



GEORGIA

A Dying Practice

Use of Cluster Munitions by Russia and Georgia in August 2008

HUMAN
RIGHTS
WATCH



A Dying Practice

**Use of Cluster Munitions by Russia and Georgia in
August 2008**

Copyright © 2009 Human Rights Watch
All rights reserved.
Printed in the United States of America
ISBN: 1-56432-469-9
Cover design by Rafael Jimenez

Human Rights Watch
350 Fifth Avenue, 34th floor
New York, NY 10118-3299 USA
Tel: +1 212 290 4700, Fax: +1 212 736 1300
hrwnyc@hrw.org

Poststraße 4-5
10178 Berlin, Germany
Tel: +49 30 2593 06-10, Fax: +49 30 2593 0629
berlin@hrw.org

Avenue des Gaulois, 7
1040 Brussels, Belgium
Tel: + 32 (2) 732 2009, Fax: + 32 (2) 732 0471
hrwbe@hrw.org

64-66 Rue de Lausanne
1202 Geneva, Switzerland
Tel: +41 22 738 0481, Fax: +41 22 738 1791
hrwgva@hrw.org

2-12 Pentonville Road, 2nd Floor
London N1 9HF, UK
Tel: +44 20 7713 1995, Fax: +44 20 7713 1800
hrwuk@hrw.org

27 Rue de Lisbonne
75008 Paris, France
Tel: +33 (1)43 59 55 35, Fax: +33 (1) 43 59 55 22
paris@hrw.org

1630 Connecticut Avenue, N.W., Suite 500
Washington, DC 20009 USA
Tel: +1 202 612 4321, Fax: +1 202 612 4333
hrwdc@hrw.org

Web Site Address: <http://www.hrw.org>



A Dying Practice

Use of Cluster Munitions by Russia and Georgia in August 2008

Acronyms	i
Summary	1
Methodology	6
Recommendations.....	8
To the Government of Russia	8
To the Government of Georgia	9
To All Governments	10
Technical and Legal Background on Cluster Munitions	11
Cluster Munitions and their Humanitarian Effects.....	12
Existing International Humanitarian Law	13
The Principle of Distinction.....	13
Feasible Precautions	14
International Humanitarian Law Applied to Cluster Munitions	14
Indiscriminate Use of Cluster Munitions	14
Disproportionate Use of Cluster Munitions	15
The Requirement to Take Precautions	16
Protocol V on Explosive Remnants of War.....	16
The Convention on Cluster Munitions	17
Key Provisions of the Convention on Cluster Munitions	17
The Importance of Joining the Convention on Cluster Munitions	18
The Belligerents and the Cluster Munitions Used	20
Use, Production, Transfer, and Stockpiling	20
Russia.....	21
Georgia	23
Cluster Munitions Used in Georgia and their Submunitions	24
AO-2.5 RTM Submunition	24
9N210 Submunition	25
Iskander Missile.....	25
M85 Submunition	25

Use of Cluster Munitions by Russia	40
Civilian Casualties at the Time of Attack.....	41
Gori City.....	41
Ruisi.....	43
Variani.....	47
Other Strikes.....	50
Socioeconomic Harm.....	52
Russian Statements about Cluster Munitions.....	52
Legal Analysis.....	54
Use of Cluster Munitions by Georgia	56
Civilian Casualties at the Time of Attack.....	57
Shindisi.....	58
Tirdznisi.....	58
Civilian Casualties from Submunition Duds.....	59
Brotsleti.....	59
Pkhvenisi.....	61
Shindisi.....	61
Ditsi.....	62
Socioeconomic Harm.....	62
Georgian Statements about Cluster Munitions.....	63
Initial Condemnation.....	64
Acknowledgment of Use.....	64
Confusion and Investigation.....	65
Legal Analysis.....	67
Clearance and Risk Education	69
Russian Military.....	69
Georgian Military.....	70
NGO Clearance.....	72
Community Clearance.....	74
Challenges.....	75
Coordination.....	75
Resource Shortages.....	76
Environmental Factors.....	76
Complications from Civilians.....	77
Risk Education.....	77
Victim Assistance.....	78
Conclusion	79
Acknowledgments	80

Acronyms

CCW	Convention on Conventional Weapons
DPICM	Dual-Purpose Improved Conventional Munition
ERW	Explosive remnants of war
GPS	Global positioning system
iMMAP	Information Management & Mine Action Programs
IDP	Internally displaced persons
NGO	Nongovernmental organization
NPA	Norwegian People's Aid
UN	United Nations

Summary

During their August 2008 conflict over the breakaway region of South Ossetia, both Russia and Georgia used cluster munitions, a weapon that the international community was in the process of banning. Together, their cluster munitions killed at least 16 civilians and injured at least 54 more in Georgia south of the South Ossetian administrative border, at the time they were fired or afterwards. Civilians remain at risk as deminers expect to be clearing submunitions from 15 million square meters of contaminated land until at least August 2009. The use of cluster munitions in Georgia was a vivid reminder of why this notorious weapon should be categorically prohibited, not merely regulated.

While the quantity of cluster munitions fired and the numbers of casualties they caused may not rise to the levels of some recent conflicts, notably Lebanon (2006) and Iraq (2003), their use again exemplified the dangers inherent to the weapon. As is generally the case, the cluster munitions were used in many populated areas. They caused significant civilian casualties during and after the war. They also left large numbers of unexploded submunitions that threaten lives and livelihoods for months to come. Their use by both sides of the conflict and the relatively small size of the battle area amplified the impact of the attacks.

These events came less than three months after 107 states from around the world adopted the Convention on Cluster Munitions, which comprehensively bans the weapon. Neither Russia nor Georgia took part in that process, and their use of cluster munitions was in defiance of an emerging consensus on a basic prohibition on the weapon.

During research missions at the time of the conflict in August and also in the Gori and Kareli districts of Georgia in September and October, Human Rights Watch documented Russian use of cluster munitions in or near seven towns and villages and Georgian cluster munitions in or near nine. In March 2009 Norwegian People's Aid (NPA) reported evidence of Russian cluster munitions from the August 2008 conflict in two additional villages. Human Rights Watch researchers took extensive testimony from about 100 witnesses, deminers, and military and government officials and examined physical evidence. They concluded that Russian weapons caused most of the civilian casualties at the time of the strikes and Georgian cluster munitions killed and injured civilians after, as well as during, attacks.

Cluster munitions are large, ground-launched or air-dropped weapons that, depending on their type, contain dozens or hundreds of submunitions. During strikes they endanger

civilians because they blanket a broad area, and when they are used in or near populated areas, civilian casualties are virtually guaranteed. They also threaten civilians after conflict because they leave high numbers of hazardous “duds,” that is submunitions that have failed to explode on impact as designed, which unwitting civilians can easily set off.

Russia used two types of Russian-produced submunitions: the air-dropped AO-2.5 RTM and the ground-launched 9N210. According to an investigation by the Ministry of Foreign Affairs of the Netherlands into the death of a Dutch cameraman in Gori, the Russians also used the surface-to-surface Iskander (or SS-26) missile that carries an unknown model of submunition. Georgia used M85 submunitions delivered by Mk.-4 160mm rockets, which it bought from Israel.

Human Rights Watch found that Russian forces fired many of their cluster munitions into populated areas of Georgia. On August 8 and 12, 2008, Russian submunitions landed in neighborhoods in the town of Variani, killing three civilians and wounding sixteen, ranging in age from eight years to seventy. Among them was 13-year-old boy, Beka Giorgishvili, who went to a friend's house to say goodbye before his family fled town. An explosion went off as he was helping pump up his friend's new bike tire. Beka lost part of his skull and suffered brain damage; shrapnel remains lodged in his head.

Russian cluster munitions killed an additional nine civilians and injured thirty in strikes on Gori city and Ruisi on August 12. The Gori attack hit the main square of the city as a crowd of locals and journalists was gathering. The Ruisi attack hit two ends of the town, not only causing civilian casualties but also leaving duds with a 35 percent failure rate in at least one area being cleared.

Despite the evidence from Human Rights Watch, the Dutch government investigation, and clearance organizations, Russia has repeatedly denied using cluster munitions “in the area of the Georgian-Ossetian conflict.”

While initially only condemning Russia's use, in response to Human Rights Watch inquiries, Georgia publicly acknowledged on September 1 deploying ground-launched Mk.-4 160mm rockets carrying M85 submunitions. According to the then first deputy minister of defense, Batu Kutelia, Georgia fired these rockets only at Russian forces between Tskhinvali, the capital of South Ossetia, and the Roki Tunnel on the border with Russia. Human Rights Watch has not independently verified this claim.

Human Rights Watch, as well as Georgian military deminers and international demining organizations, however, found M85 submunitions farther south. Human Rights Watch gathered extensive evidence of Georgian M85 submunitions and Mk.-4 160mm carrier rockets in populated areas along the Gori-Tskhinvali corridor south of the South Ossetian administrative border. These weapons killed at least one civilian and wounded at least two when they landed on the villages of Tirdznisi and Shindisi. Since the attacks, submunition duds, which in March 2009 still littered the area, have killed at least three civilians and wounded at least six in three towns. In Brotsleti in August 2008, for example, a farmer on his way to his field met a friend holding two M85s. The submunitions exploded, killing his friend instantly. The farmer himself suffered serious injuries, but moving a few steps away to answer his cell phone saved his life.

In October 2008 then-First Deputy Minister of Defense Kutelia could not explain the presence of Georgian cluster munitions in the area south of the South Ossetian administrative border. He said that Georgia was conducting an investigation and indicated the government would ask the Israeli company from which they bought the weapons to assist. In February 2009 the Georgian Ministry of Defense confirmed Kutelia's information and wrote to Human Rights Watch that its investigation was ongoing. The results of this study should be made public.

The evidence of Georgian forces' cluster munition use found by Human Rights Watch was not consistent with typical cluster munition use. The rockets landed short of their minimum range, there were more M85 duds than M85s that exploded on impact, many of these duds were in an unarmed state, and witnesses did not report Russian troops in the area of the Georgian strikes. Widespread failure of the munitions, due to technical or human error, is one possible explanation of these factors. The Georgian Ministry of Defense said in February 2009 that it is investigating the possibility of "failure of the weapons system."

In addition to documenting civilian casualties, Human Rights Watch researchers investigated the socioeconomic effects of cluster munition use. During their field missions, they found many submunitions launched by both sides that had failed to explode. Such duds remained hidden in fields of cabbages, tomatoes, and other crops, and farmers said they feared going into their fields. Deminers estimated in February 2009 that it would take at least until August 2009 to clear the area of duds. The threat of duds has caused civilians to lose harvests and, therefore in some cases, their ability to feed their families. Submunitions have cost livelihoods as well as lives.

Because of the ongoing danger of duds, efficient and effective clearance is imperative. Russian troops did extensive clearance in the Gori District before they withdrew to the South

Ossetian administrative border on October 10. Russia should now provide assistance in other ways. The Georgian military contributed to initial clearance after the Russian withdrawal. International deminers are now conducting clearance, but they have faced several obstacles, such as winter weather, unskilled clearance by community members, and a shortage of reliable data.

International humanitarian law, also known as the laws of war, governs conduct during armed conflict. It requires belligerents to distinguish between combatants and non-combatants and prohibits as “indiscriminate” any attacks that fail to do so. Cluster munition attacks in or near populated areas should be presumed indiscriminate. These inaccurate and unreliable weapons, which have a large area effect, cause foreseeable civilian casualties during strikes and afterwards. Human Rights Watch believes there should similarly be a rebuttable presumption that cluster munition strikes in or near populated areas are unlawfully “disproportionate,” that is their expected civilian harm outweighs anticipated military advantage.

Russia, which deployed the weapons in circumstances in which they were incapable of distinguishing between civilian and military objects, violated international humanitarian law with its use of cluster munitions. Its attacks in or near villages, towns, and one city were inherently indiscriminate and thus unlawful. They were also likely disproportionate. The lack of evidence of Georgian troops in the vicinity of Russian strikes at the time they occurred combined with the foreseeable civilian harm supports such a presumption in this case.

Because Human Rights Watch did not conduct, for reasons explained in the methodology section, an in-depth investigation of the area that Georgian officials acknowledged targeting with cluster munitions, it is unable to assess whether use of the weapon in this area was in violation of international humanitarian law. If the Georgian military intentionally launched its submunitions on the towns and villages in Georgia where Human Rights Watch found them, those strikes would have violated international humanitarian law. Even if their presence in populated areas is attributable to failure, however, it underscores the unacceptable danger of these weapons. In particular, the weapons’ large number of submunitions exacerbates the harm caused when cluster munitions fail.

Russia and Georgia must also consider their legal obligations under Protocol V to the Convention on Conventional Weapons (CCW), which establishes standards for dealing with explosive remnants of war (ERW), such as cluster munition duds. Russia formally submitted its consent to be bound by the protocol on July 21, 2008, and the instrument took effect for it six months later. Georgia gave its consent to be bound on December 22, 2008. Although it

will not enter into force for Georgia until June 2009, in the meantime, Georgia must not “defeat the object and purpose” of the protocol.

Under this instrument, the duties of user states include “provid[ing] where feasible” assistance for clearance of ERW, including submunitions. This assistance should include sharing information about the types, numbers, and locations of cluster munitions used to facilitate clearance. Affected states parties must also take “all feasible precautions” to protect civilians, including through risk education, and all states parties “in a position to do so” must provide assistance for clearance and risk education.

In addition to raising concerns under existing law, Russian and Georgian use of cluster munitions ran afoul of the standards enshrined in the new Convention on Cluster Munitions. In May 2008, before the conflict in Georgia, 107 nations, including large numbers of users, producers, and stockpilers of cluster munitions, negotiated and formally adopted this convention. It comprehensively prohibits the use, production, trade, and stockpiling of cluster munitions. It also establishes remedial measures, such as those for clearance, risk education, and victim assistance, in order to minimize the aftereffects of past use. The treaty, which opened for signature in Oslo on December 3, 2008, has been signed by 96 countries and ratified by six as of March 2009.

Neither Russia nor Georgia participated in the negotiation process, and the treaty has not yet entered into force, but its signing by 96 states demonstrates widespread support among many nations for its principles. The Convention on Cluster Munitions is the best tool for preventing future use of these weapons and thereby mitigating and ultimately eliminating their effects on civilian populations. The humanitarian harm caused by cluster munitions in Georgia should serve as an impetus for states to sign and ratify it.

Russia and Georgia should sign and ratify the Convention on Cluster Munitions as soon as possible. Doing so has the added benefit of making parties affected by this conflict eligible for international assistance for remedial measures, including clearance and risk education. If they cannot commit at this point, Russia and Georgia should take immediate interim measures to minimize the humanitarian harm of cluster munitions. In compliance with the rules on targeting under the laws of war, they should make no future use of cluster munitions in populated areas, and they should prohibit future production and transfer, begin destruction of stockpiles, and adopt remedial measures to ensure civilians do not die from the duds they left behind. Most urgently, they should provide assistance for clearance in Georgia, including if necessary in South Ossetia. This assistance should include providing

exact information on the location, types, and numbers of cluster strikes for international deminers.

Russia and Georgia should also conduct independent, impartial, and rigorous investigations into their use of cluster munitions and make public the findings. They should address the effects and legal implications of their cluster munition use. Russia should acknowledge its military's use of cluster munitions in Georgia and accept responsibility for its actions. A Russian investigation should include a thorough examination of whether individual commanders bear responsibility for the international humanitarian law violations that resulted from indiscriminate and disproportionate cluster munition attacks. For Georgia, an investigation should not only examine possible violations of international humanitarian law but also consider the possibility of a massive failure of cluster munitions and what caused it. Moscow should provide information about Georgian cluster munitions that landed in territory under Russia's effective control, such as the types, numbers, and locations of submunitions found, and Tbilisi should do the same with regard to Russian cluster munitions. As mentioned above, Russia and Georgia should also provide strike data on their own cluster munitions. Both countries should ensure their investigations are transparent and open to public scrutiny.

Other states committed to ending the humanitarian harm of cluster munitions, like that which occurred in Georgia, should join the Convention on Cluster Munitions as soon as possible. The treaty will establish binding provisions as soon as it enters into force, six months after its thirtieth ratification. Supporters of the ban should also join the convention in order to increase its influence on non-states parties and to stigmatize the weapon. Stigmatization based on ban treaties has reduced use of other weapons, including antipersonnel landmines, and has the potential to do the same with cluster munitions. By signing and ratifying the treaty, states can signal to peers, including Russia and Georgia, that use of these weapons is considered internationally unacceptable and unlawful.

Methodology

Human Rights Watch carried out extensive on-the-ground research in Georgia for this report. It also drew on more than a decade of field and documentary research on cluster munitions.

Human Rights Watch researchers were in Georgia during the conflict and were the first to confirm Russia's use of cluster munitions when they documented the attacks in Gori and Ruisi. They did further research after the August 12, 2008 ceasefire, traveling to locations along the Gori-Tskhinvali corridor south of the South Ossetian administrative border. In

October they conducted an intensive 10-day mission to survey the extent of the humanitarian harm from cluster munitions. Researchers investigated both casualties at the time of the attack and the ongoing aftereffects of the submunitions, including loss of lives and interference with farming.

Human Rights Watch conducted several fact-finding missions to South Ossetia to document international humanitarian law violations by Georgian, Russian, and South Ossetian forces for a report released on January 23, 2009; it did not conduct a separate fact-finding mission to South Ossetia specifically to investigate Georgia's use of cluster munitions in that region. Human Rights Watch had already gathered extensive information on damage caused by Georgian cluster munitions south of the South Ossetian administrative border. There were no reports from South Ossetia, including from the press or government authorities, that cluster munitions were causing humanitarian harm there. Human Rights Watch researchers investigating international humanitarian law violations in South Ossetia encountered only one report of cluster munitions use, which is included in this report, and no reports of civilian casualties caused by them. In an October 13, 2008 letter to the Russian minister of defense about several issues regarding the conflict, Human Rights Watch directly asked for information about Georgian use of cluster munitions in South Ossetia, territory under effective Russian control. The ministry's response on January 30, 2009, did not address the question. A February 27, 2009 letter from the Russian Prosecutor General's Office mentioned Georgian use of cluster munitions in civilian areas but provided no information on civilian casualties or humanitarian impact. These factors, combined with logistical and other difficulties, suggested to Human Rights Watch that a separate mission to South Ossetia was not warranted.

In October 2008 Human Rights Watch researchers visited 19 of the 20 Georgian towns and villages, all south of the South Ossetian administrative border, that HALO Trust listed as facing an "immediate explosive hazard," like that caused by clusters munitions. They documented cluster munition use in 15 of those towns. Researchers analyzed physical evidence of the strikes, including unexploded submunitions, debris from exploded submunitions, pieces of carrier munitions, and damage to nearby structures. They took photographs and global positioning system (GPS) coordinates at every location. They interviewed dozens of civilians who had been directly affected by the cluster munition attacks, including numerous men, women, and children who had been injured by submunitions or submunition duds. Researchers also met with demining experts who are clearing duds and coordinating clearance efforts.

Finally, Human Rights Watch researchers conducted interviews with Georgian government and military authorities, including then-First Deputy Minister of Defense Kutelia, and exchanged formal letters with the government. They also met with the new minister of defense of Georgia in January 2009.

Human Rights Watch has contacted Russian authorities by letter and informally in person at CCW meetings. The Russian Foreign Ministry responded in a letter dated January 30, 2009, again denying use of cluster munitions.

Recommendations

Human Rights Watch makes the following recommendations to mitigate the humanitarian harm caused by cluster munitions in this conflict and to help ensure that such harm never happens again.

To the Government of Russia

- Sign the Convention on Cluster Munitions, which opened for signature on December 3, 2008, and ratify it as soon as possible thereafter.
- Initiate interim national measures to address the harm of cluster munitions. These measures should include: banning use in populated areas; prohibiting future production and transfer; and starting destruction of Russia's stockpiles.
- Acknowledge that Russian forces used cluster munitions in Georgia.
- Provide assistance with remedial measures, such as clearance, to ensure civilians are not killed or injured by the duds left behind in Georgia. Such assistance should ideally meet the standards of the Convention on Cluster Munitions, but should at least follow the provisions laid out in CCW Protocol V, which entered into force for Russia in January 2009. According to both instruments, Russia should provide technical, financial, material, or human assistance for clearance.
- Immediately provide to the demining organizations on the ground in Georgia the specific locations of cluster munition attacks and the specific types and quantities of weapons used, in order to facilitate clearance and risk education activities.
- Investigate impartially and independently Russian forces' use of cluster munitions in Georgia. Such an investigation should assess carefully whether the munitions were used in a manner consistent with international humanitarian law. It should address questions about deliberate use in populated areas; the types, quantity, and reliability of cluster munitions used; the specific military objectives for each attack (or lack thereof); whether separate and distinct military objectives were treated as a single one for the purpose of bombardment; and whether there was knowing or

reckless disregard for the foreseeable effects on civilians and other protected objects. The results of the investigation should be made public.

- Follow through on the pledge to investigate the attack on Gori and make the results of that investigation public.
- Hold accountable, including through disciplinary action or prosecution if the facts warrant, those responsible for using cluster munitions in violation of international humanitarian law.

