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Villagers stand around one-third of the casing of a cluster bomb that landed on the village of Ainger, Afghanistan, on November 17, 2001. © Bonnie Docherty / Human Rights Watch, 2002.

At least twenty-five civilians died and many more were injured during cluster strikes in or near populated areas. Cluster bombs also left unexploded bomblets, which continue to injure and kill innocent civilians long after the attacks. While the United States has made efforts to improve the targeting and technology of cluster bombs, the weapon has fundamental flaws that require additional changes and new international regulation.

## **Fatally Flawed: Cluster Bombs and Their Use by the United States in Afghanistan**

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# UNITED STATES / AFGHANISTAN

## FATALLY FLAWED: CLUSTER BOMBS AND THEIR USE BY THE UNITED STATES IN AFGHANISTAN

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## ACRONYMS USED IN REPORT

AFMC	Air Force Materiel Command
ATC	Afghan Technical Consultants
BLU	Bomb live unit, referring in this report to a BLU-97
BLU-97	Submunition of CBU-87 and CBU-103, which has anti-armor, antipersonnel, and incendiary capability
CBU	Cluster bomb unit, referring in this report to a CBU-87 or CBU-103
CBU-87	U.S.-made cluster bomb containing 202 submunitions, or bomblets
CBU-103	CBU-87 with a WCMD attached to the rear to increase accuracy
CCW	Convention on Conventional Weapons
CEP	Circular error probable
ERW	Explosive remnants of war
DAFA	Demining Agency for Afghanistan
DoD	U.S. Department of Defense
EOD	Explosive ordnance disposal
GWAPS	Gulf War Air Power Survey
GPS	Global positioning system
ICRC	International Committee of the Red Cross
ICBL	International Campaign To Ban Landmines
IDP	Internally displaced persons
IHL	International humanitarian law
JDAM	Joint Direct Attack Munition
MAPA	U.N. Mine Action Program for Afghanistan
MDC	Mine Detection Dog Center
MCPA	Mine Clearance Planning Agency
NGO	Nongovernmental organization
OMAR	Organization for Mine Awareness and Afghan Rehabilitation
RMAC	Regional Mine Action Center
TMD	Tactical munitions dispenser
UNHCR	U.N. High Commissioner for Refugees
UXO	Unexploded ordnance
WCMD	Wind corrected munitions dispenser

## I. SUMMARY AND RECOMMENDATIONS

On October 7, 2001, the United States launched an air campaign in Afghanistan that represented the beginning of its worldwide war on terrorism. The campaign sought to destroy al-Qaeda, the international terrorist organization responsible for the September 11 attacks in New York and Washington, D.C., and the Taliban, Afghanistan's oppressive fundamentalist regime which had sheltered al-Qaeda. In addition to precision guided munitions and traditional unguided "dumb" bombs, the U.S. arsenal included cluster bombs, large weapons that release hundreds of smaller submunitions, or bomblets. While cluster bombs have military value because they can destroy broad or moving targets, they also have serious civilian side effects. Human Rights Watch and others have criticized the bombs' large and imprecise "footprints" (the areas over which bomblets disperse) as well as the fact that they leave large numbers of unexploded submunitions that become de facto landmines. Their use in Afghanistan renewed this debate.

The United States dropped about 1,228 cluster bombs containing 248,056 bomblets between October 2001 and March 2002.<sup>1</sup> Cluster bombs represented about 5 percent of the 26,000 U.S. bombs dropped during that time period. The United States primarily used two aerially delivered models, the CBU-87, a veteran of the Gulf War and the NATO bombing campaign in Yugoslavia, and the new, "wind corrected" CBU-103. A small number of Navy CBU-99s, CBU-100s, and JSOW-As were also used. In 232 cluster strikes, the United States hit targets across Afghanistan, including military bases, frontlines, villages where Taliban and al-Qaeda troops were hiding, and cave complexes. Reports that one bomb went astray and killed at least nine people near Herat outraged critics, who remembered the civilian casualties cluster bombs had caused in past wars. In response, the Pentagon defended cluster bombs as important area and antipersonnel weapons and said that it used them with care.

In a three-and-a-half week mission to Afghanistan in March 2002, Human Rights Watch found ample evidence that cluster bombs caused civilian harm. It confirmed that at least twenty-five civilians died and many more were injured during cluster strikes in or near populated areas. Holes in the walls and roofs of numerous homes were still visible. The casualty figures do not represent the total for the country because some deaths and injuries go unreported; furthermore, the Human Rights Watch team focused on determining potentially disturbing patterns and incidents in the bombing rather than identifying every civilian casualty.

Cluster bombs also left unexploded bomblets, or live duds, which continue to injure and kill innocent civilians long after the attacks. The precise dud, or initial failure, rate of cluster bombs used in Afghanistan, i.e., the percentage of bomblets that did not explode on impact, is not known. Even using a conservative estimate of 5 percent, however, the cluster bombs dropped by the United States likely left more than 12,400 explosive duds that threaten civilians and require clearance. From October 2001 to November 2002, at least 127 civilians as well as two deminers were killed or injured by cluster bomblets. Common post-strike victims in Afghanistan include shepherds grazing their flocks, farmers plowing their fields, and children gathering wood. Duds have also interfered with the economic recovery of the country. Clearance has proceeded with impressive speed, but deminers have had to overcome several obstacles, including shortages in information, equipment, funding, staff, and time.

The use of cluster bombs in Afghanistan, as elsewhere, raises concerns under international humanitarian law (IHL). This body of law, which governs conduct during armed conflict, requires belligerents to distinguish between combatants and non-combatants and prohibits as "indiscriminate" any attacks that fail to do so. Some kinds of cluster bomb attacks consistently rise to the level of being indiscriminate. Particularly troublesome are strikes in or near populated areas, which regularly cause civilian casualties both during strikes, due to the difficulty in precisely targeting cluster bomblets, and after strikes, due to the large number of explosive duds inevitably left by cluster bombs. The aftereffects of unexploded bomblets, especially when they litter an area that will be frequented by civilians or when the dud rate is high, are also problematic. The United States did not intentionally target civilians in Afghanistan, but in some of its cluster bomb attacks, it used means and methods of

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<sup>1</sup> Additional cluster bombs may have been used since March in the mountains of eastern Afghanistan, but the exact number is unknown and likely to be small.

attack that could be interpreted as indiscriminate. Furthermore, given the foreseeable dangers of using cluster bombs in certain circumstances, it failed in some cases to “take all feasible precautions” to avoid civilian harm as required under IHL.

The use of cluster bombs in Afghanistan did not cause as much humanitarian harm as in some other conflicts, but the case illuminates common and recurrent problems with these weapons. The United States and its allies dropped 61,000 cluster bombs in the Gulf War, and unexploded bomblets killed 1,600 civilians. In Yugoslavia, the NATO alliance used 1,765 clusters, which killed between ninety and 150 civilians during strikes and another fifty after the conflict. The smaller number of cluster bomb casualties in Afghanistan is due in part to the smaller number of cluster bombs used and the extensive pre-existing demining infrastructure, which speeded clearance of unexploded bomblets. The United States also learned lessons from its previous cluster bomb mistakes, making improvements in targeting and technology. Some lessons remain to be learned, however. The United States ignored the major targeting lesson of Yugoslavia when it used cluster bombs in populated areas, and it still has not solved the problem of unexploded bomblets by lowering the dud rate to an acceptable level.

The presence of problems with targeting, aftereffects, and clearance, even in a less egregious case like Afghanistan, suggests that cluster bombs have fundamental flaws. Tactical, technical, and legal steps should be taken to minimize future humanitarian harm. The United States should consider whether the cluster bomb, while effective in some circumstances, is still necessary to its arsenal. Airdropped cluster bombs appear to be of diminishing importance to the U.S. military, given the prevalence of less expensive precision guided munitions and the existing and emerging alternatives to cluster bombs. The international community should formally regulate cluster bombs as it has other problematic weapons, such as antivehicle landmines and incendiary weapons. At least fifty-six countries, many of which have less developed technology and may employ less careful targeting than the United States, stockpile cluster munitions. At least nine states have used them in conflict, most notably the United States in seven countries.<sup>2</sup> Specific new international law could clarify and strengthen existing IHL restrictions on cluster bombs.

The war in Afghanistan coincided with and spurred an international discussion about the best way to regulate these weapons. In December 2001, the Second Review Conference of the Convention on Conventional Weapons (CCW) appointed a group of governmental experts to evaluate ways to deal with explosive remnants of war (ERW), including the possibility of negotiating a new protocol. Cluster bombs fall under the experts’ mandate because the bombs leave unexploded bomblets. Reports of civilian cluster casualties in Afghanistan added impetus to the argument that these weapons should be controlled through a CCW protocol. The experts, who will meet again in December 2002 to present recommendations for next year’s activities, have a valuable opportunity to help reduce the humanitarian impact of cluster bombs.

The following report provides a detailed assessment of cluster bomb use in Afghanistan while offering recommendations for minimizing their civilian effects in the future. Human Rights Watch has studied these weapons for years and was the first group to call for a moratorium on their use.<sup>3</sup> This report presents detailed findings about the most recent use of cluster bombs based on a post-bombing field mission to Afghanistan. It places these findings in the context of the general cluster bomb debate, evaluating the legality of the weapons under IHL and analyzing how cluster bomb use has evolved over the past decade. The report concludes that while

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<sup>2</sup> Human Rights Watch, Memorandum to Convention on Conventional Weapons (CCW) Delegates: A Global Overview of Explosive Submunitions, May 2002 [hereinafter Human Rights Watch, A Global Overview of Explosive Submunitions]. For more information on cluster bomb use by countries other than the United States, see International Committee of the Red Cross (ICRC), *Submunitions and Other Unexploded Ordnance* (Geneva: ICRC, 2000); Landmine Action, *Explosive Remnants of War: Unexploded Ordnance and Post-Conflict Communities* (London: Landmine Action, 2002).

<sup>3</sup> Human Rights Watch, Cluster Bombs: Memorandum for Convention on Conventional Weapons (CCW) Delegates, December 16, 1999. See also Human Rights Watch, “U.S. Cluster Bombs for Turkey?” *A Human Rights Watch Report*, vol. 6, no. 19, December 1994; Human Rights Watch, “Ticking Time Bombs: NATO’s Use of Cluster Munitions in Yugoslavia,” *A Human Rights Watch Report*, vol. 11, no. 6 (D), May 1999; Human Rights Watch, “Cluster Bombs in Afghanistan,” *A Human Rights Watch Backgrounder*, October 2001. For a complete list of Human Rights Watch documents on cluster bombs, see <http://www.hrw.org/arms/clusterbombs.htm>.

the United States has made efforts to improve the targeting and technology of cluster bombs, the weapon has fundamental flaws that require additional changes and new international regulation.

## **Methodology**

As the air war in Afghanistan moved from populated areas to more isolated caves, Human Rights Watch prepared to send a team of researchers to investigate the conduct of the war and the extent of civilian casualties. One researcher was assigned to focus on cluster bombs. While unitary bombs produce primarily immediate effects, cluster bombs also present special post-conflict threats and clearance obstacles. The civilian impact of both kinds of weapons merited study.

The Arms Division of Human Rights Watch performed an extensive bomb damage assessment in Afghanistan from March 9 through April 3, 2002. Its three-person team traveled around the country to evaluate the impact of the U.S. bombing campaign Operation Enduring Freedom. The team visited more than 250 sites and most of the country's major urban areas, including Kabul, Kunduz, Mazar-i-Sharif, Pul-i Khomri, Kandahar, and Herat. Security concerns made travel to Jalalabad and the far east of Afghanistan impossible.

The Human Rights Watch team laid the groundwork for its mission in the months before its departure. With regard to cluster bombs, it compiled press accounts of strikes and civilian casualties that resulted. It also acquired the list of cluster strikes that the United States had given to the United Nations to help with clearance. This information was processed and inputted into a database harmonized with ArcView geographic information system software, a computer-mapping program. It helped researchers determine which regions and which individual sites to visit.

Once on the ground, team members visited cluster bomb sites in and around the major urban areas listed above. At each site, they took global positioning system (GPS) coordinates, a measure of a location's latitude and longitude, so that they could plot the site on maps and satellite photos. They looked at both the remains of weapons and the types and patterns of destruction they caused. Cluster bombs leave much debris, which provides clues to their model and use. Team members documented what they saw with numerous photographs. They also interviewed witnesses who provided the time and place of strikes, the names of casualties, and information about the long-term effects of unexploded bomblets; such testimony revealed the human significance of the events.

Demining groups around the country provided invaluable assistance to the Human Rights Watch mission. These groups, including the U.N. Mine Action Program for Afghanistan (MAPA), HALO Trust, the Demining Agency for Afghanistan (DAFA), and the Organization for Mine Awareness and Afghan Rehabilitation (OMAR), shared statistics on clearance efforts and civilian casualties. They guided the team to both cleared and uncleared sites, many of which had not been mentioned in press reports or U.S. government documents. Deminers also explained the steps they had taken to clear bomblets and increase awareness of their danger.

Work continued after the mission. In addition to processing its data, Human Rights Watch obtained updated lists of casualties from the various organizations recording that information on the ground. It also spoke with officials from the U.S. State Department, Department of Defense, Navy, and Air Force, from whom it received new information on cluster bomb use. These post-mission interviews clarified the U.S. government's understanding of the events and allowed Human Rights Watch to paint a more complete picture of what happened.

## **Outline of Report**

The report that follows comprises three parts: an overview of the cluster bomb debate, details on cluster bomb use in Afghanistan, and a comparison of use in this conflict and past ones. As a whole, the report illustrates the serious humanitarian problems presented by this weapon and suggests guidelines for future regulation.

The first part of the report discusses the benefits and costs of cluster bombs. Chapter two provides an explanation of the workings of cluster bombs and outlines their military purposes, focusing on the models used in

Afghanistan. Chapter three describes the major humanitarian criticisms of these weapons and analyzes how these factors raise serious concerns under IHL.

The heart of the report deals with U.S. use of cluster bombs in Afghanistan. Chapter four provides a brief overview of the air war in Afghanistan and the role cluster bombs played. It then summarizes the public debate that raged around the world during the conflict. The next three chapters present the findings of the Human Rights Watch bomb damage assessment mission to Afghanistan. Chapter five, which focuses on targeting, or immediate effects, uses three case studies to highlight the frequent civilian harm caused by dropping cluster bombs in or near populated areas. Chapter six on aftereffects explains the dangers of unexploded bomblets. Chapter seven describes clearance efforts and the obstacles deminers face in ridding Afghanistan of cluster bomblets.

Chapter eight concludes the report by comparing U.S. use of cluster bombs in Afghanistan to their use by NATO in Yugoslavia in 1999 and the allied coalition against Iraq during the 1991 Gulf War.

An appendix at the end of this report provides more detailed information about the incidents that Human Rights Watch investigated.

### **Recommendations**

While U.S. modifications in targeting and technology appear to have reduced the adverse humanitarian side effects of the cluster bombs used in Afghanistan to some degree, the weapon still poses a danger to civilians in future conflicts because of its broad footprint, lack of accuracy, and high number of explosive duds left behind. Given the proliferation of cluster bombs around the world, a new international instrument is needed to control the fundamental problems inherent in cluster bomb use. The information and recommendations in this report could be used as a starting point for discussion of both additional changes in targeting and technology and future regulation.

Human Rights Watch recommends:

#### ***To minimize the humanitarian harm of cluster bombs during strikes***

- Cluster bombs should not be used in or near populated or urban areas. The definition of a populated area should include inhabited towns and villages as well as cities.
- The United States and other users of cluster bombs should investigate the causes of cluster bombs that go astray and address them before any future use.
- The United States and other users of cluster bombs should increase transparency about targeting choices, at least post-conflict, so that the effectiveness and dangers of cluster bombs can be better evaluated.

#### ***To minimize the aftereffects of cluster bombs***

- Cluster bomb use should be suspended until the initial dud rate can be reduced dramatically. By order of the Secretary of Defense, future U.S. submunitions are to have a failure rate of less than 1 percent.
- Whatever the dud rate, militaries should consider the long-term effects of cluster bombs when choosing targets. They should be particularly careful about using cluster bombs in areas to which civilians may return or in environments that increase the dud rate, such as soft terrain.
- Records should be kept of cluster bomb casualties and clearance efforts to allow for future analysis of the aftereffects of this weapon.

#### ***To improve clearance***

- The United States and other users of cluster bombs should keep accurate records of strikes and report them to the United Nations.
- The United States and other users of cluster bombs should provide clearance assistance, at least in the form of funding, training, and equipment.



- The United Nations and international community should expedite the dissemination of information on cluster bomb locations.
- Cluster clearance groups should develop a clear and consistent system for demarcating areas containing unexploded cluster bomblets and aggressively publicize it in the local civilian community.

***To develop better cluster bomb controls for the future***

- The United States and others should continue efforts to improve the accuracy and reliability of cluster bombs and submunitions. They should also examine the military necessity of these weapons in modern warfare and consider if other weapons with fewer humanitarian side effects can replace them.
- The international community, especially CCW States Parties, should negotiate a new protocol that addresses the targeting, technology, and clearance of cluster bombs and regulates use of this troubling weapon.

## II. WHAT ARE CLUSTER BOMBS?

Cluster bombs are large weapons that contain dozens and often hundreds of smaller submunitions.<sup>4</sup> They come in at least 208 models and can be delivered from the air or the ground, releasing “bomblets” or “grenades” respectively. At least fifty-six nations stockpile these weapons and at least thirty-three produce them. At least nine states have used them in combat in thirteen different countries.<sup>5</sup> This report, which covers the U.S. air campaign in Afghanistan, discusses only airdropped cluster munitions. The basic mechanics and effects of cluster bombs are the same, however, so many of the report’s conclusions and recommendations can be applied to other models.

The United States used primarily two types of cluster bombs in Afghanistan—the CBU-87 and the CBU-103.<sup>6</sup> Each model consists of a three-part green metal casing about five-and-a-half feet (1.7 meters) long with a set of four fins attached at the rear. Formally known as a tactical munitions dispenser (TMD), the casing contains 202 submunitions, or bomblets, packed in yellow foam. The casing opens at a pre-set altitude or time and releases the bomblets, which spread over an oval area that ranges from 120 by 200 feet to 400 by 800 feet (from thirty-seven by sixty-one meters to 123 by 244 meters). The military can change the dispersal pattern by adjusting the spin of the bomb as it falls and the altitude at which it opens. The faster the spin and the higher the altitude, the wider the dispersal pattern is. The CBU-87, whose initial production dates to 1984, was one of the first designs to provide some control over the footprint through its spin mechanism.

The newer CBU-103 adds a wind corrected munitions dispenser (WCMD) to the rear of its unguided predecessor and is designed to improve accuracy by compensating for wind encountered during its fall.<sup>7</sup> According to the Air Force, the WCMD helps the bomb hit its intended target especially when dropped from medium to high altitudes.<sup>8</sup> The United States introduced this model in 1999 and first used it in combat in Afghanistan.<sup>9</sup> Air Force Chief of Staff Gen. John Jumper described the high-altitude WCMD strikes as “highly successful.”<sup>10</sup> The WCMD also narrowed the bomblets’ dispersal pattern, leading the United States to estimate footprints with a 1,500-foot (458-meter) radius for CBU-87s and a 600-foot (183-meter) radius for CBU-103s.<sup>11</sup>

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<sup>4</sup> For the purposes of this report, Human Rights Watch is using “cluster bomb” as a shorthand, catchall term for air- and surface-delivered dispensers containing unguided explosive submunitions.

<sup>5</sup> Human Rights Watch, *A Global Overview of Explosive Submunitions*, p. 1. This document represents the best information available at the time and will be updated as Human Rights Watch obtains and confirms new data.

<sup>6</sup> CBU stands for “cluster bomb unit.” Although there are other munitions that use this designation, CBU in this report refers to CBU-87s and CBU-103s. For more information on these weapons, see Human Rights Watch, “Cluster Bombs in Afghanistan,” pp. 5-7; Human Rights Watch, “Ticking Time Bombs,” pp. 7-8. A small number of Navy CBU-99s, CBU-100s, and JSOW-As were also used in Afghanistan. NAVAIR Weapons Division, *China Lake-Influenced Weapons and Aircraft Deployed/Used During Times of Military Conflict*, at <http://www.nawcwps.navy.mil/r2/wc/WpnsAir.htm> (last visited November 25, 2002).

<sup>7</sup> The accuracy of air-launched munitions is measured by “circular error probable” (CEP), which is “the radius of a circle within which half of a missile’s projectiles are expected to fall.” U.S. Department of Defense (DoD), *Dictionary of Military Terms*, available at <http://www.dtic.mil/doctrine/jel/doddict/> (last visited October 10, 2002). The WCMD is designed to have a CEP of eighty-five feet (twenty-six meters), according to manufacturer specifications. Lockheed Martin, *Wind Corrected Munitions Dispenser Fact Sheet*, available at [http://www.missilesandfirecontrol.com/our\\_products/strikeweapons/WCMD/product-WCMD.html](http://www.missilesandfirecontrol.com/our_products/strikeweapons/WCMD/product-WCMD.html) (last visited October 10, 2002).

<sup>8</sup> The WCMD is designed for use at 30,000 feet (9,200 meters), but the Air Force claims it “has proven effective around 40,000 feet” (12,000 meters). Frank Wolfe, “Air Force Outfitting Sensor Fused Weapons with WCMD Tail Kits,” *Defense Daily*, December 3, 2001. For more information on the WCMD, see *Jane’s Air Launched Weapons*, ed. Duncan Lennox (Surrey, U.K.: Jane’s Information Group, 1999).

<sup>9</sup> Jake Swinson, “Eglin’s WCMD Goes to War,” Air Force Materiel Command (AFMC) Public Affairs Link, December 2001, at [http://www.afmc.wpafb.af.mil/HQ-AFMC/PA/news/archive/2001/dec/Eglin\\_WCMDtowar.htm](http://www.afmc.wpafb.af.mil/HQ-AFMC/PA/news/archive/2001/dec/Eglin_WCMDtowar.htm) (last visited November 25, 2002).

<sup>10</sup> Frank Wolfe, “Air Force Employing WCMD, Flex Targeting on B-52s, Linking Predator and AC-130s,” *Defense Daily*, November 28, 2001.

<sup>11</sup> U.S. DoD, *Probable UXO [Unexploded Ordnance] Locations, January 2002* [hereinafter U.S. Cluster Bomb List—January].

During its mission to Afghanistan, Human Rights Watch did not find sufficient evidence to judge the effectiveness of the WCMD.

The bomblets, known as BLU-97s, are six-and-a-half-inch (16.5 centimeters) tall cylinders that are often described as resembling soda cans.<sup>12</sup> When stowed, a bomblet consists of a yellow canister with a silver six-legged or black four-legged cap called a “spider.” The legs of the spiders hook into square holes at the top of the canister and then flare out so that they will catch wind. When the casing opens and the bomblets fall towards the ground, the wind pops the spiders off. The newer four-legged version is designed to pop off more easily. The loss of the cap allows a spring inside to push up a flat, triangular decelerator, or parachute, and a plastic collar that arms the BLU. The nylon parachute stabilizes the bomblet so that it lands perpendicular to the ground and explodes on impact.

Each bomblet represents a triple threat. The steel fragmentation core targets people. This scored yellow cylinder inside the canister breaks into three hundred jagged pieces of metal, which can injure people five hundred feet (152 meters) away. They can also damage light armor and trucks at fifty feet (fifteen meters). The shaped charge, a concave copper cone located at the bottom of the BLU, serves as an anti-armor weapon. When the bomblet explodes, it turns into a molten slug than can penetrate five inches (thirteen centimeters) into tanks and other armored vehicles. Finally, an incendiary zirconium wafer, located above the shaped charge, spreads incendiary fragments that can burn nearby vehicles. This three-part effect makes the BLU a “combined effects munition.”

In addition to having multiple effects, the cluster bomb has military value as an area weapon. Because of the dispersal of its bomblets, it can destroy broad, relatively “soft” targets, like airfields and surface-to-air missile sites. It is also effective against targets that move or do not have a precise location, such as enemy troops or vehicles.<sup>13</sup> In Afghanistan, the United States primarily used the cluster bomb as an antipersonnel and area weapon.

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<sup>12</sup> BLU stands for “bomb live unit.” Although there are other munitions that use this designation, BLU in this report refers to BLU-97s.

<sup>13</sup> CBUs “are area weapons that you drop in an area where you don’t know the exact coordinates or exact location,” said U.S. Air Force Maj. Gen. Don Shepperd (ret.). “U.S. Military Begins Use of Cluster Bombs in Afghanistan,” CNN: Live This Morning transcript, October 26, 2001.

### III. CONCERNS ABOUT CLUSTER BOMBS

The qualities that make a cluster bomb militarily desirable also make it dangerous to unintended targets. The weapon attracts two major humanitarian criticisms: 1) cluster bombs are prone to causing civilian casualties during strikes, and 2) they leave large numbers of unexploded bomblets, or duds, that threaten civilians after the conflict. Cluster bombs also provoke debate about responsibility for clearance of the unexploded ordnance.<sup>14</sup> The criticisms apply to varying degrees to all cluster bombs, including the CBU-87 and CBU-103 used in Afghanistan.

#### Humanitarian Problems

Cluster bombs present risks during strikes because they are imprecise on multiple levels. Most cluster bombs are unguided dumb bombs, which means they cannot be precisely targeted. Even the WCMD attached to the CBU-103 is not designed to give this model the accuracy of a laser- or satellite-guided bomb.<sup>15</sup> Once a cluster casing opens, it releases hundreds of bomblets, which are also unguided and disperse over a wide area.<sup>16</sup> While these weapons are designed to blanket an area, in so doing, they sacrifice control over individual bomblets, which are vulnerable to wind currents.<sup>17</sup> As a result, users have more difficulty ensuring harm is confined to the combatants or military objects targeted than they do with other weapons.

