existing U.S. weapons and capabilities can compensate for the removal of antipersonnel mines from the U.S. inventory. Perhaps best known is the April 1996 open letter to President Clinton from fifteen retired U.S. military commanders, including a former Chairman of the Joint Chiefs of Staff, a former commander of U.S. forces in Korea, and a former commander of U.S. forces in Europe.³³

The Pentagon's figures for current plans through FY 2005 indicate that more than \$300 million will be spent on research and development, and more than \$500 million on procurement of mine alternatives. The funding requests contained in President Clinton's budget for research, development, test, and evaluation and procurement categories for each track of the antipersonnel landmine alternatives program are presented below.³⁴

Funding for U.S. Landmine Alternatives Programs (in thousands of dollars)									
	Program	FY 1999	FY 2000	FY 2001 (req.)	FY 2002 (est.)	FY 2003 (est.)	FY 2004 (est.)	FY 2005 (est.)	Total
Track 1	NSD-A	13,856	17,734	12,538	60,811	121,809	121,562	121,448	469,758
Track 1	RADAM	0	7,967	47,674	47,621	47,543	0	0	150,805
Track 2	Self-Healing Minefield, Tags, others	6,971	13,000	9,925	0	0	0	0	29,596 ³⁵
Track 3	Mixed System Alternatives	0	0	23,800	26,267	26,340	43,797	50,081	170,285
Total		20,827	38,701	93,937	134,699	195,692	165,359	171,529	820,744

Track 1

Track 1 consists of two separate programs, RADAM and NSD-A.

RADAM

RADAM combines seven antitank mines from the Remote Anti-Armor Mine System (RAAMS) with five antipersonnel mines from the Area Denial Antipersonnel Munition (ADAM) into one projectile.³⁶ The Department of Defense is pursuing this program because the use of ADAM antipersonnel mines alone will be prohibited in 2003, but use of this new mixed system (and all other mixed systems) will still be permitted by U.S. policy.

The Pentagon has conceded that RADAM “does not technically comply” with the Mine Ban Treaty.³⁷ RADAM as such is a wasteful stopgap that could no longer be used as early as 2006 if current policy remains in effect. The U.S. would then have to spend considerable sums to destroy RADAM or reconvert back to RAAMS.

Last year, the Pentagon asked for \$48.25 million for RADAM, but Congress reduced the amount to \$8 million, for pre-production engineering and manufacturing development activities only.³⁸ This year, the Army has

³³ Full-page open letter to President Clinton, *New York Times*, April 3, 1996. Paid for by Vietnam Veterans of America Foundation.

³⁴ All data extracted from DoD-wide and Army FY 2000 and FY 2001 Research and Development Descriptive Summary (RDDS) for Program Element (PE) 0604808A and PE 0602702E, February 1999, February 2000.

³⁵ DARPA Track 2 project costs for FY 2002-2005 are not separately broken out in its budget justification documents and are not reported here. They likely amount to tens of millions of dollars.

³⁶ “Anti-Personnel Landmine Alternatives (APL-A)” a briefing by Major Ted Jennings, Office of the Project Manager for Mines, Countermine and Demolitions presented at the National Defense Industrial Association's International Infantry and Small Arms Symposium and Exhibition, June 21-24, 1999, slide 19. Hereafter cited as “Jennings APL-A Briefing.”

³⁷ Department of Defense, “Landmines Information Paper,” March 3, 1999, p. 8.

requested \$47.7 million for RADAM procurement in its FY 2001 budget request.³⁹ The total program cost for RADAM is estimated to be \$150 million for 337,000 munitions through FY 2004.⁴⁰ An acquisition decision for RADAM may occur as early as the first quarter of FY 2001 and deployment as early as the first quarter of 2002.⁴¹

NSD-A and the battlefield override system

The non-self-destruct (antipersonnel mine) alternative (NSD-A) program will result in a “hand emplaced munition developed to meet the mission requirements formerly accomplished by M14 and M16 non self-destruct antipersonnel mines.”⁴² The NSD-A system consists of a munition (apparently an existing antipersonnel mine like the M16) with a modified sensor/fuze package, a signal repeater unit, and a control unit to activate the munition once the target has been confirmed as a combatant by a U.S. soldier (“man-in-the-loop”). The Army awarded contracts totaling nearly \$70 million to Alliant Techsystems (Hopkins, Minnesota) and Textron Defense Systems Corporation (Wilmington, Massachusetts) on December 3, 1998 for prototype development of the NSD-A.⁴³ NSD-A underwent accelerated prototype assessment testing in October 1999 at Fort Benning, Georgia.

The Pentagon plans to eventually procure 523,000 munition systems between FY 2002 and FY 2005.⁴⁴ The production decision for NSD-A is scheduled for the fourth quarter of FY 2002.⁴⁵ DoD is currently developing a sole source justification for combining the contract for a joint award to Alliant and Textron for engineering support and qualification testing.⁴⁶ Alliant and Textron announced on June 22, 2000 an agreement to jointly develop and produce NSD-A.⁴⁷

The prototype NSD-A has a feature that allows the munition to function in a target (victim) activated mode. The U.S. soldier would no longer be “in the loop.” The munition would become an indiscriminate mine, ready to explode at the footstep of a person, be it soldier or civilian. It would thus be prohibited by the Mine Ban Treaty. In a presentation during a public session of the National Academy of Sciences committee on landmine alternatives, Pentagon acquisition officials discussed this feature as a “battlefield override system.” This has also been referred to as a “command fire” and “command activation” feature—confusing names since the munition would no longer be command-detonated, that is, a soldier would no longer decide whether or not to explode the weapon, but it instead would be triggered by the contact of a person.⁴⁸

Officials from the Department of Defense have stated that this feature is an option separate from the basic man-in-the-loop operation and is merely being explored in the engineering and manufacturing development of the NSD-A. On February 28, 2000, Senator Leahy wrote a letter to the Deputy Defense Secretary to express concern about the battlefield override system. In response, Under Secretary of Defense for Policy Walter Slocombe stated that “exploring this [battlefield override] feature may provide as-of-yet-unforeseen insights in developing suitable

³⁸ These activities will be carried out at Lone Star Army Ammunition Plant, a government owned facility in Texarkana, Texas operated by Day and Zimmerman (Philadelphia, Pennsylvania). RADAM will undergo testing at Yuma Proving Ground (Yuma, Arizona).

³⁹ Office of the Under Secretary of Defense (Comptroller), “National Defense Budget Estimates for Fiscal Year 2001, Procurement Programs (P-1),” February 2000, p. A-14.

⁴⁰ Assistant Secretary of the Army for Financial Management and Comptroller, “Appropriation: 2034 Procurement of Army Ammunition, FYDP Procurement Annex,” February 14, 2000, p. 26. The 337,000 RADAM systems would include 1,685,000 ADAM antipersonnel mines and 2,359,000 RAAM antitank mines.

⁴¹ Department of the Army, “RDDS, PE 0604808A: Landmine Warfare,” February 2000, p. 1069.

⁴² Dresen APL-A Briefing, slide 10.

⁴³ U.S. Army TACOM-ARDEC, Procurement Award Notices DAAE30-99-C-1010 and DAAE30-99-C-1011, December 3, 1998.

⁴⁴ U.S. Army TACOM-ARDEC, Solicitation Notice DAAE30-99-R-0108, February 29, 2000.

⁴⁵ Department of the Army, RDDS, PE 0604808A, February 2000, p. 1069.

⁴⁶ U.S. Army TACOM-ARDEC, Solicitation Notice DAAE30-99-R-0108, February 29, 2000.

⁴⁷ Alliant Integrated Defense Company, Press Release, June 22, 2000.

⁴⁸ “Strategic and Tactical Landmine Usage Overview,” a briefing presented to the National Academy of Sciences Committee to Examine Alternative Technologies to Replace Anti-Personnel Landmines, December 9-11, 1999, Arlington, Virginia by Greg Bornhoft (BRTRC Technology Research Corporation), representing the U.S. Army Engineer School.

alternatives.”⁴⁹ Senator Leahy wrote back that he was “perplexed” by that statement, since “it is clear to me that the feature is being included because some field commanders have never accepted the Administration’s 1997 policy to accede to the Ottawa Convention.” He further stated that his continued support for the NSD-A program is dependent on the omission of the battlefield override feature.⁵⁰ A final decision regarding incorporation of a target-actuated feature into the final NSD-A munition will occur prior to the final production decision.⁵¹

Track 2

The Defense Advanced Research Projects Agency (DARPA) is responsible for Track 2 of the landmine alternatives program, which was initiated in October 1997. The first research and development procurement under Track 2 was released by DARPA on June 14, 1999 for proposals for a “self-healing minefield” wherein surface laid antitank mines have the ability to move to close breaches in antitank minefields made by enemy forces. DARPA awarded the first contract to Alliant Techsystems on April 19, 2000 for \$5 million.⁵² Another \$6.5 million contract was awarded to Science Applications International Corporation (San Diego, California) on June 6, 2000.⁵³ Another project being undertaken by DARPA is to use microelectronic tags to identify targets for direct and indirect fire systems, typically minimally guided munitions.⁵⁴ Apparently, these small tagging devices would act as “thistles” and attach themselves to persons entering an area sown with them.

Track 3

Track 3 of the antipersonnel landmine alternatives program, the search for alternatives to mixed mine systems, originated in PDD 64. Deputy Secretary of Defense Hamre signed a directive authorizing concept exploration on March 23, 1999 and it is anticipated that the Pentagon will spend \$170 million through FY 2005. The U.S. Army released a broad agency announcement (BAA) soliciting concepts for Track 3 in August 1999. This solicitation was withdrawn on September 8, 1999 for unspecified reasons. The U.S. Army Tank-Automotive and Armaments Command in conjunction with the Communications and Electronics Command issued a BAA on March 27, 2000 to solicit submissions for component technology that may provide or enhance near, mid, and far term solutions to the Track 3 program.

The Army released another BAA on February 1, 2000 for systems and operational concepts for the Rapid Tactical Terrain Limiter (RATTLER) which apparently replaced the August 1999 solicitation. In this BAA is the statement that the “U.S. Government desires to be in a position to be considered compliant with the Ottawa Convention by 2006.”⁵⁵ Additionally, the definition of antipersonnel mine in Appendix J of the solicitation is the definition used in the Mine Ban Treaty.⁵⁶ The Army awarded a total of \$800,000 to eight contractors for concept exploration studies for RATTLER on May 4, 2000.

PRODUCTION OF ANTIPERSONNEL MINES

The United States has not banned or placed a moratorium on the production of antipersonnel mines. The stockpile cap announced on January 17, 1997 does not preclude the production of new antipersonnel mines to replace those used in future combat operations.⁵⁷ Yet, there has been no antipersonnel mine production in the U.S. since 1996,⁵⁸ and the services have no known plans for future production.

⁴⁹ Letter to Senator Leahy from Under Secretary of Defense for Policy Walter Slocombe, April 25, 2000.

⁵⁰ Letter to the Under Secretary of Defense for Policy Walter Slocombe from Senator Leahy, May 10, 2000.

⁵¹ DoD interviews, May 10, 2000.

⁵² U.S. Army TACOM-ARDEC, Procurement Award Notice DAAE30-00-C-1047, April 19, 2000.

⁵³ U.S. Army TACOM-ARDEC, Procurement Award Notice DAAE30-00-C-1055, June 6, 2000.

⁵⁴ DARPA, RDDS, PE 0602702E, February 2000, p. 93.

⁵⁵ U.S. Army TACOM-ARDEC, Rapid Tactical Terrain Limiter (RATTLER) solicitation package DAAE30-00-BAA-0100, February 1, 2000, p. 1.

⁵⁶ RATTLER BAA, p. 19.

⁵⁷ DoD Interviews, May 10, 2000.

⁵⁸ Information obtained from search of database at <http://www4.ioc.army.mil/ac/enter.htm>

In April 2000, Human Rights Watch wrote to twenty-seven companies identified in its 1997 report "Exposing the Source" as past producers of antipersonnel landmines and their components. These companies had refused to join nineteen other U.S. companies in 1996 and 1997 in renouncing future involvement in mine production.⁵⁹ One of these twenty-seven companies, Quantic Industries Inc. (Hollister, California), has since changed its position and declared that it has adopted "a policy of not knowingly selling any product that is intended for use in an antipersonnel mine."⁶⁰

The companies that to our knowledge have not yet renounced antipersonnel mine production include such well-known names as General Electric, Lockheed Martin, Raytheon and Alliant Techsystems. The full list follows: AAI Corp (Hunt Valley, Maryland), Action Manufacturing, Co. (Philadelphia, Pennsylvania), Aerospace Design, Inc. (Cerritos, California), Allen-Bradley (Milwaukee, Wisconsin), Alliant Precision Fuzes (formerly Accudyne Corp.) (Janesville, Wisconsin), Alliant Techsystems, Inc. (Hopkins, Minnesota), Amron Corporation (Waukesha, Wisconsin), BI Technologies (Fullerton, California), CAPCO, Inc. (Grand Junction, Colorado), Dale Electronics, Inc. (Columbus, Nebraska), Day & Zimmerman, Inc. (Philadelphia, Pennsylvania), Stamped Products Inc. (formerly EMCO, Inc.) (Gadsden, Alabama), Ensign-Bickford Industries, Inc. (Simsbury, Connecticut), Ferrulmatic, Inc. (Totowa, New Jersey), Formworks Plastics, Inc. (Orange, California), General Electric Company (Fairfield, Connecticut), Intellitec (DeLand, Florida), Lockheed Martin Corporation (Bethesda, Maryland), Mason, Hangar, Silas Mason Co., Inc. (Lexington, Kentucky), Nomura Enterprise, Inc. (Milan, Illinois), Parlex Corp. (Methuen, Massachusetts), Raytheon (Lexington, Massachusetts), and Vishay Intertechnology, Inc. (Sanford, Maine).

Three other past producers appear to have gone out of business. Letters to Consolidated Industries, Inc. (Huntsville, Alabama), Primetec, Inc. (Naples, Florida), and Fort Belknap Industries (Harlem, Montana) were returned to Human Rights Watch with no mail forwarding service available. None of these companies are currently registered on the Department of Defense Central Contractor Registry, a prerequisite for bidding on defense contracts. Attempts to contact these companies by telephone also failed.