To the Government of Georgia

- Sign the Convention on Cluster Munitions, which opened for signature on December 3, 2008, and ratify it as soon as possible thereafter.
- Initiate interim national measures to address the harm of cluster munitions. These measures should include: banning use in populated areas; prohibiting future production, import, and export; starting destruction of Georgia's stockpiles; and adopting remedial measures to ensure civilians are not killed or injured by the duds it left on its own soil.
- Coordinate with international demining organizations, including by providing details on the clearance done by the Georgian military and providing information on the specific locations of cluster munitions attacks and the specific types and quantities of weapons used, in order to facilitate clearance and risk education activities. Its performance of remedial measures should ideally meet the standards of the Convention on Cluster Munitions, but should at least follow the provisions laid out in CCW Protocol V, which will enter into force for Georgia in June 2009.
- Provide assistance with any remedial measures necessary in South Ossetia, including by providing strike data to those in charge of clearance. Such assistance should ideally meet the standards of the Convention on Cluster Munitions, but should at least follow the provisions laid out in CCW Protocol V.
- Investigate impartially and independently Georgian use of cluster munitions. Such an investigation should assess carefully whether the munitions were used in a manner consistent with international humanitarian law. It should address questions about deliberate use in populated areas; the types, quantity, and reliability of cluster munitions used; the specific military objectives for each attack (or lack thereof); whether separate and distinct military objectives were treated as a single one for the purpose of bombardment; and whether there was knowing or reckless disregard for the foreseeable effects on civilians and other protected objects. It should include the findings of the ongoing investigation into how Georgian cluster munitions landed in populated areas of Gori District, which should consider why the rockets landed

where they did, why the submunitions had such high failure rates, and why the submunitions did not have self-destruct devices. The government should ensure that the investigation is independent and open to public scrutiny.

- If violations of international humanitarian law are found, hold accountable, including through disciplinary action or prosecution if the facts warrant, those responsible for using cluster munitions in violation of international humanitarian law.

To All Governments

- Sign, ratify, and implement the Convention on Cluster Munitions as soon as possible.

Technical and Legal Background on Cluster Munitions

Cluster munitions are large weapons containing dozens or hundreds of smaller submunitions. After being dropped from the air or fired from the ground, parent cluster munitions open in the air, releasing and dispersing their submunitions over a wide area. The submunitions from air-dropped cluster munitions (delivered by a variety of aircraft) are called bomblets, and those from ground-launched cluster munitions (delivered by artillery, mortar, rocket, and missile systems) are sometimes called grenades. Generally, both cluster munitions and their submunitions are unguided weapons.

Cluster munitions are notorious for the humanitarian harm they cause. They kill and injure civilians during attacks because of their broad area effect. They cause additional casualties after the fact because they leave large numbers of explosive duds. Human Rights Watch field researchers have documented civilian casualties from the weapon in Kosovo, Afghanistan, Iraq, Lebanon, and Israel.¹ In the August 2008 conflict in Georgia, both sides—Russia and Georgia—used cluster munitions. Again cluster munitions killed and injured civilians.

The use of cluster munitions often violates existing international humanitarian law. The laws of war prohibit means and methods of warfare that fail to distinguish between combatants and non-combatants, including using certain weapons in an inherently indiscriminate way. While not addressing use of cluster munitions, a CCW protocol lays out obligations designed to reduce the post-conflict danger of weapons. Strengthening and clarifying the law, the new Convention on Cluster Munitions goes further. It comprehensively bans cluster munitions and establishes remedial measures to alleviate the harm they cause to civilians. Although it has not yet entered into force, the treaty creates norms agreed to by 107 states at its adoption in May 2008. It was opened for signature on December 3, 2008, in Oslo and, as of March 2009, had been signed by 96 countries.

¹ Human Rights Watch, *Civilian Deaths in the NATO Air Campaign*, vol. 12, no. 1(D), February 2000, <http://www.hrw.org/en/node/78680/>; *Fatally Flawed: Cluster Bombs and Their Use by the United States in Afghanistan*, vol. 14, no. 7(G), December 2002, <http://www.hrw.org/en/reports/2002/12/18/fatally-flawed-o/>; *Off Target: The Conduct of the War and Civilian Casualties in Iraq* (New York: Human Rights Watch, 2003), <http://www.hrw.org/en/reports/2003/12/11/target-o/>; *Civilians under Assault: Hezbollah's Rocket Attacks on Israel in the 2006 War*, vol. 19, no. 3(E), August 2007, <http://www.hrw.org/en/reports/2007/08/28/civilians-under-assault/>, pp. 44-48; *Flooding South Lebanon: Israel's Use of Cluster Munitions in Lebanon in July and August 2006*, vol. 20, no. 2(E), February 2008, <http://www.hrw.org/en/reports/2008/02/16/flooding-south-lebanon-o/>.

Cluster Munitions and their Humanitarian Effects

Cluster munitions are designed to blanket a wide area with explosive submunitions. The military values cluster munitions precisely because of this area effect. The weapons can destroy broad targets, including airfields and surface-to-air missile sites. They are also used against moving targets or those with imprecise locations, such as tanks and troops. Another benefit for the military is that many submunitions have multiple purposes; they are often both antipersonnel and anti-armor weapons. The military advantages of cluster munitions, however, must be weighed against harm to civilians and civilian property both during and after strikes.

The humanitarian effects of a cluster munition attack are often more serious than those of attacks using other types of weapons because of the wide dispersal of submunitions. Even if a cluster munition hits its target, which is not guaranteed because it is usually unguided, the submunitions may kill or injure civilians within the intended footprint. The inherent risks to civilian life and property increase when a military uses cluster munitions in or near populated areas, a common occurrence. If cluster munitions are used in an area where combatants and civilians commingle, civilian casualties are almost assured.

Cluster munitions also have problematic aftereffects because many submunitions do not explode upon impact as intended. All weapons have some rate of failure, but cluster munitions present greater danger due to the large number of submunitions released. In addition, certain design characteristics, based on cost and size considerations, increase the likelihood of submunition failure. Manufacturers and militaries have typically indicated that failure rates for submunitions under test conditions range between 5 and 20 percent; however, under real combat conditions, actual failure rates tend to be even higher. As a result every cluster munition strike leaves unexploded submunitions. The initial failure, or dud rate (that is the percentage of submunitions that do not explode), not only reduces the immediate military effectiveness of cluster munitions but also puts civilians at great risk. Given the highly unstable nature of unexploded submunitions, they may explode at the slightest touch or movement. Often hidden by foliage, mud, or other features of the environment, these submunitions become de facto landmines, killing or injuring civilians returning to the battle area after an attack. Duds cause socioeconomic harm as well as casualties because they prevent civilians from safely using their land and harvesting their crops.

Existing International Humanitarian Law

During the armed conflict between Russia and Georgia in August 2008, the military forces of both parties were bound under international humanitarian law to respect and protect civilians and other persons not or no longer directly taking part in hostilities. The law also restricted the means and methods of warfare to which they could resort. With regard to the protection of civilians in times of armed conflict, the most relevant international humanitarian law provisions are in the four Geneva Conventions of 1949 and their First Additional Protocol of 1977; Russia and Georgia are both party to these instruments.²

The Principle of Distinction

The principle of distinction is one of the keystones of the law regulating protection of civilians during hostilities. It requires parties to a conflict to distinguish at all times between combatants and civilians.³ Parties may not attack civilians or civilian objects and may only direct attacks against military objectives.⁴ Military objectives are members of the armed forces, other persons taking a direct part in hostilities, and “those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.”⁵ The laws of war prohibit attacks “of a nature to strike military objectives and civilians or civilian objects without distinction.”⁶

Attacks that violate the principle of distinction are considered indiscriminate and unlawful. Indiscriminate attacks include those that “are not directed at a specific military objective,” those that “cannot be directed at a specific military objective,” and those that “employ a method or means of combat the effects of which cannot be limited.”⁷ Bombardments that

² Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (First Geneva Convention), adopted August 12, 1949, 75 U.N.T.S. 31, entered into force October 21, 1950; Geneva Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea (Second Geneva Convention), adopted August 12, 1949, 75 U.N.T.S. 85, entered into force October 21, 1950; Geneva Convention Relative to the Treatment of Prisoners of War (Third Geneva Convention), adopted August 12, 1949, 75 U.N.T.S. 135, entered into force October 21, 1950; Geneva Convention Relative to the Protection of Civilian Persons in Time of War (Fourth Geneva Convention), adopted August 12, 1949, 75 U.N.T.S. 287, entered into force October 21, 1950; Protocol Additional to the Geneva Conventions of 12 August 1949 relating to the Protection of Victims of International Armed Conflicts (Protocol I), adopted June 8, 1977, 1125 U.N.T.S. 3, entered into force December 7, 1978 (“Protocol I”).

³ See *Legality of the Threat of Use of Nuclear Weapons, Advisory Opinion*, International Court of Justice, July 8, 1996, para. 78. “States must never make civilians the object of attack and must consequently never use weapons that are incapable of distinguishing between civilian and military targets.” The International Court of Justice interpreted the principle of distinction as falling within the remits of customary international law, and Judge Bedjaoui even considered it to be *jus cogens* while Judge Guillaume stated that it was absolute. See Declaration of Judge Bedjaoui, para. 21, and Separate Opinion of Judge Guillaume, para. 5.

⁴ Protocol I, art. 48.

⁵ *Ibid.*, arts. 51(3), 52.

⁶ *Ibid.*, art. 51(4).

⁷ *Ibid.*, art. 51(4)(a, b, c).

treat as a single military objective a number of clearly separated and distinct targets are indiscriminate as well.⁸

Proportionality is a related principle of international humanitarian law. Attacks that violate the principle of proportionality are indiscriminate because they are “expected to cause incidental loss of civilian life, injury to civilians [or] damage to civilian objectives...which would be excessive in relation to the concrete and direct military advantage anticipated” from that attack.⁹

Feasible Precautions

When conducting military operations, parties to a conflict must also take “constant care” to spare the civilian population and civilian objects from the effects of hostilities. For example, belligerents must take “all feasible precautions” to minimize harm to civilians when choosing their means and methods of warfare, and they must refrain from launching disproportionate attacks.¹⁰ The enemy’s failure to respect one or more of these precautions does not permit the other party to the conflict to ignore precautions on its side.

International Humanitarian Law Applied to Cluster Munitions

Indiscriminate Use of Cluster Munitions

Cluster munitions raise serious concerns under numerous provisions of international humanitarian law. Cluster munition strikes in or near civilian population centers should be presumed indiscriminate because the weapons cannot be precisely targeted at specific military objectives and, in particular, the submunitions are almost always unguided. When cluster munitions are fired into civilian areas, civilian casualties and damage to civilian infrastructure are extremely difficult to avoid. They thus violate the rule that prohibits attacks that use a method of warfare that “cannot be directed at a specific military objective.”¹¹

Whether a cluster strike is discriminate must be judged not only on its immediate impact but also on its aftereffects. Submunition duds do not distinguish between combatants and civilians and will likely injure or kill whoever disturbs them. The effects become more dangerous if the submunitions litter an area frequented by civilians or the dud rate is high (due to poor design, age, use in inappropriate environments, or delivery from inappropriate

⁸ *Ibid.*, art. 51(5)(a).

⁹ *Ibid.*, art. 51(5)(b).

¹⁰ *Ibid.*, art. 57.

¹¹ *Ibid.*, art. 51(4)(b).

altitudes or distances). The large number of submunitions released by cluster munitions combined with a high dud rate makes the aftereffects in or near civilian areas particularly deadly. In that situation in particular, the unexploded duds raise concerns under the international humanitarian law provision that prohibits attacks that “employ a method or means of combat the effects of which cannot be limited.”¹²

Disproportionate Use of Cluster Munitions

The lawfulness of an attack may also be determined by its disproportionate effect on civilians. A cluster attack will be unlawfully disproportionate if expected civilian harm outweighs anticipated military advantage. Attacks in or near populated areas are particularly likely to be disproportionate given their predictable civilian casualties at the time of a strike.

Expected civilian harm encompasses casualties over time as well as immediate civilian losses.¹³ It is increasingly accepted that long-term effects should be a factor in judging the proportionality of cluster munition attacks, and the long-term effects of cluster munitions are foreseeable.¹⁴ The preamble of the final declaration of the Third Review Conference of States Parties to the CCW recognizes “the foreseeable effects of explosive remnants of war on civilian populations as a factor to be considered in applying the international humanitarian law rules on proportionality in attack and precautions in attack.”¹⁵ States parties, including Georgia and Russia, adopted this language on November 17, 2006.

Taking into account both strike and post-strike civilian harm greatly increases the likelihood that the harm will be excessive in relation to the military advantage sought. It is especially true if an attack occurred in or near a populated area or in an area to which people might return. Based on its field research in Yugoslavia, Afghanistan, Iraq, and Lebanon, as well as Georgia, Human Rights Watch believes that when cluster munitions are used in any type of populated area, there should be a strong, if rebuttable, presumption that the attack is disproportionate.¹⁶

¹² *Ibid.*, art. 51(4)(c).

¹³ See generally *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion*, on the issue of proportionality and long-term impact of a weapon.

¹⁴ For the foreseeability of the long-term impact of cluster munitions, see generally Human Rights Watch, *Fatally Flawed; Off Target; Flooding South Lebanon*.

¹⁵ Third Review Conference of the High Contracting Parties to the CCW, “Final Document, Part II, Final Declaration,” CCW/CONF.III/11 (Part II), Geneva, November 7-17, 2006, p. 4

¹⁶ Human Rights Watch and the International Human Rights Clinic, Harvard Law School, *Cluster Munitions and the Proportionality Test: Memorandum to the Delegates of the Convention on Conventional Weapons*, April 2008, http://www.hrw.org/sites/default/files/related_material/armso408web.pdf.

The Requirement to Take Precautions

States are legally bound to take “all feasible precautions” to minimize civilian harm. Given that cluster munition use in or near populated areas virtually guarantees civilian harm, it should be considered unlawful under this requirement.

Protocol V on Explosive Remnants of War

Protocol V on ERW, an instrument attached to the CCW, applies to cluster munitions. Its definition of ERW, which covers almost all conventional weapons, encompasses cluster munitions that did not explode on impact or were abandoned.¹⁷ Russia submitted its consent to be bound by the protocol on July 21, 2008, and it entered into force for the state six months later, that is in January 2009. Georgia agreed to be bound on December 22, 2008. It will not enter into force for Georgia until June 2009, so the instrument does not yet bind the state. Nevertheless, Georgia may not “defeat the object and purpose of the treaty” in the interim.¹⁸

Protocol V lays out obligations for clearing ERW that are designed to reduce their humanitarian effects. Affected states parties must clear ERW in their territory and take steps to protect civilians, such as by instituting risk education programs.¹⁹ States parties that are responsible for using weapons that leave ERW have specific obligations. Article 3 requires user states parties that are no longer in control of an affected area to “provide where feasible, inter alia technical, financial, material or human resources assistance” for clearance of ERW.²⁰ User states parties must also retain and make available any information, such as ERW types, numbers, and locations, that will facilitate clearance and risk education.²¹

While Protocol V is a relatively modest instrument²² and does not prohibit or even restrict the use of cluster munitions, it does establish standards for reducing the harm of submunition duds to which Russia and Georgia, as states parties, should adhere.

¹⁷ Protocol on Explosive Remnants of War to the Convention on Conventional Weapons (Protocol V), adopted November 27, 2003, U.N. Doc. CCW/MSP/2003/2, entered into force November 13, 2006, art. 2 (“Protocol V”).

¹⁸ Vienna Convention on the Law of Treaties, adopted May 23, 1969, 1155 U.N.T.S. 331, entered into force January 27, 1980, art. 18.

¹⁹ Protocol V, arts. 3, 5. Other articles elaborate on provisions related to ERW clearance.

²⁰ *Ibid.*, art. 3.

²¹ *Ibid.*, art. 4.

²² Many of Protocol V’s provisions have qualifying language. For example, Article 3 says “as soon as feasible,” Article 4 “as far as practicable,” and Articles 7 and 8 “in a position to do so.” Its “generic preventive measures,” laid out in Article 9 and the Technical Annex, are voluntary and refer to measures for reducing a weapon’s failure rate, not eliminating or circumscribing its use.

The Convention on Cluster Munitions

While existing international humanitarian law prohibits the worst uses of cluster munitions, a new treaty, the Convention on Cluster Munitions, comprehensively bans the weapon. Both a disarmament and humanitarian treaty, it not only prohibits use, production, transfer, and stockpiling, but also establishes strong remedial measures to enhance protections for civilians. The Convention on Cluster Munitions has not yet entered into force, and neither Russia nor Georgia participated in its negotiation. Nevertheless, the convention reflects the strong opposition to cluster munitions within the international community.

In 2006 the failure of states to approve a negotiating mandate for a CCW cluster munition protocol, combined with Israel's shocking use of cluster munitions in Lebanon, spurred a movement to create a treaty outside the CCW. The Oslo Process, named for the site of its first meeting, began in February 2007. On May 30, 2008, all 107 participating states at the final conference in Dublin adopted the text of the new Convention on Cluster Munitions.²³ The convention was opened for signature on December 3, 2008, and to date, 96 countries have signed and six have ratified. It will enter into force six months after the thirtieth instrument of ratification or accession, acceptance, or approval is deposited.²⁴

Key Provisions of the Convention on Cluster Munitions

While all of its articles relate to cluster munitions, the Convention on Cluster Munitions encompasses a set of core obligations, outlined below, that are particularly relevant to the conflict between Georgia and Russia. They include both preventive and remedial measures. The former are designed to prevent the kind of use that occurred in Georgia. The latter seek to alleviate the humanitarian effects of use that has already taken place. Together they address the immediate as well as long-term effects of cluster munitions. The treaty does not allow reservations, which strengthens the power of its provisions.²⁵

Under Article 1's basic prohibitions on cluster munitions, states parties undertake "never under any circumstances" to use, produce, transfer, or stockpile cluster munitions, or to "assist, encourage or induce anyone to engage" in any of these prohibited activities.²⁶ In Article 3, the Convention on Cluster Munitions requires states parties to destroy their

²³ Convention on Cluster Munitions, adopted May 30, 2008, Diplomatic Conference for the Adoption of a Convention on Cluster Munitions, CCM/77, opened for signature December 3, 2008, <http://www.clustermunitionsdublin.ie/pdf/ENGLISHfinaltext.pdf> (accessed March 30, 2009) ("Convention on Cluster Munitions").

²⁴ *Ibid.*, art. 17.

²⁵ *Ibid.*, art. 19.

²⁶ *Ibid.*, art. 1(1). By using the term "anyone," the absolute prohibition applies to non-state actors as well as states.

stockpiles of cluster munitions within eight years.²⁷ In Article 2(2), the convention defines a cluster munition as “a conventional munition that is designed to disperse or release explosive submunitions each weighing less than 20 kilograms, and includes those explosive submunitions.”²⁸

States parties are also obligated to take remedial measures. Article 4 requires states parties to clear cluster munition remnants in areas under their “jurisdiction or control” within ten years and to provide for risk education.²⁹ It “strongly encourage[s]” states parties that used or abandoned cluster munitions prior to the convention’s entry into force to assist the affected state with clearance.³⁰ Article 5 lays out states parties’ obligations to assist victims, defined broadly to cover both individuals directly impacted by the weapons and their affected families and communities.³¹

Finally, Article 6 on international cooperation and assistance lays out obligations for states parties “in a position to do so” to provide assistance to affected states.³²

The Importance of Joining the Convention on Cluster Munitions

States should sign and ratify the Convention on Cluster Munitions as soon as possible. Their support for the treaty will help prevent future use of cluster munitions like that which occurred in Georgia. By signing the treaty, a state undertakes to accept the principle of a comprehensive prohibition on cluster munitions because signatories cannot “defeat the object and purpose of the treaty.”³³ The more signatories there are, the more the weapon will be stigmatized. By ratifying the treaty, a state undertakes to be legally bound by its specific provisions. The sooner states ratify the instrument, the sooner it enters into force, and the more ratifications it garners, the greater its legal influence will be.

²⁷ *Ibid.*, art. 3(2). In exceptional circumstances, four-year extensions can be granted.

²⁸ *Ibid.*, art. 2(2). The Convention on Cluster Munitions definition explicitly excludes some weapons that meet that technical description but do not cause the same humanitarian harm as cluster munitions, but none of the weapons used in Georgia fall under the exclusion.

²⁹ *Ibid.*, art. 4(1). The Convention on Cluster Munitions allows for five-year extensions for clearance for exceptional circumstances.

³⁰ *Ibid.*, art. 4(4). That assistance can take a variety of forms, including “technical, financial, material or human,” but must include information on the types, quantities, and locations of cluster munitions used.

³¹ *Ibid.*, arts. 2(1), 5. In keeping with international humanitarian and human rights law, states parties must provide varied kinds of assistance, including medical care, rehabilitation, and psychological support, and “provide for...social and economic inclusion.”

³² *Ibid.*, art. 6.

³³ Vienna Convention on the Law of Treaties, art. 18.