The lack of control over both bomb and bomblets means that cluster munitions tend to cause extensive civilian harm. Unguided cluster bombs can miss their mark and hit nearby non-military objects. Although unitary dumb bombs represent a similar threat, the humanitarian effects of a cluster bomb accident are often more serious because of the bomblets' wide dispersal. Even if a cluster bomb hits its target, the bomblets may kill civilians within the footprint or, if they blow astray, nearby. The inherent risks to civilian life and property increase when a party uses these weapons in or near populated areas. If cluster bombs are dropped on an area where combatants and civilians commingle, civilian casualties are almost assured.<sup>18</sup>

In defending use of cluster bombs, the United States has noted that cluster bomb strikes cause less physical destruction than some unitary bomb strikes.<sup>19</sup> In Afghanistan, cluster bombs left holes in the walls and roofs of civilian homes but did not level structures as did unitary bombs. This "benefit," however, is primarily relevant to populated areas where there are civilian structures that could be damaged. As discussed above, use of cluster bombs in such areas is too dangerous to civilians. While states should seek to minimize damage to civilian structures during war, they should not do so at the expense of civilian lives.

Cluster bombs produce problematic aftereffects because many of the bomblets do not explode on impact as intended. While all weapons have a failure rate, cluster bombs are more dangerous because they release such large numbers of bomblets and because certain design characteristics, based on cost and size considerations,

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<sup>14</sup> In addition to the Human Rights Watch documents cited in this section, see, e.g., ICRC, *Submunitions and Other Unexploded Ordnance*; Landmine Action, *Explosive Remnants of War*; Virgil Weibe, "Footprints of Death: Cluster Bombs as Indiscriminate Weapons Under International Humanitarian Law," *Michigan Journal of International Law* 22 (2000): 85-167.

<sup>15</sup> While, as noted above, the WCMD is designed to have a CEP of eighty-five feet (twenty-six meters), the Joint Direct Attack Munition (JDAM), which converts a dumb bomb into a satellite-guided bomb, is designed to have a CEP of thirteen meters (less than forty-three feet). U.S. Air Force, Joint Direct Attack Munitions Fact Sheet, available at <http://www.af.mil/news/factsheets/JDAM.html> (last visited October 10, 2002).

<sup>16</sup> Although it has a smaller footprint than older cluster bombs, even the CBU-103 has a greater radius of damage than most unitary explosives.

<sup>17</sup> Because of the imprecision and fact that bomblets do not always reliably explode, multiple cluster bombs with overlapping footprints are often used in attacks. The use of multiple bombs increases the potential area of destruction in strikes and produces more unexploded bomblets that have aftereffects.

<sup>18</sup> For more information on concerns about cluster bomb strikes, see, e.g., Human Rights Watch, "Cluster Bombs in Afghanistan," pp. 1-3; Human Rights Watch, "Civilian Deaths in the NATO Air Campaign," *A Human Rights Watch Report*, vol. 12, no. 1 (D), February 2000, pp. 8, 27-28; Human Rights Watch, "U.S. Cluster Bombs for Turkey?" p. 13.

<sup>19</sup> Statement of Edward Cummings, Head of the U.S. Delegation to the Second Preparatory Conference of the 2001 CCW Review Conference, April 5, 2001, pp. 2, 6.

increase the likelihood of the bomblets' failure.<sup>20</sup> As a result, every cluster bomb leaves some unexploded ordnance. In the case of CBUs, technical problems often prevent the BLU from landing perpendicular to the target. The spider cap may never pop off or, if it does, the wind may rip off the parachute that is supposed to stabilize it. "Fratricide," or the collision of bomblets in the air, can crush the canisters, causing damage to the fuzes and/or preventing vertical landings.<sup>21</sup> The location of the strike can affect the number that malfunctions. Bomblets that fall on a hard surface, for example, are more likely to explode than those that land in soft, wet areas. Dropping cluster bombs, especially older models, from high altitudes can also increase bomblet failures.

The dud, or initial failure, rate, i.e., the percentage that does not explode, not only reduces cluster bombs' military effectiveness, but also puts civilians at great risk. Unexploded bomblets become de facto landmines that kill civilians returning to the battle area after the attack. Some people consider cluster bomblet duds even worse than landmines because the former are particularly volatile.<sup>22</sup> The BLU-97, for example, has a secondary fuze that acts like an anti-handling device.<sup>23</sup> In Herat, Afghanistan, from October 2001 to June 2002, cluster bomblets killed 44 percent of their victims and mines 21 percent.<sup>24</sup> Cluster bomblet duds also killed four times as many civilians as other types of unexploded ordnance and had higher lethality rates.<sup>25</sup> In Kosovo, the lethality rate for clusters (31.7 percent) was almost two and a half times higher than that of landmines (12.9 percent),<sup>26</sup> and cluster bomblets were six times more deadly than other ordnance.<sup>27</sup> Statistics show children are particularly vulnerable to unexploded bomblets because of their curiosity and failure to understand danger.<sup>28</sup> The submunitions, which often litter factories and farmland, roads and residences, also interfere with the economic recovery of a region.<sup>29</sup>

Because of the danger of duds, cluster bomb clearance is a humanitarian imperative. While the goal is straightforward—clear as quickly, thoroughly, and safely as possible—there are numerous difficulties to overcome and questions to resolve. Demining groups usually assume responsibility for clearance because of their experience with mines and unexploded ordnance. They require, however, funds, staff, training, and equipment to do their work. States and private donors typically fund clearance efforts. Human Rights Watch and many other nongovernmental organizations (NGOs) believe that states that drop cluster bombs should bear a special responsibility to provide assistance with clearance, at least in part because they have information and expertise about their weapons and the location of strikes.<sup>30</sup> Other related issues include determining the best way to educate civilians about the dangers of cluster bomblets and developing standardized warning symbols. Slow or inefficient

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<sup>20</sup> Human Rights Watch, *A Global Overview of Explosive Submunitions*, pp. 4-5.

<sup>21</sup> Human Rights Watch found evidence of all three of these failures in Afghanistan. Demining consultant Bob Gannon hypothesized that fratricide was particularly common in this conflict. Human Rights Watch interview with Bob Gannon, Ronco, near Kandahar, Afghanistan, March 24, 2002.

<sup>22</sup> Some people also argue that unexploded cluster bomblets are worse than landmines because while the latter are designed to maim, the former are designed to kill. Human Rights Watch, "Cluster Bombs in Afghanistan," p. 11.

<sup>23</sup> ICRC, *Submunitions and Other Unexploded Ordnance*, p. F-2.

<sup>24</sup> Regional Mine Action Center (RMAC) Herat, *Cluster Victims 2002*; RMAC Herat, *Mine/UXO Victims 2002*. Both documents were obtained in June 2002 and record casualties for the first nine months of the war. Cluster bomblets killed twenty civilians and injured twenty-five. Mines killed three and injured eleven.

<sup>25</sup> Other types of unexploded ordnance killed five civilians and injured seven. RMAC Herat, *Cluster Victims 2002*; RMAC Herat, *Mine/UXO Victims 2002*.

<sup>26</sup> Landmine Action, *Explosive Remnants of War*, p. 7. Cluster bomblets injured ninety-seven civilians and killed forty-five. Landmines injured 221 and killed thirty-three.

<sup>27</sup> Cluster submunitions caused ninety-seven injuries and forty-five deaths. Other types of unexploded ordnance caused nineteen injuries and eight deaths. *Ibid.*

<sup>28</sup> See, e.g., Associated Press, "Humanitarian Groups Criticize U.S. Attacks with Cluster Bombs," *St. Louis Post-Dispatch*, December 27, 2001; Human Rights Watch, "Ticking Time Bombs," p. 6; Human Rights Watch, "U.S. Cluster Bombs for Turkey?" p. 17; Landmine Action, *Explosive Remnants of War*, pp. 44, 53.

<sup>29</sup> For more information about concerns about cluster bomb duds, see, e.g., Human Rights Watch, "Cluster Bombs in Afghanistan," pp. 1-3; Human Rights Watch, "Ticking Time Bombs," pp. 3-6; Human Rights Watch, "U.S. Cluster Bombs for Turkey?" pp. 13-14.

<sup>30</sup> See, e.g., Landmine Action, *Explosive Remnants of War*, p. 56 ("The users of explosive munitions, including cluster submunitions, should be responsible for the clearance of unexploded ordnance, or for providing financial assistance sufficient to ensure its clearance, without delay, after active hostilities have ceased.").

clearance increases civilian casualties, slows economic recovery, and can lead people to risk their lives clearing bomblets themselves.

### **Cluster Bombs and International Humanitarian Law**

Although there is no treaty that specifically regulates cluster bombs, these weapons raise concerns under existing international humanitarian law (IHL). IHL, also called the law of war, governs the conduct of states and non-state actors during times of armed conflict. The four Geneva Conventions of August 12, 1949, and their two associated Additional Protocols of 1977 (hereinafter Protocol I and Protocol II) represent cornerstones of IHL and offer internationally accepted legal standards for evaluating the problems posed by cluster bombs.<sup>31</sup> Both the United States and Afghanistan are parties to the Geneva Conventions, but neither is party to the 1977 Protocols. The provisions discussed below, however, are considered customary law, that is, legal norms deriving from common state practice that bind all nations regardless of specific legal commitments.<sup>32</sup> The Convention on Conventional Weapons (CCW), which regulates specific weapons and will be discussed in detail below, is also relevant to cluster bombs.<sup>33</sup>

The Fourth Geneva Convention and Protocol I lay out the law that protects civilians during war.<sup>34</sup> Protocol I, adopted to supplement the original protections, includes most of the articles important for this report.<sup>35</sup> The basic principle of this branch of IHL is distinction, which requires all parties engaged in an armed conflict to distinguish between civilians and combatants. Article 48 of Protocol I states, “the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives.”<sup>36</sup>

Attacks that strike military objects and civilians or civilian objects without distinction are considered indiscriminate and are prohibited.<sup>37</sup> While the Protocol recognizes that some civilian deaths are inevitable, it says states cannot legally target civilians or engage in indiscriminate attacks. Article 51(4) and Article 51(5) define the

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<sup>31</sup> Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field of August, 12, 1949; Geneva Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea of August, 12, 1949; Geneva Convention Relative to the Treatment of Prisoners of War of August 12, 1949; Geneva Convention Relative to the Protection of Civilian Persons in Time of War of August 12, 1949 [hereinafter Fourth Geneva Convention]. See also Protocol Additional to the Geneva Convention of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) of 8 June 1977 [hereinafter Protocol I]; Protocol Additional to the Geneva Convention of 12 August 1949, and Relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II) of 8 June 1977.

<sup>32</sup> According to the U.S. Army Judge Advocate General’s Operational Law Handbook, the United States views as “either legally binding as customary international law or acceptable practice though not legally binding” the following Protocol I articles discussed in this report: Article 51 (protection of the civilian population) and Article 57 (precautions in attack). Mike O. Lacey and Brian J. Bill, eds., *Operational Law Handbook* (Charlottesville: Judge Advocate General’s School, 2000), pp. 5-2, 5-3. For a fuller discussion of customary law, see Peter Malanczuk, *Akehurst’s Modern Introduction to International Law*, 7th ed. (London: Routledge, 1997), pp. 39-48.

<sup>33</sup> Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed To Be Excessively Injurious or To Have Indiscriminate Effects [hereinafter CCW]. The original convention was adopted in 1980 and was amended at review conferences in 1995/1996 and 2001. Afghanistan has not signed the CCW. The United States has ratified the Framework Convention, Protocol I, and Protocol II (as amended in 1996).

<sup>34</sup> These treaties apply primarily to international conflicts, such as the war in Afghanistan. Geneva Conventions, Common Art. 2; Protocol I, Art. 1(3). Protocol I also applies to “armed conflicts in which peoples are fighting against colonial domination and alien occupation and against racist regimes in the exercise of their right of self-determination.” Protocol I, Art. 1(4).

<sup>35</sup> The Preamble of Protocol I notes that the parties “believ[ed] it necessary . . . to reaffirm and develop the provisions protecting the victims of armed conflicts and to supplement measures intended to reinforce their application.” Protocol I, Pmb.

<sup>36</sup> *Ibid.*, Art. 48.

<sup>37</sup> *Ibid.*, Art. 51(4).

concept of indiscriminate in several ways.<sup>38</sup> As discussed below, cluster bombs raise concerns under most of the definitions. While not inherently indiscriminate, cluster bombs are prone to being indiscriminate, particularly when certain methods of attack or older or less sophisticated models are used.

The immediate effects of cluster bombs, i.e., the damage done during strikes, raise concerns under Protocol I's proportionality test, which balances military advantage and civilian impact.<sup>39</sup> According to Article 51(5)(b), an attack is disproportionate, and thus indiscriminate, if it "may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated."<sup>40</sup> Some kinds of cluster bomb attacks tend to tip the scale toward being disproportionate. Strikes in or near populated areas are particularly problematic because when combatants and civilians commingle, civilian casualties are difficult to avoid.

An August 2001 U.S. Air Force background paper acknowledges that cluster munitions "must pass [the] proportionality test" and states that there are "[c]learly some areas where CBUs normally couldn't be used (e.g., populated city centers)."<sup>41</sup> The definition of a populated area should include not only cities but also villages and their environs.<sup>42</sup> The CCW, for example, defines "concentrations of civilians" as "any concentration of civilians, be it permanent or temporary, such as in inhabited parts of cities, or inhabited towns or villages . . . ."<sup>43</sup> Based on research in Iraq, Yugoslavia, and Afghanistan, Human Rights Watch believes that when cluster bombs are used in any type of populated area, there should be a strong, if rebuttable, presumption under the proportionality test that an attack is indiscriminate.<sup>44</sup>

Cluster bomb strikes also have the potential to be indiscriminate because the weapons cannot be precisely targeted. Article 51(4)(b) prohibits attacks "which employ a method or means of combat which cannot be directed at a specific military objective."<sup>45</sup> Article 51(5)(a), drafted in response to the carpet bombings of World War II, similarly prohibits bombings that treat "separated and distinct" military objectives as one.<sup>46</sup> Cluster bombs are area weapons, useful in part for attacking dispersed or moving targets. They cannot, however, be directed at specific soldiers or tanks, a limitation that is particularly troublesome in populated areas. If one

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<sup>38</sup> The five kinds of indiscriminate attacks enumerated in Protocol I are those that: are 1) not directed or 2) cannot be directed at "a specific military objective," 3) have effects that violate the Protocol, 4) treat separate urban military objectives as one (carpet bombing), and 5) are disproportionate. *Ibid.*, Art. 51(4, 5).

<sup>39</sup> In this context, disproportionate attacks are a subset of indiscriminate attacks. "The attacks which form the subject of this paragraph [Art. 51(5)] fall under the general prohibition of indiscriminate attacks laid down at the beginning of paragraph 4." Claude Pilloud et al., *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949* (Geneva: ICRC, 1987), p. 623. See also *ibid.*, p. 683.

<sup>40</sup> Protocol I, Art. 51(5)(b).

<sup>41</sup> U.S. Air Force, *Bullet Background Paper on International Legal Aspects Concerning the Use of Cluster Munitions*, August 30, 2001. This is an informal paper prepared by the office of the Air Force Judge Advocate General.

<sup>42</sup> Cluster bomb strikes *near* populated areas, especially villages, can be as problematic as those *in* populated areas. For example, a target in a city is clearly problematic if it has homes surrounding it one mile (1.6 kilometers) in every direction. A more rural target may have no homes immediately around it but may have a village one mile away. Even though open fields separate the military base and that village, the latter is at much at risk as a city home one mile away from an urban base. The only difference between the cases is that the village has a smaller footprint that does not extend to the base. The case studies of Qala Shater and Ishaq Suleiman, discussed below, illustrate this point. The threshold for "near" may depend on the accuracy of the specific type of cluster bomb used.

<sup>43</sup> CCW, Protocol III (Prohibitions or Restrictions on the Use of Incendiary Weapons), Article 1(2). CCW Protocol III prohibits attacks on concentrations of civilians with air-delivered incendiary weapons. It allows limited such attacks with other kinds of incendiary weapons, provided that a "military objective is clearly separated from the concentration of civilians *and* all feasible precautions are taken with a view to . . . avoiding, and in any event minimizing, incidental loss of civilian life . . ." (emphasis added). Note that separation of the military objective and concentration of civilians is not sufficient. *Ibid.*, Art. 2(2, 3).

<sup>44</sup> In other words, a cluster bomb strike on a populated area would be considered indiscriminate under the law, unless the military, which would bear the burden of proof, could prove the military advantage of a particular strike outweighed the civilian harm.

<sup>45</sup> Protocol I, Art. 51(4)(b).

<sup>46</sup> *Ibid.*, Art. 51(5)(a).

analogizes cluster bombing a populated area in order to kill individual soldiers with carpet bombing a city in order to destroy separate military bases, the attack can be interpreted as indiscriminate. The Protocol I principle that multiple targets should not be treated as one supports the argument that cluster bombs should not be used in populated areas.

The aftereffects of cluster bombs also raise concerns under IHL. If the proportionality test is interpreted as encompassing more than immediate loss, the large number of explosive duds may make cluster bomb use disproportionate. As explained above, unexploded bomblets cause greater “loss of civilian life, injury to civilians, and damage to civilian objects” than most types of unexploded ordnance.<sup>47</sup> Taking into account both strike and post-strike casualties greatly increases the likelihood that the loss would be excessive in relation to the military advantage, especially if an attack occurred in a populated area or an area to which people might return. The U.S. Air Force has said that the dud rate must be part of the proportionality determination because unexploded bomblets are “reasonably foreseeable.”<sup>48</sup>

Because of their duds, cluster bombs also exemplify weapons that can be indiscriminate in effect. Article 51(4)(c) of Protocol I says that indiscriminate attacks include “those which employ a method or means of combat the *effects* of which cannot be limited as required by this Protocol.”<sup>49</sup> Even if a cluster bomb strike is not indiscriminate, its *effects* may be. The effects become more dangerous if the bomblets litter an area frequented by civilians or the dud rate is high due to poor design, use in inappropriate environments, or delivery from a high altitude. Cluster bomblet duds cannot distinguish between combatants and non-combatants and will likely injure or kill whoever disturbs them. Under either the proportionality test or the effects provision, the high dud rate of cluster bombs combined with the large number of bomblets they release challenges the principle of distinction.

Regardless of whether cluster bombs violate IHL, states are legally bound to minimize civilian harm. Article 57(2)(a)(ii) of Protocol I imposes a duty on states to “take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects.”<sup>50</sup> “All feasible precautions” implies that the weapons should be used sparingly, if at all, when it is foreseeable that they will cause at least incidental harm to civilians. The availability of alternative weapons should also be considered. Given the potential indiscriminateness discussed above, the United States, and other countries that use cluster bombs, should avoid strikes in or near populated areas and minimize the long-term effects of duds.<sup>51</sup>

Because there is currently no cluster bomb treaty, the law does not govern post-strike clearance of bomblets. One can draw principles, however, from the guidelines used for landmines. The 1996 CCW Amended Protocol II on mines, booby-traps, and other devices offers specific guidelines for cleanup responsibilities. It requires parties to record and share information about the mines they used, including location, type, and date laid.<sup>52</sup> It also requires States Parties to clear areas under their control and provide technical and material assistance to clear areas in which they laid mines that are no longer under their control.<sup>53</sup> Applied to cluster bombs, this model

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<sup>47</sup> *Ibid.*, Art. 51(5)(b) (quoting the proportionality test).

<sup>48</sup> U.S. Air Force, *Bullet Background Paper on International Legal Aspects Concerning the Use of Cluster Munitions*.

<sup>49</sup> Protocol I, Art. 51(4)(c) (emphasis added).

<sup>50</sup> *Ibid.*, Art. 57(2)(a)(ii).

<sup>51</sup> The law of war also prohibits the use of “inhumane” weapons, which are those that cause “superfluous injury or unnecessary suffering.” See, e.g., *ibid.*, Art. 35(2). This prohibition is designed to protect combatants, not civilians, from inhumane weapons, such as mustard gas or dum dum bullets. A few opponents have argued that cluster bombs cause superfluous injury or unnecessary suffering and should be banned as inhumane, but most critics focus on their humanitarian problems. For more information on this debate, see Thomas J. Herthel, “On the Chopping Block: Cluster Munitions and the Law of War,” *Air Force Law Review* 51 (2001): 256-59; Thomas Michael McDonnell, “Cluster Bombs Over Kosovo: A Violation of International Law?” *Arizona Law Review* 44 (2002): 66-74. Further discussion of the debate is beyond the scope of this Human Rights Watch report.

<sup>52</sup> CCW, Protocol II as Amended 3 May 1996 (Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices), Art. 9 and Technical Annex [hereinafter CCW, Amended Protocol II].

<sup>53</sup> *Ibid.*, Art. 10(2, 3).



would not only promote an exchange of resources but also require the state dropping bombs to assist the bombed state with clearance. The CCW also helps standardize warning signs, which could be similarly useful for cluster awareness.<sup>54</sup> These rules are not legally binding in the case of cluster bombs, but they illustrate guidelines the international community has found appropriate in analogous situations.<sup>55</sup>

### **Proposed Cluster Bomb Protocol: CCW Process**

The humanitarian and legal concerns raised by cluster bombs demonstrate the need to regulate this weapon. The international community has regulated other problematic tools of war with separate treaties or protocols attached to IHL conventions. A similar instrument could clarify and strengthen existing IHL restrictions on cluster bombs. The CCW, which restricts the use of weapons that are “excessively injurious” or have “indiscriminate effects,” is a logical umbrella under which to draft such a document.

While the principles of IHL apply to all weapons, the CCW targets weapons of special concern. Originally negotiated in 1979 and 1980, the convention was amended at review conferences in 1995/1996 and 2001. So far, it includes four protocols that address respectively: weapons with fragments not detectable by X-ray; mines, booby-traps, and similar devices; incendiary weapons; and blinding lasers.<sup>56</sup> Any party may propose adding a new protocol to the convention.<sup>57</sup> A protocol covering cluster bombs would be an appropriate addition.

In December 2001, at the Second Review Conference of the CCW, States Parties formed a committee of experts to evaluate ways to deal with explosive remnants of war (ERW), including the possibility of negotiating an ERW protocol. Cluster bombs fall under this discussion because they leave significant unexploded ordnance. The review conference tasked the Group of Governmental Experts with a broad mandate to examine:

- Factors and types of munitions that cause post-war humanitarian problems;
- Technical improvements that could keep munitions, including submunitions, from becoming ERW;
- IHL’s adequacy in minimizing post-conflict risk;
- Warnings to civilians, clearance of ERW, and the provision of information to facilitate clearance; and
- Assistance and cooperation.<sup>58</sup>

This mandate gives the experts the freedom to propose improvements in targeting, technology, and clearance.

The Group of Governmental Experts has met several times in 2002 to discuss issues relating to ERW. In May, States Parties presented papers that raised questions about the five topics and started to formulate national positions. In July, the group listened to the positions of governments and NGOs; in particular, it discussed the scope of the humanitarian threat of submunitions and considered the advantages and disadvantages of regulating ERW generally or by specific weapon. In December, the group will submit its final report to States Parties,

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<sup>54</sup> Ibid., Technical Annex, para. 4.

<sup>55</sup> The Mine Ban Treaty also offers guidelines on clearance. It requires States Parties “to destroy or ensure the destruction of all anti-personnel mines in mined areas under its jurisdiction or control, as soon as possible but not later than ten years after the entry of force of this Convention.” Convention on the Prohibition of the Use, Stockpiling, Production, and Transfer of Anti-Personnel Mines and on Their Destruction, Art. 5(1), September 18, 1997 [hereinafter Mine Ban Treaty]. The treaty also requires States Parties to facilitate the “exchange of equipment, material and scientific and technological information, concerning the implementation of this Convention” and says, “Each State Party in a position to do so shall provide assistance for mine clearance and related activities.” Ibid., Art. 6(2, 4). Unlike the CCW Protocol, the Mine Ban Treaty bans rather than merely regulates these weapons. Ibid., Art. 1. While the United States is not party to the Mine Ban Treaty, Afghanistan deposited its instrument of accession on September 11, 2002, and will formally become a State Party on March 1, 2003. For an updated list of States Parties, see the International Campaign To Ban Landmines (ICBL) website at [www.icbl.org](http://www.icbl.org).

<sup>56</sup> There are two versions of the CCW mine protocol, the original Protocol II from 1980 and the amended version from 1996. The original version remains in force only for States Parties that did not become party to the 1996 version.

<sup>57</sup> CCW, Framework Convention, Art. 8(2).

<sup>58</sup> Final Document of the Second Review Conference of the States Parties to the CCW, December 21, 2001, CCW/CONF.II/2, pp. 12-13.

making a recommendation about how to proceed. It could recommend drafting one or more protocols under the CCW, turning to a different forum for a solution, or doing nothing. The process could potentially lead to legal negotiations next year.

Human Rights Watch has played an active role in advocating for a new protocol. In December 2001, it encouraged the group of experts to focus on cluster bombs and to consider targeting as well as technology.<sup>59</sup> It has also sent representatives to this year's series of meetings in Geneva and provided research on submunitions. While the protocol would not apply to past use of cluster bombs, the effects of cluster bombs in Afghanistan help demonstrate the need for such a protocol and could inform its contents.

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<sup>59</sup> Human Rights Watch, Statement to the Second Review Conference of the Convention on Conventional Weapons (CCW), Geneva, December 21, 2001.

#### IV. CLUSTER BOMB USE IN AFGHANISTAN

Cluster bombs became a matter of international attention once again when the United States began its air campaign in Afghanistan in October 2001. The United States had used them previously and extensively in the 1991 Gulf War and the 1999 NATO campaign in Yugoslavia, leading to discussion about the pros and cons of a weapon containing submunitions. The Afghan conflict renewed this debate. The U.S. military considered cluster bombs a valuable part of their Afghan arsenal. In 232 strikes during the first six months of the war, the United States dropped about 1,228 CBUs with 248,056 bomblets.<sup>60</sup> Their use, however, generated wartime criticism from governments and NGOs and gave new life to the push for cluster bomb regulation.

##### **The War in Afghanistan**

The U.S. air war in Afghanistan, a response to the terrorist attacks of September 11, began on October 7, 2001.<sup>61</sup> The first few days of the war consisted of “strategic” attacks on fixed military targets and were followed by weeks of “tactical” attacks on moving targets and command-and-control activities. As part of Operation Enduring Freedom, U.S. planes dropped bombs daily on military bases, airfields, terrorist training camps, communication facilities, and other targets. On October 19, a small number of U.S. ground troops were deployed to help work with and coordinate air strikes with Afghan proxy forces. With help from the skies, these anti-Taliban forces fought their way toward the country’s major urban centers. During the second week of November, they captured Mazar-i-Sharif and Taloqan in the north, Herat in the northwest, and Jalalabad in the east. The string of successes included the fall of Kabul, Afghanistan’s capital, on November 13. Kunduz and Kandahar, the last Taliban strongholds, fell on November 25 and December 7, respectively. On December 22, interim Chairman Hamid Karzai and the new government took office.