The U.S. Army recently completed the procurement of 13,000 Volcano antitank mines for approximately \$46 million.⁶¹ Previously, Volcano was produced only as a "mixed" system with both antipersonnel and antitank mines packaged together. This antitank-only procurement was part of the Pentagon's response to the one-year antipersonnel landmine use moratorium scheduled to take effect in February 1999, which was subsequently nullified. Thus, the Army seemed, at one time, prepared to accept systems that contained only antitank mines. This program also involved other upgrades for the system including modifications to the safe and arm mechanism and the dispenser control unit.⁶²

TRANSFER OF ANTIPERSONNEL MINES

The export of U.S. antipersonnel mines has been banned through legislation since October 23, 1992.⁶³ Claymore mines were exempted from this ban in 1996.⁶⁴ This export ban has been extended several times, most recently until 2003.⁶⁵ The Clinton Administration announced in January 1997 that the U.S. "will observe a

⁵⁹ Human Rights Watch Arms Project, "Exposing the Source: U.S. Companies and the Production of Antipersonnel Mines," *A Human Rights Watch Short Report*, vol. 9, no. 2 (G), April 1997. Among the companies renouncing are Motorola, Hughes Aircraft, Olin Ordnance, and Dyno Nobel.

⁶⁰ Letter to Human Rights Watch from Robert Valenti, President, Quantic Industries, Inc., May 1, 2000.

⁶¹ Assistant Secretary of the Army for Financial Management and Comptroller, "Appropriation: 2034 Procurement of Ammunition, Army, FYDP Procurement Annex," February 14, 2000, p. 31.

⁶² Department of the Army, "RDDS, PE 0604808A: Landmine Warfare," February 1999, p. 1133.

⁶³ Public Law 102-484, Section 1365; 22 U.S.C., 2778 note.

⁶⁴ Claymore is a generic term used for the U.S. M18/M18A1 directional fragmentation mine. Throughout this report, the familiar generic usage will be retained. The exception for the Claymore in the definition of antipersonnel mine was used in subsequent legislation which serves to exempt them from the transfer ban legislation.

⁶⁵ Conference Report on H.R. 3194, Consolidated Appropriations Act, 2000, Sec. 553.

permanent ban on the export and transfer of APL.”⁶⁶ However, the permanent ban has not been codified into law by Congress. Prior to the export ban, the U.S. exported 4.4 million antipersonnel mines to thirty-two countries between 1969 and 1992.⁶⁷

Transiting Mines

An issue related to transfer is that of “transit.” The Mine Ban Treaty defines transfer to include “the physical movement of antipersonnel mines into or from national territory,”⁶⁸ but some U.S. officials have stated that this does not prohibit the U.S. from “transiting” its antipersonnel mines through the territory, airspace, or waters of a party to the ban treaty. Given the fact that the U.S. has stockpiled mines in a number of states parties, and has historically used the territory of some states parties to facilitate military operations, this is a controversial issue. A number of states parties, as well as the International Committee of the Red Cross, have said that in their legal judgment, such transiting would be prohibited by the treaty.⁶⁹ The U.S. may have made certain bilateral arrangements with its allies who are party to the treaty to account for these contingencies. The legal interpretation made by the U.S. regarding the meaning and application of the term transfer is not publicly available, nor have officials in public forums addressed it.

Transfer of Non-Detectable Antitank Mines

It is not known whether the Pentagon has implemented an announced 1996 ban on the transfer of low metal content antitank mines. This was a commitment made by the U.S. upon adopting CCW Amended Protocol II. Although this ban was an objective of the U.S. during CCW negotiations, it was not adopted by the conference. Low metal content antitank mines pose a great danger to peacekeepers and deminers. The article-by-article analysis submitted to the Senate by the president reads: “As a unilateral matter the U.S. will nonetheless observe a ban on transfer of anti-tank mines which fail to meet this [8 grams of metal] detectability standard.”⁷⁰ The U.S. M19 antitank mine contains only 2.86 grams of metal and does not meet the treaty’s detectability standard.

Based on an analysis of the Commodity Command Standard System information obtained under the Freedom of Information Act by Human Rights Watch, it does not appear that the U.S. has transferred any M19 antitank mines as part of a foreign military sales case since 1998.⁷¹ Human Rights Watch has not been able to locate official sources indicating whether or not transfers of M19 mines might have occurred between 1996 and 1998. In addition, it is not known if the stated U.S. transfer ban applies to production licenses. The M19 has been produced in the past under license by Industrias Cardoen in Chile and by MKEK in Turkey. The Hanwha Corporation and Daewoo Corporation are reported to currently produce the M19 in South Korea.⁷²

⁶⁶ The White House, Office of the Press Secretary, Fact Sheet: “U.S. Initiatives on Anti-Personnel Landmines,” January 17, 1997.

⁶⁷ ICBL, *Landmine Monitor Report 1999*, p. 328.

⁶⁸ Article 1.1.b) of the treaty prohibits “transfer to anyone, directly or indirectly,” of antipersonnel mines. Article 2.4. states “ ‘Transfer’ involves, in addition to the physical movement of anti-personnel mines into or from national territory, the transfer of title to and control over the mines....”

⁶⁹ ICRC oral statement to the Standing Committee of Experts on General Status of the Convention, Geneva, January 10, 2000. Committee co-chair South Africa also expressed this view.

⁷⁰ Treaty Document 105-1, January 17, 1997, p. 16. An identical statement was made by State Department official Michael J. Matheson, “New Landmine Protocol is Vital Step toward Ban,” *Arms Control Today*, July 1996, p. 12.

⁷¹ U.S. Army Industrial Operations Command (IOC) response to Human Rights Watch FOIA request, April 4, 2000 and April 26, 2000. IOC is the national inventory control point for all U.S. conventional ammunition items and as of May 2000 was renamed as Operations Support Command. The records did not cover any possible transfers under the Excess Defense Article program.

⁷² *Jane’s Mines and Mine Clearance 1999-2000*, online update, November 18, 1999.

STOCKPILING OF ANTIPERSONNEL MINES

The U.S. has more than 12 million antipersonnel mines in its stockpile, including about 10 million self-destructing mines, more than one million non-self-destructing mines, and about one million Claymore mines. This constitutes the third or fourth largest antipersonnel mine stockpile in the world.⁷³

More specifically, the U.S. stockpile is believed to consist of ten types of antipersonnel mines:⁷⁴

ADAM	9,516,744
Gator (USAF)	237,556
Gator (USN)	49,845
Volcano	107,160
MOPMS	9,184
PDM	16,148
GEMSS	76,071
M14	670,000
M16	553,537
M18/M18A1 Claymore	973,932
TOTAL	12,210,177 ⁷⁵

The U.S. announced a cap on its stockpile of antipersonnel mines on January 17, 1997. This cap, which includes antipersonnel mines contained in mixed systems, is still in effect even though the precise cap figure has never been publicly disclosed.⁷⁶ The U.S. has declared possessing 11 million antipersonnel mines to the Organization of American States mine register, not including Claymore mines.⁷⁷

After agreeing to CCW Amended Protocol II in May 1996, the U.S., in addition to destroying 3.3 million non-self-destructing mines (see below), modified approximately 670,000 M14 non-self-destructing mines to meet the detectability requirement in the amended protocol.⁷⁸ This was accomplished by adding metal washers to the mines with adhesive bonding. These mines are to be used only in Korea, except a small number for training purposes.

The U.S. has never declared the exact number of M14 and M16 non-self-destructing antipersonnel mines retained for training and research/development purposes, but this stockpile is thought to be approximately 2,000.⁷⁹ These mines are used for proficiency training in Korea and for testing mine detection and mine clearance systems

⁷³ China, Russia, and perhaps Belarus have larger stockpiles. See ICBL, *Landmine Monitor Report 1999*, pp. 11-12.

⁷⁴ For detailed descriptions of these mine types, see Human Rights Watch Arms Project, "Exposing the Source," April 1997, pp. 43-46.

⁷⁵ See ICBL, *Landmine Monitor Report 1999*, p. 330. Please note that these are the number of individual antipersonnel mines, not the number of delivery systems like artillery projectiles or air-delivered munitions dispensers. The U.S. Arms Control and Disarmament Agency provided these figures, except for the M14 and M18/M18A1 mines, as of 1997. The numbers today are likely to be similar. The M14 number is an approximation contained in the 1999 U.S. report required under the CCW amended Protocol II (and is 63,093 less than reported by ACDA). The Claymore number comes from a symposium paper presented by two DoD officials: Harry Hambric and William Schneck, "The Antipersonnel Mine Threat: A Historical Perspective," Symposium on Technology and the Mine Problem, Naval Postgraduate School, Monterey, California, November 12-18, 1996, p. 29.

⁷⁶ DoD officials confirmed the inclusion of antipersonnel mines in mixed systems to Human Rights Watch. DoD interviews, May 10, 2000.

⁷⁷ Organization of American States, "OAS Register of Anti-Personnel Land-Mines: Summary Table of Information Submitted by Member States for the Period 1997-1999," CP/CSH-168/99, rev. 1, May 21, 1999.

⁷⁸ Amended Protocol II, Article 4 and paragraph 2 of the Technical Annex.

⁷⁹ Department of Defense, "Landmines Information Paper," March 3, 1999, p. 4.

at military research and development laboratories.⁸⁰ It is also possible that antipersonnel mines of foreign manufacture are retained for similar purposes.

The Air Force is planning to upgrade a number of its cluster munitions, including the Gator mixed mine systems, with an adaptation called the Wind Corrected Munitions Dispenser (WCMD). With the WCMD, the Gator would still be prohibited by the Mine Ban Treaty. The Air Force plans the Gator upgrade in Fiscal Year 2005, just one year before the target date for ending all use of antipersonnel mines, including those in mixed systems such as Gator.⁸¹ This both seems wasteful, since the mines with the WCMD could only be used for one year and would have to be destroyed if the U.S. joins the treaty in 2006, and calls into question the Air Force's commitment to the 2006 target date.

Overseas Stocks

U.S. antipersonnel mines are, or have been, stockpiled in the following twelve countries: Germany, Greece, Italy, Japan, Kuwait, Norway, Qatar, Saudi Arabia, South Korea, Spain, Turkey, and the United Kingdom (at Diego Garcia, its Indian Ocean territory). This report is the first to identify Qatar, a ban treaty state party, as a location for stockpiled U.S. antipersonnel mines. It also appears that the U.S. is planning to stockpile antipersonnel mines in Bahrain and Oman, which have not signed the treaty, possibly for the first time (see below).

At a recent meeting of Mine Ban Treaty nations, officials from Italy and Spain said that all U.S. antipersonnel mines have been withdrawn.⁸² There is no publicly available official information regarding the current on-hand balances of antipersonnel mines outside the U.S. Officials from the National Security Council and Department of Defense, citing security concerns, refused to comment on the types, locations, and quantities of U.S. antipersonnel mines that are stored outside the continental United States.⁸³

While the quantities and locations of munitions are routinely changed by the military, the ICBL's *Landmine Monitor Report 1999* estimated that the U.S. had some 200,000 antipersonnel mines in mixed systems (Gator, Volcano, MOPMS) stored overseas, in addition to 1.2 million M14 and M16 dumb mines for Korea.⁸⁴ There are also artillery-delivered ADAM self-destruct antipersonnel mines stored outside the continental U.S., perhaps numbering in the hundreds of thousands. For example, Human Rights Watch has learned that 7,776 ADAM antipersonnel mines are stored in Qatar (see below). It is likely that ADAM antipersonnel mines are also stockpiled in Germany and Japan.

U.S. antipersonnel mines are believed to be stored or have been stored in seven states parties to the Mine Ban Treaty (Germany, Italy, Japan, Norway, Qatar, Spain, and the U.K. at Diego Garcia), as well as treaty signatory Greece.

The Mine Ban Treaty's article 4 requires destruction of all stockpiled antipersonnel mines under a state party's "jurisdiction or control" within four years. Some states parties have apparently determined that U.S. mine stocks fall under their jurisdiction, not the U.S.'s, and thus have required removal of the U.S. mines. Italy and

⁸⁰ Letter to Human Rights Watch from Dr. George R. Schneider, Director, Strategic and Tactical Systems, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, March 21, 2000. Hereafter cited as "Schneider Letter, March 21, 2000."

⁸¹ Air Force Materiel Command, Air Armament Center fact sheets, "Wind Corrected Munitions Dispenser," and "Current Development Armament Roadmap," undated, but obtained in April 2000.

⁸² Oral remarks by Italian and Spanish delegations to the Mine Ban Treaty Standing Committee of Experts on Stockpile Destruction, Geneva, Switzerland, May 22-23, 2000. Confirmation from capitals has not yet been received.

⁸³ DoD interviews, May 10, 2000.

⁸⁴ ICBL, *Landmine Monitor Report 1999*, pp. 333-334. Based on Air Force and other U.S. government sources from 1997 and 1998, the report cited 50,000 Gator and Volcano mines in South Korea, 49,610 Gator mines in Saudi Arabia, 33,000 Gator mines in Italy, and smaller numbers for Germany, Diego Garcia (U.K.), Japan, Turkey, Greece, and Spain.

Spain have said that the U.S. has already removed its stocks. It is believed that Norway has reached an agreement for the U.S. to remove stocks by 2003 (within the treaty's four-year deadline).

Other states parties have apparently determined that U.S. mine stocks are under U.S. jurisdiction, and thus the states parties do not feel obligated to have the U.S. mines removed or destroyed. This seems to be the case with Germany, Japan, and the U.K. However, it would certainly be against the spirit of the treaty, aimed at no possession or use of antipersonnel mines, to allow a non-state party to store mines inside a state party. There is also a question about whether such stockpiling would violate the Mine Ban Treaty's provision which prohibits a state party under any circumstances to "assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention."⁸⁵

As noted, Human Rights Watch has learned that the U.S. is currently stockpiling antipersonnel mines in Qatar, a ban treaty state party. Two hundred sixteen ADAM projectiles containing 7,776 antipersonnel mines are currently stored at the Al Karana area in Doha, Qatar as part of U.S. Army Pre-Positioned Stocks Five (APS-5).⁸⁶

Disturbingly, the U.S. apparently plans also to introduce and stockpile Gator and Claymore antipersonnel mines at the Al Udeid facility in Qatar. According to documents from a recently awarded contract, it appears that one hundred forty-two Air Force CBU-89 Gator mixed system units (a total of 3,124 antipersonnel mines) and one hundred forty-one M18/M18A1 Claymore antipersonnel mines will be stockpiled in war reserve ammunition stockpiles by the Air Force in Qatar, Bahrain, and Oman.⁸⁷ The contract was awarded to DynCorp Technical Services (Fort Worth, Texas) on April 20, 2000. This would be the first publicly known instance of the U.S. stockpiling antipersonnel mines in Bahrain and Oman.