While the Convention on Cluster Munitions is awaiting enough ratifications to enter into force, it can still influence the behavior of states, even those not yet party to it, such as Russia and Georgia. Its already widely accepted standards have put states on notice that certain actions will draw condemnation from the international community. Stigmatization has led most states to follow the provisions of the Mine Ban Treaty, even if they are not party. In recent years, Burma is the only country to make significant use of antipersonnel mines.³⁴ The Convention on Cluster Munitions has the potential to have a similar impact.

Russia and Georgia, in particular, should sign and ratify, or at least follow the principles of, the Convention on Cluster Munitions as soon as they can. Many in the international community condemned their use of cluster munitions in Georgia.³⁵ Publicly supporting the convention would demonstrate that they are in step with widely accepted legal principles. Russia and Georgia could also mitigate the harm they caused in the 2008 conflict by meeting the convention's obligations on clearance, risk education, and victim assistance. Finally, Georgia would benefit from joining the Convention on Cluster Munitions because it would be eligible to receive international assistance for addressing the aftereffects of cluster munitions.

³⁴ International Campaign to Ban Landmines, *Landmine Monitor Report 2008: Toward a Mine-Free World* (Ottawa: Mines Action Canada, 2008), p. 4. A number of rebel groups also continue to use antipersonnel mines, most notably in Colombia and Burma. *Ibid.*, pp. 5-6.

³⁵ For governmental or intergovernmental condemnation, see, for example, "Statement by Minister for Foreign Affairs on Alleged Use of Cluster Bombs in Georgia," Irish Department of Foreign Affairs press release, August 21, 2008, <http://www.foreignaffairs.gov.ie/home/index.aspx?id=72512> (accessed January 28, 2009); "Norway Deeply Deplores Any Use of Cluster Munitions in the Georgia Conflict," Permanent Mission of Norway to the UN news release, September 2, 2008, http://www.norway-un.org/Selected+Topics/Disarmament/020908_Georgia_Clustermunition.htm (accessed January 28, 2009); "Statement by the Permanent Representative of the Kingdom of the Netherlands to the OSCE regarding the Death of Dutch Cameraman Stan Storimans on 12 August 2008," PC.DEL/869/08, October 23, 2008, http://www.osce.org/documents/pc/2008/10/34651_en.pdf (accessed January 28, 2009); "Rice Says Russia Becoming an Outlaw in Georgia," *Reuters*, August 19, 2008, <http://www.reuters.com/article/GCA-Georgia/idUSN1933114120080820> (accessed January 28, 2009); "Human Rights and Humanitarian Principles Have Been Seriously Violated in the South Ossetia Conflict, Reports Thomas Hammarberg after an Eight-Day Mission," Council of Europe press release, 612(2008), September 5, 2008, <https://wcd.coe.int/ViewDoc.jsp?id=1337409&Site=DC> (accessed November 16, 2008); "EU Calls on Russia, Georgia to Clear Cluster Bombs: France," September 2, 2008, *Agence France Presse*, September 2, 2008, <http://www.eubusiness.com/news-eu/1220365022.62/> (accessed November 16, 2008). Many nongovernmental organizations (NGOs), including Human Rights Watch, also condemned the use of cluster munitions by both sides. "CMC Condemns Georgian Use of Cluster Bombs," Cluster Munition Coalition press release, September 2, 2008, <http://stopclustermunitions.org/news/?id=667> (accessed January 28, 2009); "Survivor Corps Criticizes Use of Cluster Munitions in Russia Georgia Conflict," Survivor Corps news release, September 1, 2008, <http://banclusterbombs.smnr.us/> (accessed January 28, 2009); "Handicap International Condemns the Use of Cluster Bombs," Handicap International news release, August 19, 2008, <http://www.handicap-international.fr/en/our-fight-against-landmines-an/en-bref/handicap-international-condemns-the-use-of-cluster-bombs/index.html?cHash=c901adf78d> (accessed January 28, 2009); "Georgia: UK Must Condemn Russian Use of Cluster Bombs," Landmine Action press release, August 15, 2008, <http://www.landmineaction.org/resources/resource.asp?resID=1104&PLID=1012&pageID=> (accessed January 28, 2009).

The Belligerents and the Cluster Munitions Used

The conflict in Georgia highlights the nature of the global problem of cluster munitions. Both sides employed the weapon, causing civilian casualties, yet their military profiles and histories with the weapon are quite different. This case underlines the risks of continued production, transfer, and stockpiling. Whoever the user, and whatever the type used, cluster munitions pose unacceptable risks to civilians and must be eliminated.

Russia produces and exports its own cluster munitions and has stockpiles of millions of submunitions of various types. It has used cluster munitions previously, notably in Chechnya. Georgia does not manufacture its own cluster munitions but is an importer that received the models it used in this conflict from Israel. It has a smaller arsenal than its larger neighbor and claims that it now possesses only one active type. Human Rights Watch is not aware of any evidence that Georgia used the weapon prior to the August 2008 conflict.

Between the two of them, Russia and Georgia also employed cluster munitions that exemplify the variety of the weapon, including both air-dropped and ground-launched models delivered from bombs, rockets, and missiles.

Use, Production, Transfer, and Stockpiling

The two parties to this conflict have participated in the worldwide use, production, transfer, and stockpiling of cluster munitions. At least 77 states stockpile cluster munitions, amounting to caches of at least hundreds of millions of individual submunitions. Thirty-four countries have produced more than 210 different types of cluster munitions, both air-dropped and surface-launched, including projectiles, rockets, missiles, bombs, and other dispensers. At least 13 countries have transferred more 50 different types of cluster munitions to at least 60 other countries as well as non-state armed groups.³⁶ At least 15 states and a small number of non-state armed groups have used cluster munitions in at least 32 countries and disputed territories.³⁷

³⁶ Human Rights Watch, "Overview of Cluster Munitions in Eastern Europe, the Caucasus, and Central Asia," September 2008, http://www.hrw.org/sites/default/files/related_material/ClusterFactSheet_ECA.pdf, p. 2. The true scope of the global trade in cluster munitions has not been fully determined. Mark Hiznay, "Operational and Technical Aspects of Cluster Munitions," *Disarmament Forum*, vol. 4 (2006), p. 20.

³⁷ Human Rights Watch, "Cluster Munition Information Chart," March 13, 2009, <http://www.hrw.org/en/news/2009/03/19/cluster-munition-information-chart>.

Russia

Russia has not made information regarding national stockpiles or inventories readily available to the international community, but it is known to be a major producer, exporter, and stockpiler of cluster munitions. Several Russian companies are associated with the production of cluster munitions: Bazalt State Research and Production Enterprise (air-dropped bombs), Mechanical Engineering Research Institute (120mm, 152mm, and 203mm artillery projectiles), and Splav State Research and Production Enterprise Rocket (122mm, 220mm, and 300mm rockets and missiles).³⁸ Cluster munitions of Russian/Soviet origin have been reported in the stockpiles of at least 29 countries: Algeria, Angola, Azerbaijan, Belarus, Bulgaria, Croatia, Cuba, Egypt, Georgia,³⁹ Guinea-Bissau, Hungary, India, Iran, Iraq, Kazakhstan, Kuwait, Libya, Moldova, Mongolia, North Korea, Peru, Poland, Romania, Slovakia, Sudan, Syria, Uganda, Ukraine, and Yemen.⁴⁰

Russia's own stockpiles are estimated to be in the hundreds of millions or more of submunitions. The following chart, which draws on information from open sources, lists current Russian stockpiles for which Human Rights Watch has evidence.

³⁸ See Robert Hewson, ed., *Jane's Air-Launched Weapons*, Issue 44 (Surrey, UK: Jane's Information Group Limited, 2004), pp. 414-415, 422-432; Leland S. Ness and Anthony G. Williams, eds., *Jane's Ammunition Handbook 2007-2008* (Surrey, UK: Jane's Information Group Limited, 2007), pp. 572, 597-598, 683, 703-706, 715-716, 722-723; US Defense Intelligence Agency, "Improved Conventional Munitions and Selected Controlled-Fragmentation Munitions (Current and Projected)," DST-1160S-90, June 8, 1990 (partially declassified and made available to Human Rights Watch under a Freedom of Information Act request); Human Rights Watch, "Overview of Cluster Munitions in Eastern Europe, the Caucasus, and Central Asia," p. 5.

³⁹ The Georgian Ministry of Defense reports having RBK-500 cluster munitions and BKF blocks of submunitions that are carried in KMGUs, but it told Human Rights Watch that their shelf-lives have expired and they are slated for destruction. Response of Georgian Ministry of Defense to Human Rights Watch Questions, February 12, 2009.

⁴⁰ See, for example, Hewson, ed., *Jane's Air-Launched Weapons*, pp. 835-848; *Jane's Air-Launched Weapons*, Issue 24, July 1996, pp. 840-841; Ness and Williams, eds., *Jane's Ammunition Handbook 2007-2008*; US Defense Intelligence Agency, "Improved Conventional Munitions and Selected Controlled-Fragmentation Munitions (Current and Projected)"; Human Rights Watch, "Overview of Cluster Munitions in Eastern Europe, the Caucasus, and Central Asia," p. 4.

Types of Russian/Soviet Cluster Munitions in Russian Stockpiles⁴¹

Type	Caliber	Carrier Name	Number of Submunitions	Submunition Type
Projectile	152mm	3-O-23	42	DPICM
	152mm	3-O-13	8	DPICM
	203mm	3-O-14	24	DPICM
Bomb	KMGU	Mix of:	96	AO-2.5 APAM
		8	8	ODS-OD FAE
		98	98	PTAB 2.5
		248	248	PTAB-1M
	PROSAB-250	90	PROSAB bomblet	
	RBK-250	48	ZAB 2.5 Incendiary	
	RBK 250-275	60	AO-2.5 APAM	
	RBK 250-275	60	AO-2.5-2 APAM	
	RBK 250-275	150	AO-1Sch bomblet	
	RBK 250-275	30	PTAB 2.5M	
	RBK-500	108	AO-2.5 APAM	
	RBK-500	108	AO-2.5-2 APAM	
	RBK-500	75	PTAB 2.5	
	RBK-500	268	PTAB 2.5M	
	RBK-500	565	ShOAB-0.5 bomblet	
	RBK-500U	10	OFAB-50 APAM	
26		OFAB 2.5 APAM		
15		SPBE-D		
352		PTAB		
Rocket	122mm	Grad (9M218)	45	DPICM
	122mm	Grad (9M217)	2	SFW
	220mm	Uragan (9M27K)	30	APAM
	300mm	Smerch (9M55K)	72	APAM
	300mm	Smerch (9M55K1)	5	SFW
	300mm	Smerch (9M55K5)	646	APAM

⁴¹ This chart comes from a tabulation of information in Hewson, ed., *Jane's Air-Launched Weapons*, pp. 414-415, 422-432; Ness and Williams, eds., *Jane's Ammunition Handbook 2007-2008*, pp. 572, 597-598, 683, 703-706, 715-716, 722-723; US Defense Intelligence Agency, "Improved Conventional Munitions and Selected Controlled-Fragmentation Munitions (Current and Projected)." This chart has been previously published in Human Rights Watch, *Survey of Cluster Munition Policy and Practice*, February 2007, <http://www.hrw.org/sites/default/files/reports/clustero207web.pdf>.

Georgia is not the first location where Russia has used cluster munitions. It repeatedly used cluster munitions in Chechnya between 1994 and 1996 and again in 1999. The attacks led to at least 636 casualties, including 301 deaths, according to Handicap International.⁴² The attack on the Grozny market on October 21, 1999, probably the most high-profile one in Chechnya, caused more than 100 deaths according to HALO Trust, a UK-based demining organization.⁴³ All but 24 of the 636 documented casualties came during strikes, not afterwards. Not all post-conflict casualties, however, may have been reported.⁴⁴ Russian forces made use of multiple types of cluster munitions: air-dropped bombs, tactical missiles, and multiple rockets systems.⁴⁵ HALO Trust confirmed that the Grozny attack was by an SS-21 missile, a precursor of the Iskander.⁴⁶ Russia directed many of its cluster attacks at civilian areas.⁴⁷ The Soviet Union also used cluster munitions in Afghanistan during the conflict that lasted between 1979 and 1989.⁴⁸

Georgia

According to then-Georgian First Deputy Minister of Defense Batu Kutelia, interviewed by Human Rights Watch in October 2008, M85s are the only submunitions that Georgia currently stockpiles for active use.⁴⁹ He said Georgia bought its M85s from an Israeli company. Although the ministry would not release the name of the company, Israel Military Industries is the only known Israeli manufacturer of the weapon. Israel Military Industries also made the M85s used by Israel during its 2006 war with Lebanon. Those submunitions had high failure rates and caused civilian casualties and socioeconomic harm.⁵⁰

⁴² Handicap International, "Circle of Impact: The Fatal Footprint of Cluster Munitions on People and Communities," 2007, http://en.handicapinternational.be/Circle-of-Impact-,-report-on-the-human-impact-of-cluster-bombs_a467.html (accessed April 1, 2009), p. 85.

⁴³ Mennonite Central Committee, "Clusters of Death: Global Report on Cluster Bomb Production and Use," 2000, <http://mcc.org/clusterbombs/resources/research/death/chapter3.html> (accessed January 28, 2009), chapter 3. The chapter cites an email attachment, "Summary of Incidents in Chechnya," from HALO Trust to Virgil Wiebe, Landmine Monitor Researcher, May 10, 2000. This report also has information on additional civilian casualties caused by cluster munitions in Chechnya. See also Human Rights Center Memorial, "Counterterrorist Operation: Starye Atagi, September 1999–May 2002," 2002, <http://www.memo.ru/hr/hotpoints/N-Caucas/atagi/Chapter3.htm> (accessed February 17, 2009). It reports approximately 140 people killed and more than 200 wounded, the "absolute majority" of whom were civilians.

⁴⁴ Handicap International, "Circle of Impact," p. 85.

⁴⁵ Mennonite Central Committee, "Clusters of Death," chapter 3.

⁴⁶ *Ibid.* The chapter cites HALO Trust, "Summary of Incidents in Chechnya."

⁴⁷ *Ibid.* See also O. Orlov and A. Cherkasov, "Russia–Chechnya: A Chain of Mistakes and Crimes," Human Rights Center Memorial, <http://www.memo.ru/hr/hotpoints/chechen/checheng/czecz.htm> (accessed April 1, 2009).

⁴⁸ Human Rights Watch, "Cluster Munition Information Chart"; Mennonite Central Committee, "Drop Today, Kill Tomorrow: Cluster Munitions as Inhumane and Indiscriminate Weapons," June 1999, http://www.mineaction.org/downloads/1/MCC_drop%20today%20kill%20tomorrow.pdf (accessed February 18, 2009), p. 5.

⁴⁹ Human Rights Watch interview with Batu Kutelia, then Georgian first deputy minister of defense, Tbilisi, October 21, 2008.

⁵⁰ Human Rights Watch, *Flooding South Lebanon*, pp. 45–48.

In 2004 Jane's Information Group reported that the Georgian Air Force also had KMGU and RBK-500 cluster bombs, both of which can carry a variety of submunitions.⁵¹ The Georgian Ministry of Defense told Human Rights Watch in February 2009 that it still has RBK-500 cluster munitions and BKF blocks of submunitions that are delivered by KMGUs, but that their shelf-lives have expired and they are slated for destruction.⁵² Kutelia said its air force planes are not fitted for delivering these air-dropped weapons.⁵³ Human Rights Watch is not aware of any evidence that Georgia used cluster munitions before the 2008 conflict. Georgia is also not known to have produced or transferred cluster munitions.

Cluster Munitions Used in Georgia and their Submunitions

During the 2008 conflict in Georgia, Russia used two types of submunitions, the AO-2.5 RTM (carried in RBK bombs) and 9N210 (carried in Uragan rockets), and Georgia used one, the M85 (carried in Mk.-4 rockets). According to a Dutch investigation discussed later, Russia also used the surface-to-surface Iskander missile carrying unknown types of submunitions.⁵⁴ Human Rights Watch researchers found physical evidence of each of these weapons, including submunitions and the canisters they were carried in, in the towns and villages they visited. All these types, like most cluster munitions, endanger civilians because of their broad area effect and the fact that they leave unexploded duds after the conflict.

AO-2.5 RTM Submunition

The air-dropped AO-2.5 RTM submunition used by Russia is an antipersonnel and anti-materiel weapon. It is designed to attack both troops and equipment with its blast and fragmentation. The silver submunition has spherical ends and a spin, or separation, ring around the middle. The latter consists of a circular metal band with five semicircular pieces attached. The submunition weighs 2.5 kilograms and measures 90 by 150mm. Upon impact, it splits into two halves before detonating. It has a kill radius of 30 meters for materiel and 20 meters for personnel. In Georgia, Russia delivered these submunitions by RBK series bombs. The RBK-250 contains 60 bomblets, and the RBK-500 series contains 108 bomblets.⁵⁵

⁵¹ "Country Inventories: Analysis," in Hewson, ed., *Jane's Air-Launched Weapons*, p. 839.

⁵² Response of Georgian Ministry of Defense to Human Rights Watch Questions, February 12, 2009.

⁵³ Human Rights Watch interview with Batu Kutelia, October 21, 2008.

⁵⁴ Dutch Ministry of Foreign Affairs, "Report of the Storimans Investigative Mission," October 20, 2008, <http://www.minbuza.nl/binaries/en-pdf/scannen0001.pdf> (accessed January 28, 2009), p. 6.

⁵⁵ "RBK-500 AO-2.5 RTM Cluster Bomb," in Hewson, ed., *Jane's Air-Launched Weapons*, p. 425.

9N210 Submunition

The ground-launched 9N210 submunition used by Russia is also an antipersonnel and anti-materiel weapon. It is designed to attack both troops and most types of equipment with its blast and fragmentation. The silver submunition consists of a soda can-sized cylinder with six flat fins at the tail end and weighs 1.8 kilograms. A hard plastic-like core just inside the cylinder contains 370 metal fragments, which spray out in every direction upon detonation. The fragments are identical small cylinders, measuring six millimeters in length and having a six millimeter diameter. The 9N210, which has an explosive mass of 0.3 kilograms, has a self-destruct device that is supposed to detonate the submunition within 110 seconds if it does not explode on impact.⁵⁶ As shown during this conflict, however, it often fails. In one area being cleared in Ruisi, NPA reported a 35 percent dud rate.⁵⁷ In Georgia, Russia delivered its 9N210s in 220mm surface-to-surface Uragan (Russian for Hurricane) rockets, each of which carry 30 of these submunitions.⁵⁸

Iskander Missile

According to a Dutch investigative report into an attack on Gori, Russia also used at least one surface-to-surface Iskander (also called SS-26) missile carrying submunitions. Little is known about this weapon, except that it is in Russia's arsenal and, according to the Dutch report, carries 20 submunitions.⁵⁹ Russia has denied using the Iskander in this conflict, but as will be explained below, both Human Rights Watch and the Dutch investigative team found evidence of the weapon.

M85 Submunition

The ground-launched M85 submunition used by Georgia is a type of Dual-Purpose Improved Conventional Munition (DPICM) bought from Israel. It is an antipersonnel and anti-armor weapon, designed to attack troops and armored vehicles, including tanks, with blast, fragmentation, and a penetrator. This black, cylindrical-shaped submunition with one open end is often said to resemble a battery or light socket. It is topped with a red or white ribbon⁶⁰ that unfurls upon discharge, releasing a firing pin that arms the submunition and

⁵⁶ "220 mm Uragan Rockets," in Ness and Williams, eds., *Jane's Ammunition Handbook 2007-2008*, p. 716.

⁵⁷ Human Rights Watch interview with Amir Musanovic, technical advisor, Norwegian People's Aid, Ruisi, October 15, 2008.

⁵⁸ For information on how many submunitions Uragan rockets carry, see "220 mm Uragan Rockets," in Ness and Williams, eds., *Jane's Ammunition Handbook 2007-2008*, p. 716.

⁵⁹ Dutch Ministry of Foreign Affairs, "Report of the Storimans Investigative Mission," p. 6. See also Human Rights Watch telephone interview with Adriaan Jacobovits, former ambassador and head of Storimans Investigative Mission, November 19, 2008.

⁶⁰ Human Rights Watch has not been able to determine the significance of the difference between the red and white ribbons. This conflict was the first in which it saw the red ribbons. British forces used white-ribboned versions in Iraq, and the Israelis did the same in Lebanon. Norway possesses, but has not used, the red-ribboned variety. The Georgian Ministry of Defense

directing the open end with a shaped charge downwards.⁶¹ The shaped charge is a concave copper cone that turns into a molten slug and pierces armor when it hits perpendicular to its target. The outside fragmentation shell, which consists of a series of stacked rings, is designed to shoot out metal shards and kill people. In Georgia, Mk.-4 160mm rockets delivered 104 M85s each.⁶² The GRADLAR 160 multiple launch rocket system launched the Mk.-4s, which have an outside range of 45 kilometers.⁶³

M85s come in two models, with and without self-destruct devices. Human Rights Watch found many unexploded M85s in Georgia, and they were only of the non-self-destruct variety. Then-First Deputy Minister of Defense Kutelia said Georgian military deminers also found primarily non-self-destruct models, but he could not explain their presence. He claimed Georgia bought M85s exclusively with self-destruct mechanisms from Israel.