In December, the United States shifted its attention to Afghanistan’s mountain caves where Taliban and al-Qaeda troops were hiding. It began a month-long bombardment of the mountains around Tora Bora on November 30. Operation Anaconda, which lasted from March 2 to March 18, 2002, targeted pockets of al-Qaeda in the Shahi-Kot area south of Gardez. As of November 2002, U.S. forces continued to carry out operations in the mountain regions and in central Afghanistan.

Cluster bombs played a role throughout the U.S. air campaign. In the first week alone, Air Force B-1 bombers reportedly dropped fifty CBU-87s, containing 10,100 bomblets, in five missions.<sup>62</sup> The first widely publicized case of cluster bomb use occurred on October 22 when at least one weapon apparently went astray near Herat.<sup>63</sup> The United Nations reported that eight people died during a strike on Qala Shater and a ninth died from an unexploded bomblet after the attack. The bomblets also injured fourteen others and completely or partially destroyed twenty of the village’s forty-five homes.<sup>64</sup> U.S. officials acknowledged the use of cluster bombs but would not comment on the specific strike. “As we said before, we’re going to use the entire spectrum of our conventional weaponry. And . . . yes, we have used cluster-bomb units,” Gen. Richard Myers, chairman of the

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<sup>60</sup> U.S. DoD, Probable UXO [Unexploded Ordnance] Locations, March 2002 [hereinafter U.S. Cluster Bomb List—March]. Human Rights Watch has no information on the use of cluster bombs after March 2002 although it may have occurred on a more limited scale.

<sup>61</sup> Information on the chronology of the war comes from “Chronology of Operation Enduring Freedom,” an internal Human Rights Watch database of press accounts, policy statements, and other information compiled during the war.

<sup>62</sup> William M. Arkin, “A Week of Air War,” *washingtonpost.com*, October 14, 2001, at <http://www.washingtonpost.com/wp-dyn/nation/columns/dotmil/> (last visited November 22, 2002).

<sup>63</sup> Many newspapers picked up this story. See, e.g., Vernon Loeb and Thomas E. Ricks, “Pentagon Says Taliban Is Ready for Long Fight,” *Washington Post*, October 25, 2001; Gregg Jones, “U.S. Criticized for Cluster Bomb Use,” *Dallas Morning News*, October 25, 2001; Paul Richter and Peter Pae, “‘Precision Bombing’ Still a Very Imperfect Art,” *Los Angeles Times*, October 25, 2001.

<sup>64</sup> Karl Malakunas, “U.S. Cluster Bomb Attack Kills Nine, Empties Village: UN,” *Agence France-Presse*, October 25, 2001.

Joint Chiefs of Staff, said at an October 25 press briefing.<sup>65</sup> The Qala Shater incident attracted great media attention and started a public debate over the use of cluster bombs in Afghanistan.<sup>66</sup>

As the war progressed, journalists tracked cluster bomb use across the country. The United States dropped CBUs near Herat at the end of October and against frontline troops near Mazar<sup>67</sup> and in the Shomali Plain north of Kabul shortly thereafter.<sup>68</sup> Reporters witnessed cluster bomb strikes outside Kunduz around the time of its fall in late November.<sup>69</sup> After that, use seemed to shift to the south as the United States and its allies moved in on Kandahar.<sup>70</sup> By the end of November, journalists began writing regularly about the aftereffects of cluster strikes—civilians killed by unexploded bomblets that littered the country, especially in the Shomali Plain and near Herat and Khanabad.<sup>71</sup>

The United States also used cluster bombs extensively in its cave campaigns near Tora Bora and Shahi-Kot.<sup>72</sup> Forty-six of the reported 232 strikes fell on these regions.<sup>73</sup> Reporters who arrived at an al-Qaeda camp in mid-December described the aftermath of a cluster strike, including denuded trees, shredded clothing, “twisted cooking pots,” torn religious books, and dead al-Qaeda fighters.<sup>74</sup> Nearby they found CBU casings with messages painted on them by U.S. troops. “For those ‘dreams taken,’ have a few nightmares. D.,” said one. “This is going to shine like a diamond in a goat’s ass. Gary,” read another.<sup>75</sup> Since Operation Anaconda, there has been little, or no, use of cluster bombs.

### Public Debate over Cluster Bombs

The use of cluster bombs and reports of civilian casualties caused great debate during the war. NGOs and some governments criticized the use of cluster bombs in Afghanistan. Human Rights Watch as well as other NGOs, the International Committee of the Red Cross (ICRC), and the European Parliament called for an immediate stop to the use of cluster bombs in Afghanistan.<sup>76</sup> The Taliban tried to capitalize on this sentiment. “They are contaminating our farm lands and destroying our villages. It is very dangerous for civilians to try and

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<sup>65</sup> “DoD News Briefing—Secretary Rumsfeld and General Myers,” U.S. DoD News Transcript, October 25, 2001.

<sup>66</sup> See, e.g., Steven Edwards, “Cluster Bomb Use Raises Cry of Protest: Indiscriminate Killers,” *National Post* (Canada), October 26, 2001.

<sup>67</sup> Justin Huggler, “U.S. Jets Open Up New Front As Assault Intensifies,” *The Independent*, October 29, 2001; Paul Watson and Lisa Getter, “Silent Peril Lies in Wait for Afghanistan’s People,” *Los Angeles Times*, December 1, 2001 (reporting that cluster bombs fell near Mazar on October 26).

<sup>68</sup> “B-52s Pound Front North of Kabul,” AP Online, November 2, 2001.

<sup>69</sup> Eric Schmitt and James Dao, “Use of Pinpoint Air Power Comes of Age in New War,” *New York Times*, December 24, 2001 (describing cluster bomb strike on Taliban troops at the end of November); Colin Soloway, “Unfriendly Fire: Northern Alliance Forces Say They Suffered Casualties When U.S. Planes Continued To Bomb Kunduz After Their Anti-Taliban Troops Entered the City,” *Newsweek.com*, November 26, 2001; Luke Harding, “Frontline Troops Await the Final Act,” *Guardian*, November 26, 2001.

<sup>70</sup> Watson and Getter.

<sup>71</sup> See, e.g., Larry Kaplow, “Unexploded U.S. Bombs Pose Lingering Danger to Afghans,” *Austin-American Statesman*, November 27, 2001; Watson and Getter; C.J. Chivers, “An Afghan Village Where Errant Bombs Fell and Killed, and Still Lurk in Wait,” *New York Times*, December 15, 2001.

<sup>72</sup> U.S. Cluster Bomb List—March. The United States reported dropping about eighty-four cluster bombs, containing 16,968 bomblets, in Shahi-Kot.

<sup>73</sup> *Ibid.*

<sup>74</sup> Jon Swain, “Air Blitz on Running Men of Tora Bora,” *Sunday Times* (London), December 16, 2001; Jonathan S. Landay, Lauren Markoe, and Martin Merzer, “Surrender Talks and Bombing Resumed After a Deadline Passed,” *Philadelphia Inquirer*, December 12, 2001.

<sup>75</sup> Swain.

<sup>76</sup> Human Rights Watch, “Cluster Bombs in Afghanistan”; Landmine Action, “Landmine Action Deplores Use of Cluster Munitions in Afghanistan,” Press Release, October 23, 2001; Diana, Princess of Wales Memorial Fund, “New Call for U.K. To Lead on Cluster Bomb Controls,” Press Release, December 3, 2001; Paul Grossrieder, “Clean Up Your Lethal Leftovers,” *International Herald Tribune*, December 18, 2001 (op-ed by director-general of ICRC); European Parliament, “Resolution on Cluster Bombs,” RSP/2001/2636, December 13, 2001.

remove these bombs,” Taliban Education Minister Amir Khan Muttaqi said the day after the Qala Shater incident.<sup>77</sup> He asked human rights groups to push the United States to suspend cluster attacks.<sup>78</sup>

Most organizations focused on the dangers cluster bombs posed to Afghan civilians. Some groups highlighted the inherent inaccuracy of CBUs. Landmine Action said they are “prone to miss their targets.”<sup>79</sup> Anti-mine NGOs emphasized the dud rate and long-term effects of unexploded bomblets. “Politicians must tell the military that they do not have the right to use arms they know have dramatic consequences against civilian populations, even after a conflict is over,” said the director of Handicap International.<sup>80</sup> Landmine Action noted that the duds both endangered civilians’ lives and kept the already starving population from farming their land.<sup>81</sup> Seeking to minimize the aftereffects of these duds, several critics called for the U.S. government to take responsibility for post-war cleanup.<sup>82</sup>

Opponents argued the bombs were not only dangerous but also ineffective, especially in a war against terrorism where winning civilian support was crucial. “You will not win the hearts and minds of a people if, in your effort to provide them with a better future, your real legacy is to be associated with hidden deaths and hideous wounds for years to come,” said a Church of England spokesman.<sup>83</sup> Christian Aid and others said the use of cluster bombs countered the U.S. claim that it intended to minimize civilian casualties.<sup>84</sup>

The U.S. cluster bomb attacks drew criticism from governments and intergovernmental organizations as well as NGOs. In a December resolution prompted by the events in Afghanistan, the European Parliament called for an “immediate moratorium” on cluster bombs until an international agreement was reached.<sup>85</sup> The Parliament said it was “extremely concerned at the difficulty in accurately targeting cluster bombs during conflict, the high proportion of cluster bomblets which are found to have failed to detonate on impact, and the wide area of coverage of the bomblets, all of which means they pose a serious long-term threat to the civilian populations.”<sup>86</sup>

Meanwhile, U.N. officials asked the U.S. military for information on the “nature, timing and targets of daily bombing runs so that innocent civilians would not be needlessly injured.”<sup>87</sup> They also called on the United States to provide technical advice and assist with BLU clearance in Afghanistan.<sup>88</sup> The U.N. organization that oversees demining in Afghanistan said its local deminers put themselves at risk when clearing BLUs because they were

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<sup>77</sup> “Taliban Appeals to World Over Cluster Bombs, Calls on Aid Groups Return,” Agence France-Presse, October 26, 2001.

<sup>78</sup> Ibid.

<sup>79</sup> Scott Canon, “Cluster Bombs Leave Duds, Debate,” *Kansas City Star*, October 31, 2001 (quoting, e.g., Landmine Action, “Landmine Action Deplores Use of Cluster Munitions in Afghanistan”).

<sup>80</sup> Richard Beeston and Helen Rumbelow, “Allies Defend Cluster Bombs,” *Times* (London), October 29, 2001.

<sup>81</sup> Canon (quoting letter to the *Times* (London) from the Diana, Princess of Wales Memorial Fund and Landmine Action, October 25, 2001).

<sup>82</sup> See, e.g., Michael Winton, Bishop of Winchester, “Call to Restrict Use of Cluster Bombs,” Letter to the Editor, *Times* (London), December 5, 2001 (“[T]he users should take full responsibility for the prompt clearance of unexploded ordnance.”); Tom Baldwin and Katty Kay, “Stop Cluster Bombing, Diana’s Fund Says,” *Times* (London), October 25, 2001 (quoting letter to the *Times* (London) from the Diana, Princess of Wales Memorial Fund and Landmine Action, October 25, 2001, which said, “The UK should seek assurances from other members of the military alliance that they will not only cease using cluster munitions, but also take responsibility afterwards for the complete clearance of all unexploded bomblets.”).

<sup>83</sup> Beeston and Rumbelow.

<sup>84</sup> Ibid.

<sup>85</sup> European Parliament, “Resolution on Cluster Bombs.” This resolution was aimed at CCW negotiators who were considering a new protocol.

<sup>86</sup> Ibid.

<sup>87</sup> Michael Zielenziger, “Cluster Bomb Traps Villagers Inside Homes,” Knight Ridder News Service, October 25, 2001.

<sup>88</sup> Brian Toohey, “U.S. Strategy in Afghanistan May Have Missed Its Target,” *Australian Financial Review*, October 27, 2001.

unfamiliar with this kind of submunition.<sup>89</sup> A Pentagon official responded that the U.S. military does not assume responsibility for clearing unexploded ordnance.<sup>90</sup>

The United States defended its use of cluster munitions in Afghanistan. Officials argued that the weapons were militarily effective and legal under international law.<sup>91</sup> Secretary of Defense Donald Rumsfeld and Rear Adm. John Stufflebeem highlighted their use against frontline al-Qaeda and Taliban troops<sup>92</sup> while others said they were useful for attacking military facilities.<sup>93</sup> The Pentagon did not deny the claims of civilian side effects but emphasized that it limited the use of cluster bombs to certain circumstances. “[I]t goes back to the basic issue of targeteering and weaponeering the particular target. We take great pains to do that. And we only use the cluster munitions when they are the most effective weapon for the intended target,” Myers said after the Qala Shater incident.<sup>94</sup> Myers said that the military considered IHL and the minimization of civilian casualties as part of this calculus. He explained, “We are trying to be very careful in the way we plan this particular conflict. Probably only the U.S. and its allies could do it in such a way that we minimize civilian casualties. If we match up a specific weapon to a specific target and we make the judgment that it's in accordance with the law of armed conflict, and we've worked this very, very carefully, then we'll use that weapon.”<sup>95</sup>

While the care taken in targeting shows that the United States was concerned about potential civilian casualties, the Pentagon placed these casualties in the larger context of the war on terrorism. “We're now being threatened with weapons that could kill tens of thousands of people. We're trying to avoid killing innocent people, but we have to win this war and we'll use the weapons we need to in this war,” Deputy Secretary of Defense Paul Wolfowitz said in response to a question about cluster bombs.<sup>96</sup> When asked about the civilian casualties CBU's cause, Pentagon officials said that they were more concerned with the thousands who were intentionally killed on September 11. “In some cases, [matching the weapon to a target] means cluster bombs. And we understand the impact of those. I would take you back to September 11. We also understand the impact of that,” Myers said.<sup>97</sup> With such comments, the military highlighted the distinction between civilians killed as an unintentional side effect of war and civilians intentionally targeted.

Through much of this public debate, the Department of Defense did itself a disservice. First, Human Rights Watch discussions with military officials illuminated the elaborate targeting process they followed for air strikes, but the Defense Department never publicized the details of this process. Second, while identifying an important distinction in the cause of civilian deaths, its comparison to September 11 suggested insensitivity to deaths of innocent Afghans. Finally, it refused to comment on specific incidents where civilians died. When asked about the widely reported Qala Shater incident, Myers said he had not heard of it.<sup>98</sup> His inability to comment was in

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<sup>89</sup> Zielenziger.

<sup>90</sup> Baldwin and Kay; Zielenziger (“A Pentagon official speaking on condition of anonymity told the Associated Press that the U.S. military does not get involved in clearing unexploded weapons and did not do so in the Kosovo conflict in 1999.”).

<sup>91</sup> See, e.g., “General Myers Interview with Al Jazeera,” U.S. DoD News Transcript, October 31, 2001 (archived at November 5, 2001) (quoting Myers saying, “We will not use any illegal weapons in Afghanistan. . . . We used some cluster weapons, but my understanding is they are not illegal.”).

<sup>92</sup> “DoD News Briefing—Secretary Rumsfeld and General Myers,” U.S. DoD News Transcript, November 1, 2001 (quoting Rumsfeld saying, “They are being used on front-line al Qaeda and Taliban troops to try to kill them, is why we're using them, to be perfectly blunt.”); “DoD News Briefing—Rear Admiral Stufflebeem,” U.S. DoD News Transcript, November 28, 2001 (quoting Stufflebeem saying that “cluster munitions are most effective against troops that are in lightly defended positions.”).

<sup>93</sup> Richard Norton-Taylor, “America Deploys Controversial Weapon: B-52s Scour Country for Troop Convoys To Attack,” *Guardian*, October 12, 2001 (quoting a U.S. defense official saying, “The prime focus was garrisons, bivouac areas, maintenance sites, troop-type facilities.”).

<sup>94</sup> “DoD News Briefing—Secretary Rumsfeld and General Myers,” U.S. DoD News Transcript, October 25, 2001.

<sup>95</sup> “DoD News Briefing—Secretary Rumsfeld and General Myers,” U.S. DoD News Transcript, November 1, 2001.

<sup>96</sup> “Deputy Secretary Wolfowitz Interview with London Sunday Telegraph,” U.S. DoD News Transcript, October 28, 2001.

<sup>97</sup> “DoD News Briefing—Secretary Rumsfeld and General Myers,” U.S. DoD News Transcript, November 1, 2001.

<sup>98</sup> “DoD News Briefing—Secretary Rumsfeld and General Myers,” U.S. DoD News Transcript, October 25, 2001.

part due to the Pentagon's lack of information from the ground, but he made no effort to explain that or follow up with more information later.

The lack of "ground truth" made the wartime debate over cluster bombs provocative but limited. Because they could not investigate the weapon's effects on the ground during the height of the bombing, cluster bomb opponents based their criticism on their general knowledge of cluster bombs, experiences in Yugoslavia and the Gulf, and press accounts of casualties in Afghanistan. The press frequently relied on second- or third-hand sources, leading to inaccurate tallies or duplicate reports.<sup>99</sup> Even the U.S. military was unable to assess thoroughly the effects of its bombing. It relied on aerial photos, which proved ineffective in assessing cluster bomb use because the wide dispersal of bomblets and relatively small explosions they produce make it difficult to see civilian effects from high altitudes.<sup>100</sup>

This report, by contrast, is informed by a three-and-a-half week mission to Afghanistan. Such on-the-ground investigation can establish what was and was not bombed, identify possible intended targets, and determine the effects of each strike. The next three chapters will lay out Human Rights Watch's findings from its mission and discuss the major issues surrounding the use of cluster bombs in Afghanistan: targeting, or the bombs' immediate effects, aftereffects, and clearance.

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<sup>99</sup> Lucinda Fleeson, "The Civilian Casualty Conundrum," *American Journalism Review*, April 2002.

<sup>100</sup> Tom Infield, "Pentagon Says Military Is Making Progress in Achieving Its Goals," *Knight Ridder Tribune Business News*, October 26, 2001.

## V. TARGETING, OR IMMEDIATE EFFECTS

The United States used cluster bombs on four major types of targets in Afghanistan: military bases, frontlines, villages where Taliban or al-Qaeda forces were hiding, and cave complexes. The Human Rights Watch bomb damage assessment team visited examples of the first three. The caves were inaccessible because of security concerns. The appendix provides details on nineteen strike sites visited, and the text below analyzes the most interesting case studies. The majority of the strikes were aimed at military bases and frontlines, but Human Rights Watch found several cases of cluster bomb use in or near populated areas. The civilian casualties that resulted demonstrate the dangers of dropping cluster bombs on or near villages and towns.

### **Military Bases and Frontlines**

The United States used cluster bombs heavily on both military bases and frontline positions. In Herat, for example, it dropped cluster bombs on three major bases, Firqa #17, the Fourth Armored Brigade Headquarters, and the Qol-e Urdu, or regional headquarters. Craters indicated that clusters were often used in combination with unitary bombs. The Organization for Mine Awareness and Afghan Rehabilitation (OMAR), the demining group in charge of clearance in Herat, reported finding two CBU casings at the Firqa and clearing about fifty bomblets.<sup>101</sup> OMAR started clearing the Fourth Armored Brigade Headquarters on March 20 and destroyed sixty-two BLUs in the first four days.<sup>102</sup> The base does not have clear borders, and deminers said the bomblets extended about two-and-a-half miles (four kilometers) into the hills where the Taliban had stored tanks and ammunition.<sup>103</sup> In a list of strikes submitted to the United Nations in November 2001, the United States estimated there would be 1,722 unexploded bomblets at the Qol-e Urdu;<sup>104</sup> demining consultant Sean Moorhouse said he believed there were many more.<sup>105</sup>

Northern Afghanistan and the Shomali Plain exemplify the use of cluster bombs against frontlines. In the north, the United States employed clusters to drive Taliban forces from hilltops and trenches. Gerhard Zenk of the demining group HALO Trust, who described the strikes as “very accurate,” said the cluster bombs fell “right next to the trenches, right behind them as if going for their vehicles.”<sup>106</sup> He said he noticed tire tracks near some strikes suggesting that the Taliban were “hit as they were trying to bug out.”<sup>107</sup> “It doesn’t take long for guys truly stuck in trenches—and these guys are good trench fighters—to move pretty quickly,” said Zenk, commenting on the weapon’s military effectiveness.<sup>108</sup> Cluster bombs were also used heavily in the Balkh Valley, south of Mazar. In the Shomali Plain, the United States dropped cluster bombs on Taliban positions in villages from which most residents had fled. Karlwan, 25, one of the few civilians to remain in Denar Khail during the fighting, said that about four hundred Taliban and al-Qaeda fighters occupied the town.<sup>109</sup> Human Rights Watch found evidence of CBU strikes in a line of villages in the adjacent Estalef and Karabagh districts.

The targeting of military bases and frontlines with cluster bombs is legitimate under international law. The law permits attacks on “military objectives,” such as military bases and enemy soldiers.<sup>110</sup> As long as the strikes

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<sup>101</sup> Human Rights Watch interview with Farooq, Team Leader #4, OMAR, Herat, Afghanistan, March 27, 2002. Many Afghan people use only one name and thus are cited in that fashion in this report.

<sup>102</sup> Briefing by OMAR Team Leader, Fourth Armored Brigade Headquarters, near Herat, Afghanistan, March 28, 2002.

<sup>103</sup> Human Rights Watch interview with Sher-Agha, Operations Officer, OMAR, Herat, Afghanistan, March 28, 2002.

<sup>104</sup> U.S. DoD, Probable UXO [Unexploded Ordnance] Locations, November 23, 2001 [hereinafter U.S. Cluster Bomb List—November].

<sup>105</sup> Human Rights Watch interview with Sean Moorhouse, Swiss Federation for Mine Action, Herat, Afghanistan, March 27, 2002.

<sup>106</sup> Human Rights Watch interview with Gerhard Zenk, Liaison Officer, HALO Trust, Pul-i Khomri, Afghanistan, March 18, 2002. Another demining official commented on the accuracy of the strikes, saying, “I’ve seen four locations and each one had a legitimate target nearby. Therefore [the weapon] seems accurate.” Human Rights Watch interview with Tim Horner, RMAC, Kandahar, Afghanistan, March 24, 2002.

<sup>107</sup> Human Rights Watch interview with Gerhard Zenk, Pul-i Khomri.

<sup>108</sup> Human Rights Watch interview with Gerhard Zenk, Liaison Officer, HALO Trust, Kunduz, Afghanistan, March 17, 2002.

<sup>109</sup> Human Rights Watch interview with Karlwan, Denar Khail, Afghanistan, March 14, 2002.

<sup>110</sup> Protocol I, Art. 48.



do not cause disproportionate civilian damage, they are legal.<sup>111</sup> The military bases in Herat were generally large enough to encompass the broad footprint of a cluster bomb without causing collateral damage when the bombs landed on target. The use of cluster bombs against frontline troops in open areas away from civilians was also legitimate, at least when evaluated for immediate effect.<sup>112</sup> Problems arose with both of these kinds of targets in Afghanistan, however, because bases and Taliban troops were often located in or near populated areas.

### **Controversial Targets: Cluster Bombs in Villages**

The use of cluster bombs on inhabited villages raises serious targeting concerns. Most of the civilians who died during cluster bomb attacks died in this kind of strike. At three of the most controversial sites, Human Rights Watch found evidence of at least twenty-five civilian deaths from cluster bomb attacks. The case studies of Ainger, Ishaq Suleiman, and Qala Shater demonstrate the danger of dropping cluster bombs in or near populated areas and represent questionable targeting under IHL.

#### ***Ainger***

Ainger, a village east of Kunduz near Khanabad, was hit with four cluster bombs, containing 808 bomblets, around noon on November 17, the first day of Ramadan. One fell in a dried up canal, spreading bomblets across the adjacent field and road. The other three landed in the village itself. Because the inhabitants of Ainger had not fled during the war, at least five civilians, including three children, died, and several more were wounded during the strike. Marhama, 25, was cooking bread in her kitchen when she heard the “whir” of an airplane. The explosion knocked her unconscious, and she woke up to find her husband, 60-year-old Aji Agha Pather, and son, 10-year-old Sami, dead. Marhama suffered a severe leg injury that has incapacitated her and made caring for her five surviving children difficult.<sup>113</sup> Another man, Gullagha, 45, died while working in his home across the street.<sup>114</sup> Two children died nearby. Shapery, 10, was killed while she was eating lunch. Azi Mala, 10, was injured by a BLU and died later in the hospital.<sup>115</sup> The strike damaged property as well as persons. Fragments from exploding bomblets not only scarred exterior walls and roofs but also penetrated a home leaving holes in a bedspread.

While the target in this case is not entirely clear, deminers said that Taliban troops were passing nearby. Marhama said that no soldiers were in the village,<sup>116</sup> but a deminer believed that they may have been on a nearby ridge or passing through. “A lot of Taliban were running from Takhar to Kunduz. There might have been Taliban in the village,” Zenk said.<sup>117</sup> In the adjacent village of Charikari, about one-tenth of a mile (two-tenths of a kilometer) away, unitary bombs destroyed homes and a local mosque. Together these factors suggest that the cluster strike on Ainger landed in its intended location and was not the result of stray bombs. If the enemy forces were in fact on the move, it is unclear why the United States attacked them with cluster bombs while they were close to the village. It would appear that the United States did not take all feasible precautions to avoid civilian losses in this instance, as required under IHL.

#### ***Ishaq Suleiman***

Ishaq Suleiman, a village of 12,000 people northwest of Herat, was hit by five cluster bombs, containing 1,010 bomblets, over the course of six days. At least eight civilians died during the attacks, and four more died

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<sup>111</sup> Ibid., Art. 51(5)(b).

<sup>112</sup> This report will discuss the controversial aftereffects of cluster bombs in the next chapter.

<sup>113</sup> Human Rights Watch interview with Marhama, Ainger, Afghanistan, March 17, 2002.

<sup>114</sup> Human Rights Watch interview with Najubullah, Ainger, Afghanistan, March 17, 2002. Najubullah, 22, the nephew of Gullagha, was injured during the attack. The doctors have not been able to remove the piece of shrapnel in his shoulder. His brother Asadallah, 16, suffered an ear injury, and his sister Shahibi, about 16, received other injuries.