It is not known if the government of Qatar regards the U.S. equipment stored on its territory as being under its jurisdiction or control. It is also not known if Qatari nationals are employed in the operation or maintenance of the storage facilities as part of joint ventures formed with U.S. companies; if so, it could put Qatar at odds with the Mine Ban Treaty's prohibition on assisting anyone in any way with an activity prohibited by the treaty.⁸⁸

Department of Defense Officials refused to comment on the issue of either the possible deployment of Air Force or the presence of Army antipersonnel mines in Qatar.⁸⁹ Qatari diplomats stated that the "mine issue has not been discussed between Qatar and the USA."⁹⁰

Indeed, U.S. officials have refused to discuss the status of any bilateral arrangements or any modifications to Status of Forces Agreements that may allow the continued storage of U.S. antipersonnel mines with countries who are party to the 1997 Mine Ban Treaty. One Department of Defense official stated that the U.S. has "not

⁸⁵ Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, Article 1, Paragraph 1 (c).

⁸⁶ U.S. Army Operations Support Command, Solicitation DAAA09-99-R-0118: "Maintenance and Supply/Service for Army Pre-Positioned Stocks (APS-5) Equipment in Doha, Qatar," January 21, 2000. Exhibit N, Technical Exhibit no. 11 of this solicitation is titled "Ammunition in Qatar" and shows the presence of seventy-two M691 ADAM projectiles (forty-eight hour self-destruct time) and one hundred eighty-nine M731 ADAM projectiles (four hour self-destruct time). Each ADAM projectile contains thirty-six antipersonnel mines.

⁸⁷ U.S. Air Force Air Combat Command, Solicitation F44650-99-R0007: "Operation, Maintenance, And Support of Pre-positioned War Reserve Materiel in Southwest Asia" August 9, 1999. Section E, Appendix 1, Enclosure 5 shows the planned on-hand balances of munitions stored at facilities in each of these countries to include one hundred forty-two CBU-89 Gator units and one hundred forty-one M18/M18A1 Claymore mines.

⁸⁸ Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, Article 1, Article 1, Paragraph 1 (c).

⁸⁹ DoD interviews, May 10, 2000.

⁹⁰ Interview with Minister Khalifa Ahmed Al-Sowaidi, Chargé d'Affaires and Brigadier General Hamad A. Hinzab Al-Marri, Military Attaché, Embassy of the State of Qatar to the USA, Washington, D.C., February 16, 2000.

pressured or coerced” such countries.⁹¹ Just one state party, Norway, has declared the presence of U.S. stockpiles in the ban treaty’s article 7 “transparency measure” reports submitted to the U.N.

The U.S. retains about 1.22 million non-self-destructing M14 and M16 antipersonnel mines for use on the Korea Peninsula.⁹² It is unclear if these are exclusively stored at facilities in the Republic of Korea. The U.S. maintains ammunition reserves that could be sent to Korea in Japan, Okinawa, Hawaii, and possibly other storage facilities in the continental U.S. The Department of Defense has stated that it does “not publicly reveal specific types of munitions inventories or where they are located.”⁹³

Stockpile Destruction

The U.S. reported that it completed destruction of 3.355 million M14 and M16 non-self-destructing antipersonnel mines on June 30, 1998.⁹⁴ The Department of Defense told Human Rights Watch that this action fulfilled the direction given by the president in May 1996 to destroy all non-self-destructing mines not needed for Korea or for training purposes.⁹⁵ The Department of Defense also said that all non-self-destructing antipersonnel mines have been removed from maritime pre-positioning ships like those docked in Norway that contain equipment for a Marine Expeditionary Brigade and other similar pre-positioning ships stationed at Diego Garcia, a territory of the United Kingdom in the Indian Ocean.⁹⁶ The destruction of the non-self-destructing mines was conducted by open detonation at military facilities, and was carried out by the U.S. Army Industrial Operations Command of the U.S. Army Materiel Command. The cost was approximately \$3.3 million.⁹⁷

PDM and GEMSS mines are apparently also slated for destruction, but the status of each is unknown.

One problem facing the U.S. when the 16,000 PDM and 9.5 million ADAM antipersonnel mines are destroyed (demilitarized) is the presence of trace amounts of depleted uranium in the housing of these mines.⁹⁸ Apparently, during the development of ADAM, depleted uranium was used to improve their structural strength to withstand the physical forces of being expelled from an artillery tube. It is not known whether DoD has developed procedures to demilitarize these mines and if the U.S. Nuclear Regulatory Commission has approved such plans. The U.S. Army is responsible for demilitarizing antipersonnel mines and is spending \$6.4 million in research and development funds between 1999 and 2001 to develop cryofracture methods--using extremely cold gas--for the disposal of antipersonnel mines.⁹⁹ The Department of Defense has estimated the total cost of destruction of ADAM and PDM mines at \$32 to 44 million.¹⁰⁰

⁹¹ DoD interviews, May 10, 2000.

⁹² Office of the Under Secretary of Defense for Policy, “Report to the Secretary of Defense on the Status of DoD’s Implementation of the U.S. Policy on Anti-Personnel Landmines,” May 1997, p. 11.

⁹³ Schneiter Letter, March 21, 2000.

⁹⁴ Office of the Assistant Secretary of Defense (Public Affairs), News Release: “Destruction of Last Non-Self-Destructing Anti-Personnel Landmines in U.S.-Based Stockpile,” June 25, 1998.

⁹⁵ Schneiter letter, March 21, 2000.

⁹⁶ DoD Interviews, May 10, 2000.

⁹⁷ DoD estimate given in March 1998. “Annual Report to Congress on Use by Armed Forces of Antipersonnel Landmines,” March 1998, p. iii.

⁹⁸ U.S. Army TACOM-ARDEC, Energetics Systems Process Division, “Demilitarization Plan for Non Self-Destruct and Self-Destruct Antipersonnel Landmines,” August 1998, p. 1.

⁹⁹ Department of the Army, “RDDS, PE 0605805A: Munitions Standardization Effectiveness and Safety,” February 2000, pp. 4-5.

¹⁰⁰ Department of Defense, “Annual Report to Congress on Use by Armed Forces of Antipersonnel Landmines,” March 1998, p. iii and p. 15.

U.S. Mine Stocks and the Mine Ban Treaty

U.S. ADAM, Gator, MOPMS, Volcano, GEMSS, PDM, M14, and M16 antipersonnel mines are prohibited under the Mine Ban Treaty because they clearly meet the definition of antipersonnel mine in the treaty.¹⁰¹ The treaty permits Claymore mines used in command-detonated mode, but prohibits use with tripwires.

Certain U.S. mines designated as antivehicle or antitank mines may also be prohibited under the treaty. According to the provisions of the treaty, antivehicle mines with antihandling devices that explode from an unintentional act by a person are considered to be antipersonnel mines and therefore prohibited.¹⁰² The U.S. possesses a large number of antivehicle mines that may, as the result of intentional or unintentional design consequences, cause them to function as an antipersonnel mine. However, it is not possible to state with certainty which mines would be prohibited and which not, both because ban treaty states parties have not clarified what is meant by “an unintentional act” and because there is insufficient data to render judgment regarding the stimuli or forces necessary to activate the kill mechanism for these various antivehicle mines.

It would seem clear that U.S. M15 and M21 antitank mines with M624 fuzes and tilt rods would be prohibited; at least one ban treaty state party, Canada, has destroyed its antitank mines with tilt rods.¹⁰³ It is unclear if M15 and M19 antitank mines that use M1, M1A1, M3, M5, and M142 firing devices as antihandling devices, as well as M21 antitank mines using M142 firing devices, would be considered compliant. Similarly, it is unclear if the 20 percent of RAAMS and M75 GEMSS antitank mines that are equipped with antihandling devices would be considered compliant.¹⁰⁴

Even less clear is the case for U.S. antitank mines that have magnetic influence fuzes like RAAMS, Gator, Volcano, MOPMS, and GEMSS. These mines are “designed to detonate when straddled by a tank, which interrupts the mine’s magnetic field. A person can walk on it and move it, but if picked up quickly or rotated, it will detonate.”¹⁰⁵ Additionally, while Volcano, Gator, and MOPMS do not have an internal antihandling device, the mine “may detonate when moved, because the mine may sense a significant change from its original orientation.”¹⁰⁶ The M2/M4 SLAM with an infrared sensor may also be in this category of mines that are questionable due to overly sensitive fuzes.

USE OF ANTIPERSONNEL LANDMINES

There has been no reported use of antipersonnel mines by U.S. armed forces since 1991 in the Gulf War. The U.S. has banned the use of non-self-destruct antipersonnel mines since May 1996, except for the defense of Korea until 2006 (or beyond if alternatives are not available). Under current policy, the government will prohibit the use of “pure” self-destructing antipersonnel mines (ADAM and PDM) globally in 2003, again except for

¹⁰¹ Article 2.1. states “ ‘Anti-personnel mine’ means a mine designed to be exploded by the presence, proximity or contact of a person and that will incapacitate, injure or kill one or more persons.”

¹⁰² Antivehicle mines with antihandling devices are explicated allowed under the treaty, so long as the antihandling device only “activates when an attempt is made to tamper with or otherwise intentionally disturb the mine.” (Article 2.3.) If it activates when unintentionally disturbed, it is prohibited. This was made clear during the treaty negotiations in Oslo in September 1997, and has been restated by many states parties during the Mine Ban Treaty Standing Committee of Experts meetings in Geneva, January 10-11, 2000 and May 29-30, 2000. See Human Rights Watch Fact Sheet, “Antivehicle Mines with Antihandling Devices,” January 10, 2000.

¹⁰³ Canada destroyed the mines because it concluded that, while called an antitank mine, when equipped with tilt rod fuzes, it met the treaty’s definition of an antipersonnel mine.

¹⁰⁴ Data extracted from Department of the Army, Field Manual (FM) 20-32, *Mine/Countermining Operations*, May 29, 1998, chapters 3, 4, and 5; ICBL, *Landmine Monitor Report 1999*, pp. 325-326.

¹⁰⁵ ICBL, *Landmine Monitor Report 1999*, p. 326.

¹⁰⁶ Department of the Army, Field Manual (FM) 20-32, *Mine/Countermining Operations*, May 29, 1998, chapter 3.

Korea until 2006. Under current policy, the use of antipersonnel mines in mixed systems is not geographically or time restricted, but could be ended in 2006 if suitable alternatives are identified and fielded.¹⁰⁷

Antipersonnel mines were not employed by U.S. air or ground forces in Yugoslavia during Operation Allied Force from March 24 to June 10, 1999. However, the U.S. reserved the right to use antipersonnel mines if it deemed it necessary.¹⁰⁸ Had the U.S. done so, it could have put NATO allies, all but one of whom are ban treaty states parties, at legal risk given the treaty's prohibition on assisting in any way the use of antipersonnel mines by another entity (see below "Operational Issues").

The U.S. states that it has made the necessary amendments to its doctrine and training to comply with the requirements regarding mine use contained in the CCW's Amended Protocol II.¹⁰⁹ The U.S. Army field manual governing mine warfare was revised in June 1998 to incorporate policy and treaty-mandated changes since its last publication in 1992. Minor technical changes to it were made in June 1999.

The U.S. no longer classifies Claymores as antipersonnel mines, thus they are not part of the U.S. policy to find alternatives and ban antipersonnel mines. The Mine Ban Treaty allows use of Claymore mines in command-detonated mode, but not with tripwires. According to Department of Defense officials, U.S. forces are "not trained in the use of tripwires and Claymore mines."¹¹⁰ However, a U.S. Army field manual indicates that tripwire fuzing for Claymore mines is authorized for and applicable in Korea.¹¹¹ Claymore mines with M57 command detonating devices are routinely deployed in the basic combat ammunition load of U.S. forces and are likely present during operations and deployments to places such as Kosovo, Colombia, and the Persian Gulf.

The use of antipersonnel mines in minefields at the U.S. Naval Base Guantanamo Bay, Cuba ended in 1999. According to the Pentagon, all of the antipersonnel mines and antitank mines have been removed from the minefields and destroyed. A commercial contractor using mine-detecting dogs to insure that total clearance has been achieved is checking the former minefields.¹¹² Beginning in 1961, the U.S. used approximately 50,000 antipersonnel and antitank mines along the perimeter of its facilities at Guantanamo Bay.¹¹³

The mines that are already in the ground in South Korea in the DMZ are considered to be the property of South Korea, not of the United States. Thus, those mines would have to be removed when South Korea joins the ban treaty, but not when the U.S. does. U.S. war plans call for laying more than one million new non-self-destructing antipersonnel mines all across the northern part of South Korea (not in the DMZ) in the event of renewed war, as well as air- and artillery-delivered self-destructing mines.

The United States relinquished control of its military facilities in the Panama Canal Zone in December 1999. One of the most publicized aspects of this event was the responsibility for clearing unexploded ordnance (UXO) at several firing ranges and munitions testing ranges used by the U.S. According to a former Army official, the

¹⁰⁷ The White House, Office of the Press Secretary, Fact Sheet: "U.S. Efforts to Address the Problem of Anti-Personnel Landmines," September 17, 1997.

¹⁰⁸ Air Force officials told Human Rights Watch in early April 1999 that war plans included possible use of antipersonnel mines. A State Department official told Human Rights Watch on April 13, 1999 that antipersonnel mines remained "an arrow in the quiver" of the United States. A number of diplomats from other NATO countries also told Human Rights Watch that the U.S. insisted on the right to use antipersonnel mines. See also, Edith Lederer, "Land Mine Coalition Demands NATO Ban Use of Mines in Yugoslavia," Associated Press, United Nations, May 21, 1999.