The 2006 Lebanon war demonstrated that M85s have unacceptably high dud rates regardless of the type. Many military experts had argued the self-destruct version was one of the most reliable and sophisticated submunitions in existence.⁶⁴ In testing, the M85 has a 1.3 to 2.3 percent reported failure rate. Based on a study of strike locations where the self-destruct models landed in Lebanon, however, weapons experts and United Nations (UN) deminers estimated that the self-destruct M85s had an actual failure rate of 10 percent or higher.⁶⁵

told Human Rights Watch it knows of “no technical difference” between the two models. Response of Georgian Ministry of Defense to Human Rights Watch Questions, February 12, 2009.

⁶¹ “Ribbon Oriented Dual Purpose Submunition,” Database of Demining Incidents and Victims, 2008, <http://www.ddasonline.com/SubsKB1-M42.htm> (accessed November 17, 2008).

⁶² “IMI LAR-160 and AccuLAR 16 mm Rockets,” in Ness and Williams, eds., *Jane's Ammunition Handbook 2007-2008*, pp. 714-715.

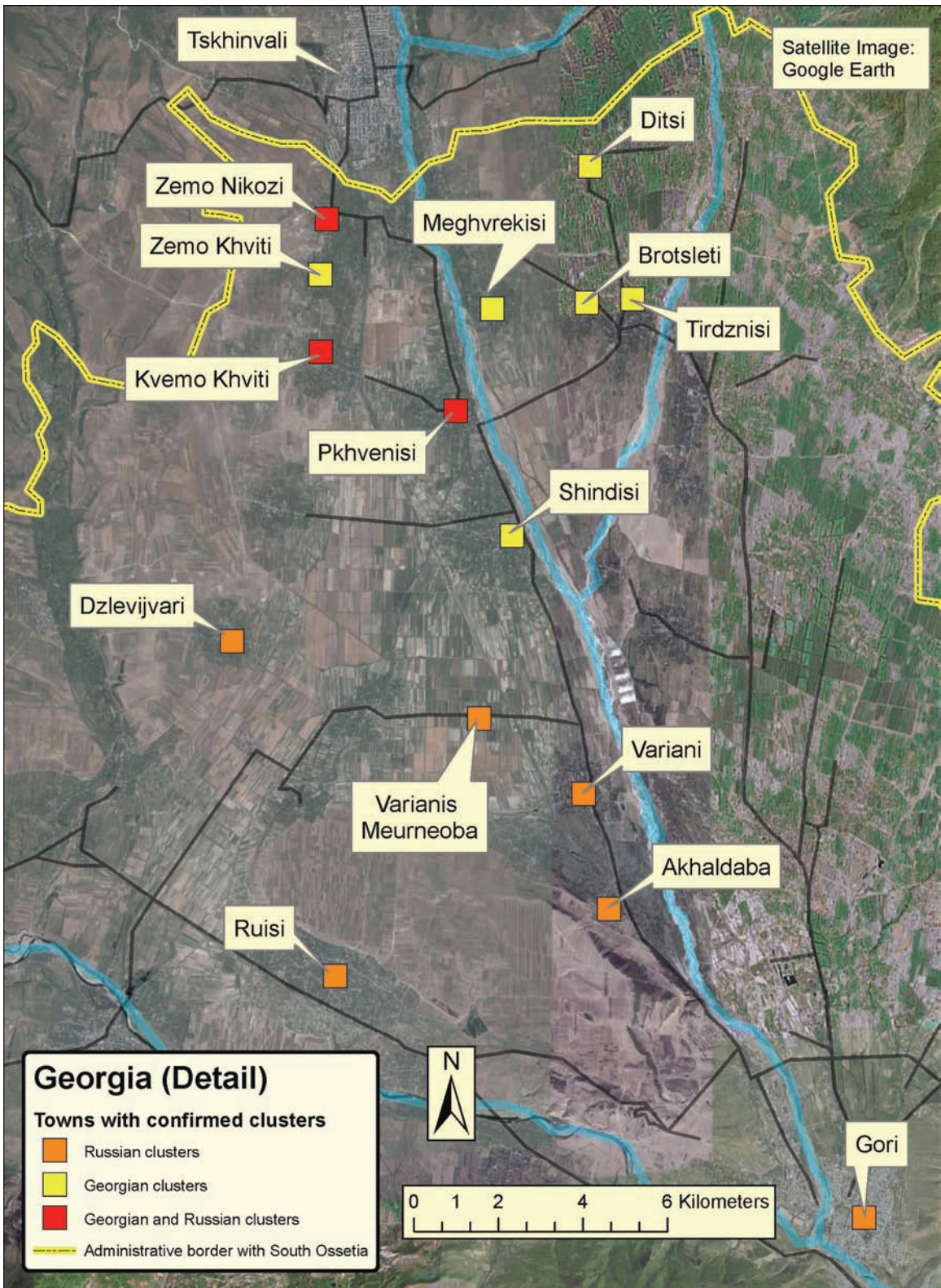
⁶³ For technical information, see “Georgian Ministry of Defence's Response to the Human Rights Watch Inquire [sic] about the Usage of M85 Bomblets,” Georgian Ministry of Defense press release, September 1, 2008, <http://www.mod.gov.ge/?l=E&m=11&sm=0&id=1046> (accessed March 30, 2009).

⁶⁴ Military experts from numerous countries that stockpile the M85 or variants of it have made this claim in discussions with Human Rights Watch during sessions of the CCW in recent years.

⁶⁵ For a detailed discussion of the M85 with self-destruct device and its failure in Lebanon, see C. King Associates, Ltd., Norwegian Defence Research Establishment, and Norwegian People's Aid, *M85: An Analysis of Reliability* (Norway: Norwegian People's Aid, 2007). See also information provided by Ove Dullum, Chief Scientist, Norwegian Defence Research Establishment, April 19, 2007; Chris Clark, program manager, Mine Action Coordination Center–South Lebanon, “Unexploded Cluster Bombs and Submunitions in South Lebanon: Reliability from a Field Perspective,” presented at the International Committee of the Red Cross Expert Meeting, Montreux, Switzerland, April 18-20, 2007; email communication from Dalya Farran, media and post clearance officer, Mine Action Coordination Center–South Lebanon, to Human Rights Watch, January 16, 2008. For further information on the use and failure of M85s in Lebanon, see Human Rights Watch, *Flooding South Lebanon*, pp. 30-32, 45-48.



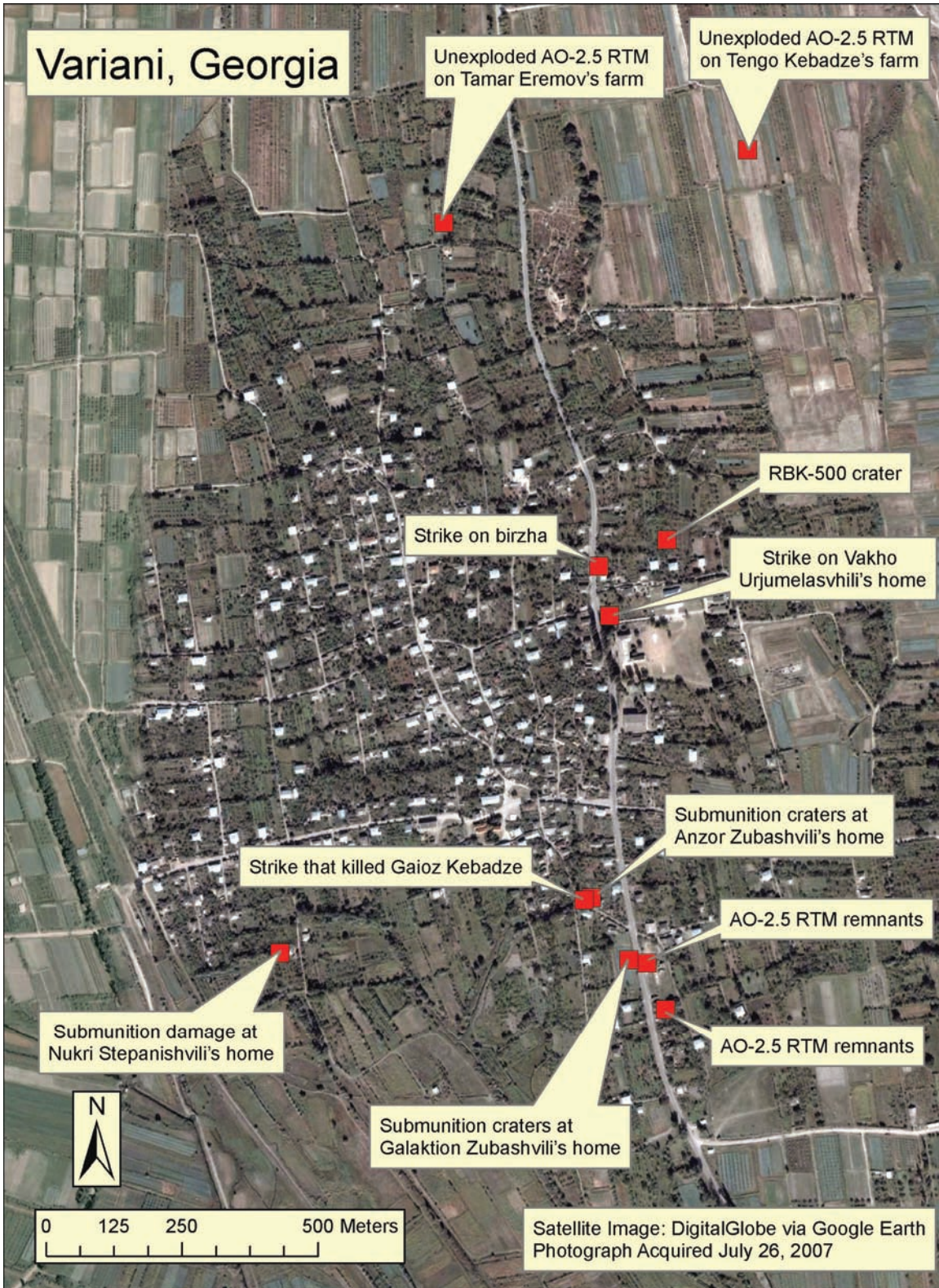
© 2009 Matthew McKinzie/Human Rights Watch



© 2009 Matthew McKinzie/Human Rights Watch



© 2009 Matthew McKinzie/Human Rights Watch



© 2009 Matthew McKinzie/Human Rights Watch



© 2009 Matthew McKinzie/Human Rights Watch



Teimuraz Khizanishvili, 70, was one of 16 casualties from a Russian cluster munition strike on Variani on August 8, 2008. The explosion broke both his legs and left shrapnel injuries across his body, including in his forehead, hand, legs, torso, and back. He was still confined to a wheelchair on October 18, 2008.
© 2008 Bonnie Docherty/Human Rights Watch



A woman injured during a Russian cluster munition strike on Ruisi on August 12, 2008, points toward the tree where she and three other women, also injured, had sought shelter. The gravestones of the adjacent church cemetery, pictured here on October 15, 2008, had holes from 9N210 fragmentation. The boy in the photograph came to report a nearby submunition dud. © 2008 Bonnie Docherty/Human Rights Watch



Alexandre Zerekidze points to a fragmentation mark from a Georgian M85 submunition in the door of his home in Tirdznisi on October 17, 2008. Several submunitions exploded as Zerekidze looked out his doorway during a strike on the morning of August 9, 2008. He suffered shrapnel wounds to his back, stomach, and leg. © 2008 Bonnie Docherty/Human Rights Watch



Nukri Stepanishvili, 44, stands where a Russian AO-2.5 RTM submunition crashed through the roof of his home and lodged unexploded in his floor. The August 2008 strike left two duds in his home, and on October 18, 2008, the day of this photograph, he found a third one in his cabbage field. © 2008 Bonnie Docherty/Human Rights Watch



A Russian 9N210 submunition is shown here with its fragmentation core and a piece of fragmentation at a demining organization's office. The submunition, an antipersonnel and anti-materiel weapon, is carried in Uragan (Russian for Hurricane) rockets. © 2008 Bonnie Docherty/Human Rights Watch



A local farmer found this Uragan (Russian for Hurricane) rocket near where four women were injured by a Russian cluster munition strike on Ruisi on August 12, 2008. The ground-launched rocket, shown here on October 15, 2008, carried 30 9N210 submunitions. © 2008 Bonnie Docherty/Human Rights Watch



An unexploded Russian AO-2.5 RTM submunition lies near the public square in the center of Variani in August 2008. The submunition, an antipersonnel and anti-materiel weapon, can be carried in RBK-500 and RBK-250 air-dropped cluster munitions. © 2008 Ole Solvang/Human Rights Watch



This Russian, air-dropped RBK-500 cluster munition was found near the *birzha*, or gathering place, in Variani. The RBK-500, shown on October 18, 2008, carried AO-2.5 RTM submunitions. © 2008 Bonnie Docherty/Human Rights Watch



An unexploded M85, an antipersonnel and anti-armor submunition, lies next to a building in Shindisi in August 2008. Bought from Israel and launched by Georgia, this submunition is carried in a Mk.-4 160mm rocket. © 2008 Marc Garlasco/Human Rights Watch



A Mk-4 160mm rocket lies in a field in Ditsi on October 17, 2008. Bought from Israel and launched by Georgia, the rocket carries 104 M85 submunitions. © 2008 Bonnie Docherty/Human Rights Watch

Use of Cluster Munitions by Russia

Russia used cluster munitions in or near nine towns and villages in the Gori-Tskhinvali corridor south of the South Ossetian administrative border. Russian cluster munition strikes on populated areas killed 12 civilians and injured 46 more. Human Rights Watch did not document any casualties from Russian duds after the time of attack, but it did find many unexploded submunitions so the potential for future injuries remains.

During multiple missions to the Gori and Kareli districts just south of the South Ossetian administrative border, Human Rights Watch researchers found unexploded submunitions, pieces of detonated submunitions, and carrier bombs and rockets. They also conducted interviews with victims and witnesses of cluster munition strikes and deminers who work in the area. Through these sources, researchers gathered evidence of Russian cluster munitions in or near villages, towns, and one city mostly in a band to the south of the area investigated: Akhaldaba, Dzlevijvari, Gori, Pkhvenisi, Ruisi, Variani, and Varianis Meurneoba. In early 2009 NPA deminers found evidence of Russian 9N210 submunitions from the August 2008 conflict in two additional villages: Kvemo Khviti and Zemo Nikozi.⁶⁶

In official statements, Russia has repeatedly denied using cluster munitions.⁶⁷ Nevertheless, Human Rights Watch has concluded that these incidents are attributable to Russian actions. According to witnesses, the targets were Georgian, not Russian, troops. Although Georgian troops were usually not in the immediate vicinity of a strike, they were often in the general area, and Russian troops were not. Russia is known to have produced and to stockpile the types of cluster munitions used (AO-2.5 RTM and 9N210 submunitions, RBK series bombs, Uragan rockets, and Iskander missiles, as described above). Georgia reports that it possesses RBK-500 bombs, but that their shelf-lives have expired and they are slated for destruction.⁶⁸ Human Rights Watch knows of no evidence that Georgia ever possessed the Uragan rocket with 9N210s or the Iskander missile.⁶⁹ International deminers, who are cluster

⁶⁶ Email communications from Jonathon Guthrie, program manager, Norwegian People's Aid, to Human Rights Watch, March 10 and March 27, 2009.

⁶⁷ See, for example, "Russia Denies Use of Cluster Bombs in Georgia," *RIA Novosti*, August 15, 2008, <http://en.rian.ru/world/20080815/116065270.html> (accessed January 28, 2009).

⁶⁸ Response of Georgian Ministry of Defense to Human Rights Watch Questions, February 12, 2009.

⁶⁹ Widely respected sources on arms arsenals, including Jane's and the International Institute of Strategic Studies, have not reported any Georgian stockpiles of these weapons. As stated in the Dutch investigative report, the Iskander is believed to be stockpiled only by Russia. Dutch Ministry of Foreign Affairs, "Report of the Störmans Investigative Mission," p. 6.

munition experts and are doing clearance in the region, believe these submunitions to be Russian.⁷⁰

In its strikes on or near populated areas, Russia violated the international humanitarian law prohibition against indiscriminate attacks.⁷¹

Civilian Casualties at the Time of Attack

Russian cluster munitions landed in or near a city, town, or village in nine strikes, and in three—on Gori, Ruisi, and Variani—they caused dozens of civilian casualties. Many witnesses said Georgian troops or vehicles, the most likely cluster munition targets, were not in the immediate area at the time of the strikes, and in no case did Human Rights Watch find evidence of enemy units at the site of the attack.

Gori City

According to an investigation initiated by the Dutch Ministry of Foreign Affairs, Russia attacked the city of Gori with cluster munitions on August 12. The conclusions of the investigation support the findings of Human Rights Watch's research. Gori's GorMed Hospital, the civilian hospital in Gori, reported that the attack killed six civilians, including a Dutch cameraman, and injured 24.⁷²

The Dutch government investigation was an effort to clarify the circumstances that led to the death of RTL cameraman Stan Storimans on that day. The team analyzed the site, photographs and videos, physical evidence, and testimony from witnesses, government officials, and nongovernmental organization (NGO) researchers. It concluded that a Russian Iskander missile carrying submunitions landed on the main square in Gori at around 10:45 a.m., killing Storimans and killing and injuring others in the area.⁷³

The Dutch government report determined that Georgian troops had fled Gori by August 12. Storimans, his colleague Jeroen Akkermans, and Israeli journalist Zadok Yehzekli arrived at Gori's central square around 10:30 a.m. that day. Storimans had recorded footage of the scene, including the statue of Stalin, and was heading back to his taxi when the explosion

⁷⁰ Human Rights Watch interview with Joseph Huber, then program manager, Norwegian People's Aid, Tbilisi, October 14, 2008; Human Rights Watch interview with Mick McDonnell, operations manager, iMMAP, Tbilisi, October 17, 2008.

⁷¹ For a full discussion of international humanitarian law violations by Russia in the August 2008 conflict, see Human Rights Watch, *Up in Flames: Humanitarian Law Violations and Civilian Victims in the Conflict over South Ossetia*, 1-56432-427-3, January 2009, <http://www.hrw.org/en/reports/2009/01/22/flames-0>.

⁷² Human Rights Watch telephone interview with Paata Kharabadze, chief doctor of GorMed Hospital, Gori, November 5, 2008.

⁷³ Dutch Ministry of Foreign Affairs, "Report of the Storimans Investigative Mission," p. 7.

occurred. It killed Storimans, seriously injured Yehzekli, and killed or injured many other bystanders.⁷⁴ While the blast did not cause any structural damage, it shattered windows and left fragmentation marks in neighboring buildings and the taxi.⁷⁵

The Storimans investigation did not find any submunitions but identified from photographs in the vicinity an Iskander missile, a Russian weapon that the Dutch report said carries 20 submunitions. It determined that “the entire square and several nearby streets [an area of about 300 by 500 meters] had been hit in the same manner” with metal fragments measuring about five millimeters.⁷⁶ The report says, “It was deduced from the entry holes that the bullets [that is fragments] were from multiple explosions, both on the ground and in the air.”⁷⁷ Video footage from journalists and security cameras also showed such explosions.⁷⁸ This evidence was consistent with the workings of and damage caused by cluster munitions.

One of heads of the Dutch investigation, Adriaan Jacobovits, told Human Rights Watch that the submunitions had identical fragments and that he believed they were only antipersonnel weapons. Investigators ruled out the alternative possibility of an airburst of a unitary weapon because video from three cameras showed one incident with 20 explosions. Each explosion left a distinct pattern with fragmentation marks radiating from the center, like the pattern left by a submunition. The explosions also created craters in the main square, on neighboring streets, and even in homes, Jacobovits said.⁷⁹

Human Rights Watch’s research focused on this incident from the perspective of Georgian civilians and independently reached the same conclusion as the Storimans investigation. Human Rights Watch researchers took victim and witness testimony and examined both video footage and physical damage to the area. They also found different parts of an Iskander missile at two sites within a few blocks of the strike.

On the morning of August 12 a group of civilians had gathered to receive food from local officials at the Gori Municipality Administration building located on the city square. A nearby car accident caused further commotion and crowding, and some journalists stopped on the

⁷⁴ *Ibid.*, p. 4.

⁷⁵ *Ibid.*

⁷⁶ *Ibid.*, p. 5.

⁷⁷ *Ibid.*

⁷⁸ *Ibid.*

⁷⁹ Human Rights Watch telephone interview with Adriaan Jacobovits, former ambassador and head of Storimans Investigative Mission, November 19, 2008.

square to inquire about directions. Two victims estimated that there were at least 40 civilians on the square when the attack took place.⁸⁰

Victims of the attack said that before falling to the ground, they saw numerous small explosions within seconds. Ketj Javakhishvili, 24, was walking to a neighbor's house for bread when the attack came.⁸¹ Dr. Merab Kiladze, head of the surgery department of the Gudushauri National Medical Center in Tbilisi, told Human Rights Watch that Javakhishvili suffered massive injuries to her liver, stomach, and intestines as well as hemorrhagic shock. Kiladze said it would require multiple procedures to repair all of the damage and months to convalesce.⁸²

Another victim, Nodar Mchedlishvili, 54, told Human Rights Watch that he went to the municipality building to get rice to feed eight people displaced from South Ossetian villages. He said, "In a couple of seconds, from everywhere I heard what sounded like massive gunfire. We fell on the ground, and some people never got up."