<sup>115</sup> Human Rights Watch interview with Mohebullah, Ainger, Afghanistan, March 17, 2002. Ezmarai, a 7-year-old boy and Shapery’s sister, has had three operations as a result of the attack. Their father, Mohebullah, 45, said he was knocked unconscious when a piece of shrapnel lodged in his head.

<sup>116</sup> Human Rights Watch interview with Marhama.

<sup>117</sup> Human Rights Watch interview with Gerhard Zenk, Pul-i Khomri.

later from unexploded bomblets.<sup>118</sup> On October 31, according to eyewitnesses, the United States dropped two cluster bombs on homes at the northeast edge of the village. The first killed house owner, Jaumagul, 55.<sup>119</sup> The second fell an hour later on his neighbor's home and killed a father and son, Noor Ahmad, 55, and Nazir Ahmad, 19.<sup>120</sup> A third bomb was dropped two days after the first strike. It landed at about 2:00 p.m. on a small field at the southeast edge of town and killed 80-year-old Khalifa Hussain<sup>121</sup> and 20-year-old shepherd Bismullah.<sup>122</sup> Three days later around 5:00 p.m., the United States dropped another pair of cluster bombs on Ishaq Suleiman. The first fell along the main street in the center of town, killing Hajim Mohammed, 55, Karim, 55, and Ghul Aagha, 21, who were sitting in front of their shops.<sup>123</sup> This bomb also severely damaged Ghulam Nabi's house<sup>124</sup> and left a crater in an adjacent field. A second CBU landed in a field west of town.

Taliban soldiers were present in Ishaq Suleiman during the strikes. The village is located about a mile (1.7 kilometers) from the Fourth Armored Brigade Headquarters, which was heavily bombed with cluster munitions. The Taliban escaped from the base by hiding in the village and nearby hills. Witnesses said some Taliban troops occupied a green, NGO building across from the first two strikes.<sup>125</sup> The bombs left the building unscathed. Another witness said that the Taliban returned to the village every night. They parked ten to twelve vehicles on every street and tried to hide them under carpets.<sup>126</sup> The fifth strike fell near a low circular wall, the ruins of a shrine, where the Taliban had camped out many nights in a row.<sup>127</sup> The villagers did not flee but recognized the danger of their position. "Time and again we complained and asked them to leave the area. The Taliban said, 'You are cooperating with the United States. You are against us,' and would not leave," one witness said. "[We told them] 'the American people have no hostility with us, only with you,'" another man said. "But they did not leave our area."<sup>128</sup> After the first two strikes, the villagers organized a protest. According to witnesses, about two hundred people, young and old and including about one hundred women, marched to convince the Taliban to leave. The soldiers eventually fled, but not before three more cluster bombs had fallen on the village.<sup>129</sup>

While witness testimony suggested that the United States intentionally targeted the Taliban troops, U.S. military documents indicate that the strikes were in fact accidental. Residents of Ishaq Suleiman presumed the Taliban attracted the bombs, and the regular pattern of the strikes seemed to corroborate this theory. After returning from Afghanistan, however, Human Rights Watch reviewed U.S. Air Force mission reports and intelligence documents and plotted every cluster bomb drop reported by the Air Force and Navy. None appeared intended for Ishaq Suleiman.<sup>130</sup> The fact that the attacks occurred during the day and the Taliban occupied the village at night supports the conclusion that troops were not the target. According to U.S. military records, the bombs were intended for the nearby Fourth Armored Brigade Headquarters and forces encamped to the north and east of the garrison. Air Force sources indicated to Human Rights Watch that the choice to use some less accurate

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<sup>118</sup> These numbers come from Human Rights Watch research in Ishaq Suleiman. OMAR's tally lists twelve deaths (not separated by strikes and duds), including four not on the Human Rights Watch list, and sixteen injuries. OMAR Sub Office Herat, "List of Killed and Injured People and Lost Their Properties at Ishaq Suliman (sic)" [hereinafter OMAR Ishaq Suleiman Casualty List].

<sup>119</sup> Human Rights Watch interview with Azima, Ishaq Suleiman, Afghanistan, March 29, 2002. Azima, 35, was injured in the attack.

<sup>120</sup> Human Rights Watch interview with Nadira, Ishaq Suleiman, Afghanistan, March 29, 2002. Nadira, 40, was the wife of Noor Ahmad and mother of Nazir Ahmad. She said the bomb dropped as she and her family were trying to flee.

<sup>121</sup> Human Rights Watch interview with Khalil Ahmad, Ishaq Suleiman, Afghanistan, March 29, 2002.

<sup>122</sup> Human Rights Watch interview with Ghulam Rasoul, Ishaq Suleiman, Afghanistan, March 29, 2002. Ghulam Rasoul, 26, was the cousin of Bismullah.

<sup>123</sup> Human Rights Watch interview with Ghulam Nabi, Ishaq Suleiman, Afghanistan, March 29, 2002. The three victims were 50-year-old Ghulam Nabi's brother, relative, and neighbor, respectively.

<sup>124</sup> Ibid.

<sup>125</sup> Human Rights Watch interview with Azima.

<sup>126</sup> Human Rights Watch interview with Ghulam Nabi.

<sup>127</sup> Human Rights Watch interview with Abdul Basir and Shames-u-din, Ishaq Suleiman, Afghanistan, March 29, 2002.

<sup>128</sup> Ibid.

<sup>129</sup> Ibid. See also Human Rights Watch interview with Azima. For more information on Taliban use of civilians as shields, see footnotes 138-141 and accompanying text.

<sup>130</sup> Human Rights Watch interviews with U.S. Air Force officials, Washington, D.C., June 29-30, 2002.

CBU-87s (rather than CBU-103s with WCMDs) and to fly towards, rather than away, from Ishaq Suleiman caused them to fall on the inhabited village instead. Although the base was separated from the village by open fields, the two sites were close enough that multiple stray bombs caused significant civilian damage.

### ***Qala Shater***

On October 22, an apparently errant cluster bomb fell on Qala Shater, a neighborhood to the northeast of Herat.<sup>131</sup> Between eleven and thirteen civilians died from the attack, and unexploded bomblets endangered those remaining.<sup>132</sup> Casualties included Najibullah, 17, who died in front of his house,<sup>133</sup> and 70-year-old Faqir Mohammed.<sup>134</sup> Saleha, 35, said the bomb killed her 16-year-old son Firoze Ahmad and injured her husband. Her father-in-law, who watched his grandson die, has been psychologically “abnormal” ever since.<sup>135</sup> Many of the inhabitants had fled before the attack because of fighting in the Herat area, but at least one or two members of each family remained behind. “If we had all been here, two or three thousand would have been killed,” one villager said.<sup>136</sup> Qala Shater is usually home to about eight hundred families, or about 4,800 people.

The neighborhood’s proximity to a military base suggests that the strike was caused by technical failure of a cluster bomb or human error in its delivery. Witnesses said that Taliban fighters came in two vehicles to pray at the mosque on the day of the attack,<sup>137</sup> but it appeared the Taliban did not occupy the village, as they did Ishaq Suleiman. Qala Shater, however, is about eight-tenths of a mile (1.3 kilometers) from Firqa #17, a heavily cluster bombed military facility in a residential district and probably the intended target. The small number of Taliban reported and the Firqa’s closeness suggest technical failure or pilot error as the cause of these civilian casualties.

### **Conclusions and Recommendations**

The Taliban bear responsibility for endangering civilians because they used villagers as human shields.<sup>138</sup> By hiding in civilian areas, such as Ishaq Suleiman and possibly Ainger, Taliban troops violated the IHL principle of distinction, which requires parties to “distinguish between the civilian population and combatants.”<sup>139</sup> More specifically, they violated Article 51(7) of Protocol I to the Geneva Convention: “The presence or movements of the civilian population or individual civilians shall not be used to render certain points or areas immune from military operations, in particular in attempts to shield military objects [such as troops] from attacks. . . .”<sup>140</sup> Although neither Afghanistan nor the United States have ratified the Protocol, this article rises to the level of customary law.<sup>141</sup> The Taliban thus violated international law by using civilians as shields and compromising their immunity from attack.

Whether the incidents discussed above were responses to the Taliban’s actions or the result of technical or human error, the United States should increase attention to civilian protection and avoid using cluster bombs in or

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<sup>131</sup> Press reports often referred to Qala Shater as a village near Herat or a village near the Iranian border. In fact, Qala Shater seems to be more of a neighborhood of the city than a distinct village.

<sup>132</sup> OMAR provided Human Rights Watch with a list of Qala Shater casualties that includes eleven deaths and fourteen injuries. OMAR Sub Office Herat, “List of Died (sic) and Injured People in Qala Shater” [hereinafter OMAR Qala Shater Casualty List]. Villagers said thirteen people died. Human Rights Watch learned of at least one death that was not on OMAR’s list. Note that all of these numbers are higher than those initially reported in the press.

<sup>133</sup> Human Rights Watch interview with Mohammed Eisah, Qala Shater, Afghanistan, May 27, 2002. Mohammed Eisah, 58, was the uncle of Najibullah and brother of deaf survivor Nasruallah, 54.

<sup>134</sup> Human Rights Watch interview with Ghulam Sakhi, Qala Shater, Afghanistan, May 27, 2002. Ghulam Sakhi, 37, was the son of Faqir Mohammed.

<sup>135</sup> Human Rights Watch interview with Saleha, Qala Shater, Afghanistan, May 27, 2002.

<sup>136</sup> Human Rights Watch interview with Mohammed Eisah.

<sup>137</sup> Ibid.

<sup>138</sup> The Taliban’s use of shields went beyond the reports in Ishaq Suleiman and possibly Ainger. For example, Taliban forces hid in civilian homes in Jebrael, a village near Ishaq Suleiman. See footnotes 156-157 and accompanying text. Abdul Ghari, 45, who stayed in the Herat suburb of Bag Nazer Gah during the entire campaign said, “the Taliban passed the night in residential areas.” Human Rights Watch interview with Abdul Ghari, Bag Nazer Gah, Afghanistan, March 29, 2002.

<sup>139</sup> Protocol I, Art. 48.

<sup>140</sup> Ibid., Art. 51(7).

<sup>141</sup> Lacey and Bill, eds., p. 5-3. For a definition of customary law, see footnote 32 and accompanying text.

near populated areas. All three incidents demonstrate the danger of such use. In Ainger, enemy troops may have been the target, but the bomblets' wide dispersal and inability to pinpoint soldiers led to the death or injury of civilians, including children. In Qala Shater and, according to Air Force information, Ishaq Suleiman, bombs intended for nearby military bases went astray; because the targets were in or near urban areas, the choice of weapon and failure in accuracy led to deadly consequences.

In these cases, the United States failed to “take all feasible precautions,” as required under existing IHL. It used cluster bombs known for wide footprints and inaccuracy in and around cities and villages. As discussed above, Human Rights Watch believes there should also be a presumption that dropping cluster bombs in a populated area is an indiscriminate attack.<sup>142</sup> If this were the case, the U.S. military would bear the burden of proving that the use of cluster bombs in such populated areas was legitimate.

To help the international community evaluate the use of cluster bombs, the United States should increase transparency about its targeting choices, at least once a campaign is over. Field research suggested that Taliban troops were the target in Ishaq Suleiman and pointed to a technical failure in Qala Shater, but post-mission interviews suggest that both were accidental strikes. The specifics of the Ainger strike remain uncertain. With more complete and accessible targeting information, independent auditors could better weigh the benefits and dangers of cluster bomb use.

Human Rights Watch, therefore, recommends that:

- The international community condemn the use of civilian shields and hold the Taliban who were responsible for such acts accountable.
- Cluster bombs should not be used in or near populated or urban areas. The definition of a populated area should include inhabited towns and villages as well as cities.
- The United States should determine the cause of any targeting mistakes, technical failures, or pilot errors and address them before future use.
- The United States should be more open about explaining its target choices, at least after a conflict is over, so that analysts can better evaluate the decisions and the military value of cluster bombs.

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<sup>142</sup> See footnotes 39-44 and accompanying text.

## VI. AFTEREFFECTS

While cluster bomb strikes endangered primarily populated areas, the aftereffects of cluster bombs caused more widespread harm to Afghanistan's civilians. Human Rights Watch found that BLU duds killed or injured scores of civilians. At least 127 casualties have been reported across eleven provinces. The majority of the victims were children. Unexploded cluster bombs also interfered with economic recovery, refugee repatriation, and military operations.

The precise dud, or initial failure, rate of cluster bombs used in Afghanistan is not known. Estimates range from 5 percent by the U.S. Air Force to up to 22 percent by deminers.<sup>143</sup> In Kosovo, the U.N. Mine Action Coordination Center found that BLU-97 bomblets had a failure rate of about 7 percent.<sup>144</sup> In order to calculate the precise dud rate, one must compare the number of unexploded bomblets with how many CBUs were dropped in a particular location. While deminers can eventually determine the number of unexploded bomblets, the United States has not provided the numbers of CBUs it used at each strike site in Afghanistan. The latter figure is difficult to determine on the ground in Afghanistan because people quickly gather the casings to sell as scrap metal in the bazaar.

### Civilian Casualties from Duds

Unexploded cluster bomblets have killed or injured scores of civilians in Afghanistan. Because of the widespread interest in the effects of cluster bombs, organizations began to collect records of civilian casualties. The ICRC reported 127 casualties, including twenty-nine deaths, as of November 2002.<sup>145</sup> Eighty-seven, or 69 percent, of those victims were under the age of eighteen. Presumably because women have less freedom of mobility in Afghanistan, all but twelve of the victims were male. Nangarhar and Herat provinces suffered the greatest number of casualties from duds, and Kabul and Kandahar provinces also reported double-digit figures.<sup>146</sup> The ICRC list does not claim to be complete. It comes from hospital data and does not include people who died on the spot or who were only injured slightly, said Mohammed Kazim Malwan Ahmadzai, deputy program manager of the ICRC Mine Data Collection Program.<sup>147</sup> Deaths are therefore underreported.

While antipersonnel landmines and other types of unexploded ordnance have caused far more casualties across Afghanistan,<sup>148</sup> statistics show cluster bomblets can be more lethal. In Herat, between October 2001 and

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<sup>143</sup> HALO Trust said it estimated dud rates ranging from 15 to 22 percent. Farnaz Fassihi, "Death Lurks Underfoot," *Star-Ledger* (Newark), December 23, 2001.

<sup>144</sup> ICBL, *Landmine Monitor Report 2001* (New York: Human Rights Watch, 2001), p. 952.

<sup>145</sup> ICRC, Mine Victims Report, October 6, 2001 to date [hereinafter ICRC, November Cluster Bomb Casualty List]. Human Rights Watch obtained this document, which lists only cluster bomb casualties, in November 2002. A list from June 2002 reported eight-seven casualties, including thirteen deaths, from unexploded cluster bomblets. ICRC, "Number of Cluster Munition Victims Recorded Since October 2001 to June 2002," June 22, 2002. An earlier list in March 2002 reported fifty-nine casualties, including nine deaths. ICRC, "All Afghanistan Cluster Ammunition Casualties," October 2001-March 2002.

<sup>146</sup> The provincial breakdown was as follows: Nangarhar, forty-seven victims; Herat, thirty-three; Kandahar, thirteen; Kabul, eleven; Bamiyan, eight; Baghlan, Hilmand, Parwan, Kunduz, three each; Uruzgan, two; Zabol, one. ICRC, November Cluster Bomb Casualty List.

<sup>147</sup> Human Rights Watch interview with Mohammed Kazim Malwan Ahmadzai, Deputy Program Manager of the Mine Data Collection Program, ICRC, Kabul, Afghanistan, March 12, 2002. Moorhouse concurred, saying, "A lot of people who died are buried [immediately] so they are not reported. [Deaths] are only reported if someone is killed and someone is injured [because the injured will report the death to the hospital]. Deaths are underreported." Human Rights Watch interview with Sean Moorhouse.

<sup>148</sup> According to the ICRC, in calendar year 2001, landmines caused 472 casualties, unexploded ordnance 476 casualties, antivehicle mines thirty-five casualties, booby-traps fourteen casualties, fuzes fifty casualties, and cluster munitions sixty-three casualties. Of the sixty-three cluster munition casualties, forty-eight occurred between October and December 2001. ICBL, *Landmine Monitor Report 2002* (New York: Human Rights Watch, 2002), p. 603.

June 2002, unexploded cluster bomblets killed 44 percent of their victims while mines killed 21 percent. Other types of unexploded ordnance killed 41 percent of their victims.<sup>149</sup>

Shepherds, farmers, and children collecting firewood have been common victims in Afghanistan.<sup>150</sup> Human Rights Watch learned of at least three shepherds killed by unexploded cluster bomblets in the Herat area. The strikes on Ishaq Suleiman left the village littered with BLUs. Demining consultant Moorhouse said there were BLUs “on houses, on roads, in gardens, in doorways, all over the place.”<sup>151</sup> Abdul Raziq, 43, and Ghouse-u-din, 37, brought their herds to a field west of the village four days after the bombing. As the men passed near the ruined shrine, a bomblet exploded and killed them both. “Before the explosion, people went there every day to graze, walk, use the fields. After that they avoided the area,” said a cousin of the second victim.<sup>152</sup> Deminers came to clear the site about one month later.<sup>153</sup> In Shidai, nine miles (14.5 kilometers) east of Herat, a bomblet killed one shepherd and eight sheep, an OMAR team leader reported in late March.<sup>154</sup> OMAR finished clearing that site in June.<sup>155</sup>

Given that Afghanistan is a largely agricultural country, farmers are also at high risk from unexploded BLUs. On the morning of December 21, for example, Arbrabrahim, 52, died while plowing a field on the north side of Jebrael with his oxen.<sup>156</sup> The United States had bombed the village around October 28, presumably to attack the Taliban hiding there. Witnesses said Taliban troops had parked their trucks under trees at the edge of this field and then hid in local homes. Although the villagers had stayed in Jebrael during the Taliban occupation, no civilians died during the strike.<sup>157</sup> The attack proved fatal after the fact, however. Other civilians have fallen victim to BLUs in Afghan farmland because crops are grown in small fields that are close to town and frequented by villagers. In Ishaq Suleiman, for example, 12-year-old Maroof died from an unexploded bomblet the day after the strike on the field southeast of town.<sup>158</sup> Farmers face the greatest risks from these bomblets, which often sink into soft soil or hide in furrows, because they strike the submunitions forcefully and with metal tools.<sup>159</sup>

Cluster bombs have made gathering wood another dangerous occupation in Afghanistan. Afghans rely on wood for fuel, and they forage for it in the hills and rural areas outside their villages. In early December, 9-year-old Amin went to collect brush at the edge of the Jebrael field where Arbrabrahim had died. A cluster bomblet

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<sup>149</sup> Cluster bomblets killed twenty civilians and injured twenty-five. Other types of unexploded ordnance killed five and injured seven. Mines killed three and injured eleven. RMAC Herat, Cluster Victims 2002; RMAC Herat, Mine/UXO Victims 2002.

<sup>150</sup> The ICRC list corroborates the trends Human Rights Watch identified during its mission to Afghanistan. Of the victims it reported, 20 percent were tending animals, 16 percent were farming, and 10 percent were gathering wood when injured. The list breaks down the victims' activities at the time of incident as follows: tending animals, 25 victims; farming, 20; traveling on foot, 19; playing/recreation, 15; collecting wood, 13; incidental passing, 13; tampering with item, 9; traveling in vehicle, 2; military activities, 2; other, 7; unknown, 2. ICRC, November Cluster Bomb Casualty List.

<sup>151</sup> Human Rights Watch interview with Sean Moorhouse.

<sup>152</sup> Human Rights Watch interview with Abdul Basir and Shames-u-din. Abdul Basir, 37, was the brother-in-law of Abdul Raziq. Shames-u-din, 31, was the cousin of Ghouse-u-din.

<sup>153</sup> Ibid.

<sup>154</sup> Briefing by OMAR team leader, Shidai, Afghanistan, March 28, 2002.

<sup>155</sup> OMAR, Adopt-a-Team Monthly Progress Report, June 2002.

<sup>156</sup> Human Rights Watch interview with Abdul Naim, Jebrael, Afghanistan, March 29, 2002. Abdul Naim, a 25-year-old farmer, was the victim's son. Other witnesses confirmed his story. See also Human Rights Watch interview with Ali, 12-year-old carpet weaver, Jebrael, Afghanistan, March 29, 2002; Human Rights Watch interview with Abdul Khaliq, Jebrael, Afghanistan, March 29, 2002. Abdul Khaliq, 30, was the victim's nephew.

<sup>157</sup> Human Rights Watch interview with Ali, 38-year-old soldier, Jebrael, Afghanistan, March 29, 2002. “At the time the village was bombed, the Taliban were there. They brought their vehicles under the trees and in these areas [pointing to a nearby street] and therefore it was bombed. . . . They hid under where we make bricks. They also hid in houses. People protested. They left vehicles by houses and left the area. Later the Taliban came and took their vehicles. We had great fear of the Taliban and couldn't get closer to them,” Ali said.

<sup>158</sup> Human Rights Watch interview with Khalil Ahmad.

<sup>159</sup> Landmine Action, *Explosive Remnants of War*, p. 29.

exploded and killed him.<sup>160</sup> Children sent to gather wood also frequent military bases, which in Afghanistan generally have undefined and porous borders. The suburbs of Herat lost several children to bomblets dropped on these targets. Three children from Nawabad, for example, died while collecting wood at Firqa #17 in Herat.<sup>161</sup>

Children are especially vulnerable to cluster bomblets because of their curiosity. Arif, 14, and Sharif, 13, brothers from the Herat suburb of Bag Nazer Gah, were injured while playing during an excursion to the Firqa. Arif lost his leg to a bomblet.<sup>162</sup> In nearby Qala Shater, Mohammed Eisah, 58, described how children played with BLUs before realizing their danger. “Two children were passing by. Other children misbehaved and threw a bomb[let] to their feet. Thank God, both survived,” he said.<sup>163</sup> Children have even interfered with demining efforts. “On the first day of [our clearance] work, children played among the bomblets,” said a HALO Trust supervisor in the Shomali Plain. “We pushed them away. They shouldn’t play there.”<sup>164</sup>

New Year celebrations led to an increase in injuries to children and adults because people spent more time outside. On March 24, during the Human Rights Watch mission, five boys set off a cluster bomb while crossing a field in Takh-te-Sefar on their way to a picnic. Ramin, 15, died immediately. The other four boys were expected to survive but suffered injuries ranging from serious to minor. Soraj, 12, lost both legs. Ismaeel, 16, sustained a chest wound. Farhad, 18, injured his foot. Waheed, 5, received a chest wound and minor head injury.<sup>165</sup> The cause of the explosion remains unclear. U.N. officials blamed a subsurface BLU, while the victims’ relative, Ghulam Syed Siddiqi, 28, said one of the boys picked up the bomblet.<sup>166</sup> Either way, the incident demonstrates the lingering dangers of cluster bombs to civilians.

Unexploded bomblets presented two other significant risks in Afghanistan although it is unclear if they caused any casualties. First, the collection of scrap metal from bombs put civilians in harm’s way. “You never find the [CBU] casing. It goes to market and gets used for various products, like satellite dishes,” said Bob Gannon, a demining consultant for Ronco.<sup>167</sup> The casings themselves will not explode, but walking through fields to collect them or gathering canisters for scrap metal could set off unexploded bomblets. Human Rights Watch did not identify any people who were hurt in this way but found ample evidence of scrap gathering.<sup>168</sup>

Second, cluster bomb opponents expressed outrage during the war at the similarities in appearance between cluster bomblets and humanitarian daily rations.<sup>169</sup> Although the latter are square and the former cylindrical, both are dropped from U.S. planes and both are yellow so that they are easy to spot on the ground. The United States responded to the outcry by changing the color of future food packages and warning civilians through

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<sup>160</sup> Human Rights Watch interview with Ali, 12-year-old carpet weaver.

<sup>161</sup> Human Rights Watch interview with Maidin, Nawabad, Afghanistan, March, 29, 2002. Maidin, 18, said he knew of two additional local civilians injured by bomblets on the Firqa.

<sup>162</sup> Human Rights Watch interview with Sharif, Bag Nazer Gah, Afghanistan, March 29, 2002.

<sup>163</sup> Human Rights Watch interview with Mohammed Eisah.

<sup>164</sup> Human Rights Watch interview with Habeeb, Explosive Ordnance Disposal (EOD) Supervisor, HALO Trust, Shomali Plain, Afghanistan, March 14, 2002.

<sup>165</sup> Human Rights Watch interview with Ghulam Syed Siddiqi, Gazer Gah, Afghanistan, March 29, 2002. Ghulam Syed Siddiqi, 28, was the cousin of the boy who died and either uncle or cousin to the other boys.

<sup>166</sup> Ibid.

<sup>167</sup> Human Rights Watch interview with Bob Gannon. See also Human Rights Watch interview with HALO Trust team leader, Sabz Sang, Afghanistan, March 14, 2002.

<sup>168</sup> For evidence of scrap gathering despite the risks in Ishaq Suleiman, see text following footnote 246. OMAR’s list of cluster bomb casualties includes four injuries at Firqa #17 and four at the Qol-e Urdu that happened while people were “collecting scrap and tending animal[s].” OMAR Sub Office Herat, “Information About Victims” [hereinafter OMAR Cluster Bomb Casualty List].

<sup>169</sup> See, e.g., Human Rights Watch, “Cluster Bombs in Afghanistan,” p. 3; Steven Mufson, “Pentagon Changing Color of Airdropped Meals,” *Washington Post*, November 2, 2001; “Human Rights Groups Are Protesting Use of Cluster Bombs,” CNN: Live This Morning transcript, November 1, 2001.

announcements and flyers.<sup>170</sup> Pentagon officials also said that the packages had not been dropped in the same areas as cluster bombs. “[D]espite the similarity in colors, it’s very, very unlikely that a person would pick up a cluster bomb thinking it was a packet of food,” Rear Adm. Craig Quigley, Deputy Assistant Secretary of Defense for Public Affairs, said.<sup>171</sup> Human Rights Watch found no cases of people injured because they confused the two. Sean Moorhouse, the only deminer to note a correlation during the Human Rights Watch mission, said he had heard that some children thought that soda-can shaped BLUs were drinks to go with the food packages.<sup>172</sup> Human Rights Watch did notice that yellow items proliferate in Afghanistan. Most families carry water in yellow plastic bottles. The omnipresent bottles and pieces are easily confused with BLUs, which demonstrates the danger of having unexploded bomblets lying around.