¹⁰⁹ United States of America, National Annual Report CCW/AP.II/CONF.1/NAR.13, November 5, 1999, p. 3. Chief among these requirements would be that all antipersonnel mines must be kept within marked and monitored minefields, or be equipped with both self-destruction and self-deactivation features if used elsewhere; also, use of non-detectable antipersonnel mines is prohibited.

¹¹⁰ DoD Interviews, May 10, 2000.

¹¹¹ Department of the Army, Field Manual (FM) 20-32, *Mine/Countermine Operations*, May 29, 1998, Chapter 4.

¹¹² Schneiter Letter, March 21, 2000; the fact that antitank mines were also to be removed was disclosed at a DoD News Briefing on January 20, 1998.

¹¹³ DoD News Briefing, January 20, 1998.

UXO does not include any antipersonnel mines. The U.S. Army tested mines at the Tropic Test Center and the Empire, Piña, and Balboa West ranges. The test program consisted of component and system tests but this source said there was no high explosive in the mines. The only detonable material used was for fuze function testing. All of the mine components were reportedly recovered for forensic examination.¹¹⁴

Operational Issues

There are a number of issues regarding interoperability, rules of engagement, command and control, and logistics between the United States and its alliance and coalition partners who are party to the 1997 Mine Ban Treaty. The major areas where U.S. operations may be limited:

- Europe: All NATO partners except Turkey and the U.S. are party to the treaty;
- Southwest Asia: Qatar is party to the treaty, and the U.S. often uses facilities in Europe to stage equipment to this region; and
- Korea: Japan is party to the treaty.

The International Campaign to Ban Landmines has expressed concern that participation by states parties in joint operations with the U.S. in which U.S. forces use antipersonnel mines could put the states at legal risk, and certainly is contrary to the spirit of a treaty aimed at no possession of antipersonnel mines.¹¹⁵ Such participation does not appear consistent with the treaty's article 1 obligation for a state party "never under any circumstance...[t]o assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under this Convention."

As noted above, there are also serious concerns related to U.S. desires to transit antipersonnel mines across the territories of states parties, and U.S. stockpiling of antipersonnel mines in states parties.¹¹⁶

The U.S. has tended to address these issues with each state individually. The status of discussions within NATO political and military structures is not publicly available. An official from the Department of Defense stated that the U.S. has "not pressured or coerced" other NATO countries or allies to violate their obligations under the 1997 Mine Ban Treaty.¹¹⁷ To date, no alliance-wide precedents have been publicly released regarding these issues.

U.S. Mine Casualties

Mines have caused nearly 100,000 U.S. Army casualties since 1942.¹¹⁸ One-third of all U.S. Army casualties in Vietnam were the result of mine incidents.¹¹⁹ Thirty-three percent of U.S. personnel killed in action and fourteen percent of the wounded in action during the 1990-1991 Persian Gulf war were the result of mine incidents.¹²⁰ Peacekeeping operations in Somalia, Bosnia, and Kosovo have all resulted in U.S. mine casualties.

¹¹⁴ Telephone interview with former munitions test official, March 2000.

¹¹⁵ ICBL, "Landmine Monitor Executive Summary 1999," p. 10.

¹¹⁶ See page 14 on transit and pages 16-18 on stockpiling.

¹¹⁷ DoD Interviews, May 10, 2000.

¹¹⁸ Harry Hambric and William Schneck, "The Antipersonnel Mine Threat," paper presented to the Technology and the Mine Problem Symposium, Monterey, California, November 18-21, 1996, p. 3-11.

¹¹⁹ Human Rights Watch and Vietnam Veterans of America Foundation, Press Release, "Retired Generals Call for Total Antipersonnel Mine Ban, Pentagon Documents Reveal Devastating Effect of U.S. Landmines in Korea and Vietnam," Washington, D.C., July 29, 1997.

¹²⁰ Hambric and Schneck, p. 3-28 and 3-33. The authors note that UXO incidents are included in this total because Joint Publication 1-02 includes UXO in the definition of mine.

MINE ACTION FUNDING AND PROGRAMS

Between FY 1993 and FY 1999 the U.S. contribution for humanitarian mine action programs totaled \$288 million, including \$63 million in Pentagon research and development programs. The total does not include funding for mine victim assistance programs because mine victim-specific funding, as opposed to more general war victim funding, is not identified by the U.S. government; it would likely amount to tens of millions of dollars more.¹²¹

U.S. Government Humanitarian Demining Funding, FY 93 – FY 1999 (in millions of U.S. Dollars)							
	<i>FY 93</i>	<i>FY 94</i>	<i>FY 95</i>	<i>FY 96</i>	<i>FY 97</i>	<i>FY 98</i>	<i>FY 99</i>
Total funding	10.191	15.931	39.252	32.768	45.475	63.449	81.175
Number of Countries	7	9	12	14	15	22	34

The current spending plans are in the table below:

U.S. Government Humanitarian Demining Funding (in millions of U.S. Dollars)			
	FY 1999 (actual)	FY2000 (estimate)	FY2001 (request)
DoS Humanitarian Demining Budget (NADR) ¹²²	35.0	40.0	40.0
DoD Humanitarian Demining Budget (OHDACA) ¹²³	16.0	25.6	25.5
International Trust Fund for Demining and Mine Victim Assistance	12.115	14.0	Not available
DoD Humanitarian Demining R&D Budget ¹²⁴	18.172	18.197	12.728
Total	81.287	97.797	78.228

Since 1993, Congress has provided funding for the U.S. humanitarian demining program to the Department of Defense and the Department of State. Inside the Executive Branch, the administrative infrastructure for U.S. efforts is centralized in the Humanitarian Demining Interagency Working Group (IWG) formed on September 13, 1993. This body is responsible for coordinating, prioritizing, and integrating U.S. humanitarian demining. The IWG is chaired by an official from the State Department Bureau of Political-Military Affairs and co-chaired by an official from the office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict. The organization and functions of the IWG and the roles and missions of each organization are detailed in the Humanitarian Demining Strategic Plan originally written in 1994 but revised and republished in May 2000.¹²⁵

According to the Department of State, “the steps by which a mine-affected country requests U.S. assistance includes a formal request through the U.S. embassy...which reviews and endorses the request and forwards it to the IWG.... the IWG meets and determines whether to conduct a policy assessment. A policy assessment visit evaluates both the nature of the mine problem and the suitability of U.S. assistance.... Based on this assessment, the IWG may approve the establishment of a formal program for the country. A typical U.S. program involves

¹²¹ “FY 00 NADR Project Status” provided by the Department of State, Office of Humanitarian Demining Program, May 5, 2000. Numbers reflect funding for Department of Defense, Department of State, and some Agency for International Development programs. In addition, the U.S. contributed \$2.2 million to the U.N. Voluntary Trust Fund for Assistance in Mine Clearance between October 1994 and September 1999.

¹²² U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001,” March 15, 2000.

¹²³ Defense Security Cooperation Agency, “FY 2001 Budget Estimate: Overseas Humanitarian, Disaster, and Civic Aid Appropriation,” February 2000, pp. 1-17.

¹²⁴ U.S. Department of Defense, “RDDSD, PE 0603920D8Z: Humanitarian Demining,” February 2000.

¹²⁵ <http://www.state.gov/www/global/arms/pm/hdp/policy.html>

assisting in the establishment of a mine action center, a mine awareness program, and a demining training program. As the country develops its mine clearance abilities, the IWG will periodically evaluate the development of the program. When the program reaches the point of being self-sustaining, the United States passes off its active role to the host nation, although some U.S. funding may continue to sustain demining efforts.”¹²⁶

Beginning in 1998, U.S. financial assistance for humanitarian demining in mine-affected countries in Southeast Europe has been channeled through the Slovenian International Trust Fund (ITF) for Demining and Mine Victim Assistance. Most if not all of these funds thus far have been used for programs in Bosnia and Herzegovina. The ITF works with the national and regional mine action centers to disperse funds for mine clearance projects, mine awareness education, and victim assistance efforts.¹²⁷

A country-by country description of U.S. humanitarian demining programs is contained in Appendix 1. The number of countries has grown from seven in FY 1993 to thirty-four in FY 1999 and an expected thirty-six in FY 2000.

Department of State

The Department of State is responsible for assisting a recipient country in sustaining its national demining program. Once a program is established, continued support of demining operations is the responsibility of the Department of State's Office of Humanitarian Demining Programs. Funding for the humanitarian demining programs run by the Department of State is provided by the Nonproliferation, Antiterrorism, Demining and Related programs (NADR) appropriation. NADR funding can be used to support the programs of international organizations and nongovernmental organizations or can be transferred to other agencies.¹²⁸

On August 19, 1999, the Department of State awarded an Integrated Mine Action Support (IMAS) contract to a team of companies led by the RONCO Consulting Corporation. The not-to-exceed \$250 million over five years contract provides for one base year plus four one-year options for extension. The IMAS contract allows for RONCO and a team of seven other companies to provide mine clearance, mine detecting dogs, logistics and supply services, and other program management to countries receiving humanitarian demining assistance.¹²⁹ As of May 2000, approximately twenty task orders have been initiated or are in the procurement process.¹³⁰

In addition to country programs, the State Department also has allocated \$7.93 million in FY 2000 to fund a number of “cross-cutting initiatives.” This includes \$1.4 million to the Survey Action Center, a \$300,000 grant signed on April 14, 2000 to Saybrook Productions for a mine action CD-ROM, \$150,000 to Warner Brothers for the development of mine awareness comic books, a \$100,000 grant signed on February 28, 2000 to the UNDP for a training study, \$1.1 million to UNICEF for mine awareness programs, a \$250,000 grant signed on April 7, 2000 to the United Nations Association's Adopt-A-Minefield program, an \$18,343 grant signed on February 17, 2000 to James Madison University for a CD-ROM project, \$75,000 to the IMAS contractors for a measures of effectiveness study, \$200,000 to the IMAS contractors for information management support, and a \$4,550 grant signed on April 13, 2000 to the University of Denver's Center for Teaching International Relations curriculum project.¹³¹

¹²⁶ U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: “U.S. Humanitarian Demining Program,” July 9, 1999.

¹²⁷ U.S. Department of State, Office of the Spokesman, “Review of U.S. Government Humanitarian Demining Assistance To Bosnia and Herzegovina Since the End of the 1992-1995 Conflict,” April 17, 2000.

¹²⁸ U.S. Department of State, “U.S. Humanitarian Demining Program Fact Sheet,” July 9, 1999.

¹²⁹ U.S. Department of State, Press Statement by James P. Rubin, Spokesman, August 20, 1999.

¹³⁰ Interview with the Director of the Office of Humanitarian Demining Programs, Department of State, Washington D.C., May 5, 2000.

¹³¹ “FY 00 NADR Project Status” provided by the Department of State, Office of Humanitarian Demining Program, May 5, 2000, pp. 5-6. Hereafter cited as “U.S. Department of State, FY 00 NADR Project Status.”

On September 2, 1999, the Humanitarian Demining Interagency Working Group (IWG) approved in principle, as a one-time confidence and security building measure, a joint demining training exercise conducted by U.S. military personnel for Azerbaijan and Armenia.¹³² Georgia was subsequently included in this initiative and the joint training exercise will be conducted at a location in Georgia between September and November 2000. The training will include a total of sixty deminers from Armenia, Azerbaijan, and Georgia.¹³³ This exercise is unique because more than one country is involved and because of their history of belligerence.

The Humanitarian Demining IWG modified existing informal policy on December 9, 1999 in response to renewed armed conflict and possible new use of mines in countries receiving U.S. humanitarian demining assistance. Of particular concern were Afghanistan and Angola. Decisions regarding continuation of assistance are to be made on a case-by-case basis and assistance will only be funneled to the people, not the government of the country, through programs operated by nongovernmental organizations and international organizations. Assistance will only be allowed in areas where conflict has a low probability of reoccurrence, for the purpose of clearing arable land or facilitating the resettlement of displaced persons in areas thought to be mine-affected before the commencement of U.S. demining assistance. It is felt that these restrictions would neither aid belligerent parties nor commit the U.S. to assist in clearing newly mined areas.¹³⁴

The U.S. also intends to establish a Quick Reaction Demining Force of forty deminers and eight mine-detecting dog teams. This group will conduct emergency demining operations when directed by the State Department's Office of Humanitarian Demining Programs. The host country for this force has not been determined but it is likely to be in a mine-affected country.¹³⁵ Funding in FY 2000 for the force may reach \$1.75 million from the State Department NADR appropriation.¹³⁶

Public-Private Partnerships for Mine Action

In January 1999 Ambassador Donald Steinberg took over as the U.S. Special Representative of the President and the Secretary of State for Global Humanitarian Demining. He leads the U.S. "Demining 2010 Initiative," launched in November 1997 with the objective of identifying and clearing landmines posing threats to civilians by the year 2010.

As part of the Demining 2010 initiative, the special representative has a unique role in developing public-private initiatives for integrated mine action. In addition to advising the executive branch agencies on the implementation of humanitarian demining programs, the special representative's mandate includes fundraising for programs and initiatives. The list of programs and initiatives and recipients is quite varied.¹³⁷ It includes the Survey Action Center, Adopt-A-Dog, Adopt-A-Minefield, Roots-for-Peace, DC Comics mine awareness comic books, Warner Brothers mine awareness initiative, Landmine Survivors Network, Mine Action Information Center at James Madison University, Los Angeles Unified School District (mine awareness and education

¹³² U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: "Meeting of the Interagency Working Group on Demining, September 2, 1999." Hereafter cited as "U.S. Department of State, September 2, 1999 IWG Fact Sheet."

¹³³ Interview with the Director of the Office of Humanitarian Demining Programs, Department of State, Washington D.C., May 5, 2000.

¹³⁴ U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: "Meeting of the Interagency Working Group on Demining, December 9, 1999." Hereafter cited as "U.S. Department of State, December 9, 1999 IWG Fact Sheet."

¹³⁵ U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: "Meeting of the Interagency Working Group on Demining, March 30, 2000." Hereafter cited as "U.S. Department of State, March 30, 2000 IWG Fact Sheet."