Mchedlishvili sustained shrapnel wounds to his left leg and knee. He was driven to GorMed Hospital in a car with six other victims as part of a convoy of the injured before being transferred to Tbilisi. Giorgi Malkhaziani, 59, whose right leg was shredded as a result of the attack, corroborated Mchedlishvili's account of the events.⁸³

The main command center for the Georgian military operation in South Ossetia was located in Gori. Witnesses, however, reported no military forces on the square when it was attacked.⁸⁴ The Dutch report corroborated this testimony and stated that the Georgian military had fled Gori by August 12.⁸⁵

Ruisi

On August 12 Russian forces attacked the village of Ruisi at its northwest and southeast ends. They used Uragan rockets that scattered gN210 submunitions across the area. The submunitions killed three civilians and wounded six others at the time of the attack.

⁸⁰ Human Rights Watch interview with Nodar Mchedlishvili and Giorgi Malkhaziani, Gudushauri National Medical Center, Tbilisi, August 13, 2008.

⁸¹ Human Rights Watch interview with Ketj Javakhishvili, Gudushauri National Medical Center, Tbilisi, August 13, 2008.

⁸² Human Rights Watch interview with Dr. Merab Kiladze, Gudushauri National Medical Center, Tbilisi, August 13, 2008.

⁸³ Human Rights Watch interview with Nodar Mchedlishvili and Giorgi Malkhaziani, August 13, 2008.

⁸⁴ Human Rights Watch interview with Ketj Javakhishvili, August 13, 2008; interview with Gvtiso Sekhniashvili, Gori, August 29, 2008.

⁸⁵ Dutch Ministry of Foreign Affairs, "Report of the Storimans Investigative Mission," p. 4. The report states, "By August 12, military and police units had abandoned Gori."

Suliko Goginashvili, 65, died in the northwest part of town that day. He had taken the family's cows to graze in their fields in the morning. An assault began around 11 a.m. and lasted until about 2 p.m. "When we found him he had numerous wounds. His head was broken.... His legs and hand were sliced off," his 57-year-old wife, Iza, said.⁸⁶ Cluster munitions also killed Natela Guraspashvili, a 75-year-old woman who accompanied Goginashvili to the fields. While Goginashvili's family waited three days to bury him, Guraspashvili's body was so damaged that it "could not be put back together," and she was buried immediately.⁸⁷ Khvicha Sa'atashvili, a 45-year-old carpenter, showed Human Rights Watch researchers pieces of an Uragan rocket that he found near where Suliko Goginashvili died. He also showed them fragments of 9N210s he found in his house and yard in the middle of town.⁸⁸

On the same day, around noon, Ushangi Beruashvili, 68, hurried along the highway near the edge of his village, heading to Kareli to escape the violence. When the fighting began, he turned back to find shelter in a basement not far from Goginashvili's field. As he was entering the basement, "Something hit me in the stomach area. My intestines fell out. I held them in."⁸⁹

As his wife, uninjured, left to seek help, the village administrator passed by with his own family and drove Beruashvili to Khashuri Hospital, west of Kareli. Beruashvili stayed in the hospital for two weeks with several other victims from his village, including Mzia Khanisvili. His small intestine had been "cut into pieces"; doctors have sewed it back together, but he said in October 2008 that he would have to wait for three months, while the intestine healed, for an operation to reinsert it in his abdomen.⁹⁰ At the time of Human Rights Watch's visit, his wife was in Tbilisi to negotiate with the minister of health for the medical assistance Beruashvili needs.

The population of Ruisi suffered casualties at the other end of town during the same attack. Amiran Vardzelashvili, 76, was walking on the path to his garden next to his home when a cluster munition landed. A submunition fragment pierced his heart, killing him almost immediately.⁹¹

⁸⁶ Human Rights Watch interview with Iza Goginashvili, wife of victim, Ruisi, October 15, 2008.

⁸⁷ Ibid.

⁸⁸ Human Rights Watch interview with Khvicha Sa'atashvili, carpenter, Ruisi, October 15, 2008.

⁸⁹ Human Rights Watch interview with Ushangi Beruashvili, Ruisi, October 15, 2008.

⁹⁰ Ibid.

⁹¹ Human Rights Watch interview with Gela Vardzelashvili, son of victim, Ruisi, October 15, 2008.

Marine, one of his six daughters, was at home when the strike occurred, and she described the scene:

We heard bombs exploding in different places. People were screaming and crying. We could feel the blast waves from the explosions. It was right near our house.... Suddenly, we heard our father screaming, “Gela!” He was calling for his son. We ran out and saw him. My father was on the ground, all covered in blood. He died on the spot from shrapnel wounds. We buried him here, in the yard.⁹²

According to Vardzelashvili’s 35-year-old son, Gela, the attack left one big crater and 15 small ones in the garden.⁹³ He and a neighbor showed Human Rights Watch pieces of an Uragan rocket that landed at the scene.

About 700 meters away, a group of women watched other parts of the village being destroyed. Fearing for their lives if they stayed in their homes, they fled to the local church, clearly marked by a large cross. Seventeen-year-old Tinatin Beruashvili said, “We felt the Russians would know it was a church and not bomb it.”⁹⁴ She and her mother, Maya, 40, and two neighbors, Tsiuri Khanishvili, 56, and Tsiala Beruashvili, 50, huddled near the church on a large pipe under a tree, and cluster munitions fell around them. Rather than finding safety, they all suffered extensive injuries, and houses near the church burned.⁹⁵ The church itself was not damaged, but gravestones in the attached cemetery had fragmentation marks from exploding submunitions.

Tsiala described hearing an explosion as something hit the church cemetery. When she realized she could not run away, she lay down:

I felt a big piece of shrapnel cutting my left leg. There was a big open wound. I lost consciousness. When I came to my senses, I heard Tinatin screaming that I needed help because I couldn’t walk. They helped me out.

Tsiala stayed in the hospital for two weeks and had to return regularly for another two weeks to receive treatment as an ambulatory patient.⁹⁶

⁹² Human Rights Watch interview with Marine Vardzelashvili, daughter of victim, Ruisi, August 22, 2008.

⁹³ Human Rights Watch interview with Gela Vardzelashvili, October 15, 2008.

⁹⁴ Human Rights Watch interview with Tinatin Beruashvili, Ruisi, October 15, 2008.

⁹⁵ Human Rights Watch interview with Tsiala Beruashvili, Ruisi, October 15, 2008.

⁹⁶ *Ibid.*

Maya did not lie down. She said she thought she had lost an eye and felt her hand get “heavy.” She suffered shrapnel wounds near her eye and to her face, right hand, hip, and back. Seeing that Tsiala could not stand, Maya helped her up, and the two walked to get help. A neighbor took them in a minivan to the hospital.⁹⁷ Maya showed Human Rights Watch a piece of shrapnel that doctors had removed, and it matched the fragmentation of a 9N210.

Maya’s daughter Tinatin said she was hit in the lower right leg. She suffered a broken bone, and the hospital put her leg in a cast.⁹⁸

Tsiuri said she screamed when she heard the explosion. “I had shrapnel in my back. When I stood up to run away, several hit me in the buttock. I still have shrapnel in my body,” she said. The overwhelmed hospital could not give her deep wounds due attention and therefore did not remove the shrapnel.⁹⁹

The women showed Human Rights Watch researchers an Uragan rocket that had fallen in the cemetery, and a neighbor boy showed them a handful of 9N210 fragments from the same place. Damage from such fragments was visible on the gravestones of the cemetery. According to Tamara Khodanovich, 59, her husband, Arjevan Beruashvili, 72, passed the women hiding by the church on his way to his garden. Another rocket fell near him, but he was not injured. Khodanovich showed Human Rights Watch researchers the rocket, which was also an Uragan.¹⁰⁰

While in Ruisi, Human Rights Watch researchers also visited a contaminated garden next to some homes. NPA deminers were clearing the site and showed researchers seven unexploded 9N210s as well as many pieces of submunitions and rockets from the attack. The submunitions had shattered the windows and left shrapnel marks on the walls of a neighboring home. Amir Musanovic, who was leading the clearance team, estimated the 9N210s in his 200,000 square meter area of operation had a 35 percent dud rate.¹⁰¹

Some witnesses who spoke to Human Rights Watch said that Georgian troops had moved through the town the previous day but that on the day of the attack, all Georgian troops had

⁹⁷ Human Rights Watch interview with Maya Beruashvili, Ruisi, October 15, 2008.

⁹⁸ Human Rights Watch interview with Tinatin Beruashvili, October 15, 2008.

⁹⁹ Human Rights Watch interview with Tsiuri Khanishvili, Ruisi, October 15, 2008.

¹⁰⁰ Human Rights Watch interview with Tamara Khodanovich, Ruisi, October 15, 2008.

¹⁰¹ Human Rights Watch interview with Amir Musanovic, technical advisor, Norwegian People’s Aid, Ruisi, October 15, 2008.

left the town and were deployed a few kilometers outside of it.¹⁰² A local shopkeeper described how Georgian troops were fleeing the area with their equipment by two roads on August 11, the day before the attack.¹⁰³ Another resident, however, said that Georgian troops were in the town at the time of the attack.¹⁰⁴ Regardless of whether Georgian troops were present, use of cluster munitions in a populated area like Ruisi would violate existing international humanitarian law.

Variani

Russian forces attacked the town of Variani with AO-2.5 RTMs on August 8 and again on August 12. Human Rights Watch found evidence of submunitions spread throughout two neighborhoods as well as in the fields on the edge of town. Incidents in the two neighborhoods killed a total of three civilians and wounded 16 more.

Strike at the *Birzha*

On August 8, more than a dozen men had congregated at a *birzha*, or gathering place, in the center of town. “It was in the morning, when people send their cows to pasture.... We were talking and chatting.... The bomb fell from the air, and it exploded. It happened in seconds, and we all fell down. When I looked around, I saw people spread all around,” said 70-year-old Teimuraz Khizanishvili. A few meters away, he saw Malkhaz Bedoshvili, about 31, lying face down, dead. Malkhaz’s father, Omar, about 65, “sat down and covered his wounds. He was taken to Gori [GorMed] Hospital and died several hours later.” Khizanishvili said there were no Georgian troops in the neighborhood.

Khizanishvili himself, wheelchair-bound with two large casts in October 2008, suffered serious injuries. Both his legs were broken, and he had shrapnel “everywhere” in his body, including his forehead, hand, legs, torso, and back. His 43-year-old son, Nikoloz, sustained numerous shrapnel injuries, including a gaping wound in his right thigh. After four operations, he still had to use crutches and would have to have further surgery. Khizanishvili’s 70-year-old wife, Tamara Kokashvili, was at their nearby home, and the explosion burst her eardrum so that she has lost almost all her hearing.¹⁰⁵

¹⁰² See, for example, Human Rights Watch interview with Tsiala Beruashvili, October 15, 2008; Human Rights Watch interview with shop woman, Ruisi, October 15, 2008; Human Rights Watch interview with Ushangi Beruashvili, Khashauri hospital, August 24, 2008 (saying he believed the attacks were targeting Georgian military two kilometers outside of town); Human Rights Watch interview with Naira Mindiashvili, Tbilisi, August 17, 2008 (saying that there were no military objects in Ruisi and that the Georgian military was closer to Variani); Human Rights Watch interview with Marine Vardzelashvili, August 22, 2008.

¹⁰³ Human Rights Watch interview with shop woman, Ruisi, October 15, 2008.

¹⁰⁴ Human Rights Watch interview with resident (name withheld), Ruisi, October 15, 2008 (saying “The military was running through the village and was in a house nearby with some equipment.”).

¹⁰⁵ Human Rights Watch interview with Teimuraz Khizanishvili, Variani, October 18, 2008.

Izo Khizanishvili, 67, who lived immediately adjacent to the *birzha*, was in her garden when the submunitions landed. She said,

I heard a loud explosion in the area. There were multiple ones. I dropped my tool and ran away. When I got to the fence, shrapnel hit me. I was hit in the back and was bleeding. My son was not home, so I was worried. I went out and saw 14 to 15 people around. There were two dead, and the rest were wounded.

She was taken to GorMed Hospital, treated, and released.¹⁰⁶

Lia Kereselidze, 48, was at her nearby home when she heard the explosion followed by screams and shouts. “My husband [56-year-old Niko] was wounded and screaming for help. He was still conscious,” she said. Niko had 14 pieces of shrapnel in his left side and three more in his back. He was in Gori for treatment at the time of Human Rights Watch’s visit.¹⁰⁷

The Giorgishvili family was planning to leave the village before the attack came. That morning, 13-year-old Beka went to say goodbye to his friends, 12-year-old Vakho and 8-year-old Tsira Urjumelashvili, who lived about 90 meters away from the *birzha*. The three friends were pumping up the tires of Vakho’s new bike when an explosion went off about five meters away. Fragments broke Beka’s skull, and doctors could not remove the shrapnel; he suffered brain damage and can no longer speak clearly.¹⁰⁸ Vakho had shrapnel in the back of his shoulder and armpit, and his sister Tsira was also wounded.¹⁰⁹

Human Rights Watch collected testimony that in addition to killing two men, the strike at the *birzha* injured 14 people.¹¹⁰ Their names and ages are:

- 1) Kakha Adamashvili, about 43
- 2) Ilia Adamashvili, about 31
- 3) Temo Adamashvili, about 27
- 4) Dato Akopov, about 31

¹⁰⁶ Human Rights Watch interview with Izo Khizanishvili, Variani, October 18, 2008.

¹⁰⁷ Human Rights Watch interview with Lia Kereselidze, Variani, October 18, 2008.

¹⁰⁸ Human Rights Watch interview with Khatuna Giorgishvili, Beka’s mother, Variani, October 18, 2008.

¹⁰⁹ Human Rights Watch interview with Vakho Urjumelashvili, Variaini, October 18, 2008.

¹¹⁰ Human Rights Watch interview with Teimuraz Khizanishvili, October 18, 2008; Human Rights Watch interview with Khatuna Giorgishvili, October 18, 2008; Human Right Watch interview with Vakho Urjumelashvili, October 18, 2008; Human Rights Watch interview with Lia Kereselidze, October 18, 2008; Human Rights Watch interview with Izo Khizanishvili, October 18, 2008.

- 5) Beka Giorgishvili, 13
- 6) Niko Kereselidze, 56
- 7) Izo Khizanishvili, 67
- 8) Mikheil Khizanishvili, about 46
- 9) Teimuraz Khizanishvili, 70
- 10) Nikoloz Khizanishvili, 43 (Teimuraz's son)
- 11) Tamara Kokashvili, 70 (Teimuraz's wife)
- 12) Vano Khizanishvili, about 65
- 13) Tsira Urjumelashvili, 8
- 14) Vakho Urjumelashvili, 12.

At Lia Kereselidze's home, about 130 meters from the *birzha*, Human Rights Watch saw a cluster munition canister labeled "RBK-500/AO-2.5 RTM" in Cyrillic and the crater in which it had landed. Kereselidze said two others had been found in the area but had been removed.¹¹¹

Strike on Another Neighborhood

Cluster munitions caused additional civilian casualties in a neighborhood on the other side of Variani. On August 12, Suliko Zubashvili, 59, stood on a street corner talking to two neighbors, Zakro Buzaladze and 78-year-old Gaioz Kebabze, when he heard a jet overhead, followed by an explosion. The strike wounded both Zubashvili and Buzaladze and killed Kebabze. "I was wounded in the leg, chest, back, [and] fingers," Zubashvili said. "I don't remember how many explosions there were. I fell down and got up. I was bleeding, and when I looked back, Gaioz was dead. Nobody was here to help so I went home and tried to stop the bleeding." When he could not stop the bleeding himself, he went to his brother's wife who called a nurse to help bandage the wounds. The next day, he walked 12 kilometers to the GorMed Hospital in Gori because there was no ambulance. He was ultimately transferred to Tbilisi and spent about 10 days in the hospital there. Buzaladze suffered minor wounds to his back and treated himself.¹¹²

While those were the only casualties in that part of town, AO-2.5 RTMs covered the neighborhood. Galaktion Zubashvili, 79, said he was sitting on a bench outside his front door when jets flew overhead. "Something told me I should get up and go inside. Then something exploded.... [T]hen I saw shrapnel, and smoke rising up," he said. He sought shelter in his home. After the fighting stopped, Zubashvili found three unexploded

¹¹¹ Human Rights Watch interview with Lia Kereselidze, October 18, 2008.

¹¹² Human Rights Watch interview with Suliko Zubashvili, Variani, October 18, 2008.

submunitions, craters from three submunitions that exploded in his yard, and one crater in his neighbor's yard.¹¹³

Anzor Zubashvili, 68, said at least two submunitions exploded on impact in his yard. When he came out of his basement after the attack, he said, "Windows had come down. Doors had come off. The leaves and trees had fallen. It looked as if there had been many years of no one in the area." He later found six unexploded AO-2.5 RTMs in his house and yard. For example, when he went to repair his roof a month after the strike, he found two submunitions and carried them downstairs until deminers could remove them. He found another one on October 16, two days before Human Rights Watch arrived.¹¹⁴

During its visit, Human Rights Watch found three unexploded AO-2.5 RTMs and the separation rings of two more. It heard reports of an additional 50 individual submunitions that had exploded on impact or been destroyed by deminers in Variani and the fields just outside it.¹¹⁵

While some villagers said Georgian troops might have been in the fields surrounding Variani, they said there were none in the town at the time of the attacks.¹¹⁶

Other Strikes

Human Rights Watch itself found evidence of Russian cluster munitions in or near four other towns. In Akhaldaba, Russian forces dropped AO-2.5 RTMs along the Liakhvi River on the edge of town. Amiran Natsvlshvili, a trout farm guard, described the submunitions and showed Human Rights Watch researchers HALO Trust warning signs and sandbags. He also said that deminers had cautioned him not to touch the submunitions.¹¹⁷

¹¹³ Human Rights Watch interview with Galaktion Zubashvili, Variani, October 18, 2008.

¹¹⁴ Human Rights Watch interview with Anzor Zubashvili, Variani, October 18, 2008.

¹¹⁵ Human Rights Watch interview with Tengo Keadze, Variani, October 18, 2008 (reporting deminers cleared 27 submunitions from his cherry orchard); Human Rights Watch interview with Lia Kereselidze, October 18, 2008 (reporting deminers had cleared four submunitions in her garden); Human Rights Watch interview with Teimuraz Khizanishvili, October 18, 2008 (reporting deminers had cleared two submunitions from his home); Human Rights Watch interview with Nukri Stepanishvili, Variani, October 18, 2008 (reporting two submunitions had been removed from his home); Human Rights Watch interview with Anzor Zubashvili, October 18, 2008 (reporting two explosions and six duds in his yard); Human Rights Watch interview, Galaktion Zubashvili, October 18, 2008 (reporting four explosions and three duds in his and his neighbor's yard).

¹¹⁶ Human Rights Watch interview with Archil Khizanishvili, Variani, October 18, 2008 (saying there were troops in town at other times but not at the time of this incident); Human Rights Watch interview with Teimuraz Khizanishvili, October 18, 2008 (saying that Georgian troops were not in town at the time of this attack but could have been outside the town); Human Rights Watch interview with Galaktion Zubashvili, October 18, 2008 (saying that Georgian troops were by a river outside of town).

¹¹⁷ Human Rights Watch interview with Amiran Natsvlshvili, trout farm guard, Akhaldaba, October 18, 2008.

On August 11 Ilia Chagalishvili, a 54-year-old farmer, was resting on a log in his field outside Dzlevijvari. Suddenly, at around 11 a.m., a rocket crashed into the next field. “When it fell and exploded, I started running [home]. I saw there was another one in my house. I saw the windows were broken,” he said.¹¹⁸ The rocket that was embedded in his backyard had suffered a catastrophic failure, meaning that it had not properly dispensed its submunitions and most of them had not exploded. He was too afraid to sleep in his home for two weeks, but the rocket was not cleared until the week of October 12.¹¹⁹ He added, “There was no Georgian military here on the 11th [of August]. The entire village was empty. There were only five people remaining. There was nobody around. I have no idea why the Russians would attack.”¹²⁰ Human Rights Watch found many pieces of 9N210 submunitions at the craters both at his home and in his field.

In Pkhvenisi, Gocha Asanidze, a 44-year-old farmer, showed Human Rights Watch researchers an Uragan rocket embedded in a tomato field outside of town and many pieces of 9N210 submunitions. He had found the rocket and debris when he returned to town after the war in late August. Deminers had cleared the site in mid-October.¹²¹ As will be discussed in the next chapter, Georgian cluster munitions also struck Pkhvenisi.

Residents of Varianis Meurneoba showed Human Rights Watch researchers nine pieces of RBK-250 pusher plates, which help deploy the AO-2.5 RTMs carried by the bombs. Each bomb has three such plates that form a circle. The residents reported that the Russians had done extensive clearance in the area before they withdrew in October.