Although cluster bomb clearance is progressing well (see next chapter), casualties still occur. The ICRC reported twenty-one civilian casualties, including five deaths, since the Human Rights Watch mission in March 2002.<sup>173</sup> The most recent reported casualty was a fifteen-year-old boy who suffered head and arm injuries on October 12 when a cluster bomblet exploded while he tended animals in the Oruzgan province.<sup>174</sup> Two deminers from HALO Trust were also killed by cluster bomblets in the Kunduz province in 2002, one in Kunduz city in July, the other in Khoja Ghar in August.<sup>175</sup>

### Socioeconomic Impact

The civilian impact of cluster bombs extends beyond casualties. They interfere with agriculture, which is crucial to Afghanistan’s recovery. Many of the bomblets are spread over fields, vineyards, and walled gardens. In a village south of Kandahar, bomblets damaged a building used to dry grapes and littered a pomegranate orchard, in which Human Rights Watch counted about eighty bomblets in a three-hundred-foot (ninety-one meter) radius. The trees probably increased the dud rate because branches snagged the parachutes, some of which still hung in the trees, and slowed the bomblets’ descent. “I’m faced with a huge problem,” said Karlwan, the 25-year-old villager in Denar Khail, describing his need to gain access to his land. “The BLU team should clear. Only when they clear can I plant grape trees and reconstruct my house.”<sup>176</sup> In Ainger, the village near Khanabad, people started plowing as soon as the deminers finished their work.<sup>177</sup> In other cases, people decide they cannot wait. “It gets to the stage where villagers clear themselves,” Zenk said. “There’s that kind of pressure for land. [They decide,] ‘We’ll do it ourselves and take the casualties.’”<sup>178</sup>

Cluster bomblets also hinder the return of refugees and internally displaced persons (IDPs). Afghanistan suffers from a long-standing refugee problem, which the most recent conflict aggravated.<sup>179</sup> Between March and October 2002, the U.N. High Commissioner for Refugees (UNHCR) helped facilitate the repatriation of 1.6

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<sup>170</sup> “DoD News Briefing—Secretary Rumsfeld and Gen. Myers,” U.S. DoD News Transcript, November 1, 2001. Air Force communications planes issued radio broadcasts in the local languages, Pashto and Dari, warning of the dangers. The broadcasts said, “We do not wish to see an innocent civilian mistake the bombs for food bags and take it away, believing it might contain food. . . . Do not confuse the cylinder-shaped bomb with the rectangular food bag.” Another broadcast warned, “Attention, people of Afghanistan! . . . Let the bundles [of rations] land and settle before you approach them. If you follow these instructions you will not get hurt.” Richard Sisk, “U.S. Warns of Food, Bomb Mixups,” *New York Daily News*, October 31, 2001.

<sup>171</sup> “Rear Admiral Quigley Briefing at the Foreign Press Center,” U.S. DoD News Transcript, November 14, 2001.

<sup>172</sup> Human Rights Watch interview with Sean Moorhouse.

<sup>173</sup> ICRC, November Cluster Bomb Casualty List.

<sup>174</sup> *Ibid.*

<sup>175</sup> Human Rights Watch interview with Abdul Wasi, HALO Trust, Kabul, Afghanistan, November 2002. See also Mine Action Program for Afghanistan (MAPA), Chart of Cluster Bomb Clearance and Casualties. Human Rights Watch obtained this document from MAPA in November 2002.

<sup>176</sup> Human Rights Watch interview with Karlwan.

<sup>177</sup> Human Rights Watch interview with Gerhard Zenk, Kunduz.

<sup>178</sup> Human Rights Watch interview with Gerhard Zenk, Pul-i Khomri.

<sup>179</sup> The September 11 attacks and fear of U.S. bombing led a new wave of Afghans to flee the country. Within ten days of the terrorist attacks on New York and Washington, 20,000 fled into Pakistan and Iran. Human Rights Watch, “Safe Refuge Must Be Provided for Afghan Refugees,” Press Release, September 21, 2001.



million Afghans, and more than 400,000 people returned on their own.<sup>180</sup> As of October, a year after the U.S. bombing began, however, more than two million refugees remained in the countries bordering Afghanistan.<sup>181</sup> Bomblets and other unexploded ordnance can contribute to delays in organized returns. UNHCR's guidelines require the agency to look at the safety of roads and return areas before sending inhabitants back to their homes.<sup>182</sup> The guidelines focus on the threats from landmines, but because of their similar effect, unexploded BLUs must be treated the same way.<sup>183</sup> UNHCR is also required to discourage spontaneous repatriation in unsafe circumstances. "The need for return 'in safety and dignity' means that UNHCR *cannot promote* the voluntary repatriation of refugees in patently dangerous situations with the risk of injury or death."<sup>184</sup> By necessitating such precautions, cluster bombs can slow a country's economic recovery and its people's return to normalcy.

In Afghanistan, however, repatriation has happened quickly, which has increased concerns about safety. The rate of returns surprised most experts and caught agencies unprepared. As soon as the Taliban fled, Afghans started going back to their abandoned villages, some of which had been attacked with cluster bombs. In the Shomali Plain, as of March 2002, about ten of one hundred families had returned to Denar Khail, one of the communities most littered with unexploded BLUs,<sup>185</sup> and twenty-five of 560 to Sabz Sang, where ten bomblets were observed laying in just one of its many small vineyards.<sup>186</sup> HALO Trust was still doing active cluster clearance in both villages and ultimately destroyed 281 bomblets from the former and 208 from the latter.<sup>187</sup> By late March, most villagers had returned to Mandisar, south of Kandahar, where BLUs lay among plants in a vineyard. About 115 people were using the land, and one man was injured when he picked up a bomblet with a spade.<sup>188</sup>

Unexploded bomblets also endanger transients unfamiliar with a region's hazards. Two people from the Mazlach IDP camp encountered cluster bomblets while passing through the field west of Ishaq Suleiman; the 61-year-old father died and his 8-year-old son was injured.<sup>189</sup> Although the earlier deaths of two shepherds kept locals away, the victims had no reason to know of the incident. The deadly bomblets not only harm returning refugees but also contribute to a cycle of displacement, forcing those who find their villages too dangerous to join Afghanistan's large number of IDPs.

### **Military Impact**

Unexploded cluster bombs even interfere with the military's conduct of the war, endangering U.S. soldiers and slowing down operations. The United States used cluster bombs extensively in the cave regions, only to

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<sup>180</sup> Ruth Gidley, "Agencies Caught Off Guard as Afghans Flock Home," Reuters, October 21, 2002 (quoting UNHCR figures). While these numbers come from UNHCR, they may be exaggerated. A *London Sunday Telegraph* article suggested that many of those who returned did so several times in order to collect relief packages. Christina Lamb, "Afghan Refugees Run a Scam on U.N. Relief," *London Sunday Telegraph*, November 11, 2002.

<sup>181</sup> UNHCR, "Afghanistan at a Glance," at <http://www.unhcr.ch/cgi-bin/texis/vtx/afghan?page=facts> (last visited October 11, 2002).

<sup>182</sup> *Handbook: Voluntary Repatriation: International Protection* (Geneva: UNHCR, 1996), sec. 6.5 ("The presence of landmines and other unexploded ordnance on main routes of return and in returnee settlement areas poses tremendous danger for repatriating refugees and is therefore a major protection concern to UNHCR."). UNHCR recognizes that not every mine "poses an immediate threat to voluntary repatriation," so it focuses its study on "the routes of organized as well as, to the extent possible, spontaneous return, and the sites where refugees will settle upon their return." *Ibid.*

<sup>183</sup> UNHCR has recognized the dangers of unexploded ordnance, such as cluster bomblets. "Afghanistan's challenges remain daunting. Insecurity, along with mines and unexploded ordnance, still affect some areas . . ." UNHCR, "Afghanistan at a Glance."

<sup>184</sup> *Handbook: Voluntary Repatriation: International Protection*, sec. 6.5 (emphasis in original). See also UNHCR, *Handbook for Emergencies*, 2nd. ed., p. 282.

<sup>185</sup> Human Rights Watch interview with HALO Trust team leader, Denar Khail, Afghanistan, March 14, 2002.

<sup>186</sup> Human Rights Watch interview with HALO Trust team leader, Sabz Sang.

<sup>187</sup> RMAC Kabul, "BLU Strick (sic) Sites Report as at 31 Aug 02" [hereinafter RMAC Kabul, "BLU Strike Sites"]. This document represents the information HALO Trust provided to the RMAC.

<sup>188</sup> Human Rights Watch interview with Haji Faizul Haq, Team Leader #4, Demining Agency for Afghanistan (DAFA), Mandisar, Afghanistan, March 24, 2002.

<sup>189</sup> Human Rights Watch interview with Abdul Basir and Shames-u-din. See also OMAR Cluster Bomb Casualty List.

discover later that the duds endangered ground troops. “We really have to watch where we’re . . . walking. We limited our night movement because of the unexploded ordnance up on . . . this ridge,” a soldier told a CBS reporter during Operation Anaconda.<sup>190</sup> Usually U.S. soldiers prefer to fight at night when they have the technological advantage of night vision. The danger of stepping on BLUs forced them to cut back on such operations, reducing their advantage.<sup>191</sup>

### Conclusions and Recommendations

The civilian casualties and socioeconomic harm caused by unexploded cluster bomblets in Afghanistan demonstrate the need to reduce the dud rate dramatically. Even when cluster bombs were dropped on legitimate targets, their submunitions produced aftereffects that raise concerns under IHL. Such aftereffects should be considered under the proportionality test used during targeting and evaluated to see if they are indiscriminate.<sup>192</sup> In some circumstances, the long-term harm to the civilian population of cluster bomb use may outweigh the short-term military benefit.

Human Rights Watch calls on the United States and other countries to discontinue the use of cluster bombs until they develop a submunition with a very low failure rate. The rate should certainly be less than 1 percent, and if technologically possible, considerably less than that. According to some experts, existing technology could achieve a failure rate of .1 to .3 percent.<sup>193</sup>

The U.S. government has adopted 1 percent or less as a reasonable goal for future production. On January 10, 2001, then-U.S. Secretary of Defense William Cohen issued a memorandum stating that it was the Defense Department’s policy to “reduce overall UXO [unexploded ordnance] through a process of improvement in submunition system reliability—the desire is to field future submunitions with a 99% or higher functioning rate. . . . The Services shall design and procure all future submunition weapons in compliance with the above policy.”<sup>194</sup> The United States should be commended for recognizing the dangers of the excessive unexploded ordnance caused by cluster bomblets and other submunitions and for taking steps to rectify the problem. The new policy, however, permits continued use of existing submunitions that do not meet the new standard. Cohen said, “The services may retain ‘legacy’ submunitions until employed or superceded by replacement systems . . . .” The United States stockpiles more than one billion submunitions with a failure rate of more than 1 percent.<sup>195</sup> There is a fundamental inconsistency in acknowledging the dangers of these submunitions and the need to replace them while still permitting their use.

If the U.S. military cannot or does not modify the BLU-97 and other older submunitions to meet this standard, it should not employ them in any future conflicts. If it does decide to use them, it should restrict use of submunitions with a high failure rate to special circumstances where they are viewed as the only appropriate weapons for the mission and target. In any event, cluster bombs should not be used in or near populated areas or areas to which civilians are likely to return post-conflict.

While several types of technical approaches to reducing the dud rate are possible, Human Rights Watch is not in a position to evaluate or make recommendations in this regard. After nine months of research and

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<sup>190</sup> “CBS Evening News,” CBS News Transcript, March 18, 2002. According to another report, “[t]he soldiers described the area as being littered with U.S. cluster bombs and unexploded ordnance, adding to the dangers faced by troops as they searched the peak.” Stephen Coates, “Al-Qaeda Cave Stronghold Was Like a Castle, Say U.S. Troops,” Agence France-Presse, March 16, 2001.

<sup>191</sup> “CBS Evening News.”

<sup>192</sup> See footnotes 47-49 and accompanying text.

<sup>193</sup> See Vietnam Veterans of America Foundation, Proposed Protocol To Address Explosive Remnants of War, September 25, 2001, slide 10.

<sup>194</sup> Secretary of Defense William Cohen, Memorandum for the Secretaries of the Military Departments, Subject: DoD Policy on Submunition Reliability (U), January 10, 2001. The memo defines future submunitions as those reaching a production decision in fiscal year 2005 and beyond. The memo also notes that “functioning rates may be lower under operational conditions due to environmental factors such as terrain and weather.”

<sup>195</sup> Human Rights Watch, A Global Overview of Explosive Submunitions, p. 2.

consultations with munitions experts, the Vietnam Veterans of America Foundation recommended the incorporation of dual-event fuzes with a backup self-destruct mechanism.<sup>196</sup> One way to fund such improvements would be to reallocate the cost of submunition parts. The shaped charge is the most expensive part of the \$50 BLU-97. Human Rights Watch, however, found no evidence of cluster bombs being used mainly as an anti-armor weapon in Afghanistan.<sup>197</sup> It has been suggested that if the BLU were recognized as a primarily antipersonnel weapon and the shaped charge were removed, more resources could be directed to developing a fuze that would lower the dud rate to below 1 percent.<sup>198</sup>

The military is also capable of designing a unitary bomb that has the same antipersonnel effect as a cluster bomb. During the Afghanistan air war, the United States experimented with such an idea. It set Joint Direct Attack Munitions (JDAMs), a type of 2000-pound satellite-guided bomb, to burst in the air so that they would release fragments akin to the BLU's fragmentation core.<sup>199</sup> A unitary antipersonnel bomb would raise the same targeting issues as a cluster bomb, but it would lessen concerns about aftereffects.

The cluster bomb dud problem can be attacked through targeting as well as technology. Users should avoid dropping cluster bombs from high altitudes or in certain environments, such as soft ground, because past experience shows that the dud rate is likely to increase in these situations. The impact of the dud problem can also be lessened greatly if states prohibit the use of cluster bombs in or near populated areas or in areas to which civilians may return en masse.

In sum, Human Rights Watch recommends that:

- Countries suspend the use of cluster bombs until the dud rate is reduced dramatically. By order of the Secretary of Defense, future U.S. submunitions must have a failure rate of at least less than 1 percent.
- Militaries consider the long-term effect of CBUs when choosing targets regardless of what the dud rate is.

While solutions discussed above hold promise, one must remember that cluster bomb strikes would still raise targeting issues even if their dud rate were eliminated.

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<sup>196</sup> Vietnam Veterans of America Foundation, Proposed Protocol, slide 10.

<sup>197</sup> The statement of an Air Force spokesman corroborates Human Rights Watch's finding. The CBU-103 is "useful primarily against softer targets--troops, softer vehicles, anything that's not armored basically. . . ." Rich Tuttle, "Wind Corrected Munitions Dispenser in First Combat Use, Program Office Director Says," *Aerospace Daily*, December 5, 2001.

<sup>198</sup> This idea was proposed by William M. Arkin, senior military advisor to Human Rights Watch and adjunct professor at the U.S. Air Force's School of Advanced Airpower Studies.

<sup>199</sup> JDAMs can be set to "air-burst, impact or penetrating modes." David Fulghum and Robert Wall, "Heavy Bomber Attacks Dominate Afghan War," *Aviation Week & Space Technology* 155 (December 3, 2001). See also Bryan Bender, Kim Burger, and Andrew Koch, "Afghanistan: First Lessons," *Jane's Defence Weekly* (December 19, 2001) (discussing the criticism of cluster bombs, this article notes that "in recent years the DoD has begun developing unitary warheads for many of its strike weapons, at least partially due to pressure over submunition use.").

## VII. CLEARANCE EFFORTS

Because of the humanitarian problems with duds, quick and professional clearance of cluster bomblets is crucial. By removing the dangerous duds, clearance protects civilians from injuries and helps a country and its people return to normal life. Fortunately, unlike other countries where cluster bombs have been used, Afghanistan had an extensive demining program already in place. (After two decades of war, Afghanistan is one of the most heavily mined countries in the world, with about 737 million square meters contaminated.)<sup>200</sup> As a result of the existing demining infrastructure, cluster clearance has progressed rapidly and in some regions may be finished by the end of 2002.<sup>201</sup> Nevertheless deminers encountered several difficulties, including lack of resources, insufficient awareness (risk education) programs, and limited assistance from the United States.

### Cluster Clearance in Afghanistan

The U.N. Mine Action Program for Afghanistan (MAPA) oversees the clearance of mines, unexploded ordnance, and cluster bombs. The program also supervises survey, assessment, and risk education programs for the country. Its headquarters, the Mine Action Center for Afghanistan, was located in Islamabad but moved to Kabul in spring 2002. MAPA also has five Regional Mine Action Centers (RMACs) based in Afghanistan, which cover the central, north, south, west, and east areas of the country. The RMACs are located in Kabul, Mazar, Kandahar, Herat, and Jalalabad respectively.<sup>202</sup>

MAPA coordinates about sixteen mine action groups in Afghanistan, several of which work on cluster bombs. Three Afghan-based NGOs have contributed to cluster clearance. The Mine Clearance Planning Agency (MCPA) surveys and maps BLU sites as well as minefields. OMAR runs extensive awareness programs and, in some parts of the country, clears ordnance. The Demining Agency for Afghanistan (DAFA) specializes in clearance.<sup>203</sup> MAPA also works with several international NGOs, including the U.K.-based HALO Trust.<sup>204</sup>

HALO Trust, OMAR, and DAFA have played significant roles in the clearance of U.S. cluster bombs. HALO Trust is clearing bomblets in the central and northern regions, DAFA in the south, and OMAR in the west. Each group has assigned clearance teams to focus on BLUs. In March, in addition to setting aside staff to locate cluster sites, HALO Trust had dedicated twelve BLU teams to clear about fifty-two strikes. OMAR and DAFA had set aside two teams each.<sup>205</sup> A typical team, at least for OMAR, includes one team leader, one assistant team leader, four section leaders, twenty-four deminers, two paramedics, and drivers.<sup>206</sup>

After MCPA finishes mapping a site, cluster clearance generally proceeds in two steps: surface and subsurface. The deminers first clear unexploded bomblets on the surface.<sup>207</sup> Then, depending on the urgency of the site, they clear bomblets that penetrated the surface, often when the ground was soft.<sup>208</sup> In Shidai outside Herat, for example, OMAR deminers walked in teams of seven up an isolated hillside marking every BLU. They

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<sup>200</sup> ICBL, *Landmine Monitor Report 2002*, p. 593.

<sup>201</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002; Human Rights Watch interview with Tim Horner; Human Rights Watch interview with Gerhard Zenk, Pul-i Khomri.

<sup>202</sup> Human Rights Watch interview with Qader Hamdard, Operations Officer, RMAC, Kabul, Afghanistan, March 12, 2002.

<sup>203</sup> *Ibid.* The other two major Afghan NGOs are: the Afghan Technical Consultants (ATC), which does clearance and mechanical excavations, and the Mine Detection Dog Center (MDC), which uses dogs to find mines, especially Iranian anti-tank mines without enough metal to be picked up by a metal detector. *Ibid.*

<sup>204</sup> Human Rights Watch interviewed deminers from HALO Trust, OMAR, and DAFA as well as officials at the RMACs.

<sup>205</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002; Human Rights Watch interview with Tim Horner.

<sup>206</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002.

<sup>207</sup> The deminers work through three rings of debris, small pieces of casing, spiders, and bomblets, while progressing to the most dangerous area. Human Rights Watch interview with Habeeb; Human Rights Watch interview with Tim Horner. Another interviewee described the three rings as burnt parachutes, CBU casings, and bomblets. Human Rights Watch interview with Dr. Nasir Ahamd, Assistant Program Manager and Press Officer, HALO Trust, Kabul, Afghanistan, March 12, 2002.

<sup>208</sup> See, e.g., Human Rights Watch interview with Gerhard Zenk, Kunduz.

planned to return later with large-loop metal detectors to track down subsurface bomblets, a much longer process. Deminers said they found BLUs up to fifty centimeters (twenty inches) deep although most subsurface ones traveled only twenty to thirty centimeters (eight to twelve inches) under ground.<sup>209</sup>

Because cluster bomblets cannot be defused, the deminers explode them *in situ* (in place). In many parts of Afghanistan, they use a simple tripod made in Pakistan. The device has three thin legs topped by a two inch (five centimeter) tall cup with a shaped charge. The deminers spread the legs of the tripod so that the shaped charge is three inches (seven centimeters) above the bomblet. They fill the cup halfway with explosive, stretch a time fuze out the plastic top, and light it. The shaped charge destroys the core of the bomblet without setting off the BLU and spreading dangerous fragments in every direction.<sup>210</sup> While the device is cheap and effective, it is also dangerous because the deminers must work over the bomblet for an extended period of time. Since bomblets are sensitive to temperature, “there is a theoretical risk that if it’s a hot day and a shadow falls over it, that would be enough to trigger an explosion,” Moorhouse said.<sup>211</sup>

Overall the deminers have made excellent progress in clearing cluster bombs from Afghanistan. By late March, for example, OMAR had cleared seven of thirteen strike sites in Herat. “*Inshallah* we complete all cluster bombs in two to three months,” OMAR engineer Sher-Agha said.<sup>212</sup> Deminers in other parts of the country had similar expectations. Tim Horner at the RMAC in Kandahar said his teams would finish in a couple months.<sup>213</sup> HALO Trust’s Zenk expected to finish by year’s end. “I think we’ll deal with it. It’s not really a problem because [HALO Trust] ha[s] massive manpower,” Zenk said.<sup>214</sup>

Although clearance expectations were high in the spring, work remained to be done at the end of 2002. According to MAPA, as of November, 227 cluster bomb sites had been surveyed and 111 cleared.<sup>215</sup> In some regions, expectations were met. Cluster bomb clearance in the southern region was reportedly almost finished by September.<sup>216</sup> By November, HALO Trust had finished clearance in the Shomali Plain, destroying 2,230 BLUs, and had cleared fifty sites in the north, destroying 3,666 BLUs. It still had several northern areas to complete, however.<sup>217</sup> Work in the Herat region slowed in the summer because OMAR prioritized mine clearance in rural areas that would be inaccessible in the winter. In September, it could only dedicate cluster bomb clearance teams to the Fourth Armored Brigade Headquarters and Ishaq Suleiman.<sup>218</sup> While deminers did not meet their original goals, the clearance rate in Afghanistan is impressive given that cluster bomblets caused problems in Iraq and Yugoslavia for years. The success is due to the smaller number of bomblets dropped and to the existing capacity of the Afghanistan’s demining program.

The deminers generally do not view cluster bomblets as a huge problem, at least compared to landmines. “In the context of this country, they’re kind of like a minor problem,” Zenk said.<sup>219</sup> Sher-Agha concurred. He said that the unexploded ordnance abandoned at Herat’s military bases by the Taliban presents many more difficulties

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<sup>209</sup> See e.g., Human Rights Watch interview with Habeeb; Human Rights Watch interview with Gerhard Zenk, Kunduz; Human Rights Watch interview with DAFA team leader, Mandisar.

<sup>210</sup> Human Rights Watch interview with Sean Moorhouse. Moorhouse recommended placing an explosive next to the bomblet and surrounding the area with sandbags instead of using the tripod.

<sup>211</sup> Ibid.

<sup>212</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002.

<sup>213</sup> Human Rights Watch interview with Tim Horner.

<sup>214</sup> Human Rights Watch interview with Gerhard Zenk, Pul-i Khomri.

<sup>215</sup> MAPA, Chart of Cluster Bomb Clearance and Casualties. Human Rights Watch obtained this chart in November 2002.

<sup>216</sup> Pamela Sampson, “Afghan Cluster Bombs Almost Cleared,” Associated Press Online, September 19, 2002.

<sup>217</sup> According to a HALO Trust official, by November, it had finished clearing the city of Kunduz and its airport, but not the whole province. It expected to finish clearance in Khanabad by the end of November. Many of the areas that remain are in Balkh province and marked low priority because they are located in the mountains or a minefield. Others are inaccessible because of security restrictions. Human Rights Watch interview with Abdul Wasi; RMAC Kabul, “BLU Strike Sites.”

<sup>218</sup> Human Rights Watch interview with Sher-Agha, Operations Officer, OMAR, Herat, Afghanistan, September 19, 2002.

<sup>219</sup> Ibid.

than cluster bomb clearance, which he described as “easy.”<sup>220</sup> Another Herat official noted in March that he expected OMAR to finish the thirteen cluster sites by summer, but it would take ten years to clear the 347 surveyed mine sites.<sup>221</sup> Some deminers, however, felt that cluster bombs were distracting them from their primary work. Zenk said that HALO deminers frequently had to clear BLUs from villages surveyed for mines the previous year.<sup>222</sup> “They are taking resources from a long-standing mine problem,” Moorhouse said.<sup>223</sup>

The controversial nature of the weapon has attracted international attention to cluster clearance. “Why is it a big issue? Because the rest of the world is interested in it. We’ll deal with it because of pressure on us from different angles,” Zenk said.<sup>224</sup> The United Nations asked clearance groups to keep separate data about injuries due to cluster bombs. Deminers in the Shomali Plain, just north of Kabul, were urged to finish their work quickly so that government officials can take visiting dignitaries there. Some of this pressure is political, and the demining groups do not give in to it completely. Horner said that regardless of pressure, a minefield on land needed by civilians takes precedence over an isolated cluster site.<sup>225</sup> Nevertheless, information gathering will provide a better understanding of cluster bombs and inform future debate about them.

### Clearance Difficulties and Dangers

Despite the speed of the cleanup, deminers still faced several obstacles, including lack of information, equipment, funding, staff, and time. First, the demining community in Afghanistan was unfamiliar with the cluster bombs dropped by the United States. “The guys here had never seen cluster bombs before January,” Horner said.<sup>226</sup> Some had worked on Russian submunitions, but they said that those have less sensitive fuzes and are therefore considered less dangerous than the U.S. BLUs.<sup>227</sup> The latter have secondary fuzes designed to detonate even when bomblets do not land perpendicular to the ground.<sup>228</sup> The demining organizations had to train their teams before sending them into the field. They brought in foreign consultants, especially from groups that had cleared bomblets from Yugoslavia after the NATO air campaign.<sup>229</sup> While deminers learned how to destroy the bomblets safely *in situ*, most of those interviewed by Human Rights Watch did not understand the detailed workings of a BLU. They could not tell, for example, which bomblets had been armed and which had not.<sup>230</sup>

The deminers also suffered from a lack of equipment. The Taliban stole vehicles and looted warehouses, especially in Kandahar.<sup>231</sup> A U.S. strike on a DAFA warehouse occupied by the Taliban destroyed other equipment.<sup>232</sup> During their reign, the Taliban banned global positioning system (GPS) receivers, which tell users their exact latitude and longitude. Horner said his survey team did not believe him when he said they were now legal.<sup>233</sup> GPS receivers are important tools for identifying the location of cluster sites. They also allow deminers to find sites that others, including the United States, have identified. Horner described the biggest obstacle to clearance as having to use multiple kinds of maps instead of GPS receivers. “I read all about this place being a

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<sup>220</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002.