¹³⁶ U.S. Department of State, FY 00 NADR Project Status, p. 5.

¹³⁷ For details see: Office of the Special Representative of the President and Secretary of State for Global Humanitarian Demining, "Public-Private Partnerships for Global Humanitarian Demining: Toward a Mine-Safe World," Washington D.C., January 2000.

module), Army Research Laboratory (landmine detection), Center for International Rehabilitation, Huntington Associates (mine action CD-ROM), and more.

Department of Defense

Department of Defense Humanitarian Demining programs are funded annually from the Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) appropriation. OHDACA funded programs are coordinated with the Department of State and approved by the Office of the Secretary of Defense. The Defense Security Cooperation Agency administers the funds while the regional military commanders execute the programs. By law, U.S. military personnel are prohibited from entering live minefields or removing mines as part of humanitarian demining programs.¹³⁸

Use of OHDACA funds is restricted under Title 10, United States Code, Section 401. These funds can only be used to support U.S. forces participating in humanitarian demining activities. According to a military planning document, “the majority of the [OHDACA] funds are used to pay costs associated with deployment of U.S. military trainers and support personnel.”¹³⁹ Officers from the Office of the Deputy Assistant Secretary of Defense for Peacekeeping and Humanitarian Assistance confirmed that as much as 80 percent of OHDACA funding is spent on personnel allowances and the logistical costs of moving personnel and equipment across the world.¹⁴⁰ Purchase of equipment, supplies, and services is permitted as long as it directly supports U.S. military forces participating in humanitarian demining activities. Donation of purchased equipment, supplies, and services can occur upon completion of the program.

The DoD Humanitarian Demining R&D program researches, tests, and modifies existing technology and equipment for immediate use in U.S. humanitarian demining country programs. R&D accounts for nearly 22 percent of total U.S. humanitarian mine action funding to date, not including victim assistance funding. The budget for FY 1995-1999 was \$63.6 million, including \$18.172 million in FY 1999. For FY 2000 the estimated budget is \$18.197 million and the requested budget for FY 2001 is \$12.728 million. Technologies and equipment being developed under this program include improved protective gear for deminers, minefield marking and mapping systems and survey equipment, vegetation clearing devices, in-situ neutralization devices, mine awareness and training materials, and mechanical clearance equipment for area clearance and quality assurance purposes. The program will produce a “Consumer Reports” style catalogue on the R&D findings for mine detection technologies sometime in 2000.¹⁴¹

The Pentagon also plans to spend more than \$215 million between FY 99 and FY 01 on research and development of military technologies to detect and neutralize explosives, mines, and UXO. These programs are in separate areas of the budget and are not specifically related to the humanitarian mine action totals. The primary organizations conducting this research and development are the Army, DARPA, and the Office of the Secretary of Defense (OSD). It is possible that the results of this military research may in the future find application in the humanitarian demining area.¹⁴²

¹³⁸ 10 USC Sec. 401.

¹³⁹ U.S. Central Command, “U.S. Government Humanitarian Demining Country Plan for the Arab Republic of Egypt (FY 2000 & 2001),” July 13, 1999.

¹⁴⁰ DoD Interviews, May 10, 2000.

¹⁴¹ U.S. Department of Defense, “RDDS, PE 0603920D8Z: Humanitarian Demining,” February 2000, pp. 1-3.

¹⁴² All data from Army and Defense-wide RDDS for PE’s 0602702E, 0602712A, 0604808A, 0603606A, 0603619A, 0603858D8Z, 0603750D8Z, 0602709A, February 2000.

Military Research and Development Programs with Landmine Technology Detection Elements (in millions of dollars)					
Program Name	Agency	FY 99	FY00 (Estimate)	FY01 (Request)	Totals
Countermine Applied Research	Army	7.976	12.286	9.976	30.238
Countermine Advanced Development	Army	6.702	6.866	10.042	23.61
Countermine Advanced Technology Development	Army	20.725	27.536	18.250	66.511
Countermine Engineering and Manufacturing Development	Army	11.254	11.666	33.246	56.166
Night Vision and Electronic Sensor Development	Army	0	3.694	3.37	7.064
UXO Detection	DARPA	20.020	6.457	0	26.477
Countermine Advanced Technology Concept Demonstration	OSD	1.4	.370	0	1.77
Joint UXO Center of Excellence	OSD	1.216	1.168	1.204	3.588
Totals		69.293	70.043	76.088	215.424

The Defense Threat Reduction Agency (DTRA) is also exploring technologies for airborne wide area antipersonnel landmine detection in arms control treaty compliance monitoring.¹⁴³ Budget figures for this project were not available within DTRA's Arms Control Technology program budget justification materials. Research and development projects for explosive ordnance disposal (EOD) projects are also not included with the above figures.

Countries Receiving U.S. Demining Assistance

Between FY 1993 and FY 1999, the U.S. has provided about \$225 million in assistance to demining programs in thirty-four countries.¹⁴⁴ The top recipients of U.S. demining funds during this time are:

Bosnia	\$40.5 million (incl. funds from Slovenia International Trust Fund)
Angola	\$22.2 million
Afghanistan	\$22.0 million
Mozambique	\$20.3 million
Cambodia	\$19.9 million
Laos	\$14.0 million
Rwanda	\$13.9 million
OAS	\$9.1 million (Honduras, Costa Rica, Nicaragua, Guatemala)
Ethiopia	\$8.8 million
Namibia	\$8.3 million

¹⁴³ Defense Threat Reduction Agency, RDDS PE 0603711BR, February 2000.

¹⁴⁴ Figure extracted from "FY 00 NADR Status" country programs with funds for demining research and development and "cross cutting initiatives" removed.

The following table summarizes the country-by-country funding of Department of State and Department of Defense humanitarian demining programs.¹⁴⁵

Recipient	Department of State NADR Funding (in millions of U.S. dollars)			Department of Defense OHDACA Funding (in millions of U.S. dollars)	
	FY 99	FY 00 (Est.)	FY 01 (Est.)	FY 99	FY 00 (Est.)
Afghanistan	2.615	3.0	2.9	-	-
Angola	-	3.096	2.9	-	-
Armenia	-	0.3	0.6	-	0.044
Azerbaijan	-	0.5	0.6	0.14	0.048
Bosnia Herzegovina	2.305	-	-	-	0.641
Cambodia	1.5	2.58	2.6	-	-
Chad	0.732	0.633	0.6	1.0	1.16
Croatia	0.6	-	-	-	-
Djibouti	-	0.3	0.8	-	-
Ecuador	0.999	1.0	1.2	0.125	1.1
Egypt	-	-	-	0.615	0.817
Eritrea	-	1.117	1.0	-	1.2
Estonia	.335	-	0.3	-	1.9
Ethiopia	.335	1.117	1.0	-	1.2
Georgia	-	0.997	0.9	-	0.065
Guinea Bissau	-	0.3	0.5	-	0.065
Jordan	1.9	1.511	1.5	0.74	0.63
Kosovo	0.5	-	-	0.5	4.95
Laos	1.8	1.486	1.5	0.70	0.40
Lebanon	0.53	0.857	0.8	0.065	0.84
Mauritania	0.534	.501	0.4	0.45	1.7
Moldova	-	0.3	-	0.071	0.043
Mozambique	1.9	3.5	2.0	1.1	0.465
Namibia	1.053	0.3	0.1	-	0.007
OAS/IADB (Costa Rica, Guatemala, Honduras, Nicaragua)	2.241	1.437	1.5	0.35	-
Oman	-	0.3	0.5	1.4	-
Peru	1.0	1.0	1.2	0.125	1.1
Rwanda	0.750	0.246	0.250	-	0.007
Somalia	1.15	1.3	1.6	-	-
Swaziland	-	-	-	0.828	0.289
Thailand	1.049	1.22	1.3	0.7	1.8
Vietnam	1.096	1.0	0.8	-	-
Yemen	1.462	1.236	1.4	0.527	0.581
Zambia	-	0.3	0.5	-	-
Zimbabwe	0.743	0.250	1.0	1.0	0.756
Total	27.129	31.684	32.25	10.436	21.808

¹⁴⁵ U.S. Department of State, "Congressional Budget Justification for Foreign Operations, FY 2001," March 15, 2000 and NADR Country Funding for Humanitarian Demining Assistance at <http://www.state.gov/www/global/arms/pm/hdp/budget.html> and "Demining Program Financing History" provided by the Department of State, Office of Humanitarian Demining Programs, May 5, 2000; Office of the Director for Humanitarian Assistance and Anti-Personnel Landmine Policy of the Office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict, "Information Paper," April 8, 1999. Hereafter cited as "SOLIC, Information Paper."

Survivor Assistance

The primary vehicle for U.S. government funding for landmine survivor assistance is the Patrick J. Leahy War Victims Fund (WVF) administered by the U.S. Agency for International Development (USAID). The WVF provides prosthetic assistance for victims who have lost limbs as a result of landmines and other war-related injuries. Since 1989, the WVF has provided \$60 million in support for victims of war in sixteen countries. The approximate FY 2000 budget is \$12 million.¹⁴⁶ Expenditures for landmine victims are not separated out from those for war victims overall, thus it is not possible to give a precise value to U.S. spending on mine victim assistance programs.

The WVF is dedicated to improving the mobility, health, and social integration of adults and children who have sustained physical disabilities as a direct or indirect result of war or civil strife. These programs focus on medical care and physical rehabilitation. This includes the expanding of cost-effective, quality prosthetic services and setting up well equipped, self-sustainable local medical facilities. Related services, such as gaining access to education and employment opportunities are also funded to promote the economic and social rehabilitation of the victims. These programs can be funded in a variety of ways. Country-based projects meeting criteria are mostly funded through grants to organizations that work closely with host governments and that are registered with USAID. Funds are normally negotiated and managed directly from USAID's overseas missions. Specific WVF projects include:¹⁴⁷

Angola \$3.033 million has been given to the Vietnam Veterans of America Foundation since September 1996 for the "Angolan Regional Rehabilitation Project." This money funded the construction of a rehabilitation center that provides orthopedic devices to disabled Angolans as well as funding the training of thirty-three Angolans as orthopedic technicians, physiotherapists, and administrators. The clinic has fitted 360 Angolans with prostheses, the majority of whom are landmine victims.

Cambodia \$500,000 will be allocated between 1998-2001 to Handicap International for the purpose of establishing the Disability Action Council in Cambodia. This body has coordinated, promoted, and monitored services for disabled Cambodians, as well as implemented a communication network between itself, government agencies, international organizations, and NGOs.

Cambodia \$7.778 million will be allocated between 1996-2001 to the Vietnam Veterans of American Foundation for the "Cambodia Prosthetics and Rehabilitation Program." The program has treated more than 8,000 patients with prostheses and wheelchairs, and has provided socioeconomic assistance and employment training to Cambodians with disabilities. A Cambodian staff has been trained and the planning of satellite workshops in eastern Cambodia is underway.

Central America For the period 2000-2002, \$500,000 will be allocated to the Pan American Health Organization in support of the "Central American Tripartite Land Mine Initiative." The purpose of this initiative is to improve the physical, social, and economic development of persons disabled by landmines in El Salvador, Honduras, and Nicaragua.

Ethiopia Since July 1998, \$1 million has been given to the International Committee of the Red Cross for the "Special Fund for the Disabled's Polypropylene Prosthetic Training Centre" to train African technicians in the production and use of prosthetic components. Thousands of components have since been made in Addis Ababa.

Laos \$2.118 million has been granted to "The Consortium" (World Education, World Learning, Save the Children/USA) for the War Victims Assistance Project. These funds have provided medical equipment and renovations for six hospitals as well as the training of three hundred medical staff. Seventy-nine landmine victims

¹⁴⁶ <http://www.info.usaid.gov/press/releases/fs991101.html>

¹⁴⁷ All subsequent descriptive summaries of WVF programs taken from United States Agency for International Development, "Patrick J. Leahy War Victims Fund, Portfolio Synopsis," Spring 2000.

have been treated. The funds have also gone towards landmine education programs under which 43,000 students are currently studying.

Lebanon \$1.390 million has been allocated to the World Rehabilitation Fund since June 1998 for the “Preventing Land Mine Injuries and Managing the Social Burden of Land Mines in Lebanon” project. The project has initiated a survey to identify minefields and victims. It has also increased involvement from NGO and community-based organizations in addressing the needs of landmine victims as well as provided training and the necessary technology for these organizations.

Liberia \$1.474 million has been allocated to UNICEF since September 1994 for the “Physical Rehabilitation of War Victims Project.” Rehabilitation centers were established in five counties with trained staff. An orthopedic workshop was completed, equipped, and staffed by trained technicians. Seventy-five prostheses are now produced manually each year and over 800 disabled Liberians have been assisted.

Mozambique Since November 1995, \$2.755 million has been provided to Prosthetic and Orthotic Worldwide Education and Relief for their Prosthetics Assistance Project. This project has trained local people in the production of prosthetic and orthotic devices for war victims. Thousands have since been produced under an organized management system.

Sierra Leone \$60,764 allocated since November 1999 to the Vietnam Veterans of America Foundation for supporting the “Emergency Assistance for P & O in Sierra Leone: Training and Components Provision” project. The funds are allocated for a technical specialist on a short-term basis to provide prosthetic assistance to war victims and to train four nationals as prosthetic technicians. Enough prosthetic limbs have been produced for one hundred amputees and need for further assistance is being assessed.

Sri Lanka \$1.175 million has been given since October 1991 to the Friend-in-Need Society for their “Citizens Participation Project” to rehabilitate war victims and integrate them into mainstream society. More than 1,200 prosthetic limbs have been produced and three technicians trained.

Tanzania \$300,000 allocated since September 1998 to the World Health Organization for “The Tanzanian Training Center for Orthopedic Technologists.” This grant supports prosthetics training courses for qualified African applicants.

Vietnam \$900,508 allocated since September 1992 to the Health Volunteers Overseas organization for its Vietnam Rehabilitation Project. This project has promoted the professional development of healthcare providers by introducing new physical therapy curriculums, conducting workshops, and facilitating national acceptance of the Vietnamese Nursing Association. A new discussion forum was also formed for organizations working on related issues.