In March 2009 NPA reported to Human Rights Watch that 9N210s had landed on two additional villages during the conflict. It identified the submunitions in an orchard outside of Kvemo Khviti. It also found the remains of an Uragan rocket and its submunitions “throughout the village area” of Zemo Nikozi, including 100 meters behind a school.¹²² As will be mentioned in the next chapter, Georgian M85 submunitions also landed on both these villages.

¹¹⁸ Human Rights Watch interview with Ilia Chagalishvili, farmer, Dzlevijvari, October 21, 2008.

¹¹⁹ Ibid.

¹²⁰ Ibid.

¹²¹ Human Rights Watch interview with Gocha Asanidze, farmer, Pkhvenisi, October 20, 2008.

¹²² Email communications from Guthrie, March 10 and March 27, 2009.

Socioeconomic Harm

Since the area's economy relies heavily upon agriculture, Russian duds have endangered those who attempt to harvest their crops and impeded Georgians' ability to tend their farms and livestock and earn a living. While some of the Russian strikes on fields may have been aimed at Georgian military targets, the Russian forces' decision to use cluster munitions, which have high dud rates, has caused socioeconomic harm after the conflict. This harm was most visible in Variani, where submunition duds blocked many farmers from their fields. Nukri Stepanishvili, a 44-year-old farmer, left the town on August 11, just as the Georgian military was fleeing, and returned a couple weeks later to find two submunition duds had penetrated his home. On October 18, he found another unexploded AO-2.5 RTM in his cabbage patch. He reported it to the police and showed it to Human Rights Watch researchers. "I haven't harvested. I won't until there is some clearance," he said. He feared losing his cabbages, which would be ready to harvest in early November. He had also lost his tomatoes because they went unwatered during his forced absence in August.¹²³

Tamar Eremov, a 68-year-old farmer, echoed Stepanishvili's fears. Looking for walnuts on her land near the edge of town, she found an unexploded AO-2.5 RTM. "[Contamination] has interfered with my harvest.... Now I'm afraid to go in[to my fields] because of the ordnance."¹²⁴ She said she worried that the submunitions would prevent her from harvesting her tomatoes, beans, and corn.

Anzor Zubashvili, who had had eight submunitions land in his home and yard, said the attack had resulted in the loss of about 15,000 flowers, which he had grown to sell. Submunitions also killed his cow and one of his chickens.¹²⁵

Tengo Keadze, 42, another farmer from Variani, reported that the Georgian military deminers removed 27 submunitions from his cherry orchard. He still had a live AO-2.5 RTM in another field he owns that he had not reported.¹²⁶

Russian Statements about Cluster Munitions

Russia has denied using cluster munitions since the first reports about cluster use were published by Human Rights Watch. In a daily news briefing on August 15, Col. Gen. Anatoly Nogovitsyn, deputy head of the General Staff, said, "We did not use cluster bombs, and

¹²³ Human Rights Watch interview with Nukri Stepanishvili, October 18, 2008.

¹²⁴ Human Rights Watch interview with Tamar Eremov, farmer, Variani, October 18, 2008.

¹²⁵ Human Rights Watch interview with Anzor Zubashvili, October 18, 2008.

¹²⁶ Human Rights Watch interview with Tengo Keadze, October 18, 2008.

what's more there was absolutely no necessity to do so.”¹²⁷ The Ministry of Defense said it did not use cluster munitions “in the area of the Georgian-Ossetian conflict,” but the ministry did not explain what is included in the Georgian-South Ossetian conflict zone and whether it includes areas of Georgian territory beyond South Ossetia.¹²⁸ At the September meeting of the CCW Group of Governmental Experts, Andrei Malov, senior counselor in the Russian Ministry of Foreign Affairs, echoed this denial. In a January 30, 2009 letter to Human Rights Watch, a Russian Foreign Ministry official wrote, “Despite Georgian aggression in South Ossetia, the Russian Federation did not employ the use of cassette [cluster] bombs or antipersonnel landmines.”¹²⁹

On August 16, 2008, the Russian Ministry of Defense denied that it had used the Iskander missile in South Ossetia.¹³⁰ The Dutch Foreign Ministry investigation later said Russian forces had used this weapon in Gori. Human Rights Watch researchers saw the remnants of an Iskander missile in Gori in mid-August.

According to a member of the Dutch investigative team, Russian authorities provided no information for the report on the Gori incident, saying they had none to give.¹³¹ Nevertheless, on October 23, the Russian Ministry of Foreign Affairs disputed the findings of the Dutch investigation, claiming that it had not been presented with sufficient evidence to warrant the conclusion that a Russian cluster munition had killed Storimans. In a public statement, the ministry said, “No unambiguous conclusion about the identity of the ammunition whose fragments to all appearances had killed [Storimans] can be drawn on the basis of the data provided by the Dutch. The documents and death scene photographs submitted by the Dutch side are not sufficient evidence that Stan Storimans was killed as a result of the use of weapons by the Russian side.”¹³² The statement continued:

¹²⁷ “Russia Denies Use of Cluster Bombs in Georgia,” *RIA Novosti*, August 15, 2008, <http://en.rian.ru/world/20080815/116065270.html> (accessed February 17, 2009).

¹²⁸ “Russia Did Not Use Cluster Bombs in the Zone of the Georgian-South Ossetian Conflict Zone” (“Россия не использовала кассетные бомбы в зоне грузино-осетинского конфликта”), Ministry of Defense of the Russian Federation news release, August 15, 2008, <http://www.mil.ru/info/1069/details/index.shtml?id=49501> (accessed November 14, 2008).

¹²⁹ Letter from Andrei Kelin, director, Fourth Department for CIS Countries, Ministry of Foreign Affairs of the Russian Federation, to Human Rights Watch, January 30, 2009 (on file with Human Rights Watch).

¹³⁰ Russian Ministry of Defense, “Russian Troops Did Not Use the Iskander Missile System in South Ossetia” (Министерство обороны Российской Федерации, “Российские войска не применяли комплекс 'Искандер' в Южной Осетии”), August 16, 2008, <http://www.mil.ru/info/1069/details/index.shtml?id=49537>.

¹³¹ Human Rights Watch telephone interview with Adriaan Jacobovits, November 19, 2008.

¹³² Ministry of Foreign Affairs of the Russian Federation, “Response by the Russian Foreign Ministry’s Spokesman to a Media Question About the Death in Gori, Georgia, of a Netherlands Citizen in August 2008,” October 23, 2008, http://www.in.mid.ru/brp_4.nsf/sps/33BCABA43279F37FC3257523003F9EC7 (accessed April 1, 2009).

It is only regrettable that the arguments set forth at the Russian MFA during the October 17 meeting by the Russian side were not heard and did not find proper reflection in this document. We believe that the establishment of the true circumstances will require more careful work by military experts [sic]. Incidentally, the Georgian side has cluster warheads in service.¹³³

Notably, while rejecting the findings of the Dutch report, Russia did not specifically repeat its denial of cluster munition use elsewhere in this statement.

About a week later, the Russian Foreign Ministry announced it would conduct its own investigation of the Gori incident. ““We are cooperating closely with the Dutch government commission and have received its leadership in Moscow. All documents are currently being studied, and it has been decided that the results of our investigation will be offered to the Netherlands,” said Foreign Minister Sergei Lavrov.¹³⁴

Legal Analysis

Strikes on Gori’s main square and in the towns of Ruisi and Variani caused civilian casualties, and the strike on Dzlevijvari hit a farmer’s home in town. Human Rights Watch believes that cluster munition attacks in or near populated areas are indiscriminate and thus unlawful. Cluster munitions cannot distinguish between soldiers and civilians so when they are used in places where the two groups may commingle, they are inherently indiscriminate.

The attacks were also likely disproportionate. The Georgian military was retreating at the time, and many witnesses told Human Rights Watch that Georgian forces were not in the immediate vicinity of those attacks. As a result, the military advantage of the strikes is questionable. Their civilian harm, however, is clear. Russian cluster munitions killed or injured almost 60 civilians. Given the proximity of centers of civilian population to the strike areas, this harm was foreseeable, and Russia should have anticipated it. Human Rights Watch believes there should be a presumption that attacks on populated areas are disproportionate, and the evidence in these cases supports that position.

Russia should not only abide by these international humanitarian law provisions in the future but also live up to its obligations under CCW Protocol V, which it consented to be

¹³³ *Ibid.*

¹³⁴ “Russia Will Assist In Investigating the Death of Dutch Camera Operator in Georgia,” (“Россия поможет расследованию гибели голландского телеоператора в Грузии,”) *Gazeta.ru*, October 30, 2008, http://www.gazeta.ru/news/lenta/2008/10/30/n_1289685.shtml (accessed February 17, 2009).

bound by on July 21, 2008. Under this instrument, which encompasses cluster munitions, Russia's duties include "provid[ing] where feasible" assistance for clearance of ERW, such as submunitions.¹³⁵ As will be discussed below, Russian troops did significant surface clearance before they withdrew to the South Ossetian administrative border on October 10. Now the Russian military should provide assistance to other deminers, including by sharing information on strike locations, weapon types, and numbers of submunitions used, to facilitate and expedite clearance efforts.

The types of cluster munitions used by Russia fall under the scope of the new Convention on Cluster Munitions, and for those states party to the convention, their future use would violate its basic prohibition on all use of cluster munitions.

Russia, like all states, should sign and ratify the Convention on Cluster Munitions as soon as possible. If it cannot do so at this point, however, Russia should take immediate interim measures to minimize the humanitarian harm of cluster munitions. It should cease use in populated areas, a measure necessary anyhow to comply with its obligations under international humanitarian law. It should also prohibit future production and transfer, begin destruction of its enormous stockpiles, and assist with remedial measures, such as clearance, to ensure civilians do not die from the duds it left behind in Georgia.

¹³⁵ Protocol V, art. 3(1).

Use of Cluster Munitions by Georgia

Georgia also used cluster munitions during the August 2008 conflict. It fired M85 submunitions in Mk.-4 160mm rockets, weapons that it bought as packages from Israel. Responding to a Human Rights Watch inquiry related to cluster munitions, the Ministry of Defense said Georgia launched 24 volleys of 13 GRADLAR (Mk.-4) rockets each.¹³⁶ While these rockets can have unitary warheads as well, if they all were cluster munitions, they would have carried 32,448 M85 submunitions. In the strikes that Human Rights Watch confirmed, these cluster munitions caused fewer identified casualties than their Russian counterparts—at least four civilian deaths and eight injuries—but like all cluster munitions, they killed and injured civilians both during attacks and afterwards, and their duds continue to cause socioeconomic harm.

The Georgian Ministry of Defense has acknowledged using cluster munitions, saying its armed forces aimed at Russian targets between the Roki Tunnel and Tskhinvali in attacks from August 8 to 11.¹³⁷ Because it did not conduct a fact-finding mission to the region to investigate cluster munition use in particular, Human Rights Watch has not independently verified Georgia's description of this use of cluster munitions against targets in South Ossetia. In an interview with Human Rights Watch, a member of the Ossetian militia, who had been assisting in the evacuation of civilians along the Dzara road south of the Roki Tunnel, said he saw "a rocket which exploded in the air, and then small clusters started exploding."¹³⁸ Human Rights Watch did not corroborate this report or establish whether the use of these munitions caused civilian casualties in this area.

Russia reported on Georgian use of cluster munitions in South Ossetia only in February 2009. The Russian authorities' January 30, 2009 letter to Human Rights Watch did not respond to a request for information about this Georgian use during the conflict. A February 27, 2009 letter from the Investigative Committee of the Prosecutor General's Office, however, reported that Georgian armed forces "used heavy offense armaments—heavy artillery, Grad multiple-launch firing systems, 500-kilogram aerial bombs and cluster munitions—in shelling the civilian population and objects in South Ossetia."¹³⁹

¹³⁶ "Some Facts," attachment to email communication from David Nardaia, head of Analytical Department, Ministry of Defense of Georgia, to Human Rights Watch, November 18, 2008.

¹³⁷ Human Rights Watch interview with Batu Kutelia, then Georgian first deputy minister of defense, Tbilisi, October 21, 2008; Response of Georgian Ministry of Defense to Human Rights Watch Questions, February 12, 2009.

¹³⁸ Human Rights Watch interview with Mokhar N., Tskhinvali, August 14, 2008.

¹³⁹ Letter from M.G. Yadrov, head, Department for International Legal Cooperation's Investigative Committee, Office of the Prosecutor General of the Russian Federation, to Human Rights Watch, February 27, 2009 (on file with Human Rights Watch).

During several missions just south of the South Ossetian administrative border in the Gori District, Human Rights Watch researchers found unexploded M85 submunitions, ribbons from detonated submunitions, and Mk.-4 160mm rockets, all pieces of Georgian weapons.¹⁴⁰ They conducted interviews with villagers who had fallen victim to M85 submunitions, deminers who work in the area, and high-level government officials. Through these sources, researchers gathered evidence of M85s in or near a band of nine villages in the north of the Gori District: Brotsleti, Ditsi, Kvemo Khviti, Meghvrekisi, Pkhvenisi, Shindisi, Tirdznisi, Zemo Khviti, and Zemo Nikozi. A villager also showed them a Mk.-4 160mm rocket and red M85 ribbon in Variani, but because the town is further south and does not fit the geographic pattern, Human Rights Watch has not determined for certain if it landed in that location.

Several factors, which are discussed later in this chapter, suggest that the submunitions landed on these villages because of a massive failure. If the Georgian cluster munitions that Human Rights Watch documented landed where intended, their use would have violated international humanitarian law's prohibition on indiscriminate attacks because many struck populated areas.¹⁴¹ If the weapons failed dramatically, the attacks highlight the fact that cluster munitions are highly dangerous to use. The large number of duds makes the consequences of failure enormous. Human Rights Watch is unable to assess whether Georgia's use of cluster munitions between Tskhinvali and the Roki Tunnel violated international humanitarian law because, as mentioned earlier, researchers did not do an in-depth investigation in the area.

Civilian Casualties at the Time of Attack

Georgian cluster munitions killed at least one civilian and wounded at least two more when they landed on or near the towns of Tirdznisi and Shindisi. Witnesses interviewed by Human Rights Watch reported that Georgian, but not Russian, troops and tanks were in the area at the time of the incidents.

According to a March 26, 2009 press report, a Prosecutor General's Office spokesman said that cluster munition debris was found in the South Ossetian village of Pris. "Russian Claims Proof Georgia Used Cluster Munitions," *Russia Today*, March 26, 2009, http://www.russiatoday.com/Top_News/2009-03-26/Russia_claims_proof_Georgia_used_cluster_weapons.html (accessed March 28, 2009).

¹⁴⁰ In initial reports, Human Rights Watch attributed the M85 attacks around Pkhvenisi and Shindisi to Russia, based upon the accounts of nearly a dozen witnesses, interviewed separately, who said that Russian air strikes on Georgian armored units in the area were followed by extensive cluster munition strikes. There were no Russian ground forces reported in the area at that stage of the conflict. "Georgia: Civilians Killed by Russian Cluster Bomb 'Duds,'" Human Rights Watch news release, August 21, 2008, <http://www.hrw.org/en/news/2008/08/21/georgia-civilians-killed-russian-cluster-bomb-duds>. Further investigations led Human Rights Watch to change that original attribution. "Clarification Regarding Use of Cluster Munitions in Georgia," Human Rights Watch news release, September 3, 2008, <http://www.hrw.org/en/news/2008/09/03/clarification-regarding-use-cluster-munitions-georgia>.

¹⁴¹ For a full discussion of international humanitarian law violations by Georgia in the August 2008 conflict, see Human Rights Watch, *Up in Flames*.

Shindisi

M85s caused two casualties during a strike on the edge of Shindisi on August 9 at around 3:30 p.m. Vano Gogidze, 45, was killed, and his sister Ketino Gogidze, 38, was wounded.¹⁴² Human Rights Watch found M85s near the site of their death.

A witness, Zura Tatrishvili, told Human Rights Watch that Georgian troops had taken position in the fields adjacent to Shindisi during their multiple attacks into and retreats out of Tskhinvali. The area is a farming village, and though the village was not occupied, Tatrishvili stated, a large Georgian Army force spent the night in the fields from August 9 to 10.¹⁴³ According to two witnesses, Georgian troops and tanks were passing through the area, although not the location of the casualties, when the submunitions fell.¹⁴⁴

Tirdznisi

In Tirdznisi, M85s injured Alexandre Zerekidze, a driver and farmer, during an attack on August 9 at around 3:30 a.m. He opened his front door to investigate the noise he heard. Zerekidze told Human Rights Watch:

There was big shooting, and I came out to see what was happening. I heard screams and came out to see if someone was wounded. As soon as I came out, something exploded. I turned back, and shrapnel hit my back, stomach, and leg. I started bleeding. My kids were inside of the house. I tried to cover them. My wife treated me first and stopped the bleeding.¹⁴⁵

The next morning Zerekidze went to a hospital in Tkviavi and then on to Tbilisi. He was released a couple days later. Zerekidze reported that there were no troops in the village the day of the attack.

Zerekidze showed Human Rights Watch an M85 fragmentation ring from the incident and three small craters consistent with an M85 explosion in his front yard and neighboring garden.

¹⁴² Human Rights Watch interview with relative of Ketino Gogidze (name withheld), Shindisi, October 19, 2008; Human Rights Watch interview with Zura Tatrishvili, Shindisi, August 19, 2008.

¹⁴³ Human Rights Watch interview with Zura Tatrishvili, August 19, 2008.

¹⁴⁴ *Ibid.*; Human Rights Watch interview with Vazha Mazmishvili, October 19, 2008.

¹⁴⁵ Human Rights Watch interview with Alexandre Zerekidze, Tirdznisi, October 17, 2008.

Other witnesses reported that Georgian submunitions fell in the middle of Tirdznisi. Pridon Solomonian, 26, showed Human Rights Watch the red ribbon of an M85 that had landed right in front of a store. He recalled:

People were leaving en masse. It was around August 9, 2008, in the first half of the day. I was in my house [next door]. I saw [the submunitions] falling down. One exploded, and when I got here I found two red ribbons. There were many [M85s] in the village. There are some craters around.¹⁴⁶

Civilian Casualties from Submunition Duds

Human Rights Watch documented that, after the Georgian cluster munition attacks, M85 duds killed at least three civilians and wounded six when they were disturbed in Brotsleti, Pkhvenisi, and Shindisi.¹⁴⁷ Notwithstanding the absence of casualties in Ditsi, two incidents documented there by Human Rights Watch show the ongoing and widespread danger of duds in the area.

Brotsleti

Tariel Kikilashvili, a 38-year-old farmer, and Alika Kikilashvili, a 48-year-old farmer, were hiding in the fields outside Brotsleti during an attack on August 11. Tariel said, “When cluster bombs were dropped, they exploded first in the air, and then there were many more. I saw small craters every two meters in the fields.”¹⁴⁸ Alika recalled that on their way back home they saw “many of the small bombs.”

Three days later, Alika Kikilashvili was confronted with one of those duds. Between 1 and 2 p.m., he was headed to the fields to tend his cows. On his way, he met Tero Surameli, 46. Surameli was holding in his hands two small objects that to Kikilashvili looked like light sockets. One had a white ribbon, and one had a red ribbon. Someone had brought them from the fields and given them to Surameli. Kikilashvili told his friend to put them down.

¹⁴⁶ Human Rights Watch interview with Pridon Solomonian, Tirdznisi, October 17, 2008.

¹⁴⁷ An explosive remnant of war also caused an injury in Tirdznisi. It may have been caused by an unexploded submunition, but since Human Rights Watch could not definitively determine that, the casualty is not included in the total number. On August 24, Shota Kaidarashvili, 57, went to his garden to water and take care of his crops. When he started digging in the ground, something exploded. He suffered multiple wounds to the head, requiring doctors to remove part of his skull. He also had an open fracture of his lower right leg, and his right forearm was amputated. He arrived at the Gori military hospital at 10:45 a.m. that day in a coma, and doctors said he was in critical condition with a low chance of survival. Human Rights Watch interview with Shota Lapachi, Gori, August 24, 2008.

¹⁴⁸ Human Rights Watch interview with Tariel Kikilashvili, farmer, Brotsleti, October 16, 2008.

Then, he said:

I had my phone in my hand and it vibrated. I was five steps away [from Tero], and as soon as I answered it there was a big explosion. I felt a kind of wave of wind hit me. I couldn't understand what was happening.... I started running away and didn't feel wounded. I ran 700 to 800 meters. A dog started barking. I hid somewhere near my house because I [thought the Ossetians might be coming]. When I didn't see anyone, I realized maybe something else had happened. Maybe that what Tero was holding had exploded.

After recovering from the shock, Kikilashvili realized he had shrapnel in his stomach, both arms, and both legs. Much of that shrapnel remained in his body in October 2008. He said:

For four days I got no help. In particular my left leg had a hole. I poured vodka inside so there would be no infection. Four days later the Russians came. They had a field hospital here. Someone told them I needed help, and they took me to the field hospital. I was taken back and forth and treated.

Kikilashvili, who was facing Surameli at the time of the explosion, said it was a “miracle” he survived. According to Kikilashvili:

Tero's face was completely damaged. There were a lot of open wounds. He was alive for about an hour and then died. There was no treatment or medicine. Someone covered his wounds. He was buried in his yard and later moved to a cemetery.