<sup>221</sup> Human Rights Watch interview with U.N. official, Herat, Afghanistan, March 27, 2002.

<sup>222</sup> Human Rights Watch interview with Gerhard Zenk, Pul-i Khomri.

<sup>223</sup> Human Rights Watch interview with Sean Moorhouse.

<sup>224</sup> Human Rights Watch interview with Gerhard Zenk, Kunduz.

<sup>225</sup> Human Rights Watch interview with Tim Horner.

<sup>226</sup> Ibid.

<sup>227</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002. Capt. Jan-Erik Johansen, a Norwegian mine clearance expert working near Bagram Air Base, “stepped among the Soviet cluster bombs. But [he] gave a wider berth to American cluster bombs, which can be set off by vibration of the ground.” Douglas Birch, “Landscape of Land Mines: Any Step Could Be the Last,” *Baltimore Sun*, April 7, 2002.

<sup>228</sup> See Landmine Action, *Explosive Remnants of War*, p. 29.

<sup>229</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002.

<sup>230</sup> Most of the deminers eagerly absorbed any technical information Human Rights Watch provided.

<sup>231</sup> DAFA said the recent war cost it \$5 to \$6 million in damaged or lost equipment. ICBL, *Landmine Monitor Report 2002*, p. 600.

<sup>232</sup> Human Rights Watch saw several DAFA vehicles that had been destroyed by U.S. bombs at the World Food Program compound outside Kandahar. DAFA had a warehouse on the site, and witnesses said the Taliban occupied the compound during the war.

<sup>233</sup> Human Rights Watch interview with Tim Horner.

mature demining place, but it's way behind Bosnia," Horner said. "It takes three to four weeks to map sites. The information we've got is nowhere near as comprehensive."<sup>234</sup> The demining groups need funding to replace their lost equipment, buy new GPS receivers, and train staff in their use.

The equipment that does exist is spread unevenly across the country. Horner said that Kandahar was the worst off. "Because it's hot, dusty, and no one likes coming here, it's been ignored for a long time," he said.<sup>235</sup> OMAR in Herat has also faced equipment shortages. It has only eight large-loop metal detectors and its deminers have limited safety equipment.<sup>236</sup> While deminers clearing cluster bomblets for the U.K.-based HALO Trust in the Shomali Plain wore chest and face protectors, deminers in Herat had no such gear because the Afghan-based OMAR could not afford it.

The southern and western demining groups have also faced staff shortages. After the U.S. bombing campaign began in October, many deminers fled. "Everyone was told to flee to the hills and look after their families," Horner said.<sup>237</sup> Deminers started to trickle back in January, but by late March, the Kandahar RMAC had about a dozen active teams instead of its usual forty-nine.<sup>238</sup> Since the deminers have to clear mines as well as clusters, OMAR and DAFA could only dedicate two teams each to cluster bomblets. In March, HALO Trust had a staff of more than 1,800 in Afghanistan but expected to lose some as the war ended and the new government was set up. Doctors who worked for the demining group, for example, would want to return to their pre-war positions.<sup>239</sup> Several deminers also complained about the low pay, which averages \$130-135 per month. Zenk, however, described it as "very good pay for these here parts."<sup>240</sup>

Because these obstacles led to delays in deminers' work, civilians often resorted to their own methods of clearance. The pressure for land and the fear of casualties drove residents to find ways to dispose of the bomblets themselves. After a BLU killed a child in Takhar, for example, an elderly woman began to gather bomblets. "She decided she was an old lady and if anyone should get it, it should be her," Zenk said. The woman piled up eighteen bomblets, lit a fire under them, and walked away. When HALO Trust heard of this story, it quickly dispatched a team to the area.<sup>241</sup> Civilian clearance is not only dangerous to civilians who do not know how to handle cluster bombs safely but also of limited effect. In Kandahar and other places, Human Rights Watch found bomblets civilians had tried to burn. While charred on the outside, the BLUs remained dangerous because the fuzes were intact.<sup>242</sup> In Qala Shater, neighbors dumped unexploded bomblets into a canal that runs through the center of the neighborhood and is used by children for swimming. OMAR diverted the water into irrigation canals to start clearance. The residents, however, needed the canal's water and only let the deminers divert it for a short time. As a result they created a long-term clearance problem.<sup>243</sup>

### **Awareness (Risk Education) Programs**

The spread of unexploded BLUs in civilian areas combined with civilians' need to use those areas has made effective awareness (also known as risk education) programs critical. Demining groups and other NGOs that have a history of raising mine awareness have taken responsibility for educating the population about the risks of cluster bomblets.<sup>244</sup> With varying degrees of success, they have adopted two major approaches: educating Afghans about this new type of weapon and demarcating danger zones.

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<sup>234</sup> Ibid.

<sup>235</sup> Ibid.

<sup>236</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002.

<sup>237</sup> Human Rights Watch interview with Tim Horner.

<sup>238</sup> Ibid.

<sup>239</sup> Human Rights Watch interview with Gerhard Zenk, Pul-i Khomri.

<sup>240</sup> Ibid.

<sup>241</sup> Human Rights Watch interview with Gerhard Zenk, Kunduz.

<sup>242</sup> Human Rights Watch interview with Bob Gannon.

<sup>243</sup> Human Rights Watch interview with Sean Moorhouse.

<sup>244</sup> For more information on landmine awareness, see ICBL, *Landmine Monitor Report 2002*, pp. 601-03.

OMAR has added cluster bomblets to its nationwide mine awareness program. Posters now include images of individual BLUs and CBU casings. One depicts a refugee who spots a bomblet on his way home. It instructs him to retrace his steps, mark the spot, and go for help. "Danger. Don't touch unknown devices. They cause death," reads another poster with images of mines, cluster bomb parts, and unexploded ordnance. OMAR also brings BLU models to its awareness classes and makes extra efforts for special events. During the New Year celebrations in late March, which brought many people outside for picnics, OMAR used megaphones to warn people not to walk in certain areas.<sup>245</sup>

The education programs have had mixed effects. Human Rights Watch only saw the awareness posters in OMAR and U.N. offices, and the more common mine-awareness murals and billboards generally did not include cluster bombs.<sup>246</sup> Nevertheless, by March, most people Human Rights Watch interviewed knew what a cluster bomb was and recognized it as dangerous. Villagers in Ishaq Suleiman, for example, at first said they did not have any pieces of cluster bomblets because OMAR had warned them they were dangerous to pick up. After further discussion, however, the people showed the Human Rights Watch team their collections of CBU casings, CBU computer pieces, and bomblet canisters. A young boy even offered the spider he had picked up for a toy. Desperate for scrap metal or merely curious, these villagers had ignored OMAR's warnings. In other cases, the awareness programs came too late. In Bag Nazer Gah, villagers said deminers arrived only after two people were injured.<sup>247</sup> The demining groups, which have limited resources, cannot educate every Afghan or enforce what they teach.

Deminers have also increased awareness by identifying dangerous areas with painted rocks, but their system needs to be simplified or clarified. Red stones indicate mines, white cleared areas, and blue cluster bombs or battle areas. While most people seem to understand red and white, the blue confuses many. "It's a stupid system. . . . Blue doesn't mean anything to anyone," Moorhouse said.<sup>248</sup> A shepherd found sleeping in an area outlined by blue stones near Ashoga said, "I have no idea what they mean. The deminers just came once and painted stones and left."<sup>249</sup> Another man at the same site said, "I don't know exactly, might be something about mines."<sup>250</sup> Contrary to what other deminers, including his supervisor, said, an OMAR team leader in Herat said blue meant the area had been surface cleared but not subsurface cleared.<sup>251</sup> Either he was using a different system than everyone else or he was misinformed about the color code. The system itself has value, but deminers should better publicize their color-coded system by, for example, including the color key on awareness posters or discussing it in classes.<sup>252</sup>

## U.S. Role

The United States, the party that dropped the cluster bombs, provided limited assistance with clearance. Pentagon officials have said that the U.S. military "does not get involved in clearance."<sup>253</sup> When asked in March what help they had received from the United States, most deminers said little or none. The United States did provide various types of aid, including advising, equipping, and funding local deminers, providing a list of strikes, and clearing certain areas. These programs, however, were relatively small, and especially in the case of the strike list, not very helpful.

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<sup>245</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002. Sher-Agha said cluster bomb casualties increased during the New Year holiday when people were out picnicking and celebrating.

<sup>246</sup> Human Rights Watch did see a U.S. military awareness poster at the Mazar airport. It had been recycled from Operation Allied Force in Yugoslavia.

<sup>247</sup> Human Rights Watch interview with Sharif.

<sup>248</sup> Human Rights Watch interview with Sean Moorhouse.

<sup>249</sup> Human Rights Watch interview with Grah, Ashoga, Afghanistan, March 25, 2002.

<sup>250</sup> Human Rights Watch interview with Nangiali, Ashoga, Afghanistan, March 25, 2002.

<sup>251</sup> Human Rights Watch interview with OMAR team leader, Herat, Afghanistan, March 27, 2002.

<sup>252</sup> Despite the confusion about blue and red stones, only six of the ICRC's reported 127 casualties from unexploded cluster bombs occurred in marked areas. ICRC, November Cluster Bomb Casualty List.

<sup>253</sup> Baldwin and Kay; Zielenziger ("A Pentagon official speaking on condition of anonymity told the Associated Press that the U.S. military does not get involved in clearing unexploded weapons and did not do so in the Kosovo conflict in 1999.").



The State Department's Office of Humanitarian Demining Programs hired consultants and sent equipment to help the demining groups in Afghanistan. It contracted with eleven employees from Ronco, a private consulting firm specializing in ordnance clearance, to help train deminers to explode BLUs safely and to offer advice on local clearance programs. The consultants arrived in December and planned to stay until July.<sup>254</sup> Although it focused on training, the Office of Humanitarian Demining Programs contributed some equipment, including trucks, like one seen at the Kandahar RMAC, to replace those stolen by the Taliban. Deputy Director Col. Tom Seal also noted that the United States provides annual grants to mine clearance organizations, which will contribute to the clearance of cluster bomblets.<sup>255</sup> In the first eight months of 2001, before the war started, the United States gave \$1.7 million to MAPA. Between October 1, 2001 and June 15, 2002, it contributed \$7 million in cash and equipment to mine clearance NGOs.<sup>256</sup>

The U.S. Defense Department provided a list of CBU strikes to the United Nations to be passed on to clearance organizations. The original list included the name of the location, GPS coordinates, estimated number of unexploded bomblets, and radius of dispersal. The unexploded ordnance numbers seemed to be based on a 5 percent dud rate.<sup>257</sup> Deminers indicated, however, that the list was of little use. First, it existed in several, considerably different versions. Human Rights Watch encountered three versions of the list, dating from November 2001, January 2002, and March 2002, circulating in Afghanistan.<sup>258</sup> MAPA said it gets new lists regularly<sup>259</sup> although in November 2002 the March list was still the most recent version in MAPA's possession. The different versions were not merely updates of new strikes. Each of the three provided different categories of information; they added and then removed weapon type, replaced number of unexploded bomblets with the number of bombs, and changed the way they measured the footprint.

The various versions of the list also included contradictory and inaccurate information, demonstrating a failure to record strikes carefully. Human Rights Watch visited many sites listed without finding evidence of cluster bombs. In one case, the list had the wrong coordinates for the village of Khodydad Kolai. It gave coordinates for a neighborhood by that name in Kabul, when it should have given coordinates for a village by that name south of Kandahar. In another case, it identified sites south of Herat that were unfamiliar to the local deminers. Instead they found evidence of thirteen strikes to the north. It appears that that January list transposed two digits, which were corrected in the March version. But even the latter did not include known strikes in villages such as Ishaq Suleiman and Jebrael.<sup>260</sup> The ostensible precision of the data reported by the United States, latitudes and longitudes down to the second, leads to an expectation of accuracy when, in fact, the list is largely estimated.<sup>261</sup> Given today's technology, the United States should be able to record the GPS coordinates of a strike when it happens and then pass that information on to the appropriate parties at the appropriate time.

Even if the list had been consistent and accurate, it would have been of little use on the ground. The United Nations failed to ensure deminers received the list or its updated versions. Zenk said that HALO Trust was just starting to look at the list in March.<sup>262</sup> In Herat, Moorhouse said that he had not seen a new version since

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<sup>254</sup> Human Rights Watch telephone interview with Col. Tom Seal, Deputy Director, Political-Military/Humanitarian Demining Programs, U.S. Department of State, Washington, D.C., May 31, 2002. See also Amy Joyce, "D.C. Firm Is Sending Team to Afghanistan To Help Defuse Devices," *Washington Post*, January 4, 2002, sec. E, p. 5.

<sup>255</sup> Human Rights Watch telephone interview with Col. Tom Seal.

<sup>256</sup> ICBL, *Landmine Monitor Report 2002*, pp. 597-98.

<sup>257</sup> The U.S. Department of Defense and U.S. manufacturers frequently use 5 percent as the expected failure rate for cluster bomblets.

<sup>258</sup> U.S. Cluster Bomb List—November; U.S. Cluster Bomb List—January; U.S. Cluster Bomb List—March.

<sup>259</sup> Human Rights Watch interview with H. Asem, Manager, Mine Action Management Information System, Islamabad, Pakistan, April 2, 2002.

<sup>260</sup> In a HALO Trust document comparing the U.S. list to HALO's findings, the GPS coordinates of only two of the forty-two strikes compared were identical. RMAC Kabul, "BLU Strike Sites."

<sup>261</sup> Air Force sources indicated that the lists were merely extracted, inexpertly, from mission reports and air tasking orders.

<sup>262</sup> Human Rights Watch interview with Gerhard Zenk, Pul-i Khomri.

November,<sup>263</sup> and OMAR was unaware of any list.<sup>264</sup> For those who had received the list, it did not come in a usable form. The first two versions of the U.S. list of strikes identified their location by latitude and longitude. Such information had little value to deminers who did not have GPS receivers to determine their coordinates. The March version added a different kind of mapping coordinates, possibly to address this problem.

When the U.S. military has cleared cluster bomblets in Afghanistan, it has not coordinated well with the U.N. demining groups. Explosive ordnance disposal (EOD) teams have worked to clear cluster bombs from Bagram and Rhino Bases, but the U.S. military assumes no responsibility for clearing except to protect its own forces.<sup>265</sup> Officials in Herat said U.S. Special Forces completed surface clearance near Takh-te-Sefar, possibly because the soldiers were based in the area, but left a field with subsurface BLUs unmarked. A group of five boys walked across that field on March 24, leaving one killed and four injured. (The boys' relative said one of them picked up the BLU.) In Kandahar, Horner said that it was difficult to liaise with the U.S. military.<sup>266</sup> He had warned his staff to stay away from bomblets near Rhino Base. He feared that the military would hear explosions, assume it was enemy forces, and start a firefight before investigating thoroughly. "I'm loathe to put guys near the base until there's a good liaison. If we start making explosions, we'll get Black Hawks coming down on us," Horner said.<sup>267</sup> Good communication could prevent that confusion, but his deminers do not have radios that work with the U.S. radios and the United States would not lend them compatible ones. He said he may negotiate a deal where DAFA locates the bomblets and the U.S. military explodes them.<sup>268</sup>

### Conclusions and Recommendations

Afghan demining organizations deserve high praise for their rapid and professional handling of the unexploded cluster bomblet problem. Nevertheless, cluster clearance methods still have much room for improvement. Human Rights Watch found a shortage of resources and a delay in outside assistance slowed the clearance process. Between October 1, 2001, and June 15, 2002, the international community contributed or pledged \$63.75 million in mine action assistance,<sup>269</sup> but in March 2002, deminers had not yet fully benefited from these contributions. If Afghanistan had not had such experienced deminers, such difficulties would have caused much more humanitarian harm.

The United States should contribute to clearance efforts for moral and practical reasons. As the party that dropped the bombs, it has the information and tools to expedite removal of the dangerous duds its munitions released. The assistance would protect U.S. troops as well as Afghan civilians. It would also speed Afghanistan's economic recovery, thus contributing to the defeat of terrorism. Although there is no legal requirement to help with cluster bomb clearance, the mine treaties discussed above offer guidelines for how states should get involved with this process.<sup>270</sup>

While the international community should focus on addressing the problems outlined in the chapters on targeting and aftereffects, it should at the same time seek to improve clearance because many countries have stockpiled submunitions for future use and others are littered with duds from past wars. Codifying guidelines in a cluster bomb protocol would help clarify responsibilities and standardize clearance, thus reducing the danger of duds. In the meantime, Human Rights Watch recommends the following steps:

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<sup>263</sup> Human Rights Watch interview with Sean Moorhouse.

<sup>264</sup> Human Rights Watch interview with Sher-Agha, March 28, 2002.

<sup>265</sup> Eric Slater, "Master Blasters Detonate Dangers Military," *Los Angeles Times*, January 5, 2002. See also Human Rights Watch interview with Tim Horner.

<sup>266</sup> Human Rights Watch interview with Tim Horner.

<sup>267</sup> Ibid.

<sup>268</sup> Ibid.

<sup>269</sup> ICBL, *Landmine Monitor Report 2002*, p. 598. The funding included \$13.5 million in contributions to NGOs, \$43 million to the U.N. trust fund that supports MAPA, and \$7.25 million in pledges to that trust fund.

<sup>270</sup> See footnotes 52-55 and accompanying text.

- The international community should provide far more financial support for clearance and risk education programs. The United States, or any country that uses cluster munitions, should bear a special responsibility to provide financial assistance to clear its munitions.
- The United States, or any country that uses cluster munitions, should provide training in how to handle and destroy its weapons and equipment to assist clearance.
- The United States, or any country that uses cluster munitions, should develop a system for accurately recording all cluster strikes and reporting them to the United Nations.
- The United Nations should expedite the dissemination of information that it receives on cluster bomb locations.
- The method for identifying cluster fields should be improved. Deminers should better publicize the color-coded system so people know that blue means danger.

The speed of clearance in Afghanistan does not undermine the significance of these recommendations. Implementation of these recommendations in Afghanistan would have reduced the number of civilians killed or injured by unexploded cluster bomblets and expedited the economic recovery of the country. Furthermore, few countries have the demining infrastructure of Afghanistan, which means cluster bombs could pose even more severe clearance problems in the future. In another country, clearance could take many months or years longer, resulting in severe humanitarian consequences.

## VIII. PRIOR U.S. USE OF CLUSTER BOMBS

Operation Enduring Freedom is the most recent of a trio of U.S. air campaigns that have made significant use of cluster bombs. During the past decade, the United States has also dropped these weapons on Iraq and Kuwait during the 1991 Gulf War (Operation Desert Storm) and on the Federal Republic of Yugoslavia during NATO's Operation Allied Force in 1999. In order to determine if the U.S. use of clusters in Afghanistan represents an improvement over its use in the past, it is important to understand their use in these previous conflicts.

### The Gulf War

Cluster bombs accounted for about one-quarter of the bombs dropped on Iraq and Kuwait during the Gulf War.<sup>271</sup> Between January 17 and February 28, 1991, the United States and its allied coalition used a total of 61,000 cluster bombs, releasing twenty million bomblets. About 15 percent of those were CBU-87s, then new to the U.S. arsenal.<sup>272</sup> Other, less reliable Vietnam-era types included the Rockeye and CBU-52, CBU-58, and CBU-71.<sup>273</sup> Although media coverage highlighted the use of precision guided "smart" weapons, "dumb" cluster bombs played a major role in the campaign.<sup>274</sup>

The coalition used cluster bombs against a range of strategic and tactical targets. Taking advantage of clusters' effectiveness against targets with uncertain locations, the coalition chose them as the best means to attack mobile SCUD missiles.<sup>275</sup> They were also used against Iraqi tank and vehicle columns retreating from Kuwait.<sup>276</sup> As a result, unexploded bomblets littered roads, culverts, and bridges.<sup>277</sup> The coalition also used CBU-87s in urban areas, particularly in southern Iraq.<sup>278</sup> The selection of such targets led to the cluster bombing of infrastructure and dual use targets frequented by civilians during and after the war.

The manner of dropping the bombs interfered with their precision. In order to avoid anti-aircraft fire, pilots released most of the clusters from medium to high altitudes. The bombs, however, were designed for use at lower altitudes, and pilots had more experience with delivery closer to the ground. The change in altitude decreased the accuracy of strikes and increased the dispersal pattern of the bomblets.<sup>279</sup> The new CBU-87 fared better because of its radar proximity fuze and a spin mechanism that controlled dispersal, but it still had a lower accuracy rate than designed.<sup>280</sup> This lack of precision increased the risk of immediate collateral damage from a strike. It also decreased the control pilots had over the location of unexploded bomblets.

Duds caused most of the civilian cluster bomb casualties in the Gulf War. As of February 1993, unexploded bomblets had killed 1,600 civilians and injured 2,500 more.<sup>281</sup> Post-war research revealed an "excessively high dud rate" due to the high altitude from which they were dropped and the sand and water on which they landed.<sup>282</sup> The large quantity of bombs added to the problem; even a 5 percent dud rate would have left 2.2 million unexploded submunitions.<sup>283</sup> The high number of duds, combined with the location of the unexploded bomblets in dual use areas, presented significant risks for the civilian population. The plethora of unexploded bomblets on

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<sup>271</sup> Human Rights Watch, "U.S. Cluster Bombs for Turkey?" p. 15. For more information on cluster bomb use in the Gulf War, see Human Rights Watch, "Ticking Time Bombs," pp. 8-12; Human Rights Watch, "Cluster Bombs in Afghanistan," pp. 8-9.

<sup>272</sup> Human Rights Watch, "U.S. Cluster Bombs for Turkey?" pp. 15-16.

<sup>273</sup> *Ibid.*, p. 17.

<sup>274</sup> *Ibid.*, p. 15.

<sup>275</sup> *Ibid.*, p. 18 (citing U.S. Air Force, *Gulf War Air Power Survey*, vol. IV, pt. I (1993), p. 290 [hereinafter GWAPS]).

<sup>276</sup> *Ibid.* (citing GWAPS, vol. IV, pt. I, p. 231).

<sup>277</sup> Human Rights Watch, "Cluster Bombs for Turkey?" p. 18 (citing GWAPS, vol. IV, pt. I, pp. 43, 48).

<sup>278</sup> *Ibid.*, p. 16.

<sup>279</sup> *Ibid.* (citing GWAPS, vol. II, pt. II, pp. 162-63).

<sup>280</sup> *Ibid.* (citing Murray Hamrick, "Aerial Views: USAF Air-to-Air Combat," *International Defense Review* (July 1991), p. 743).

<sup>281</sup> *Ibid.*, p. 18.

<sup>282</sup> Human Rights Watch, "U.S. Cluster Bombs for Turkey?" p. 16 (quoting GWAPS, vol. II, pt. I, p. 261).

<sup>283</sup> *Ibid.*, p. 17.

major roads, for example, put both refugees and foreign relief groups at risk.<sup>284</sup> The bomblets particularly endangered children; 60 percent of the victims were under the age of fifteen. In addition to being less cautious in battlefield areas, children were attracted by the colorful bomblets, which one reporter described as resembling “white lawn darts, green baseballs, [and] orange-striped soda cans.”<sup>285</sup>

Unexploded bomblets caused other significant side effects. First, they slowed economic recovery because industrial plants, communication facilities, and neighborhoods had to be cleared before they could be restored. Iraqi authorities said that they removed tens of thousands of bomblets from such areas.<sup>286</sup> Submunitions also needed to be cleared before people could extinguish the oil fires in Kuwait.<sup>287</sup> Second, during and after the war, unexploded ordnance, including submunitions, represented the “greatest threat” to U.S. troops.<sup>288</sup> The General Accounting Office reported, that in some cases, “ground movement came to a halt because units were afraid of encountering unexploded ordnance.”<sup>289</sup> Bomblets killed or injured more than one hundred American soldiers and killed an additional one hundred clearance workers.<sup>290</sup>

### Yugoslavia

Cluster bombs played a smaller, but still significant, role in the NATO air campaign against Yugoslavia. Of the 26,000 bombs dropped between March and June 1999, about 1,765, or 7 percent, were cluster bombs.<sup>291</sup> They released a total of about 295,000 bomblets over 333 strikes. The United States dropped about 1,100 CBU-87s as well as some CBU-99s and CBU-100s, updated versions of the Rockeye. The United Kingdom dropped 500 RBL-755s, and the Netherlands 165 CBU-87s.<sup>292</sup> While the numbers were significantly lower than during the Gulf War, the immediate and aftereffects of cluster bombs remained problematic.

In Yugoslavia, the strikes themselves caused the most significant casualties. Between ninety and 150 civilians died during cluster bomb strikes. These figures represent 18 to 30 percent of the total deaths from Operation Allied Force.<sup>293</sup> Targets included airfields, communications sites, military posts, vehicles on roads, troop concentrations, and armored units.<sup>294</sup> The most notable case of civilian deaths, which occurred in Nis on May 7, 1999, demonstrated the danger of using cluster bombs in populated areas. A technical failure caused a CBU-87 to open immediately after the plane released it, instead of over the airfield it was targeting. The bomblets fell on an urban area, killing fourteen and wounding twenty-eight civilians. The incident led President Clinton to suspend temporarily U.S. use of cluster bombs in this campaign.<sup>295</sup>

As in Iraq, bomblets continued to harm the civilian population after the war. The U.N. Mine Action Coordination Center estimated that a dud rate between 7 percent and 11 percent, depending on bomb model, left more than 20,000 bomblets.<sup>296</sup> Some bomblets penetrated up to fifty centimeters (twenty inches) deep, making

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<sup>284</sup> Ibid., p. 18.

<sup>285</sup> Ibid., p. 17 (quoting James Vincent Brady, “Kuwaitis Dying from Old Menace: Unexploded Bombs,” *Forth Worth Star-Telegram*, January 12, 1992, p. 1).