Since February 1998, \$100,000 has been granted to the Prosthetic Outreach Foundation for the “Outreach Prosthetic Services and Prosthetic Component Development” program. A national prosthetic manufacturing center was opened and more than 9,000 prostheses have been delivered to patients.

Beginning in September 1998, \$1,435,510 has been given to Viet-Nam Assistance for the Handicapped (VNAH) for the “Can Tho and Thu Duc Prosthetic and Rehabilitation Project.” This project promotes disability access to public buildings, including the Hanoi international airport. It has also provided 2,000 new prostheses.

Since March 1998, \$1 million has been granted to the Vietnam Veterans of America Foundation for the “Thermoplastic Orthotics Rehabilitation Program for Vietnam” to promote extensive and sustainable production of thermoplastic orthoses to help rehabilitate the disabled. A new orthotics workshop was constructed and equipped, a monitoring unit was trained, new services were provided and more than 3,000 orthoses were provided for children.

Since August 1998, \$801,000 has been provided to World Vision for the “Prosthetics and Orthotics Rehabilitation Project” to upgrade the indigenous health care system to meet the needs of handicapped individuals. High quality prosthetic production rates and outreach services to beneficiaries have increased since several rehabilitation centers were handed over to the Vietnamese Ministry of Labor, Invalids, and Social Affairs.

A small number of private organizations fund victim assistance programs in mine-affected countries. For example, the Prosthetics Outreach Foundation conducts programs in Vietnam that are entirely funded from private sources. Another private organization, PeaceTrees Vietnam, a project of the Earthstewards Network, has funded mine clearance and mine awareness in Vietnam’s Quang Tri province since 1996 with \$595,000 in privately raised monies.

Most private organizations are using a mix of private and public funds in their programs. The biggest source of public funds is USAID through the WVF. Examples of such victims assistance programs in Vietnam include Catholic Relief Services, Vietnam Veterans of America Foundation, Vietnam Assistance for the Handicapped, and World Vision. Some organizations in the U.S. raise funds and then pool resources at an international level to support programs that may or may not be administered from the original U.S. group. Jesuit Relief Services-USA and CARE are examples of organizations that provide this type of assistance.

Appendix 1: Country-By-Country Summary Of U.S. Humanitarian Demining Programs

Afghanistan NADR funding: FY 99, \$2.615M; FY 00, \$3.0M (estimate); FY 01, \$2.9M (request). Funding supports mine awareness education, mine clearance, surveys, minefield marking, and training coordinated by the U.N. Office for the Coordination of Humanitarian Assistance to Afghanistan (UNOCHA) and continued operation of the U.N.'s Mine Action Program for Afghanistan (MAPA).¹⁴⁸ The U.S. committed \$1.5M in FY 99 funds to the HALO Trust to conduct demining operations in Vardak Province.¹⁴⁹ In FY 00, the NADR funding includes: \$1.1M to the HALO Trust (grant signed March 9, 2000); \$1.3M for UNOCHA mine clearance; \$0.5M for UNOCHA equipment.¹⁵⁰

Albania During the summer and fall of 1999, the Humanitarian Demining IWG conducted a policy assessment of the situation in Albania to ascertain efforts undertaken by the Albanian Government and possible areas of U.S. assistance.¹⁵¹ It is possible that mine action funding for Albania will be channeled through the Slovenian International Trust Fund for Demining and Mine Victim Assistance.

Algeria A request for humanitarian demining assistance from the Government of Algeria was received on December 6, 1999. The request is currently being reviewed by the Humanitarian Demining IWG.¹⁵²

Angola NADR funding: FY 00, \$3.096M (estimate); FY 01, \$2.9M (request). Assistance supports U.N. Demining Program in providing training, equipment, and mine awareness education. Victim assistance programs also funded.¹⁵³ Recently, the U.S. agreed to assist the U.N. by providing nearly \$2 million to purchase "demining equipment such as communications gear, mine detectors, protective suits, computers, explosives, mine probes, vehicles, and trauma kits."¹⁵⁴ In FY 00, the NADR funding allocation includes: \$0.399M to the HALO Trust (grant signed April 11, 2000); \$0.697M to the German NGO MgM (grant signed April 18, 2000); \$1.964M to Norwegian People's Aid (NPA) (grant signed May 1, 2000).¹⁵⁵

Armenia OHDACA funding: FY 00, \$0.044M (estimate). NADR funding, FY 00, \$0.3M (estimate); FY 01, \$0.6M (request). Armenia requested humanitarian demining assistance in late 1999, noting that there are landmines along the Armenia-Azerbaijan border (excluding occupied territory). Armenia also has agreed to participate in demining training as part of the Beecroft initiative. On December 9, 1999, the U.S. Humanitarian Demining IWG authorized an assessment visit to Armenia in 2000.¹⁵⁶

Azerbaijan OHDACA funding: FY 99, \$0.14; FY 00 \$0.048M (estimate). NADR funding: FY 00, \$0.5M (estimate); FY 01, \$0.6M (request). Azerbaijan was formally approved into the U.S. humanitarian demining program on December 12, 1999. An assessment of requirements will be conducted in early 2000.¹⁵⁷ Training of

¹⁴⁸ U.S. Department of State, "Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of South Asia," March 15, 2000; U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 17.

¹⁴⁹ U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 17.

¹⁵⁰ U.S. Department of State, FY 00 NADR Project Status, p.1.

¹⁵¹ U.S. Department of State, September 2, 1999 IWG Fact Sheet.

¹⁵² U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: "Meeting of the Interagency Working Group on Demining December 9, 1999." Hereafter cited as "U.S. Department of State, December 9, 1999 IWG Fact Sheet."

¹⁵³ U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 7.

¹⁵⁴ Pat Patierno, Director, Office of Humanitarian Demining Programs, Bureau of Political Military Affairs, U.S. Department of State, Speech to the Model U.N. at the Loy Henderson Conference Room, Department of State, April 7, 2000.

¹⁵⁵ U.S. Department of State, FY 00 NADR Project Status, p. 1.

¹⁵⁶ U.S. Department of State, December 9, 1999 IWG Fact Sheet

¹⁵⁷ U.S. Department of State, December 9, 1999 IWG Fact Sheet

deminers will take place as part of the Beecroft initiative. The entire amount of FY 00 NADR funds is proposed for a grant to the UNDP.¹⁵⁸

Bosnia Herzegovina OHDACA funding: FY 00, \$0.641M (estimate). NADR funding: FY 99, \$2.305M. ITF funding: FY 99, \$12.115M; FY 00 \$14.0M (estimate). USAID Support for East European Democracy (SEED) funding: FY 00 \$0.2M (estimate). Beginning in 1998, all U.S. financial assistance for humanitarian demining in mine-affected countries in Southeast Europe has been channeled through the Slovenian International Trust Fund (ITF) for Demining and Mine Victim Assistance. The ITF works with the national and regional mine action centers to disperse funds for mine clearance projects, mine awareness education, and victim assistance efforts.¹⁵⁹ Prior to the establishment of the ITF, the U.S. had spent over \$26M in funds on a wide range of mine action activities including the training and equipping of 450 military deminers, produced mine awareness comic books and other activities in conjunction with UNICEF and the World Bank.¹⁶⁰ The Department of Defense officially completed its demining training program in February 2000.¹⁶¹

Cambodia NADR funding: FY 99, \$1.5M; FY 00, \$2.58M (estimate); FY 01, \$2.6M (request). U.S. funding is given in the form of grants to international NGOs or channeled through the Cambodian Mine Action Center (CMAC). From FY 1993-1998, U.S. funding for mine action in Cambodia totaled nearly \$17M. Prior to the suspension of OHDACA funding in July 1997, DoD personnel equipped and trained 1,221 CMAC deminers and another 537 military engineers through the UNDP Trust Fund. Victim assistance programs by the VVAF and other NGO are also funded by USAID through the War Victims Fund.¹⁶² For FY 00, NADR funding allocation is planned to include: \$0.250M grant to CARE; \$1.2M grant to the HALO Trust; \$0.2M grant to the Mines Advisory Group; \$0.12M to Handicap International; \$0.78M donation to CMAC.¹⁶³

Chad OHDACA funding: FY 99, \$1.0M; FY 00, \$1.16M (estimate). NADR funding: FY 99, \$0.732; FY 00, \$0.633 (estimate); FY 01, \$0.6M (request). Prior to October 1, 1997, the U.S. had provided \$1.9M in assistance to Chad to support and sustain the training of approximately 200 military engineer personnel as deminers. Additionally, U.S. funding supports the operation of a national mine action center, establishment of a regional demining office in the northern part of country, mine awareness education, and the collection of historical data.¹⁶⁴ U.S. military trainers will re-qualify Chadian demining personnel in 2000.¹⁶⁵ FY 00 NADR funding allocation includes: an IMAS task order for the provision of commodities and equipment; \$0.210 for the purchase of vehicles; \$0.011M to purchase radios; \$0.196M grant to UNDP to contract aerial medical evacuation services; \$0.012M for repairs to the deminer's building in Faya; \$0.108M for the purchase of spare parts for C-130 aircraft supporting demining operations (handled as a U.S. foreign military sales case).¹⁶⁶

Croatia NADR funding: FY 99, \$0.6M. ITF funding: FY 99, \$1.6. Following an assessment mission in January 2000, the U.S. announced that it will provide an additional \$360,000 to support ongoing demining efforts in Croatia, in cooperation with the Croatian Mine Action Center (CROMAC) and the Slovenian International Trust Fund. The new grant apparently will fund the procurement of MRV3 demining flail machines manufactured by

¹⁵⁸ U.S. Department of State, FY 00 NADR Project Status, p. 1.

¹⁵⁹ U.S. Department of State, Office of the Spokesman, "Review of U.S. Government Humanitarian Demining Assistance To Bosnia and Herzegovina Since the End of the 1992-1995 Conflict," April 17, 2000.

¹⁶⁰ SOLIC Information Paper; U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 21.

¹⁶¹ Descriptive summaries of Department of Defense demining programs provided by the Office of the Deputy Assistant Secretary of Defense for Peacekeeping and Humanitarian Assistance, May 10, 2000. Hereafter cited as "DoD Descriptive Summaries."

¹⁶² U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 18; U.S. Department of State, "Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of East Asian and Pacific Affairs," March 15, 2000; SOLIC Information Paper.

¹⁶³ U.S. Department of State, U.S. Department of State, FY 00 NADR Project Status, p. 1.

¹⁶⁴ SOLIC Information Paper; "To Walk the Earth in Safety," April 1999, p. 8.

¹⁶⁵ DoD Descriptive Summaries.

¹⁶⁶ U.S. Department of State, FY 00 NADR Project Status, p. 1.

the Croatian firm of Doking D.O.O. Ltd. The terms of the grant also include demining approximately sixty hectares of land in 2000. The U.S. provided \$1.7M in humanitarian demining assistance in FY 99.¹⁶⁷

Djibouti NADR funding: FY 00, \$0.3M (estimate); FY 01, \$0.8M (request). The Humanitarian Demining IWG approved Djibouti's request for humanitarian demining assistance on December 12, 1999. U.S. military trainers and the IMAS contractor will apparently be used to establish a complete demining program including training, equipment, and facilities for demining training. A survey of requirements will be conducted sometime in 2000.¹⁶⁸

Ecuador OHDACA funding: FY 99, \$0.125M; FY 00, \$1.1M (estimate). NADR funding: FY 99, \$0.999M; FY 00, \$1.0M (estimate); FY 01, \$1.2M (request). Ecuador was included in the U.S. humanitarian demining program on February 22, 1999. The first U.S. training program was conducted late in 1999 and another is scheduled to occur between April and June 2000. The same training is provided to deminers in Peru.¹⁶⁹ The U.S. has committed to providing long-term demining training and possibly a mine detection dog program in Ecuador. Near-term objectives include the establishment of a national demining office.¹⁷⁰

Egypt OHDACA funding: FY 99, \$0.615M; FY 00, \$0.817M (estimate). Egypt requested U.S. assistance to supplement its national demining program in 1997. Egypt was accepted into the U.S. humanitarian demining program on September 2, 1998. The U.S. initially intended to conduct train-the-trainer programs and establish a national demining center. It is unclear whether a formal memorandum of understanding has been developed to assure that the intended use for donated equipment, supplies, and services is solely for humanitarian demining purposes. While not a requirement of the U.S. program, the U.S. is requesting that Egypt establish a civilian-led national demining organization. This is a necessity in order to receive assistance from the international donor community. There is concern whether the NGO presented by the Egyptian Government as part of this structure is actually independent of the government or if it existed prior to the government's announcement.¹⁷¹ Apparently, no additional funding has been approved to provide long-term support in Egypt. The Humanitarian Demining IWG has refused to allocate any NADR funds to Egypt in light of the \$1.3 billion of Foreign Military Financing funds Egypt receives from the U.S. and the apparent reluctance on the part of the Egyptian government to support its own demining effort with this assistance. In the FY 2001 State Department Budget request, Egypt is eligible to receive Excess Defense Article (EDA) under section 516 of the Foreign Assistance Act. The supporting State Department budget justification materials note that in FY 2001 EDA funds will be used to supply spare parts to outdated U.S. M-60 tanks that will be specially outfitted for use in Egypt's ongoing demining efforts. It is also possible that USAID funding will be used to support some aspects of the Egyptian national demining program such as victim assistance programs.¹⁷²

Eritrea OHDACA funding: FY 00, \$1.2M (planned estimate). NADR funding: FY 00, \$1.117M (planned estimate); FY 01, \$1.0M (request). From 1993 to 1998, the U.S. provided approximately \$8.0M in funds for training and equipping of nearly 400 military deminers and a wide array of mine action activities. On June 22, 1998 most elements of the U.S. humanitarian demining program in Eritrea were temporarily suspended due to the conflict between Ethiopia and Eritrea. While continued U.S. assistance is predicated on the conclusion and

¹⁶⁷ U.S. Department of State, Office of the Spokesman, "State Department Grants Humanitarian Demining Assistance to Croatia," January 28, 2000.

¹⁶⁸ U.S. Department of State, December 9, 1999 IWG Fact Sheet

¹⁶⁹ DoD Descriptive Summaries.