Kikilashvili told Human Rights Watch that a third man, Amiran Khaduri, was walking behind the pair and was also injured, although less severely. He came to Surameli's aid when he heard the noise.¹⁴⁹

Human Rights Watch also found two unexploded M85s in the fields of Brotsleti in October 2008. One had a red ribbon and one a white.¹⁵⁰

¹⁴⁹ Human Rights Watch interview with Aliko Kikilashvili, farmer, Brotsleti, October 16, 2008.

¹⁵⁰ Another casualty occurred in Brotsleti on the afternoon of September 9. It was likely from a submunition dud given the extensive contamination in the town, but it could not be definitively proved because the victim did not see what exploded. Therefore Human Rights Watch has not included the victim in its total casualty figures. On that afternoon, Giorgi Chinchriki, 70, went to his field in Brotsleti to collect plums, which were hidden on the ground by tall grass. As he was cutting the grass to get to them, something exploded. Describing his injuries, he said, “I was hurt in my lip and lost a tooth. I also had 17 pieces of shrapnel in my right leg and one in my left leg. There were also some in my stomach and arm.” After he was injured, he walked

Pkhvenisi

On August 18, Veliko Bedianashvili, 72, found an unexploded M85 submunition with a red ribbon in a field close to his house in Pkhvenisi. It exploded and killed him. His son, Durmishkhan Bedianashvili, told Human Rights Watch, “There are so many of those lying around. The fields are full of them.”¹⁵¹ Human Rights Watch researchers also found a Mk.-4 160mm rocket in Pkhvenisi.

Shindisi

On August 10 at around 11 a.m., several men from the village of Shindisi decided to inspect one of the sites that had been hit the previous day. At the site they found an M85 submunition with a red ribbon, which they brought back to the village. When Ramaz Arabashvili, around 40, tried to disassemble it, the submunition exploded, killing him and wounding four others.¹⁵² The injured included Dato Arabashvili, Malkhaz Maisuradze, Nugzar Maisuradze, and Vaso Papunashvili.¹⁵³ Neighbors drove them to the hospital in Gori and then on to Tbilisi.¹⁵⁴

On their first visit to Shindisi on August 19, Human Rights Watch researchers found three M85s at the northern end of town. They also found two Mk.-4 160mm rockets. Zura Tatrishvili, 62, said at that time, “My garden is full of [unexploded ordnance]. There are three lines of these small mines. The lines start at my place and stretch for about a kilometer.”¹⁵⁵

On October 19 Human Rights Watch researchers identified two additional M85 duds in fields on the edge of town. Vazha Mazmishvili, 46, said he had found the duds four to five days earlier. Civilians reported that the Georgian military had cleared many duds, but that several more remained in the neighboring fields two months after the conflict. The researchers also found the inside packaging assembly of a Mk.-4 160mm rocket, which holds the submunitions before they are released by the canister.

to the main road where neighbors came to rescue him. His cousin took him to the GorMed Hospital in Gori, where he spent one week before being transferred to a hospital in Tbilisi. Chinchriki saw several submunition duds in his son's field, which is on the way to his field. He said some had white ribbons and some red. Human Rights Watch interview with Giorgi Chinchriki, Brotsleti, October 16, 2008.

¹⁵¹ Human Rights Watch interview with Durmishkhan Bedianashvili, Pkhvenisi, August 20, 2008.

¹⁵² Human Rights Watch interview with Ilya Arabashvili, Shindisi, August 27, 2008; Human Rights Watch interview with witness (name withheld), Shindisi, August 24, 2008.

¹⁵³ Human Rights Watch interview with Ilya Arabashvili, August 27, 2008; Human Rights Watch interview with Valiko Arabashvili, cousin of Ramaz Arabashvili, Shindisi, August 19, 2008; Human Rights Watch interview with Yulia Maisuradze, mother of Malkhaz Maizuradze, Shindisi, August 19, 2008.

¹⁵⁴ Human Rights Watch interview with Valiko Arabashvili, August 19, 2008; Human Rights Watch interview with Yulia Maisuradze, August 19, 2008.

¹⁵⁵ Human Rights Watch interview with Zura Tatrishvili, August 19, 2008.

Ditsi

Although they did not cause any civilian casualties, two incidents in Ditsi highlight how duds create an unsafe environment for the local population.

One incident is a vivid reminder that children are attracted to submunitions because they often resemble toys. Having been displaced by the conflict, Omar Mindiashvili, a 40-year-old driver, and his family returned to Ditsi six days before Human Rights Watch arrived on October 17. On October 13, his daughter Salome Mindiashvili, 13, and her cousin Mari Mindiashvili, 13, were playing on the rooftop porch of their house. They found two M85s, and Mari began twirling one around on her finger by its ribbon. Mindiashvili told Human Rights Watch:

Salome called, “Father, come, I’ll show you something.” I realized it could be something dangerous and took it to the [Georgian] police. When I saw the [firing] pin in, I realized it was an explosive. I had seen warning ads on TV.¹⁵⁶

Afterwards, a neighbor found a third M85 in Mindiashvili’s backyard, and a deminer came to clear it on October 16. During Human Rights Watch’s visit, researchers found a red ribbon on the roof where the girls had been playing.

Describing a second incident, Giorgi Barishvili, 57, said he picked up a submunition on the side of the road. It looked like a light socket, but had no ribbon, and he threw it away. When it did not detonate, he gave it to his son, who tossed it in the water. Only then did it explode. Barishvili did not recall the exact date of this incident. He also showed Human Rights Watch part of a Mk.-4 160mm rocket, which delivered M85s and was dug out of crater in a field outside of the village. It measured 160 millimeters in diameter and had a characteristic red ring and deployable fins at the base.

Socioeconomic Harm

M85 duds have not only cost lives but also interfered with livelihoods. Local civilians, who in the Gori District depend heavily on agriculture, have been forced to choose between going to their farms and risking injury or death from an unexploded dud, and staying at home and having little with which to feed their families. Most of those Human Rights Watch spoke to chose the latter option.

¹⁵⁶ Human Rights Watch interview with Omar Mindiashvili, driver, Ditsi, October 17, 2008.

Alika Kikilashvili, the farmer from Brotsleti who was injured by two duds, described how the weapons have ruined his source of food and income. In October 2008 he told Human Rights Watch,

I am not going to my fields. The harvest is now ready, but there are weeds and it is hard to notice anything [suspicious] so I am not going there. I hope there will be some deminers. My harvest includes apples and corn, which I sell. That's how we survive. That's how people live here. My peaches were lost completely. Now my apples are.¹⁵⁷

Other farmers in Brotsleti echoed Kikilashvili's comments. After being injured by an explosion in his overgrown plum orchard, Zhora Chinchriki feared returning to his fields. "Until someone goes to clean it up, I'm afraid to go back. I don't know if the deminers have been in my field," he said.¹⁵⁸ Sergo Nikolaishvili, 34, said most of the village shares this sentiment. He told Human Rights Watch that "unless they do some clearance, people are afraid to harvest. They have not been able to collect their food."¹⁵⁹

Human Rights Watch heard similar statements in towns across the region. In Shindisi, two women who lived near the site where Vano Gogidze was killed expressed fear of the duds left behind. "All our gardens and fields went bad because no one dares to go there to harvest," said one.¹⁶⁰ Dato Lapachi, a 46-year-old Tirdznisi farmer, said he was too afraid to farm.¹⁶¹ Although Human Rights Watch did not document casualties in Zemo Nikozi, at least one civilian said he stayed away from his fields because of unexploded submunitions.¹⁶²

Georgian Statements about Cluster Munitions

Georgian statements about cluster munitions evolved dramatically from August 2008 to March 2009. Georgia moved from completely condemning the weapon to acknowledging limited Georgian use to recognizing the possibility of a deadly failure of Georgian clusters yet defending their military advantage.

¹⁵⁷ Human Rights Watch interview with Alika Kikilashvili, October 16, 2008.

¹⁵⁸ Human Rights Watch interview with Zhora Chinchriki, Brotsleti, October 16, 2008.

¹⁵⁹ Human Rights Watch interview with Sergo Nikolaishvili, Brotsleti, October 16, 2008.

¹⁶⁰ Human Rights Watch interview with Alexandra Zhghenti and Marina Mamistarishvili, Shindisi, October 19, 2008.

¹⁶¹ Human Rights Watch interview with Dato Lapachi, Tirdznisi, October 16, 2008.

¹⁶² Human Rights Watch interview with man (name withheld), Zemo Nikozi, October 16, 2008.

Initial Condemnation

In August 2008 Georgia repeatedly blamed Russia for using cluster munitions but failed to acknowledge its own use. For example, the Ministry of Foreign Affairs issued a statement on August 15 that said, “It must be especially stressed, that the use of cluster munitions against civilian population is especially cynical next to the background of the efforts applied by the international community to restrict and even ban such types of weaponry.”¹⁶³ The same day, Georgian President Mikheil Saakashvili, in a press conference with US Secretary of State Condoleezza Rice, described cluster munitions as “an inhuman weapon” and the Russians as “21st century barbarians” and “cold-blooded killers” for using them against civilians.¹⁶⁴

Acknowledgment of Use

In early September, however, Georgia acknowledged its own use of cluster munitions. In a letter to Human Rights Watch made public on September 1, the Georgian Ministry of Defense stated that it had used cluster munitions “against Russian military equipment and armament marching from Rocki [sic] tunnel to Dzara road.” The ministry also insisted that cluster munitions “were never used against civilians, civilian targets and civilian populated or nearby areas.”

The letter, later made public, identified the type of cluster munitions used as Mk.-4 LAR160 rockets carrying M85 submunitions. It said the rockets were launched from the GRADLAR 160 multiple launch rocket system and had a range of 45 kilometers. It also claimed Georgia only had M85s with self-destruct mechanisms. The ministry denied launching rockets toward Shindisi, despite Human Rights Watch’s discovery of M85s there. It also said the Russians had not destroyed any GRADLAR launchers during the war.

The ministry concluded:

¹⁶³ Ministry of Foreign Affairs of Georgia, “Different Types of Heavy Conventional Weapons Have Been Indiscriminately Used against Civilian Population and Infrastructure of Georgia by Russian Armed Forces,” August 15, 2008, <http://georgiamfa.blogspot.com/2008/08/russians-use-cluster-munitions-against.html>. See “The War in Georgia: A Caucasian Journey,” *The Economist*, August 21, 2008, http://www.economist.com/world/europe/displaystory.cfm?story_id=11986018 (accessed November 16, 2008); “Georgia Demands EU, NATO to Confirm Use of Cluster Bombs by Russia,” *Trend News Agency* (Baku), August 16, 2008, <http://trend.smart.az/index.shtml?show=news&newsid=1270971&lang=EN> (accessed November 16, 2008); Neil Cavuto, “Interview with Georgian President Mikhail Saakashvili,” FOX News, August 18, 2008, <http://www.foxnews.com/story/0,2933,405722,00.html> (accessed November 16, 2008). See also “Preconference of President of Georgia Mikheil Saakashvili and US State Secretary Condoleezza Rice,” Office of the President of Georgia news release, August 15, 2009, <http://www.president.gov.ge/?l=E&m=o&sm=2&st=10&id=2712> (accessed April 1, 2009).

¹⁶⁴ “Preconference of President of Georgia Mikheil Saakashvili and US State Secretary Condoleezza Rice,” Office of the President of Georgia news release.

The discovery of M85 bomblets in Shindisi raises a lot of suspicion.... This fact demands proper investigation and Georgian side is ready to participate in and provide all necessary assistance for the conduc[t] of such investigation. If needed, for the investigation purposes, we can provide the name of the supplier company.¹⁶⁵

Confusion and Investigation

In a meeting with Human Rights Watch on October 21, 2008, then-First Deputy Minister of Defense Batu Kutelia presented a more nuanced position on Georgia's use of cluster munitions. He said Georgia has limited M85 stocks and used them only against Russian troops in the area north of Tskhinvali. He did not deny, however, that the M85s Human Rights Watch found in Georgia could be Georgian weapons.

Kutelia said he could not explain the presence of M85 submunitions in areas south of the South Ossetian administrative border. He said:

We received reports of M85s in a number of Georgian villages. How they ended up there is unclear. Our system would not fire there itself.... Perhaps an accident happened. That might be the explanation.... It's a real mystery how they ended up there. It is physically impossible someone fired there.

He said Georgia had opened an investigation into the situation and had requested assistance from the company from which they bought the weapons.¹⁶⁶ He did not disclose the name of the company, but it is presumably Israel Military Industries.

A massive failure is one possible explanation for the many M85 duds Human Rights Watch documented south of the South Ossetian border. In villages other than Tirdznisi and Shindisi, Human Rights Watch found no evidence of M85 submunitions that exploded on impact and much evidence of M85s that had failed to function. According to witnesses, there were also no Russian troops in the areas hit at the time of the strikes. The Mk.-4 rocket has a minimum range of 12 kilometers.¹⁶⁷ According to Kutelia, Georgia fired its rockets from about eight to ten kilometers north of Gori (although the Georgian Ministry of Defense, in a February 2009 response to a Human Rights Watch inquiry, refused to release more detailed information

¹⁶⁵ "Georgian Ministry of Defence's Response to the Human Rights Watch Inquire [sic] about the Usage of M85 Bomblets," Georgian Ministry of Defense press release.

¹⁶⁶ Human Rights Watch interview with Batu Kutelia, then Georgian first deputy minister of defense, Tbilisi, October 21, 2008.

¹⁶⁷ "IMI LAR-160 and AccuLAR 160 mm Rockets," in Ness and Williams, eds., *Jane's Ammunition Handbook 2007-2008*, pp. 714-715.

about the launch sites, saying that the information “is not public”).¹⁶⁸ If Kutelia’s information about the launch sites is correct, the rockets that landed in the Gori District fell short of their minimum range, which would explain why there were high dud rates and why so many submunitions were unarmed.

Georgian officials claimed that their military directed cluster munition strikes only against military targets in fairly unpopulated areas just south of the Roki Tunnel. If a massive failure of the weapons system caused the civilian casualties and contamination of a large populated area in the Gori District, however, the consequences of the failure highlight the danger of these weapons. The large number of submunitions dramatically increases the harm caused by any failure.

Kutelia also expressed surprise at the large number of M85 duds found not only by Human Rights Watch researchers but also by Georgian military deminers. Like the former, the latter found no evidence of self-destruct mechanisms, but according to Kutelia, “our contract was for self-destruct.” He said the Ministry of Defense, with the company’s help, would also investigate that issue.¹⁶⁹

Echoing Kutelia’s statements, in February 2009, the Ministry of Defense wrote to Human Rights Watch that the M85s may have landed in the Gori District because of a “failure of the weapons system.” It said a final answer would have to wait for the findings of the investigation, which was ongoing at that time.¹⁷⁰ The investigation, however, does not appear to be looking into Georgian use of cluster munitions in South Ossetia and the possibility that international humanitarian law violations occurred there. Such a study is necessary for a full understanding of the effects of Georgia’s use in this conflict.

In its February 2009 letter to Human Rights Watch, the Georgian Ministry of Defense wrote that it still has RBK-500 cluster munitions and BKF blocks of submunitions, but that their shelf-lives have expired and that they are slated for destruction.¹⁷¹

¹⁶⁸ Human Rights Watch interview with Batu Kutelia, October 21, 2008; Response of Georgian Ministry of Defense to Human Rights Watch Questions, February 12, 2009.

¹⁶⁹ Kutelia also noted that the contract was for 85 percent of the M85s to have white ribbons, yet the majority of the duds found by Human Rights Watch had red ribbons. As mentioned earlier, Human Rights Watch has not determined a difference between models with white and red ribbons. The deminers it interviewed did not know either. Human Rights Watch interview with Joseph Huber, then program manager, Norwegian People’s Aid, Tbilisi, October 14, 2008. The Georgian Ministry of Defense told Human Rights Watch it knew of “no technical difference” between the white- and red-ribboned models. Response of Georgian Ministry of Defense to Human Rights Watch Questions, February 12, 2009.

¹⁷⁰ Response of Georgian Ministry of Defense to Human Rights Watch Questions, February 12, 2009.

¹⁷¹ *Ibid.*

While acknowledging the presence of submunition duds in Georgian towns and villages and the possibility that a massive failure occurred, in October 2008 Kutelia said that Georgia's cluster munitions had military utility, helping Georgia "contain the Russians for two days."¹⁷² He added that the Ministry of Foreign Affairs was asking the Ministry of Defense for its opinion on the Convention on Cluster Munitions. Kutelia said:

As an agency, the Ministry of Defense in principle supports this type of convention to help us diminish civilian casualties and indiscriminate attacks on populated areas. We are ready to start reviewing, but we are not ready to make a commitment to abolish them from our arsenal.... Since Georgia is still under the occupation of a foreign military [referring to Russian troops in South Ossetia and Abkhazia], it is very sensitive for us.¹⁷³

As a result, although Georgia has joined CCW Protocol V, the Ministry of Defense has recommended that Georgia not sign the Convention on Cluster Munitions at this point. It told Human Rights Watch that it is considering replacing cluster munitions with an alternative but has immediate concerns about cost and security. Minister of Defense Vasil Sikharelidze himself said, "We need something more effective and need to be able to defend ourselves.... Technically cluster munitions should be possible to replace. How quickly and what would we replace them with? We don't know."¹⁷⁴

Legal Analysis

As previously mentioned, Human Rights Watch has not conducted an in-depth investigation into the use of cluster munitions in the area south of the Roki Tunnel, which the Georgians acknowledge having targeted with cluster munitions, and therefore, it cannot assess whether strikes in this area were in violation of international humanitarian law. If Georgia's strikes on populated areas documented by Human Rights Watch further south were intentional, then they violated international humanitarian law.¹⁷⁵ These strikes landed in or near towns and villages, and Human Rights Watch believes that cluster munition attacks in such locations are indiscriminate and thus unlawful. The attacks if intentional were also

¹⁷² Human Rights Watch interview with Batu Kutelia, October 21, 2008. High-level officials from the Ministry of Defense and Ministry of Foreign Affairs reiterated Kutelia's assessment that cluster munitions had slowed the Russian advance and described the weapons as a deterrent. Human Rights Watch interview with Vasil Sikharelidze, Georgian minister of defense, Tbilisi, January 26, 2009; Human Rights Watch interview with Giga Bokeria, Georgian deputy minister of foreign affairs, Tbilisi, January 24, 2009.

¹⁷³ Human Rights Watch interview with Batu Kutelia, October 21, 2008.

¹⁷⁴ Human Rights Watch interview with Vasil Sikharelidze, January 26, 2009.

¹⁷⁵ Human Rights Watch did extensive research into humanitarian law violations by Russian, Georgian, and South Ossetian forces in this area. See Human Rights Watch, *Up in Flames*.

likely disproportionate. Human Rights Watch found no evidence of the Russian military at any of the strike sites at the time of the strikes, and the rockets caused civilian casualties both during attacks and afterwards. Human Rights Watch believes there should be a presumption that cluster attacks on populated areas are disproportionate, and the evidence in these cases supports that position.

If Georgia's cluster munitions suffered from massive failure, it would highlight that cluster munitions are highly dangerous when used in any circumstances. They can cause significant humanitarian harm when they fail.

To address the problems caused by these failed munitions, the Georgian military has carried out significant clearance of submunition duds, as will be discussed below. It should supplement these efforts by sharing with international, nongovernmental deminers information on strike locations, weapon types, and numbers of submunitions used, in order to facilitate and expedite their clearance work. It should also share information about its strikes in South Ossetia with those clearing submunitions in that region. It should embrace CCW Protocol V's standards while waiting for it to enter into force.

The cluster munitions used by Georgia fall under the scope of the new Convention on Cluster Munitions, and for those states party to the convention, their future use would violate its basic prohibition on all use of cluster munitions.

Georgia, like all states, should sign and ratify the Convention on Cluster Munitions as soon as possible. It would not only assume responsibility under the convention but also benefit from it. If it became a state party, Georgia, as an affected state, would be eligible for international support for clearance, risk education, and victim assistance once the treaty entered into force.

If it cannot join the treaty at this point, Georgia should take immediate interim measures to minimize the humanitarian harm of cluster munitions. It should ban use in populated areas and adopt remedial measures to ensure civilians are not harmed from the duds it left behind. Most urgently, it should continue to provide further assistance for clearance and risk education.

Clearance and Risk Education

To stop the number of civilian casualties from rising, efficient and effective clearance is imperative. “If I find one cluster, I save one life,” said Amir Musanovic, who in October 2008 was leading a team of NPA deminers in Ruisi.¹⁷⁶ NPA estimated then that there were “thousands” of unexploded submunitions to be cleared.¹⁷⁷ As of February 2009, international deminers estimated submunitions had contaminated 15 million square meters, and they expected to continue clearance in Georgia until at least August 2009.¹⁷⁸ Human Rights Watch’s investigation showed that many of the submunitions were hidden in cornfields and cabbage beds, and by February, most of the remaining submunitions were buried below the surface.¹⁷⁹ This situation has not only caused socioeconomic harm but also complicated clearance.