<sup>286</sup> Ibid., p. 19.

<sup>287</sup> Human Rights Watch, “U.S. Cluster Bombs for Turkey?” p. 19.

<sup>288</sup> Ibid.

<sup>289</sup> Ibid., p. 20 (citing U.S. General Accounting Office, “Operation Desert Storm: Casualties Caused by Improper Handling of Unexploded U.S. Submunitions,” GAO/NSIAD-93-212, August 1993, p. 9).

<sup>290</sup> Ibid. (citing Patrick J. Sloyan, “U.S. Bomblets Killed 14 Americans in Gulf War,” *Newsday*, September 19, 1991, p. 4; Brady).

<sup>291</sup> Human Rights Watch, “Civilian Deaths in the NATO Air Campaign,” p. 12; Human Rights Watch, “Cluster Bombs in Afghanistan,” p. 7.

<sup>292</sup> Human Rights Watch, “Cluster Bombs in Afghanistan,” p. 7.

<sup>293</sup> Human Rights Watch, “Civilian Deaths in the NATO Air Campaign,” pp. 8, 2.

<sup>294</sup> Human Rights Watch, “Ticking Time Bombs,” p. 4.

<sup>295</sup> Human Rights Watch, “Civilian Deaths in the NATO Air Campaign,” pp. 27-28.

<sup>296</sup> Human Rights Watch, “Cluster Bombs in Afghanistan,” p. 7 (citing ICBL, *Landmine Monitor Report 2001*, p. 952); “U.N. Mine Clearance Center Expects To Finish Kosovo Mine Clearance by End of 2001,” Agence France Press, July 11, 2001).

clearance slow and difficult.<sup>297</sup> In the year after the war's end, bomblets killed about fifty civilians and injured 101, with children being frequent victims.<sup>298</sup> The deaths from duds represent 10 percent of all civilians killed by U.S. and NATO forces during the bombing. Fortunately, only one BLU casualty has been reported since August 2000.<sup>299</sup> Bomblets also interfered with the return of refugees and slowed agricultural and economic recovery.<sup>300</sup> Although the campaign did not involve a ground component, the BLUs threatened peacekeeping forces that patrolled the region after the bombing campaign ended. Ten days after the KFOR multinational force deployed, two British soldiers were killed while clearing bomblets.<sup>301</sup>

### **Afghanistan: Lessons Learned and Not Learned**

An analysis of cluster bomb use in Afghanistan gives the United States a mixed report card on its lessons learned from previous wars. The United States dropped about 1,149 cluster bombs during Operation Enduring Freedom and an additional eighty-four in Operation Anaconda.<sup>302</sup> These figures are smaller than those for either of the previous campaigns and represent about 5 percent of the 26,000 bombs dropped by the United States between October and March. The United States seems to have improved technology and restricted use more than before. Nevertheless, cluster bomb attacks in Afghanistan raised the same basic problems as in the Gulf and Yugoslavia, and the United States repeated several of its past mistakes.

The United States has made efforts to improve cluster bomb technology over the past decade. In Afghanistan, the United States used the CBU-103 with WCMD for the first time in combat.<sup>303</sup> While still not a precision guided munition, this weapon is designed to have increased accuracy and a more contained dispersal pattern. In its list to the United Nations, the United States estimated footprints with a 1,500-foot (457-meter) radius for CBU-87s and a 600-foot (183-meter) radius for CBU-103s.<sup>304</sup> These changes have the potential to reduce collateral damage during strikes and to give the military more control over the location of unexploded bomblets. The United States has also modified the BLU-97 in an apparent effort to reduce the dud rate. The newer version has a cap, or spider, that comes off more easily and a slightly different parachute. These modifications could decrease the chance of a bomblet malfunctioning, but there is no technical proof that this is the case. Despite having the technically better option of the CBU-103, however, the United States continued using the older CBU-87, and Human Rights Watch found evidence of both versions of the BLU in Afghanistan. Furthermore the United States still stockpiles the older versions as well as some Vietnam-era submunitions, which could be used in future wars.

The United States learned some targeting lessons from its experience in the Gulf and Yugoslavia, but it continued to make costly cluster bomb strikes on populated areas. Many CBUs fell on uncontroversial military targets. Unlike in Iraq, the United States did not target roads or bridges with either unitary or cluster bombs. This decision preserved civilian infrastructure and protected returning refugees from some unexploded bomblets. The U.S. military also did not use cluster bombs on industrial plants, communication sites, or other potentially dual-use facilities that would need to be cleared for recovery. Despite these positive changes in targeting practice, the

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<sup>297</sup> Ibid., p. 8 (quoting ICBL, *Landmine Monitor 2001*, p. 952).

<sup>298</sup> Ibid. (citing ICRC, "Cluster Bombs and Landmines in Kosovo," August 2000, p. 12. The ICRC notes that the actual number of CBU casualties is likely higher because there were 108 incidents in which the cause of injury was unknown.).

<sup>299</sup> Ibid. (citing email from John Flanagan, Program Manager, UNMIK Mine Action Program, Kosovo, October 25, 2001).

<sup>300</sup> Human Rights Watch, "Ticking Time Bombs," p. 6.

<sup>301</sup> Human Rights Watch, Cluster Bombs: Memorandum for Convention on Conventional Weapons (CCW) Delegates, December 16, 1999.

<sup>302</sup> U.S. Cluster Bomb List--March.

<sup>303</sup> For an explanation of the WCMD, see footnote 8-10 and accompanying text. The Air Force has contracted with Lockheed Martin for 6,000 WCMDs and plans to procure 40,000 WCMDs, including 30,000 for cluster bombs. Each costs \$10,000, significantly less than the target cost of \$25,000. Tuttle. "WCMD became one of the greatest success stories in the history of Defense Department munitions acquisition, for which it received this year's Schriever award for outstanding program management," said Col. Ken Merchant, director of Eglin Air Force Base's Area Attack System Program Office. Jake Swinson, "New Munitions Dispenser Greatly Improves Accuracy," Air Force Link, December 14, 2001, at [http://www.af.mil/news/Dec2001/n20011214\\_1799.shtml](http://www.af.mil/news/Dec2001/n20011214_1799.shtml) (last visited November 22, 2002).

<sup>304</sup> U.S. Cluster Bomb List--January.

United States ignored the lesson of Yugoslavia and continued to drop cluster bombs in or near populated areas. The thirteen deaths from a stray bomb in Qala Shater are reminiscent of the fourteen deaths from a stray bomb in Nis. While Afghan villages are smaller than Yugoslavian cities, such targets accounted for most, if not all, civilian casualties during cluster bomb strikes in Afghanistan.

The aftereffects of cluster bombs have been less severe in Afghanistan, but that is largely because of the pre-existing demining infrastructure and the fact that fewer bomblets were released. Clearance should still be improved, but it has moved remarkably rapidly in Afghanistan. The dud rate, however, continues to cause problems. Although fewer bombs were dropped, there is no evidence that the rate of unexploded bomblets decreased. Orchard trees that snagged parachutes rather than sand that softened the bomblets' landing caused high dud rates for certain strikes. The unexploded submunitions have led to scores of civilian casualties, including at least twenty-nine deaths, and have endangered coalition troops. The bomblets also continue to slow economic recovery. Afghanistan is a largely agricultural nation so the fact that clusters were not dropped on industrial facilities is relatively insignificant. They did litter farmland, orchards, and grazing areas, which provide Afghans sustenance. While the United States learned some lessons from past wars, it did not always adapt them to the unique circumstances of the current one.

### **Conclusion: Lessons for the Future**

In the future, the United States and other countries using cluster bombs must not only weigh the humanitarian consequences of these troublesome weapons against their military effectiveness, but also learn the lessons of Afghanistan. Some lessons of Afghanistan are clear: cluster bombs should not be used in or near populated areas, the dud rate must be reduced, and clearance efforts should be improved. Even many of the least controversial strikes resulted in civilian casualties, however. The CBUs dropped on large military bases caused casualties because of their proximity to urban areas vulnerable to stray munitions and because people gathered wood or grazed sheep within their borders. Cluster bombs dropped on cave complexes endangered the lives of U.S. troops with their duds. Such effects raise the question of military necessity. Unitary bombs, like those used at Kandahar East Barracks, would have caused the same damage to military facilities with fewer risks. Cluster bombs were most effective against frontlines, but an antipersonnel unitary weapon might have been equally effective. Perhaps the most important lesson of Afghanistan is that despite efforts to correct the errors of past wars, the fundamental problems of cluster bombs remain. Cluster bombs continue to endanger civilians during strikes, leave a lethal legacy after conflicts, and require an international effort for clearance.

## APPENDIX: CLUSTER BOMB INCIDENTS

This Appendix provides details about cluster bomb sites visited by Human Rights Watch and casualties that it learned about during its mission. It does not intend to serve as a complete list of cluster bomb incidents and casualties in Afghanistan.

### Central Region (Shomali Plain)

#### 1. *Denar Khail village, Karabagh district*

The United States bombed Denar Khail when it was part of the frontlines. By March 2002, HALO Trust had cleared one-fifth of a 50,000 square meter area and found fourteen unexploded bomblets (BLU-97s). It estimated that four to five cluster bombs (CBUs) fell on the village.<sup>305</sup> By the end of August, it had completed clearance and updated its statistics. It estimated that seventeen cluster bombs fell in and around the village. It destroyed 215 surface bomblets and sixty-six subsurface ones.<sup>306</sup>

About four hundred Taliban and al-Qaeda forces had occupied the village at the time of the attack, according to one of the few villagers who had not fled. The soldiers moved forward at night and back during the day, he said.<sup>307</sup> By March, about ten of the village's 1,100 families had returned home.

As of August, no civilian casualties had been reported in Denar Khail, either during or after the attack, but unexploded bomblets had endangered villagers and slowed the town's economic recovery. A HALO Trust supervisor said that on the first day of clearance, deminers found children playing among the bomblets.<sup>308</sup> Karlwan, 25, described how the BLUs had interfered with his farming. "I'm faced with a huge problem. The BLU team should clear. Only when they clear, can I plant grape vines and rebuild my house," Karlwan said.<sup>309</sup>

According to demining personnel, other villages in the Karabagh district, including Alar, Bazari, Karabagh Center, Nanigikhail, Qalai Kohna, Qalai Panjshanbe, and Qalai Sufi, were also hit by cluster bombs. By August 31, HALO Trust had cleared a total of 1,303 bomblets in the district, 998 surface and 305 subsurface. Seven sites, not under HALO Trust's jurisdiction, remained to be cleared.<sup>310</sup>

#### 2. *Langi Khil village*

Ali Ahmad, a farmer, was killed in Kalai Mohib's house during a cluster bomb strike.<sup>311</sup>

#### 3. *Sabz Sang village, Estalef district*

The United States dropped cluster bombs on the Sabz Sang village, which was also part of the frontlines. In March, a HALO Trust team leader estimated about nine cluster bombs fell on this stretch of the frontlines and about a dozen Taliban soldiers were killed. His demining team had cleared 20,000 of 70,000 square meters. Bomblets littered vineyards on either side of the main road; one small field had ten unexploded BLUs. Twenty-five families had returned to the village, which once had 560 families.<sup>312</sup> By the end of August, HALO Trust had completed clearance in the village. It destroyed 208 bomblets, including 160 surface and forty-eight subsurface. No civilian casualties had been reported.<sup>313</sup>

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<sup>305</sup> Human Rights Watch interview with HALO Trust team leader, Denar Khail, Afghanistan, March 14, 2002.

<sup>306</sup> Regional Mine Action Center (RMAC) Kabul, "BLU Strick (sic) Sites Report as at 31 Aug 02" [hereinafter RMAC Kabul, "BLU Strike Sites"]. This document represents the information HALO Trust provided to the RMAC.

<sup>307</sup> Human Rights Watch interview with Karlwan, Denar Khail, Afghanistan, March 14, 2002.

<sup>308</sup> Human Rights Watch interview with Habeeb, Explosive Ordnance Disposal (EOD) Supervisor, HALO Trust, Shomali Plain, Afghanistan, March 14, 2002.

<sup>309</sup> Human Rights Watch interview with Karlwan.

<sup>310</sup> RMAC Kabul, "BLU Strike Sites."

<sup>311</sup> Human Rights Watch interview with Afghan man, Denar Khail, Afghanistan, March 14, 2002.

<sup>312</sup> Human Rights Watch interview with HALO Trust team leader, Sabz Sang, Afghanistan, March 14, 2002; Human Rights Watch interview with Habeeb.

<sup>313</sup> RMAC Kabul, "BLU Strike Sites."



As of March, HALO Trust said it had found 550 unexploded BLUs across a 150,000 square meter area in the Estalef district. It had 193,000 square meters to clear.<sup>314</sup>

## **Northern Region (area around Kunduz and Mazar-i-Sharif)**

### **4. Ainger village, near Khanabad**

At noon on November 17, the first day of Ramadan, four cluster bombs fell on this village and its environs. Three fell in the residential area. The fourth dispersed bomblets across a nearby field and canal that runs parallel to the main road. Although a woman villager said there were no soldiers in the village,<sup>315</sup> a HALO Trust official said the strike might have targeted Taliban fleeing from Takhar to Khanabad.<sup>316</sup> The cluster bombs killed at least five civilians and injured many others.

One home suffered several casualties. Azi Mala, 10, was injured during the attack and died later in the hospital. Shapery, 10, died instantly. Her brother Ezmerai, 7, survived but has had three operations for his injuries. A piece of a bomblet lodged in their father's head knocking him unconscious. At least two other boys, aged 7 and 5, were injured during the attack.<sup>317</sup>

At a second house, the owner Gullagha, 45, was killed while working. His nephews Najubullah, 22, and Asadallah, 16, were injured in the shoulder and ear respectively. Both showed Human Rights Watch their injuries. Their sister Shabibi, about 16, was also hurt. One building was destroyed.<sup>318</sup>

In a third house, bomblets killed Aji Agha Pather, 60, and his son Sami, 10. Marhama, 25, the victims' wife and mother, said she was in the kitchen cooking bread when she heard an airplane. The explosion knocked her unconscious. Her father took her to the hospital where she was treated for a broken leg and injured hand. She remained disabled in March, struggling to take care of her five remaining children.<sup>319</sup>

Bomblets left holes in some roofs and shrapnel marks in many walls. Fragments from one bomblet even penetrated a home, leaving holes in a bedspread.

In a different strike the same week, the adjacent village of Charikari was hit with unitary bombs that caused several casualties and destroyed a local mosque.

### **5. Takhar province**

A bomblet killed a child in a village in Takhar. The death inspired an elderly woman to clear other bomblets herself. "She decided she was an old lady. If anyone should get it, it should be her," said Gerhard Zenk, HALO Trust's liaison officer. The woman gathered eighteen bomblets and put them in a fire.<sup>320</sup> Fortunately, she survived the incident.

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<sup>314</sup> Human Rights Watch interview with Habeeb.

<sup>315</sup> Human Rights Watch interview with Marhama, Ainger, Afghanistan, March 17, 2002.

<sup>316</sup> Human Rights Watch interview with Gerhard Zenk, Liaison Officer, HALO Trust, Pul-i Kumri, Afghanistan, March 17, 2002.

<sup>317</sup> Human Rights Watch interview with Mohebullah, Ainger, Afghanistan, March 17, 2002.

<sup>318</sup> Human Rights Watch interview with Najubullah, Ainger, Afghanistan, March 17, 2002.

<sup>319</sup> Human Rights Watch interview with Marhama.

<sup>320</sup> Human Rights Watch interview with Gerhard Zenk, Pul-i Kumri.

## **Southern Region (area around Kandahar)**

### **6. Ashoga Valley, near Khroti village**

The United States dropped both cluster and unitary bombs on this rocky plain near the Arghandab River. Human Rights Watch found two BLU parachutes and one canister in a pool of water at the bottom of a crater. There was also a smaller crater that probably marked the spot where a CBU casing landed. By March, deminers had cleared the site, leaving markings that stretched up into the hills. The area was uninhabited except for a small group of temporary shelters beyond the edge of the strike. A shepherd said the Taliban had concealed tanks and ammunition here.<sup>321</sup> There were no reported casualties from this attack.

### **7. Mandisar village**

As of March 24, deminers had found seventy-six unexploded cluster bomblets in this village on the Tarnak River south of Kandahar. The bomblets were spread across a walled garden and neighboring grape field, and several had penetrated the surface. Officials from the Demining Agency for Afghanistan (DAFA) expected to finish clearance in three more days. A crater indicated that unitary bombs were dropped as well. According to the vineyard owner, the villagers had fled before the attack. By late March, about 115 people had returned, and farmers had started to use the land. One farmer was wounded when he picked up a bomblet with a spade.<sup>322</sup>

### **8 and 9. Two sites near Mandisar**

Cluster bombs fell on two additional sites near Mandisar, an open grazing area and a pomegranate orchard. In the latter, Human Rights Watch found about eighty unexploded bomblets in a three-hundred-foot (ninety-one meter) radius. The trees probably increased the dud rate because branches snagged the parachutes and slowed the bomblets' descent. Human Rights Watch found a few BLU parachutes still hanging in the trees in March. The attack also damaged a nearby building used to dry grapes.

### **10. Sarband village**

In a nighttime attack around December 1, the United States dropped cluster bombs on this one-street village along the Taliban's route of retreat to Kandahar. The village, northwest of Kandahar, is located on the north bank of a riverbed, and the bomblets fell on mudflats next to the river. The Taliban camped in the village one night and then moved out. Human Rights Watch found a ring of burnt ground where their vehicles had been destroyed; two burnt trucks were located nearby. Villagers said the Taliban usually stayed in orchards but had an office in town that was destroyed.<sup>323</sup> Deminers had cleared the land by March, but locals had dropped some BLUs into the water.<sup>324</sup> A migrant laborer from the north died as a result of the attack.<sup>325</sup>

## **Western Region (area around Herat)**

### **11. Firqa #17 Military Base**

By late March, the Organization for Mine Awareness and Afghan Rehabilitation (OMAR) had cleared about fifty surface bomblets from this military base located at the eastern edge of Herat.<sup>326</sup>

Although no civilians died at the Firqa during the attack, unexploded bomblets on the base have caused multiple casualties. Two young children from nearby Nawabad were killed collecting wood at the Firqa; the father of one was an army officer. In a separate incident, a third boy was killed and a cook who went to help him

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<sup>321</sup> Human Rights Watch interview with Grah, Ashoga, Afghanistan, March 25, 2002.

<sup>322</sup> Human Rights Watch interview with Haji Faizul Haq, Team Leader #4, DAFA, Mandisar, Afghanistan, March 24, 2002; Human Rights Watch interview with vineyard owner, Mandisar, Afghanistan, March 24, 2002.

<sup>323</sup> Human Rights Watch interview with Abdul Rani, Sarband, Afghanistan, March 23, 2002.

<sup>324</sup> Human Rights Watch interview with Tim Horner, RMAC, Kandahar, Afghanistan, March 24, 2002.

<sup>325</sup> Human Rights Watch interview with Din Mohammed, Sarband, Afghanistan, March 23, 2002. Din Mohammed was a shopkeeper in town. Agha Mohammed, a second shopkeeper, said he lost his store in the attack. Human Rights Watch interview with Agha Mohammed, Sarband, Afghanistan, March 23, 2002.

<sup>326</sup> Human Rights Watch interview with Farooq, Team Leader #4, OMAR, Herat, Afghanistan, March 29, 2002.

lost both legs.<sup>327</sup> OMAR listed the victims as Nazir Ahmad, son of Noor Ahmad; Jalil Ahmad, son of Ghulam Farooq; and Khalil Ahmad, son of Ghulam Farooq. It said they died December 24.<sup>328</sup>

Civilians from another nearby village, Bag Nazer Gah, were also hurt at the Firqa. Around March 19, Sharif, 13, and his brother, Arif, 14, encountered BLUs during an excursion to the base. Arif lost his leg in an explosion.<sup>329</sup> OMAR's records said that cluster bomblets killed one person and injured three others from this village.<sup>330</sup>

OMAR also said that Wahidullah, son of Fazel Rahim, and Khalil Ahmad, son of Anwar Khalil, were injured while collecting scrap metal and tending animals at the Firqa.<sup>331</sup>

### **12. Fourth Armored Brigade Headquarters, Suleiman village, Engeel district**

This base, about six miles (ten kilometers) to the northwest of Herat, was heavily cluster bombed. OMAR started clearing the area of 294,000 square meters on March 20 and hoped to be finished by April 24. In the first four days, they destroyed sixty-two BLUs. The unexploded bomblets not only covered the base, but also stretched two-and-a-half miles (four kilometers) into the hills where the Taliban had stored tanks and ammunition.<sup>332</sup> OMAR reported that two people, Ghulam and Mohammed Salim, were injured by bomblets on the base while collecting wood or tending animals.<sup>333</sup>

### **13. Ishaq Suleiman village**

Five cluster bombs fell on this village over the course of a week. A village of 12,000 people northwest of Herat, Ishaq Suleiman was used as a hiding place by Taliban troops from the nearby Fourth Armored Brigade Headquarters. While villagers presumed the Taliban attracted the attacks, U.S. Air Force documents indicate that the strikes were intended for the base itself and landed on the village by accident. Human Rights Watch found evidence of twelve civilian deaths, eight during the attack and four from duds. OMAR's tally lists twelve deaths, including four not on the Human Rights Watch list, and sixteen injuries.<sup>334</sup>

On October 31, the United States dropped two cluster bombs on homes at the northeastern edge of the village, the end closest to the Fourth Armored Brigade Headquarters. The first, which fell around noon, killed house owner, Jaumagul, 55. It also injured his neighbor Azima, 35.<sup>335</sup> The second fell about an hour later on the home next to Jaumagul's and killed a father and son, Noor Ahmad, 55, and Nazir Ahmad, 19. Nadira, 40, wife and mother to the victims, said they were trying to escape when the house was hit.<sup>336</sup> The bomb also destroyed her house and killed many cattle. Villagers said that the attack was probably directed at Taliban troops who had occupied a green building across the street for two days. The building escaped unscathed.<sup>337</sup>

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<sup>327</sup> Human Rights Watch interview with Maidin, Nawabad, Afghanistan, March 29, 2002. Maidin, 18, said a soldier from the Chicharan province also died from a dud at the Firqa.

<sup>328</sup> OMAR Sub Office Herat, "Information about Victims" [hereinafter OMAR Cluster Bomb Casualty List].

<sup>329</sup> Human Rights Watch interview with Sharif, Bag Nazer Gah, Afghanistan, March 29, 2002.

<sup>330</sup> OMAR Cluster Bomb Casualty List.

<sup>331</sup> Ibid.

<sup>332</sup> Briefing by OMAR team leader, Fourth Armored Brigade Headquarters, near Herat, Afghanistan, March 28, 2002.

<sup>333</sup> OMAR Cluster Bomb Casualty List.

<sup>334</sup> OMAR Sub Office Herat, "List of Killed and Injured People and Lost Their Properties at Isaq Suliman (sic)" [hereinafter OMAR Ishaq Suleiman Casualty List].

<sup>335</sup> Human Rights Watch interview with Azima, Ishaq Suleiman, Afghanistan, March 29, 2002.

<sup>336</sup> Human Rights Watch interview with Nadira, Ishaq Suleiman, Afghanistan, March 29, 2002.

<sup>337</sup> Human Rights Watch interview with Azima.

A third bomb fell two days after the first strike at about 2:00 p.m. It landed in a field just southeast of the center of town. Khalifa Hussain, 80, and 20-year-old shepherd Bismullah died during the bombing. Twelve-year-old Maroof died the day after the attack when he crossed the field and set off an unexploded BLU.<sup>338</sup>

A fourth bomb struck the center of town three days later at 5:00 p.m. It killed Hajim Mohammed, 55, in front of his shop, Karim, 55, on the road, and Gul Aagha, 21, in front of a different shop. It injured twelve others and severely damaged Ghulam Nabi's home.<sup>339</sup> The bomb also left a small crater in a neighboring vacant lot, probably from the casing. Ghulam Nabi said that a Taliban four-by-four vehicle had stopped in front of the local butcher shop and just started to drive away as the U.S. plane approached. He hypothesized that the pilot had seen this vehicle and was targeting it, but it seems unlikely a pilot would respond so quickly to a single vehicle.<sup>340</sup>

The fifth CBU landed at the same time in a field outside of town to the west. No one died when the bomb dropped, but duds caused multiple post-strike casualties. At about 9:00 a.m. four days after the attack, unexploded bomblets killed two shepherds, Abdul Raziq, 43, and Ghouse-u-din, 37, who had brought their animals to the field for grazing. "Before the explosion, people went there every day to graze, walk, use the fields. After that they avoided the area," said a cousin of the second victim.<sup>341</sup> One month later, two people from the Mazlach refugee camp set off a bomblet while crossing the field. The 61-year-old father died and his 8-year-old son was injured.<sup>342</sup>

Taliban soldiers were present in Ishaq Suleiman during the strikes. The village is about a mile (1.6 kilometers) away from the Fourth Armored Brigade Headquarters, which had been heavily bombed with cluster munitions. The Taliban escaped from the base by hiding in the village, spending every night there. They parked ten to twelve vehicles on each street and tried to hide them under carpets.<sup>343</sup> The fifth strike fell near a low circular wall, the ruins of a shrine, where the Taliban had camped out many nights in a row.<sup>344</sup> A witness said he could not confirm if they were there the night of the attack, but said they usually brought their tanks and four-by-fours to the area.<sup>345</sup> The villagers did not flee, but they recognized the danger of their position. "Time and again we complained and asked them to leave the area. The Taliban said, 'You are cooperating with the United States. You are against us,' and would not leave," one witness said. "[We told them] 'the American people have no hostility with us, only with you,'" another man said. "But they did not leave our area."<sup>346</sup> After the first two strikes, the villagers organized a protest. About two hundred people, young and old, including about one hundred women, marched to force the Taliban to leave. The soldiers eventually fled, but not before three more cluster bombs had fallen on the village.<sup>347</sup>

While witness testimony and the regular pattern of the strikes suggested that the United States intentionally targeted the Taliban troops, U.S. military documents indicate that the strikes were in fact accidental. After returning from Afghanistan, Human Rights Watch reviewed Air Force mission reports and intelligence documents and plotted every cluster bomb drop reported by the Air Force. None appeared intended for Ishaq Suleiman.<sup>348</sup> The fact that the attacks occurred during the day and that the Taliban occupied the village at night supports the

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<sup>338</sup> Human Rights Watch interview with Khalil Ahmad, Ishaq Suleiman, Afghanistan, March 29, 2002; Human Rights Watch interview with Ghulam Rasoul, Ishaq Suleiman, Afghanistan, March 29, 2002. Ghulam Rasoul, 26, was the cousin of Bismullah.