¹⁷⁰ U.S. Department of State, "Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of Western Hemisphere Affairs," March 15, 2000; U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 27; U.S. Department of State, March 18, 1999 IWG Fact Sheet.

¹⁷¹ Interview with Ayman Sorour, Executive Director of the Landmine Struggle Center, Cairo, April 10, 2000.

¹⁷² U.S. Central Command, "U.S. Government Humanitarian Demining Country Plan for the Arab Republic of Egypt (FY 2000 & 2001)," July 13, 1999; U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 28; U.S. Department of State, "Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of Near Eastern Affairs," March 15, 2000; SOLIC Information Paper; Interviews conducted in Cairo April 9-11, 2000.

implementation of a peace accord, planning is ongoing for the immediate resumption of the program.¹⁷³ Upon resumption of this program, the \$1.117M in NADR funds programmed for FY 00 would be spent deploying a mine detecting dog capability, training in explosive ordnance disposal and mine clearance, and the purchase of equipment.¹⁷⁴

Estonia OHDACA funding: FY 00, \$1.9M (estimate). NADR funding: FY 99, \$0.335; FY 01, \$0.3M (request). Estonia was accepted into the U.S. humanitarian demining program on June 1, 1998. U.S. assistance includes providing modern protective clothing and demining equipment, the establishment of a mine action center, and a mine awareness campaign.¹⁷⁵ U.S. military personnel provided training in Estonia between April and June 2000. Another training mission is scheduled to occur in FY 01.¹⁷⁶

Ethiopia OHDACA funding: FY 00, \$1.2M (planned estimate). NADR funding: FY 99, \$0.335M; FY 00, \$1.117M (planned estimate); FY 01, \$1.0M (request). Since 1993, the U.S. provided approximately \$8.0M for training and equipping of military deminers and wide array of mine action activities. On June 22, 1998 elements of the U.S. program were temporarily suspended due to the conflict between Eritrea and Ethiopia. Future U.S. demining assistance is predicated on the conclusion and implementation of a peace accord.¹⁷⁷ Upon resumption of this program, the \$1.117M in NADR funds programmed for FY 00 would be spent deploying a mine detecting dog capability, training in explosive ordnance disposal and mine clearance, and the purchase of equipment.¹⁷⁸

Georgia OHDACA funding: FY 00, \$0.065M (estimate). NADR funding: FY 00, \$0.997M (estimate); FY 01, \$0.9M (request). In 1999, the Government of Georgia requested U.S. humanitarian demining assistance to “clear protective minefields surrounding two ex-Soviet military bases in Georgia so that the areas may be returned to civilian use.”¹⁷⁹ The Humanitarian Demining IWG is currently considering this request. Georgia will host the joint training exercise resulting from the Beecroft Initiative in September to November 2000.¹⁸⁰ The \$0.997M in FY 00 NADR funds may possibly be granted to HALO Abkhazia.¹⁸¹

Guinea Bissau OHDACA funding: FY 00, \$0.065M (estimate). NADR funding: FY 00, \$0.3M (estimate); FY 01, \$0.5M (request). The Economic Community of West African States (ECOWAS) submitted a request for U.S. humanitarian demining equipment for its regional peacekeeping force (ECOMOG) in Guinea-Bissau.¹⁸² The Humanitarian Demining IWG did not approve this request. While the U.S. is studying the feasibility of using emergency demining funds for deploying contractor mine-detecting dogs, the Humanitarian Demining IWG is apparently deferring a decision pending the completion of a study of the landmine problem in Guinea Bissau.¹⁸³

¹⁷³ U.S. Central Command, “U.S. Government Humanitarian Demining Country Plan for Eritrea (Conditional, FY 2001 & 2002),” February 23, 2000; U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 9; U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of African Affairs,” March 15, 2000; SOLIC Information Paper.

¹⁷⁴ U.S. Department of State, FY 00 NADR Project Status, p. 2.

¹⁷⁵ U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 22; U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: “Meeting of the Interagency Working Group on Demining, June 1, 1998.” Hereafter cited as “U.S. Department of State, June 1, 1998 IWG Fact Sheet.”

¹⁷⁶ DoD Descriptive Summaries.

¹⁷⁷ U.S. Central Command, “U.S. Government Humanitarian Demining Country Plan for Ethiopia (Conditional, FY 2001 & 2002),” February 24, 2000; U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 10; U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of African Affairs,” March 15, 2000; SOLIC Information Paper.

¹⁷⁸ U.S. Department of State, FY 00 NADR Project Status, p. 2.

¹⁷⁹ U.S. Department of State, September 2, 1999 IWG Fact Sheet.

¹⁸⁰ Interview with the Director of the Office of Humanitarian Demining Programs, Department of State, Washington D.C., May 5, 2000.

¹⁸¹ U.S. Department of State, FY 00 NADR Project Status, p. 2.

¹⁸² U.S. Department of State, March 18, 1999 IWG Fact Sheet.

¹⁸³ DoD Interviews, May 10, 2000; U.S. Department of State, March 30, 2000 IWG Fact Sheet.

Jordan OHDACA funds: FY 99, \$0.74M, FY 00, \$0.63M (estimate). NADR funds: FY 99, \$1.9M, FY 00, \$1.511 (estimate); FY 01, \$1.5M (request). U.S. military cooperation for humanitarian demining with Jordan began in 1997. The U.S. has assisted in establishing the national demining coordination office, conducted training of Jordanian military engineers, and provided equipment including mechanical clearance mini-flails. Additionally, the U.S. has provided computer based planning, management, and training tools. The Royal Jordanian Armed Forces maintains a force of 380 combat engineers dedicated to demining. Future funds for humanitarian demining will be used to fund on-going programs to remove landmines in the Jordan River Valley, along the Jordan-Syrian border, and in the Rift Valley with emphasis on providing heavy engineering equipment and bulldozers, mine detecting dogs, and experimental mechanical mine removal systems.¹⁸⁴ The FY 00 NADR funds are planned to be used to provide demining equipment (\$0.411M), demining technologies (\$0.943M), and vehicles (\$0.155M).¹⁸⁵

Kosovo OHDACA funding: FY 99, \$0.5M; FY 00, \$4.95M (estimate). NADR funds: FY 99, \$0.5M. USAID SEED funding: FY 99, \$0.65M; FY 00, \$5.414M (estimate). In response to the crisis in the spring of 1999 and the laying of new mines in the area, the U.S. funded, through UNICEF, a mine awareness campaign in the refugee camps in Albania and Macedonia.¹⁸⁶ Additionally, on June 11, the State Department modified an existing contract with RONCO to clear mines and unexploded ordnance in Kosovo. The contract provided short-term emergency demining assistance at a total cost of approximately \$1.6 million, funded from the SEED account.¹⁸⁷ The status of plans to fund a similar contract for 2000 and 2001 at an estimated cost of \$3.5 million per year is unknown. According to the U.S. European Command, "KFOR continues to perform only 'mission-essential' demining, with the exact definition of 'mission-essential' determined on the ground."¹⁸⁸

Laos OHDACA funding: FY99, \$0.7M; FY 00, \$0.4M (estimate). NADR funding: FY 99, \$1.8M; FY 00, \$1.486M (estimate); FY 01, \$1.5M (request). USAID funding: FY 99, \$0.8M. Laos began receiving U.S. assistance in 1994 and the total amount of aid reached \$11.4M through September 30, 1998. Training by U.S. military personnel has occurred with personnel from the Lao national coordinating agency for demining and UXO clearance. U.S. funds are also used in victim assistance programs in Laos. The FY 00 NADR funds will apparently be channeled through the IMAS contract to purchase equipment (\$0.726M) and vehicles (\$0.760M).¹⁸⁹ In the past, the U.S. has provided funds for mine awareness education and some historical data regarding bombing patterns.¹⁹⁰ According to Department of Defense official all "render safe" procedures that can be released have, or are in the process of, been released to deminers operating in Laos.¹⁹¹

Lebanon OHDACA funding: FY 99, \$0.65M; FY 00, \$0.084M (estimate). NADR Funding: FY 99, \$0.53M; FY 00, \$0.857M (estimate); FY 01, \$0.8M (request). U.S. funding of demining programs in Lebanon was initiated in 1998. U.S. military personnel have conducted train-the-trainer programs with military engineers in-country and twenty-two Lebanese military personnel have attended a one-time advanced humanitarian demining training at Fort Leonard Wood. Other U.S. military personnel have assisted establishing the national demining center and

¹⁸⁴ U.S. Central Command, "U.S. Government Humanitarian Demining Country Plan for the Hashemite Kingdom of Jordan (FY 2001 & 2002)," April 12, 2000; U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 29; U.S. Department of State, "Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of Near Eastern Affairs," March 15, 2000; SOLIC Information Paper.

¹⁸⁵ U.S. Department of State, FY 00 NADR Project Status, p. 2.

¹⁸⁶ U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: "Meeting of the Interagency Working Group on Demining, June 17, 1999." Hereafter cited as "U.S. Department of State, June 17, 1999 IWG Fact Sheet."

¹⁸⁷ U.S. Information Service, "Ambassador Steinberg Outlines U.S. Humanitarian Demining Efforts in Kosovo," June 21, 1999.

¹⁸⁸ U.S. Department of State, September 2, 1999 IWG Fact Sheet.

¹⁸⁹ U.S. Department of State, FY 00 NADR Project Status, p. 3.

¹⁹⁰ U.S. Department of State, "To Walk the Earth in Safety," April 1999, p. 19; U.S. Department of State, "Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of East Asian and Pacific Affairs," March 15, 2000; SOLIC Information Paper.

¹⁹¹ DoD Interviews, May 10, 2000.

developing a mine awareness campaign. Further funds will be used to finance other on-going programs to remove mines throughout Lebanon.¹⁹² Spending plans for FY 00 NADR funds include: \$0.4M for mechanical equipment through the IMAS contract; \$0.057 for unspecified services; \$0.2M for ambulances; \$0.11M for World Rehabilitation Fund mine awareness programs; \$0.09M for support to the national demining office.¹⁹³

Macedonia, Former Yugoslav Republic of The Humanitarian Demining IWG is conducting a policy assessment regarding the landmine situation in Macedonia and possible areas of U.S. assistance.¹⁹⁴

Mauritania OHDACA funding: FY 99, \$0.45M; FY 00, \$1.7M (estimate). NADR funding: FY 99, \$0.534M; FY 00, \$0.501M (estimate); FY 01, \$0.4M (request). Mauritania was accepted into the U.S. humanitarian demining program on December 10, 1998. Initially, U.S. efforts were directed at surveying mine affected regions. Other objectives of the program include developing an indigenous demining capability and a mine awareness program. Training of Mauritanian military deminers is expected to begin in 2000.¹⁹⁵ In FY 00, \$0.460M in NADR funds will be channeled through the IMAS contract to procure vehicles.¹⁹⁶

Moldova OHDACA funding: FY 99, \$0.071M; FY 00, \$0.043M (estimate). NADR funding: FY 00, \$0.3M (estimate). The Humanitarian Demining IWG approved Moldova for humanitarian demining assistance on September 2, 1999. According to the U.S. assessment of the landmine problem in Moldova, “the problem is limited to one minefield. The National Army of Moldova previously cleared the other six minefields from the 1992 internal conflict with the Transnistrian separatist region. The remaining minefield was emplaced in a haphazard manner, and mine clearance operations caused unacceptable casualties.”¹⁹⁷ Department of Defense assistance goes solely toward the procurement of demining and support equipment.¹⁹⁸

Mongolia The U.S. Government received a request for humanitarian demining assistance in early 1999 and the Demining IWG approved the dispatch of an assessment team. The extent of the landmine problem in Mongolia is unknown but it is possible that UXO are more of a concern.¹⁹⁹

Mozambique OHDACA funding: FY 99, \$1.1M; FY 00, \$0.465M (estimate). NADR funding: FY 99: \$1.9M; FY 00: \$3.5M (estimate); FY01, \$2.0M (request). U.S. assistance to Mozambique has totaled nearly \$27 million since its inception in 1993 and has included the full spectrum of mine action activities permitted under U.S. law. This has included extensive USAID funded mine clearance projects and victim assistance efforts. The U.S. military has conducted extensive train-the-trainer activities, provided computer and communications equipment, and assisted the establishment and operation of the National Demining Commission. DoD’s role and funding will be curtailed as the program was “handed off” to the Department of State in April 1999. The U.S. provided \$2.0 million in additional demining equipment on May 11, 2000 in response to recent natural disasters in mine-affected regions of Mozambique. The planned allocation of FY 00 NADR includes: \$2.9M for operational demining

¹⁹² U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 30; U.S. Department of State “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of Near Eastern Affairs,” March 10, 2000; SOLIC Information Paper.

¹⁹³ U.S. Department of State, FY 00 NADR Project Status, p. 3.

¹⁹⁴ U.S. Department of State, September 2, 1999 IWG Fact Sheet.

¹⁹⁵ U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of African Affairs,” March 15, 2000; “To Walk the Earth in Safety,” April 1999, p. 11; U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: “Meeting of the Interagency Working Group on Demining December 10, 1998.” Hereafter cited as “U.S. Department of State, December 10, 1998 IWG Fact Sheet.”

¹⁹⁶ U.S. Department of State, FY 00 NADR Project Status, p. 3.

¹⁹⁷ U.S. Department of State, September 2, 1999 IWG Fact Sheet.

¹⁹⁸ DoD Interviews, May 10, 2000.