<sup>339</sup> Human Rights Watch interview with Ghulam Nabi, Ishaq Suleiman, Afghanistan, March 29, 2002. The three victims were 50-year-old Ghulam's brother, relative, and neighbor, respectively.

<sup>340</sup> Ibid.

<sup>341</sup> Human Rights Watch interview with Abdul Basir and Shames-u-din. Abdul Bair, 37, was the brother-in-law of Abdul Raziq. Shames-u-din, 31, was the cousin of Ghouse-u-din.

<sup>342</sup> Ibid; OMAR Cluster Bomb Casualty List.

<sup>343</sup> Human Rights Watch interview with Ghulam Nabi.

<sup>344</sup> Human Rights Watch interview with Abdul Basir and Shames-u-din.

<sup>345</sup> Human Rights Watch interview with Shames-u-din.

<sup>346</sup> Human Rights Watch interview with Shames-u-din.

<sup>347</sup> Ibid. See also Human Rights Watch interview with Azima.

<sup>348</sup> Human Rights Watch interviews with U.S. Air Force officials, Washington, D.C., June 29-30, 2002.

conclusion that troops were not the target. If this was the case, the bombs were probably intended for the nearby Fourth Armored Brigade Headquarters. Air Force sources indicated that the choice to use less accurate CBU-87s (instead of CBU-103s with wind corrected munition dispensers (WCMD)) and to fly towards, rather than away, from Ishaq Suleiman caused them to fall on the inhabited village instead.<sup>349</sup>

#### **14. Jebrael**

Around October 28, a cluster bomb fell on a field next to a canal at the north edge of Jebrael, a village of about two thousand families west of Herat. The bomblets covered an area of two hundred by three hundred yards (180 meters by 290 meters). The Taliban had parked their vehicles both under trees at the edge of the field and on a nearby street. They had hid themselves in homes, leading villagers to protest. The Taliban eventually departed but without their vehicles, which they retrieved later. When asked if the soldiers were Taliban or al-Qaeda, one witness said, “We had a great fear of the Taliban and couldn’t get closer to them to know if they were foreign fighters.”<sup>350</sup>

Unexploded BLUs from the attack caused two civilian casualties. Around December 21 at 9:00 a.m., Arbabrahim, 52, was killed while plowing the field with his oxen. In late February or early March, nine-year-old Amin was killed while collecting firewood from the trees.<sup>351</sup>

#### **15. Mohaleh Babaghi**

A cluster bomb fell on this neighborhood of Jebrael in a separate attack. In March, an unexploded bomblet injured one person here. It was one of several casualties that occurred during the New Year holiday when people were out picnicking and celebrating.<sup>352</sup>

#### **16. Qala Shater**

On October 22, a cluster bomb fell on this neighborhood at the northeast edge of Herat. It was presumably intended for Firqa #17, a military base eight-tenths of a mile (1.3 kilometers) away. Between eleven and thirteen people died as a result of the attack. Fourteen others were injured.<sup>353</sup> The United Nations reported that twenty of Qala Shater’s forty-five homes were damaged.<sup>354</sup>

On the day of the bombing, the Taliban arrived in two vehicles to pray at a local mosque. Five soldiers entered to pray and one stayed with the vehicles. This mosque had its glass shattered by the attack; another one was completely destroyed. The majority of the inhabitants had left the village, but a couple members of each family were still in the area during the bombing. About eight hundred families, averaging six members each, lived in the town. One survivor said that if everyone had been there at the time, two or three thousand civilians would have been killed.<sup>355</sup>

After the strike, unexploded bomblets littered the area, putting its inhabitants, especially children, at risk. A witness described how children threw a bomblet at the feet of two other children passing by; fortunately no one was hurt.<sup>356</sup> To avoid future incidents, villagers cleared the area by dumping BLUs in the canal or burning them.

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<sup>349</sup> Ibid.

<sup>350</sup> Human Rights Watch interview with Ali, 38-year-old soldier, Jebrael, Afghanistan, March 29, 2002.

<sup>351</sup> Human Rights Watch interview with Abdul Khaliq, Jebrael, Afghanistan, March 29, 2002; Human Rights Watch interview with Abdul Naim, Jebrael, Afghanistan, March 29, 2002; Human Rights Watch interview with Ali, 12-year-old carpet weaver, Jebrael, Afghanistan, March 29, 2002. Abdul Naim, 25, was Arbabrahim’s son, and Abdul Khaliq, 30, was the victim’s nephew. Ali was a friend of Amin. These interviews corroborated the OMAR Cluster Bomb Casualty List.

<sup>352</sup> Human Rights Watch interview with Sher-Agha, Operations Officer, OMAR, Herat, Afghanistan, March 28, 2002.

<sup>353</sup> OMAR provided Human Rights Watch with a list of Qala Shater casualties that included eleven deaths and fourteen injuries. OMAR Sub Office Herat, “List of Died (sic) and Injured People in Qala Shater” [hereinafter OMAR Qala Shater Casualty List]. Villagers said thirteen people died. Human Rights Watch learned of at least one death that was not on OMAR’s list.

<sup>354</sup> Karl Malakunas, “U.S. Cluster Bomb Attack Kills Nine, Empties Village,” Agence France-Presse, October 25, 2001.

<sup>355</sup> Human Rights Watch interview with Mohammed Eisah, Qala Shater, Afghanistan, March 27, 2002.

<sup>356</sup> Ibid.

Professional deminers finished land clearance later, but as of March they had not had the opportunity to clear out the canal.<sup>357</sup> Human Rights Watch saw children swimming in the canal despite the danger.

### **17. Qol-e Urdu Military Headquarters**

The United States heavily cluster bombed this base just north of Herat, which was one of the Taliban's four regional headquarters around the country. In a list of strikes submitted to the United Nations, the United States estimated there would be 1,722 unexploded bomblets at the Qol-e Urdu;<sup>358</sup> demining consultant Sean Moorhouse said he believed there were many more.<sup>359</sup> According to OMAR, Mohammed Ali and Haleem Wahidi died at the Qol-e Urdu on January 30.<sup>360</sup> OMAR reported that duds injured four additional civilians who were collecting scrap metal and tending animals, but it did not have names of these victims.<sup>361</sup>

### **18. Shidai, near Olia village, Engeel district**

The United States dropped multiple cluster bombs in this isolated area of hills and valleys located nine miles (14.5 kilometers) east of Herat. At the end of March, OMAR had surface cleared fifteen percent of the 102,800 square meter site.<sup>362</sup> By the end of June, OMAR had cleared 189 BLUs and completed its task.<sup>363</sup> According to the OMAR team leader, the Taliban and al-Qaeda hid here, especially at night, around the time of the attack. Unexploded bomblets killed one shepherd and eight sheep.<sup>364</sup>

### **19. Takh-te-Sefar**

On March 24, an unexploded cluster bomblet seriously injured a group of boys on their way to a picnic in a park north of Herat. Fifteen-year-old Ramin died immediately. Four others suffered injuries. Soraj, 12, lost both legs; Ismaeel, 16, sustained a chest wound; Farhad, 18, injured his foot; and Waheed, 5, suffered a chest wound and minor head injuries. U.N. officials said U.S. Special Forces, based nearby, had surface cleared the field but failed to do subsurface clearance or leave warnings that the clearance was incomplete. Ghulam Syed Siddiqi, 28, a relative, said one of the boys had picked up a cluster bomblet.<sup>365</sup>

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<sup>357</sup> Human Rights Watch interview with Sean Moorhouse, Swiss Federation for Mine Action, Herat, Afghanistan, March 27, 2002.

<sup>358</sup> "Probable UXO [Unexploded Ordnance] Locations," November 23, 2001 [hereinafter U.S. Cluster Bomb List—November]. The United States provided this and later lists of cluster bomb strikes to the United Nations.

<sup>359</sup> Human Rights Watch interview with Sean Moorhouse.

<sup>360</sup> OMAR Qala Shater Casualty List.

<sup>361</sup> OMAR Cluster Bomb Casualty List.

<sup>362</sup> Briefing by OMAR team leader, Shidai, Afghanistan, March 28, 2002.

<sup>363</sup> OMAR, Adopt-a-Team Monthly Progress Reports, March, April, May, and June, 2002.

<sup>364</sup> Briefing by OMAR team leader, Shidai.

<sup>365</sup> Human Rights Watch interview with Ghulam Syed Siddiqi, Gazer Gah, Afghanistan, March 29, 2002. Ghulam was the cousin of Ramin, Ismaeel, and Waheed and the uncle of Soraj and Farhad.

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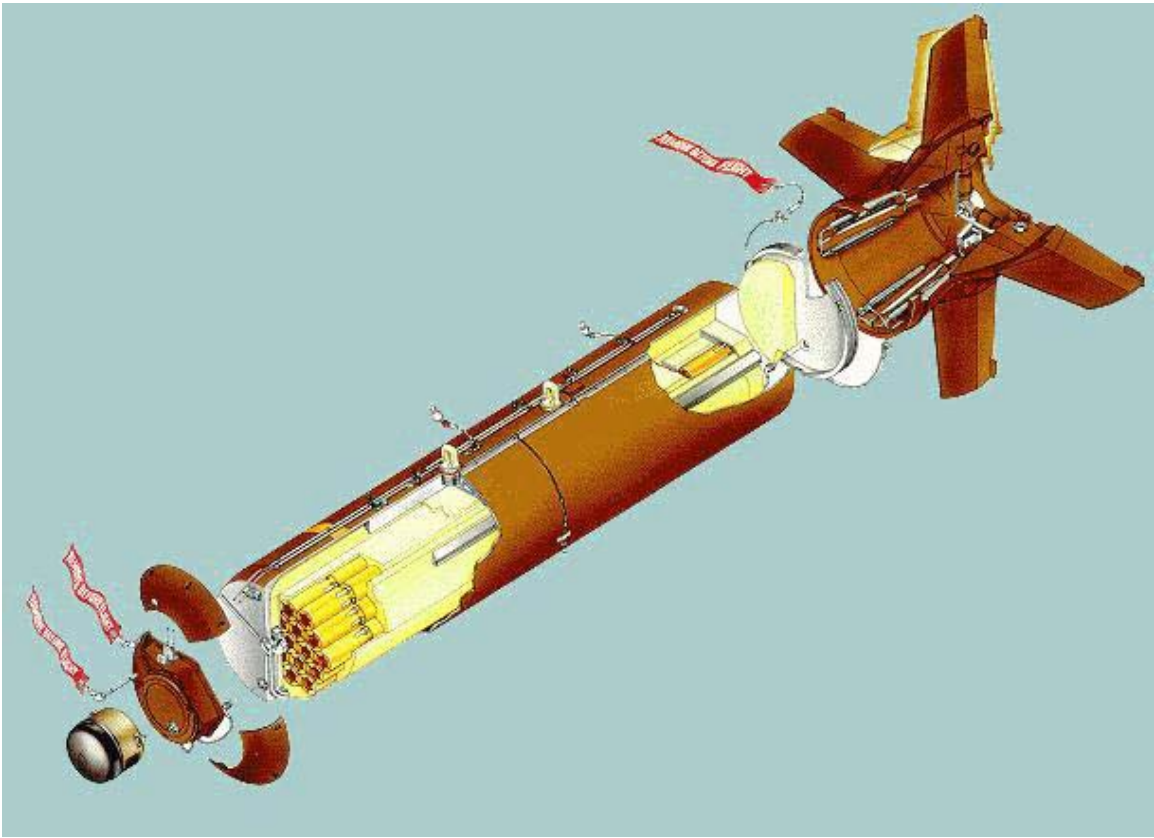


Diagram of a CBU-87 with cluster bomblets (BLU-97s) packed inside. Courtesy of Global Security.



(Left) A BLU-97 cluster bomblet as it appears when loaded into a cluster bomb. (Right) A BLU-97 as it appears after released from a cluster bomb; note that the spider cap is gone, the parachute has been inflated, and the plastic collar has been pushed up to arm the bomblet. Courtesy of Global Security.





An unexploded BLU-97 cluster bomblet lies in a field in Denar Khail, a village in the Shomali Plain. © Bonnie Docherty / Human Rights Watch, 2002.





Two BLUs lie in a field in Shidai near Herat. The left bomblet is unexploded. The shaped charge, an anti-armor concave cone, is visible at its right end, and the exterior canister has slipped to expose its antipersonnel fragmentary core. On the right is the flattened canister of a bomblet and the spring that pushes out the parachute and arms the bomblet. © Bonnie Docherty / Human Rights Watch, 2002.





Marhama, 25, who sits in front of her surviving children, suffered a serious leg injury during a cluster bomb attack in Ainger on November 17, 2001. Her leg brace is partially visible. Marhama's husband and 10-year-old son died in the attack. © Bonnie Docherty / Human Rights Watch, 2002.





Marhama was injured while cooking in this covered kitchen in Ainger. Note the pockmarks left in the walls of her home by an exploding cluster bomblet. © Bonnie Docherty / Human Rights Watch, 2002.





Exploding cluster bomblets left craters in a dried up canal next to Ainger. The road to Kunduz is visible in the background. © Bonnie Docherty / Human Rights Watch, 2002.





Cluster bomblets left pockmarks on this home in Ainger. Some pieces of shrapnel penetrated the house and made holes in a bedspread.  
© Reuben E. Brigety, II / Human Rights Watch, 2002.





A stray cluster bomb killed between eleven and thirteen civilians when it fell on Qala Shater, a neighborhood in Herat, on October 22, 2001. Residents dumped unexploded bomblets in this canal. © Bonnie Docherty / Human Rights Watch, 2002.





The United States used cluster bombs extensively on the Fourth Armored Brigade Headquarters near Herat (pictured above). Several bombs from this attack went astray and landed on the nearby village of Ishaq Suleiman. © Bonnie Docherty / Human Rights Watch, 2002.



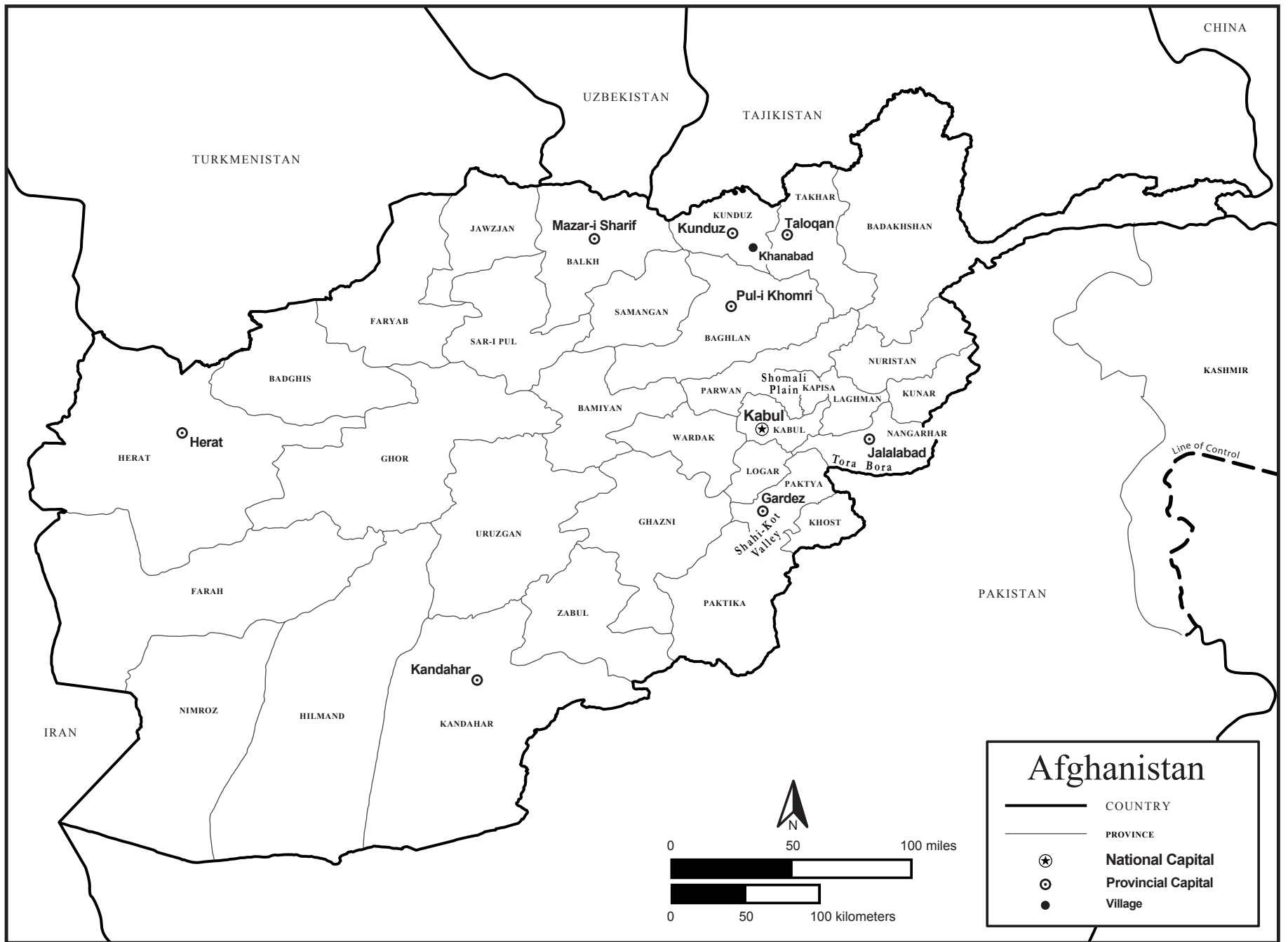


Deminers created these piles of debris as they cleared hundreds of cluster bomblets from the Fourth Armored Brigade Headquarters near Herat. The black objects are BLU caps, or "spiders." Also visible (clockwise from upper left) are: pieces of CBU casings, the yellow foam that surrounds the bomblets, empty BLU canisters, and parachutes. © Bonnie Docherty / Human Rights Watch, 2002.





Deminers from HALO Trust clear bomblets in Denar Khail, a village in the Shomali Plain, on March 14, 2002. © Bonnie Docherty / Human Rights Watch, 2002.



TURKMENISTAN

UZBEKISTAN

TAJIKISTAN

CHINA

JAWZJAN

Mazar-i Sharif

Kunduz

TAKHAR

Taloqan

BADAKHSHAN

BALKH

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Pul-i Khomri

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SAMANGAN

BAGHLAN

NURISTAN

BADGHIS

SAR-I PUL

PARWAN

Shomali Plain

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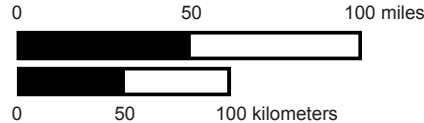
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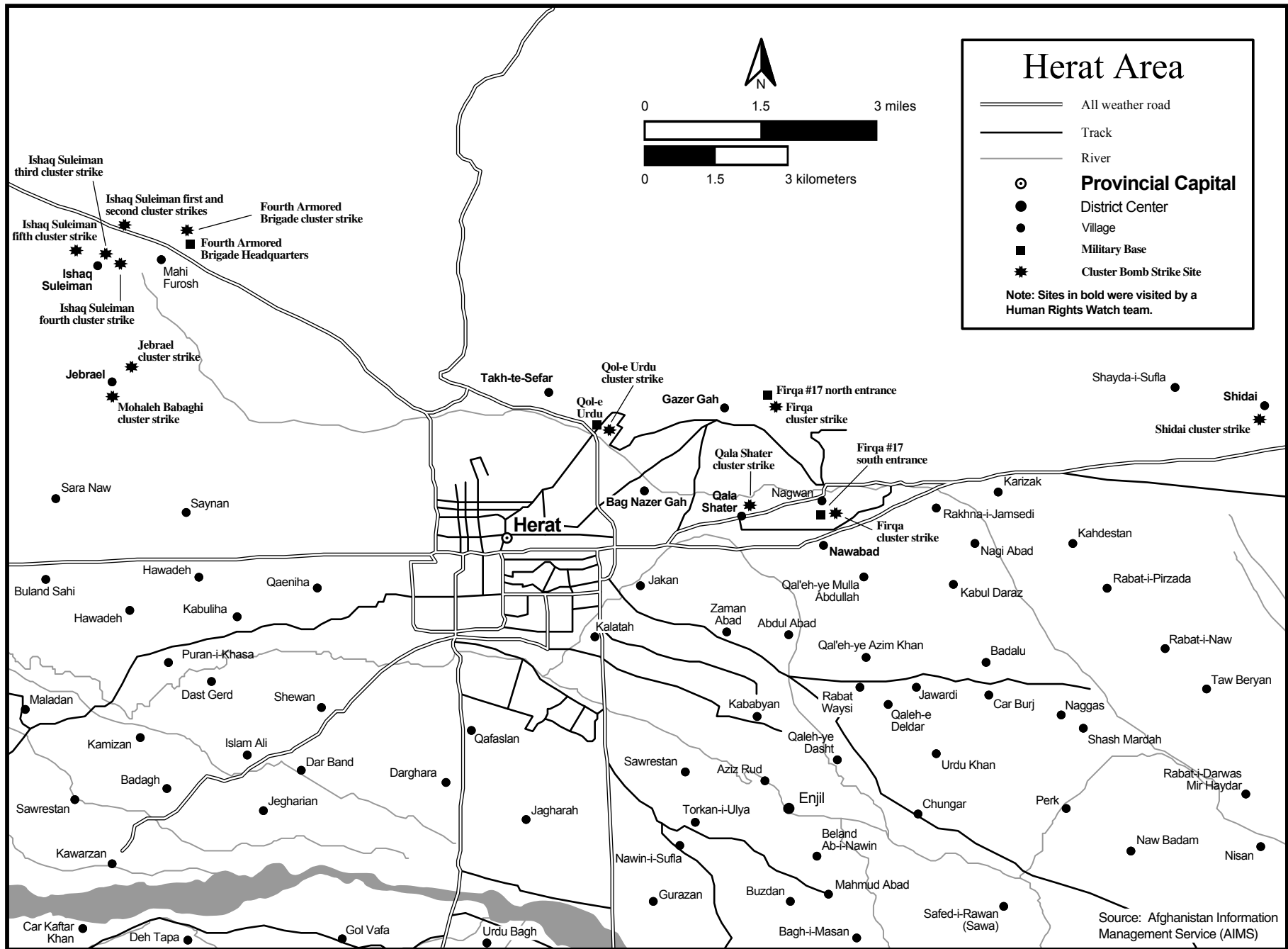
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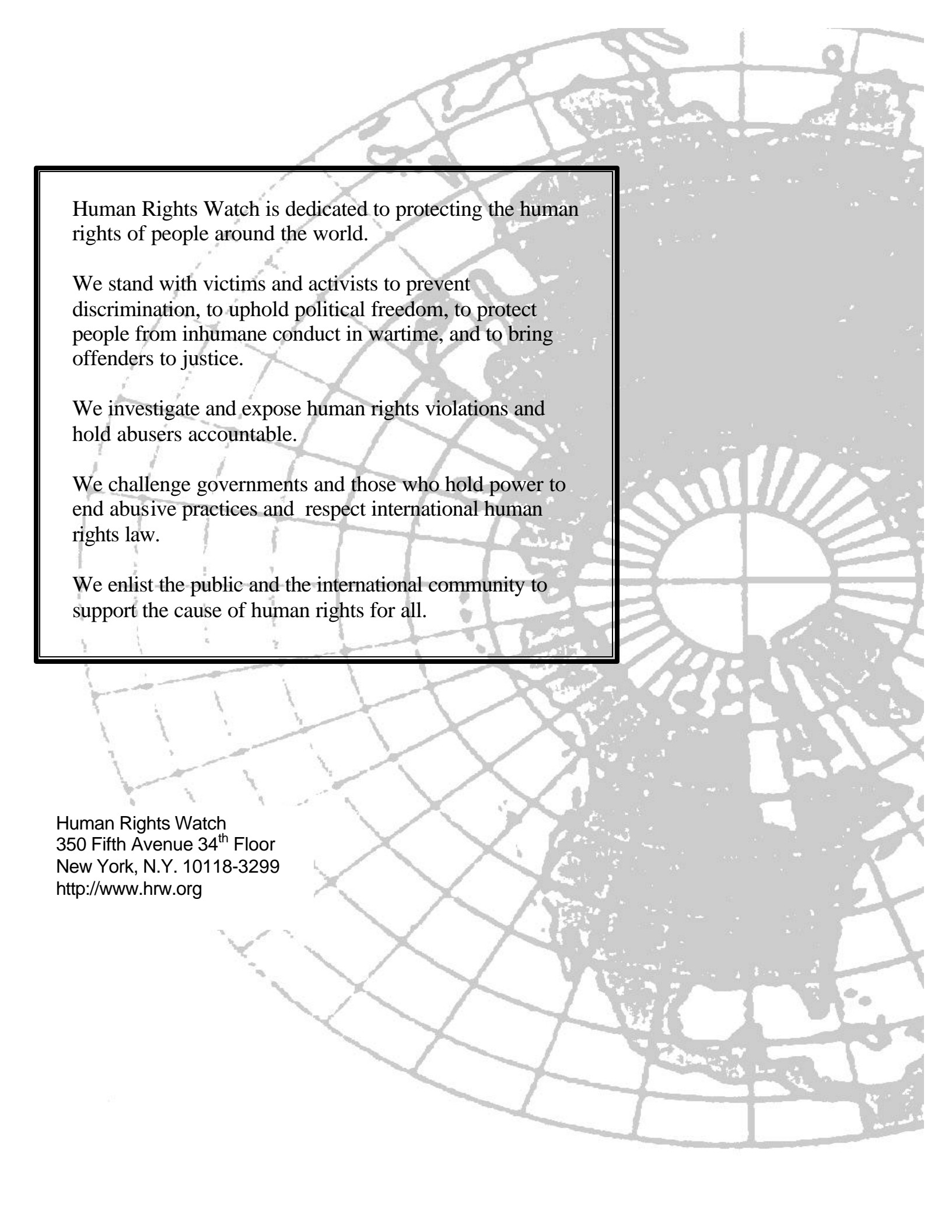
# Afghanistan

-  COUNTRY
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-  Village









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