¹⁹⁹ U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: “Meeting of the Interagency Working Group on Demining, March 18, 1999.” Hereafter cited as “U.S. Department of State, March 18, 1999 IWG Fact Sheet.”

through the IMAS contract; \$0.118M for vehicles and equipment through the IMAS contract; a \$0.343M grant to the HALO Trust for demining in northern part of the country; \$0.2M to refurbish the Buquisso demining camp.²⁰⁰

Namibia OHDACA funding: FY 00, \$0.007M (estimate). NADR funding: FY 99, \$1.053M; FY 00, \$0.3M (estimate); FY 01, \$0.1M (request). From 1995 to 1998 over \$3.6M in U.S. military assistance was used in train-the-trainer programs, establishment and operation of a national demining office, the purchase of equipment, and mine awareness education programs. The U.S. also provided prototype machinery called a “berm processor” to mechanically clear landmines from berms surrounding 409 electrical pylons. The DoD training program was completed in February 2000 and the entire program has been transferred to Department of State management. Future U.S. funded efforts will sustain the technical expertise and logistical support to the national program, completing the berm project and accomplishing minefield clearance quality assurance via a commercial contract.²⁰¹ The \$0.3M in FY 00 has been dedicated to an IMAS contract task order to perform the pylon quality assurance project.²⁰²

Organization of American States/Inter-American Defense Board (OAS/IADB) (Costa Rica, Guatemala, Honduras, Nicaragua) OHDACA funding: FY 99, \$0.35M. NADR funding: FY 99, \$2.241M; FY 00, \$1.437M (estimate); FY 01, 1.5M (request). USAID funding: FY 00, \$2.0M (estimate). Beginning in 1993, nearly \$6.5M of U.S. assistance has been provided for demining in Central America through the OAS/IADB through September 30, 1998. The OAS has been coordinating a regional demining effort in Central America since that time. U.S. funds are used for training, equipment procurement, and mine awareness. U.S. funding also supports the multinational mine clearance organization named MARMINCA. U.S. military personnel have trained over 1,000 deminers for MARMINCA. The OAS requested and the U.S. demining IWG has agreed to support a mine-detecting dog program for Central America. The four recipient governments, with the full support of donors, have set 2002 as a target to make their states “mine safe.”²⁰³ The projected allocation of FY 00 NADR funding includes: \$1.237M for a mine detection dog contract; \$0.166M for communications equipment; \$0.2M for victims assistance and mine awareness projects.²⁰⁴

Oman OHDACA funding: FY99, \$1.4M. NADR funding: FY 00, \$0.3M (estimate); FY 01, \$0.5M (request). The Humanitarian Demining IWG provisionally approved Oman's request for humanitarian demining assistance on December 9, 2000. A survey will be conducted sometime in 2000 to establish the training and equipment requirements needed to bring Oman's current demining units up to international standards. U.S. training of Omani deminers is scheduled to occur in February 2001. It is also possible that the U.S. will provide a mine-detecting dog capability as part of the overall country program.²⁰⁵ A decision whether to formally include Oman in the U.S. program was deferred until sometime in early 2000.²⁰⁶

Peru OHDACA funding: FY 99, \$0.125M; FY 00, \$1.1M (estimate). NADR funding: FY 99, \$1.0M; FY 00, \$1.0M (estimate); FY 01, \$1.2M (request). Peru was formally included in the U.S. humanitarian demining program on February 22, 1999. A survey of requirements followed this decision along with the purchase of some equipment. The first U.S. training program was conducted late in 1999 and another is scheduled to occur between April and June 2000. The same training is provided to deminers in Ecuador.²⁰⁷ The establishment of a national

²⁰⁰ U.S. Department of State, FY 00 NADR Project Status, p. 3.

²⁰¹ U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of African Affairs,” March 15, 2000; U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 13; SOLIC Information Paper; U.S. Department of State, June 17, 1999 IWG Fact Sheet.

²⁰² U.S. Department of State, FY 00 NADR Project Status, p. 3.

²⁰³ U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of Western Hemisphere Affairs,” March 15, 2000; U.S. Department of State, “To Walk the Earth in Safety,” April 1999, pp. 23-26; U.S. Department of State, March 18, 1999 IWG Fact Sheet; U.S. Department of State, June 1, 1998 IWG Fact Sheet.

²⁰⁴ U.S. Department of State, FY 00 NADR Project Status, p. 4.

²⁰⁵ DoD Descriptive Summaries.

²⁰⁶ U.S. Department of State, December 9, 1999 IWG Fact Sheet.

²⁰⁷ DoD Descriptive Summaries.

demining center and demining operations to clear mine-affect border regions are near-term priorities of the program.²⁰⁸

Rwanda OHDACA funding: FY 00, \$0.007M (estimate). NADR funding: FY 99, \$0.75M; FY 00, \$0.246M (estimate); FY 01, \$0.25M (request). USAID funding: FY 99, \$1.05M. U.S. demining assistance to Rwanda began in 1994 with extensive military support to establish a national demining office, basic mine awareness training, the establishment of a computer based data collection and records management system, and a train-the-trainer program.²⁰⁹ According to the Department of State, “the country program is proceeding with one region of the country (the northeast) complete and the second region (the northwest) now sufficiently secure to conduct demining operations. The extent of the problem in the northwest is not yet known. USAID plans use some portion of its development assistance operations to fund mine action activities in the near future.”²¹⁰ The Department of Defense completed its demining training program in February 2000.²¹¹ The planned allocation of FY 00 NADR funds includes: \$0.001M for the local purchase of auto parts; an IMAS contract task order for unspecified equipment, commodities and services.²¹²

Somalia NADR funding: FY 99, \$1.15M; FY 00, \$1.3M (estimate); FY 01, \$1.6M (request). A U.S. delegation visited northwestern Somalia in late April 1999 and found that the unrecognized republic of “Somaliland” suffers from a severe landmine/UXO problem. The U.S. is providing funding for a HALO Trust project that will clear landmines in western Somaliland and the city of Burao. Additionally, the U.S. has provided \$0.343M to fund a CARE effort to conduct Level One and Level Two survey projects and to provide mine awareness training. While making progress, CARE’s project may be forced to suspend its operations due to the European Union’s unexplained failure to provide its share of funding for the project.²¹³ The planned allocation of FY 00 NADR funds includes \$1.3M for HALO Trust activities (grant signed March 27, 2000) and an unspecified \$0.1M reimbursement for the HALO Trust project.²¹⁴

Swaziland OHDACA funding: FY 99, \$0.828M; FY 00, \$0.289M (estimate). The Humanitarian Demining IWG approved Swaziland for humanitarian demining assistance on June 1, 1998. Swaziland has a single minefield, 10 kilometer long and 50-100 meters wide, along part of its border with Mozambique. The focus of the U.S. program has been on training military demining personnel, providing equipment and equipment operator training.²¹⁵

Thailand OHDACA funding: FY 99, \$0.7M; FY 00, \$1.8M (estimate). NADR funding: FY 99, \$1.049M; FY 00, \$1.22M (estimate); FY 01, \$1.3M (request). Thailand was approved for humanitarian demining assistance in November 1999. Funding will establish a national mine action center, a demining school, and mine awareness program. Additionally, funding will be used to purchase demining equipment, protective clothing, and vehicles. According to State Department budget justification materials, “FY 2001 funds will complete the planned three-year cycle to fully train the Thai demining trainers and equip six demining platoons with trucks, computers, and

²⁰⁸ U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of Western Hemisphere Affairs,” March 15, 2000; U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 27; U.S. Department of State, March 18, 1999 IWG Fact Sheet.

²⁰⁹ U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of African Affairs,” March 15, 2000; U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 14; SOLIC Information Paper.

²¹⁰ U.S. Department of State, June 17, 1999 IWG Fact Sheet.

²¹¹ DoD Descriptive Summaries.

²¹² U.S. Department of State FY 00 NADR Project Status, p. 3.

²¹³ U.S. Department of State, June 17, 1999 IWG Fact Sheet; U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of African Affairs,” March 15, 2000.

²¹⁴ U.S. Department of State FY 00 NADR Project Status, p. 3.

²¹⁵ U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 15; U.S. Department of State, Bureau of Political Military Affairs, Office of Humanitarian Demining Programs, Fact Sheet: “Meeting of the Interagency Working Group on Demining June 1, 1998.”

demining gear, building the capacity Thailand needs to address the landmine problem along its borders with Cambodia and Burma.”²¹⁶ The second round of Department of Defense train-the-trainer programs was conducted between April and June 2000.²¹⁷ The planned allocation of FY 00 NADR funds includes: \$0.1M for Level Two Survey activities; \$0.5M for an unspecified mine detection dog program; \$0.5M for equipment and vehicles; \$0.07 for facilities refurbishment; \$0.05 for an unspecified regional initiative.²¹⁸

Vietnam NADR funding: FY 99, \$1.096M; FY 00, \$1.0M (estimate); FY 01, \$0.8M (request). The U.S. demining program is in a nascent stage. U.S. personnel have traveled to Vietnam on an assessment mission and engaged in discussions regarding the types of assistance that can be provided as part of a bilateral demining assistance program.²¹⁹ The U.S. announced on June 20, 1999 that an agreement had been reached with Vietnam to provide demining equipment.

Yemen OHDACA funding: FY 99, \$0.527M, FY 00, \$0.581M (estimate). NADR funding: FY 99, \$1.462M; FY 00, \$1.236M (estimate); FY 01, \$1.4M (request). The U.S. program in Yemen was initiated in October 1997 and approximately \$4.0M has been allocated prior to October 1, 1998. U.S. Central Command deployed a twenty five member humanitarian demining training team on March 20, 1999 to conduct train-the-trainer operations with Yemeni military engineers. Other U.S. funded activities include establishment of a central demining office in Sa’naa and a regional demining office in Aden, and the provision of equipment.²²⁰ The planned allocation of FY 00 NADR funds includes: \$0.813M for vehicles and equipment; \$0.015 for computers; \$0.046 for office support; \$0.36M for unspecified “sustainment” activities.²²¹

Zambia NADR funding: FY 00, \$0.3M (estimate); FY 01, \$0.5M (request). The Humanitarian Demining IWG authorized an assessment visits to Zambia in March 2000.²²²

Zimbabwe OHDACA funding: FY 99, \$1.0M, FY 00, \$0.756M (estimate). NADR funding: FY 99, \$0.743M; FY 00, \$0.250M (estimate); FY 01, \$1.0M (request). Zimbabwe was approved for inclusion in the U.S. humanitarian demining program on 5 February 1998. Prior to October 1, 1998, Zimbabwe received \$2.3M in U.S. assistance. U.S. military personnel trained Zimbabwe soldiers in August and September 1999 on techniques for minefield survey, mine clearance, and advanced medical training. While a national demining center and a mine awareness campaign have been initiated, the focus of the U.S. program seems to be on the provision of heavy equipment and the training necessary to operate and maintain this equipment in demining operations. Apparently, the U. S. and the European Union explored the possibility of jointly demonstrating new demining equipment at Victoria Falls, one of the Government of Zimbabwe's highest priorities.²²³

²¹⁶ U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 120; U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of East Asian and Pacific Affairs,” March 15, 2000.

²¹⁷ DoD Descriptive Summaries.

²¹⁸ U.S. Department of State, FY 00 NADR Project Status, p. 4.

²¹⁹ U.S. Department of State, June 17, 1999 IWG Fact Sheet.

²²⁰ U.S. Central Command, “Humanitarian Demining Country Plan For The Republic of Yemen,” July 19 1999; U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 31; U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of Near Eastern Affairs,” March 15, 2000; SOLIC Information Paper.

²²¹ U.S. Department of State, FY 00 NADR Project Status, p. 4.

²²² U.S. Department of State, March 30, 2000 IWG Fact Sheet.

²²³ U.S. Department of State, “Congressional Budget Justification for Foreign Operations, FY 2001 – Bureau of African Affairs,” March 15, 2000; U.S. Department of State, “To Walk the Earth in Safety,” April 1999, p. 16; SOLIC Information Paper; U.S. Department of State, September 2, 1998 IWG Fact Sheet; U.S. European Command Press Release, July 28, 1999.

LIST OF ACRONYMS

ACDA	Arms Control and Disarmament Agency
ADAM	Area Denial Antipersonnel Munition
APL-A	antipersonnel landmine alternatives (program)
ARDEC	Armament Research and Development Engineering Center (U.S. Army)
BAA	broad agency announcement
CCW	Convention on Certain Conventional Weapons
CD	Conference on Disarmament
DARPA	Defense Advanced Research Projects Agency
DMZ	demilitarized zone
DoD	Department of Defense
DoS	Department of State
DTRA	Defense Threat Reduction Agency
DU	depleted uranium
EMD	engineering and manufacturing development
EOD	explosive ordnance disposal
FM	field manual
FOIA	Freedom of Information Act
FY	fiscal year ²²⁴
FYDP	five year defense plan
GEMSS	Ground Emplaced Mine Scattering System
IADB	Inter-American Defense Board
ICBL	International Campaign to Ban Landmines
ICRC	International Committee of the Red Cross
IMAS	Integrated Mine Action Support (contract)
IOC	Industrial Operations Command (U.S. Army)
ITF	International Trust Fund (for Bosnia Herzegovina)
IWG	interagency working group
MNS	mission needs statement
MOPMS	Modular Pack Mine System
NADR	Nonproliferation, Antiterrorism, Demining and Related Programs (DoS Appropriation)
NATO	North Atlantic Treaty Organization
NGO	nongovernmental organization
NSD	NON SELF-DESTRUCT
NSD-A	NON SELF-DESTRUCT (ANTIPERSONNEL MINE) ALTERNATIVE
OAS	Organization of American States
OHDACA	Overseas Humanitarian, Disaster, and Civic Aid (DoD Appropriation)
OSD	Office of the Secretary of Defense
OUSD(A&T)	Office of the Under Secretary of Defense (Acquisition and Technology)
PAT	prototype assessment test
PDD	Presidential decision directive
PDM	Pursuit Deterrent Munition
PE	program element
PM-MCD	Project Manager for Mines, Countermine, and Demolitions (U.S. Army)
RAAMS	REMOTE ANTI-ARMOR MINE SYSTEM
RADAM	Remote Area Denial Artillery Munition
RATTLER	Rapid Tactical Terrain Limiter

²²⁴ U.S. Government fiscal years (FY) begin on the first day of October in the previous calendar year and end on the last day of September of the current calendar year.

RDDS	Research and Development Descriptive Summary
RDT&E	research, development, test and evaluation
SEED	Support for Eastern European Democracy
SLAM	Selectable Lightweight Attack Munition
SOF	special operations forces
SOLIC	Special Operations-Low Intensity Conflict (DoD)
TACOM	Tank-Automotive and Armaments Command (U.S. Army)
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
UNOG	United Nations Office, Geneva
USAID	United States Agency for International Development
USAF	United States Air Force
USN	United States Navy
UXO	unexploded ordnance
VVAF	Vietnam Veterans of America Foundation
WCMD	wind corrected munitions dispenser
WVF	War Victims Fund

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