Since the end of the war, both military and NGO deminers have tackled the problem. They have faced a range of challenges, including their different standards of clearance as well as a lack of resources, environmental factors, and complications from civilians. With better coordination and ongoing risk education programs, however, they can keep the number of civilian casualties from duds to a minimum.

Russian Military

Before they withdrew from the buffer zone adjoining South Ossetia on October 10,¹⁸⁰ Russian forces did extensive clearance of submunitions. Civilians reported clearance by Russian troops in Disti, Kvemo Khviti, Tirdznisi, Variani, Varianis Meurneoba, and Zemo Khviti.¹⁸¹ Multiple residents of a neighborhood in Variani said the Russian forces had removed duds

¹⁷⁶ Human Rights Watch interview with Amir Musanovic, technical advisor, Norwegian People’s Aid, Ruisi, October 15, 2008.

¹⁷⁷ Human Rights Watch interview with Joseph Huber, then program manager, Norwegian People’s Aid, Tbilisi, October 14, 2008.

¹⁷⁸ Email communication from Jonathon Guthrie, program manager, Norwegian People’s Aid, to Human Rights Watch, February 12, 2009; email communication from Mick McDonnell, operations manager, iMMAP, to Human Rights Watch, February 16, 2009.

¹⁷⁹ Email communication from Guthrie, February 12, 2009.

¹⁸⁰ “EU Verified Russia’s Withdrawal,” *BBC News Online*, October 10, 2008, <http://news.bbc.co.uk/2/hi/europe/7663145.stm> (accessed November 17, 2008).

¹⁸¹ Human Rights Watch interview with neighbor of Omar Mindiashvili, Disti, October 17, 2008; Human Rights Watch interview with resident (name withheld), Kvemo Khviti, October 16, 2008; Human Rights Watch interview with Pridon Solomonian, Tirdznisi, October 17, 2008; Human Rights Watch interview with Alik Sa’atashvili, Variani, October 18, 2008; Human Rights Watch interview with Galaktion Zubashvili, Variani, October 18, 2008; Human Rights Watch interview with Nukri Stepanishvili, farmer, Variani, October 18, 2008; Human Rights Watch interview with Tenggo Keadze, Variani, October 18, 2008; Human Rights Watch interview with Anzor Zubashvili, farmer, Variani, October 18, 2008; Human Rights Watch interview with Eliko Ominadze, Varianis Meurneoba, October 21, 2008; Human Rights Watch interview with Ketino Berikashvili, Varianis Meurneoba, October 21, 2008; Human Rights Watch interview with resident (name withheld), Zemo Khviti, October 16, 2008.

from their homes and gardens,¹⁸² and several civilians of other villages reported that the Russian troops cleared “a lot.”¹⁸³ The Russian forces may have also destroyed duds elsewhere, but the full extent of their efforts is unknown. They have not publicly reported on their clearance, and in its official letter to Human Rights Watch on January 30, 2009, the Ministry of Foreign Affairs did not respond to a request for information about its clearance efforts.¹⁸⁴ That letter also did not answer a question about whether Russia had provided strike data, including the locations, types, and numbers of cluster munitions used, to deminers in either Georgia or South Ossetia. As of February 2009, deminers working in the Gori and Kareli districts of Georgia had not received such information, which is necessary to facilitate clearance.¹⁸⁵

Russia should continue to provide assistance with clearance to ensure civilians are not killed or injured by the duds left behind. Such assistance should ideally meet the standards of the Convention on Cluster Munitions, but it should at least follow the provisions laid out in CCW Protocol V, which entered into force for Russia in January 2009. According to both instruments, Russia should provide technical, financial, material, or human assistance for clearance. In particular, Russia should immediately share with demining organizations on the ground the specific locations of cluster munition attacks and the specific types and quantities of weapons used.

Georgian Military

More is known about clearance by the Georgian military. When Russian forces withdrew from Gori and Kareli districts, the Georgian military stepped in with an engineering brigade of 80 deminers.¹⁸⁶ In October 2008, local residents noted Georgian clearance in Brotsleti, Dzlevijvari, Shindisi, Tirdznisi, and Variani,¹⁸⁷ and it might have been occurring in other towns as well. In Variani, for example, Tengo Keadze said Georgian troops removed 27

¹⁸² Human Rights Watch interview with Alike Sa'atashvili, October 18, 2008; Human Rights Watch interview with Galaktion Zubashvili, October 18, 2008; Human Rights Watch interview with Nukri Stepanishvili, October 18, 2008; Human Rights Watch interview with Tengo Keadze, October 18, 2008; Human Rights Watch interview with Anzor Zubashvili, October 18, 2008.

¹⁸³ Human Rights Watch interview with resident (name withheld), Zemo Khviti, October 16, 2008; Human Rights Watch interview with Pridon Solomonian, October 17, 2008; Human Rights Watch interview with Nukri Stepanishvili, October 18, 2008; Human Rights Watch interview with Tengo Keadze, October 18, 2008; Human Rights Watch interview with Ketino Berikashvili, October 21, 2008.

¹⁸⁴ Letter from Kelin, January 30, 2009.

¹⁸⁵ Email communication from McDonnell, February 16, 2009.

¹⁸⁶ Human Rights Watch interview with high-ranking Georgian officer of engineering brigade, Osiauri, October 21, 2008.

¹⁸⁷ Human Rights Watch interview with Sergo Nikolishvili, farmer, Brotsleti, October 16, 2008; Human Rights Watch interview with Ilia Chagalishvili, farmer, Dzlevijvari, October 21, 2008; Human Rights Watch interview with Vazha Mazmishvili, Shindisi, October 20, 2008; Human Rights Watch interview with Ramaz Pataradze, farmer, Shindisi, October 20, 2008; Human Rights Watch interview with Dato Lapachi, farmer, Tirdznisi, October 16, 2008; Human Rights Watch interview with Galaktion Zubashvili, October 18, 2008; Human Rights Watch interview with Tengo Keadze, October 18, 2008.

duds from his cherry orchard. “They cleared on the spot—as soon as they came in, after the Russians left,” Keadze said.¹⁸⁸ By February 2009 the Georgian military deminers had ceased their operations, but NPA was training 24 national deminers who were scheduled to start work in March 2009.¹⁸⁹

While the Georgian deminers cleared large numbers of duds over a wide area,¹⁹⁰ they focused on surface clearance at the expense of more systematic clearance that also deals with submunitions below the surface. An officer in charge of military engineers said in October 2008, “We are in almost all villages with six-man teams.... We take a village and start demining. We do systematic surface clearance. We do our best to clear the surface. Then we give territory to [international deminers] to do subsurface.”¹⁹¹ The International Campaign to Ban Landmines’ *Landmine Monitor Report 2008* reported that before the war Georgia hoped to upgrade its clearance standards to meet the widely accepted International Mine Action Standards,¹⁹² but it had not done so as of fall 2008. Mick McDonnell, operations manager of Information Management & Mine Action Programs (iMMAP), told Human Rights Watch in October 2008, “Georgians are doing the first level of clearance flat out. Their response should be applauded. A lot of countries don’t do that.” As McDonnell pointed out, however, this procedure has created challenges that will be discussed below.¹⁹³

Humanitarian concerns guided Georgian clearance efforts, according to the officer in charge. The deminers prioritized the submunitions most tempting to children. He said, “Everything that is beautiful or attractive to kids, we destroy first.”¹⁹⁴ Furthermore, these deminers tried to remove duds from the area before destroying them. If it was not possible to render them safe and move them, they destroyed unexploded submunitions *in situ*.¹⁹⁵

¹⁸⁸ Human Rights Watch interview with Tengso Keadze, October 18, 2008.

¹⁸⁹ Email communication from Guthrie, February 12, 2009.

¹⁹⁰ According to the Georgian Ministry of Defense, its deminers cleared 479 submunitions and some cluster munition casings between October 10 and 21, 2008. The clearance took place in the following towns and villages in the Gori and Kareli districts: Abisi, Akhaldaba, Avnevi, Brotsleti, Dzlevijvari, Ergneti, Kvemo Khviti, Kvemo Nikozi, Meghvrekisi, Pkhvenisi, Tirdznisi, Tortiza, and Zemo Nikozi. “Annex 1: Information Regarding the Demining of Cluster Munitions Dropped by Russian Side,” attachment to email communication from David Nardaia, head, Analytical Department, Ministry of Defense of Georgia, to Human Rights Watch, November 18, 2008. Although the ministry’s document refers to the submunitions as Russian, it does not break down the submunitions by type, and Human Rights Watch found evidence of Georgian M85s in several of the towns listed. Furthermore, a Georgian officer reported that his deminers cleared many M85s, suggesting that some of the submunitions counted were in fact Georgian. See Human Rights Watch interview with high-ranking Georgian officer of engineering brigade, October 21, 2008.

¹⁹¹ Human Rights Watch interview with high-ranking Georgian officer of engineering brigade, October 21, 2008.

¹⁹² International Campaign to Ban Landmines, *Landmine Monitor Report 2008*, p. 840 (citing email from Kartlos Koranshvili, Ministry of Defense, June 23, 2008).

¹⁹³ Human Rights Watch interview with Mick McDonnell, operations manager, iMMAP, Tbilisi, October 17, 2008.

¹⁹⁴ Human Rights Watch interview with high-ranking Georgian officer of engineering brigade, October 21, 2008.

¹⁹⁵ *Ibid.*

Even looking only on the surface, Georgian deminers expressed surprise at the high number of duds, especially M85s, they found. The high-ranking engineer said, “For us what is surprising as professionals is all the cluster munitions we’re finding there, and the problem is the majority [of the M85s that were launched] are unexploded.”¹⁹⁶ The officer said they passed the information they found on to the Ministry of Defense for its M85 investigation.

Georgia should coordinate on clearance with international demining organizations, including by providing details on the clearance done by the Georgian military and by providing information on the specific locations of cluster munitions attacks and the specific types and quantities of weapons used. Its performance of remedial measures should ideally meet the standards of the Convention on Cluster Munitions, but it should at least follow the provisions laid out in CCW Protocol V, which will enter into force for Georgia in June 2009.

Georgia should also provide assistance with any remedial measures necessary in South Ossetia, including by providing strike data to those in charge of clearance. Such assistance should ideally meet the standards of the Convention on Cluster Munitions, but it should at least follow the provisions laid out in CCW Protocol V.

NGO Clearance

NGOs have also played an important role in cluster munition clearance in Georgia. HALO Trust and NPA have taken charge of the fieldwork, while iMMAP is serving in a coordination role.

HALO Trust, a non-profit organization that “specialises in the removal of the hazardous debris of war,”¹⁹⁷ started clearance immediately because it already had established clearance programs in Georgia’s breakaway region of Abkhazia.¹⁹⁸ As of February 2008 it had about 30 teams of 12 deminers, totaling 360 deminers, in action.¹⁹⁹ It has assumed responsibility for surveying and mapping areas contaminated with submunition duds and other forms of unexploded ordnance.²⁰⁰ Human Rights Watch found HALO Trust’s red warning signs in several towns it visited, and HALO Trust has published maps of danger

¹⁹⁶ Ibid.

¹⁹⁷ HALO Trust, “The HALO Trust—A Charity Specialising in the Removal of the Debris of War,” undated, <http://www.halotrust.org/> (accessed November 12, 2008).

¹⁹⁸ HALO Trust, “HALO Emergency Response in Georgia,” undated, <http://www.halotrust.org/news.html> (accessed February 18, 2009).

¹⁹⁹ Email communication from Guthrie, February 12, 2009.

²⁰⁰ Human Rights Watch interview with Joseph Huber, October 14, 2008.

areas along the Gori-Tskhinvali corridor south of the South Ossetian administrative border.²⁰¹ It has also conducted clearance, including in Akhaldaba, Brotsleti, Pkhvenisi, Ruisi, Shindisi, and Tirdznisi.²⁰² Like Human Rights Watch, HALO Trust has found three types of submunitions: the AO-2.5 RTM, 9N210, and M85.²⁰³

A humanitarian organization whose work includes demining and anti-cluster munition advocacy,²⁰⁴ NPA joined the clearance efforts at the end of September 2008. To expedite the process, it brought in experienced deminers who have worked in Bosnia and Herzegovina and Lebanon. Between September and December 2008 its deminers had control of 1.5 million square meters of contaminated land in Ruisi and cleared 35 9N210 submunitions. “We started in Ruisi because we couldn’t enter the buffer zone [that Russia occupied before October 10],” said then-Program Manager Joseph Huber. “If there’s a higher priority, we’d move.”²⁰⁵ In March 2009 Huber’s replacement, Jonathon Guthrie, reported that NPA was working in Kvemo Khviti, where it has found 9N210s and M85s, and Zemo Nikozi, where it has found 9N210s.²⁰⁶ It expected to complete clearance in those villages by August 2009. It is now responsible for clearing two million square meters.²⁰⁷

These international NGOs follow International Mine Action Standards, which are higher than the standards used by the Georgian military. Amir Musanovic, who was leading NPA’s clearance team in Ruisi, described a three-level approach to clearance. Visual clearance focuses on surface submunitions, and subsurface clearance targets submunitions either 10 centimeters or 30 centimeters deep. NPA has looked for submunitions at all of those levels, allowing it to find 9N210s buried about 35 centimeters in the ground. In Ruisi, the complete process took 15 days for an approximately 100,000 square meter area covered by a 12-person team. To prevent casualties and achieve desired clearance rates, NPA surveys land even when residents claim it has been cleared. It also carefully marks danger areas with red sticks and safe ones with white sticks.²⁰⁸

²⁰¹ HALO Trust, “Unexploded Ordnance Contamination Maps,” undated, <http://www.halogeorgia.org/> (accessed November 17, 2008) (maps of areas of Georgia showing clearance progress).

²⁰² Office of the UN Resident/Humanitarian Coordinator in Georgia, Situation Report No. 38 on the Situation in Georgia, November 27-December 4, 2008, p. 1; Office of the UN Resident/Humanitarian Coordinator in Georgia, Situation Report No. 33 on the Situation in Georgia, October 23-30, 2008, p. 1; Office of the UN Resident/Humanitarian Coordinator in Georgia, Situation Report No. 31 on the Situation in Georgia, October 16, 2008, p. 1.

²⁰³ HALO Trust, “An Introduction to the Ammunition Threat in the Gori-Tskhinvali Corridor,” undated, <http://www.halogeorgia.org/guidetouxo.htm> (accessed November 17, 2008).

²⁰⁴ Norwegian People’s Aid, http://www.npaid.org/www/English/World/Cluster_munitions/ (accessed November 12, 2008).

²⁰⁵ Human Rights Watch interview with Joseph Huber, October 14, 2008.

²⁰⁶ Email communications from Guthrie, March 10 and March 27, 2009.

²⁰⁷ Email communication from Guthrie, February 12, 2009.

²⁰⁸ Human Rights Watch interview with Amir Musanovic, October 15, 2008.

While HALO Trust and NPA work on the clearance itself, iMMAP provides coordination. A leader in the development of landmine and cluster surveying technologies, iMMAP provides mapping and management services to those involved in clearance, including setting up an Explosive Remnants of War Coordination Center to administer the work of the various demining actors.²⁰⁹ In Georgia, its role is to coordinate the activities of all deminers, whether military or NGO, and serve as a clearinghouse of information. According to Operations Manager McDonnell, iMMAP had been trying to establish an office in Georgia for seven years, but the recent conflict finally persuaded Georgia to agree to one in mid-October.²¹⁰ It has since coordinated with about a dozen government agencies as well as HALO Trust and NPA to promote information exchange and cooperation. It is also working with other organizations on a survey of civilian casualties.²¹¹

Community Clearance

As in most conflicts involving cluster munitions, local people have also tried to clear duds. Community clearance endangers the individual doing it and others in the area because civilians generally use unsafe methods to destroy submunitions. It also complicates the work of professional deminers because it disturbs the ordnance while often failing to destroy it. Despite the risks, locals say they are driven to clear by the need to protect their families and to work in their fields.

The clearance by Ramaz Pataradze, a 38-year-old farmer, exemplifies the problem. Pataradze described putting cardboard boxes over M85s in the fields of Shindisi and laying twigs on top. Then he lit the twigs to blow up the submunitions. He said he had done this 10 to 15 times between August 21 and October 17. Although he had seen warnings on posters and on television, he explained that personal safety and economic necessity drove him to take the risk; he walks through the fields with his cows even at night. “I’m going there [to the contaminated field] to harvest and take my cows. What should I do?” he asked.²¹² While some Georgians have made the same choice as Pataradze, Guthrie reported an ongoing problem in February 2009.²¹³ Human Rights Watch found that far fewer had done so than in

²⁰⁹ Information Management & Mine Action Programs, “Services and Tools,” undated, http://www.immap.org/joomla/index.php?option=com_content&view=article&id=51&Itemid=55 (accessed November 17, 2008).

²¹⁰ Human Rights Watch interview with Mick McDonnell, October 17, 2008.

²¹¹ Email communication from McDonnell, February 16, 2009.

²¹² Human Rights Watch interview with Ramaz Pataradze, Shindisi, October 20, 2008.

²¹³ Email communication from Guthrie, February 12, 2009.

previous conflicts where cluster munitions were used, such as Lebanon, Iraq, and Afghanistan.²¹⁴

Challenges

Deminers have faced numerous challenges in the course of cluster munition clearance although many of them have been reduced over time. Challenges have ranged from coordination to resource shortages, from environmental factors to complications from civilians.

Coordination

One of the biggest initial challenges was a lack of coordination among various demining agencies, which used different methods of clearance. As described above, the Georgian military focused on faster, surface clearance, and the international organizations adopt a slower but more thorough approach. The contrast frustrated international deminers, who follow international standards and want information on exactly what other groups have cleared. In October 2008 Huber said, “The problem we have is the Georgian Army and Ministry of Interior are collecting and destroying stuff. No one knows what they’re doing. There’s a gap if nothing is recorded. It will be a problem for future clearance. We have to redo from the beginning without knowing where the strikes were.”²¹⁵ Huber continued, “The Georgian Army is running all over the place. They remove what they find on the surface, but if there’s a problem, there is no marking, no register. That’s changing. We’re asking them to mark.”²¹⁶ According to McDonnell of iMMAP, who was striving to bring the groups together, the Georgian deminers in turn distrusted the foreigners.²¹⁷

The difference in approaches was not merely an internal debate, but has also affected civilians. To clarify the distinction, an officer in charge of the Georgian deminers said, “[The Georgian military] distribute[s] posters, and when done with our clearance, we tell the local population to wait until the subsurface is done.... We don’t give any guarantees.”²¹⁸ A Shindisi woman recognized the limitations of surface-only clearance. “The deminers did visual clearance but have not done a thorough search of the area. I don’t go to my garden. I am afraid of this area. Two of them fell near my house, and I saw the clearance done.”²¹⁹

²¹⁴ See, for example, Human Rights Watch, *Flooding South Lebanon*, pp. 88-90; *Fatally Flawed*, p. 35.

²¹⁵ Human Rights Watch interview with Joseph Huber, then program manager, Norwegian People’s Aid, Tbilisi, October 16, 2008.

²¹⁶ Human Rights Watch interview with Joseph Huber, October 14, 2008.

²¹⁷ Human Rights Watch interview with Mick McDonnell, October 17, 2008.

²¹⁸ Human Rights Watch interview with high-ranking Georgian officer of engineering brigade, October 21, 2008.

²¹⁹ Human Rights Watch interview with Alexandra Zhghenti and Marina Mamistrashvili, Shindisi, October 19, 2008.

While this woman understood that the surface approach was insufficient, others may have become confused by the mixed messages.²²⁰ They may have assumed since a group did some clearance, even surface clearance, an area must be safe, but in fact subsurface submunitions continue to pose risks. The Georgian military has since ceased regular demining, and NPA reports now having good relationships with military authorities.²²¹

Resource Shortages

Resource shortages also interfered with early clearance. According to NPA, getting enough explosives to destroy the submunition duds it found had been a major impediment to demining.²²²

For the Georgian military, the loss of equipment during the conflict presented an obstacle to clearance. “We [the deminers] did not participate in the war, and we lost our equipment when the Russians took it. We had a new system of mine searching, specialized demining vehicles, all of which were taken by the Russians. There was a lot of capacity lost, and that’s an impediment,” said the engineering officer.²²³

In February 2009 McDonnell and Guthrie said the earlier resource shortages had been resolved, but McDonnell noted that “clearance operations are nearly always under resourced.”²²⁴ Guthrie added that that lack of information remained a major problem.²²⁵

Environmental Factors

The environment also has threatened the progress of clearance. Huber highlighted the difficulties of clearing submunitions among trees and in cornfields. “It is not that easy to work in these areas. People want to harvest,” he said. In October 2008 Musanovic was worried about the approaching winter. “We will do a survey in the whole village because with the snow we will lose all evidence.”²²⁶ Snow both covers duds and creates mud, driving them deeper underground. The Georgian military also expressed concern about the coming of winter and said its goal was to finish clearance before it sets in.²²⁷ In February 2009

²²⁰ Human Rights Watch interview with Joseph Huber, October 14, 2008.

²²¹ Email communication from Guthrie, February 12, 2009.

²²² Human Rights Watch interview with Joseph Huber, October 14, 2008. See also email communication from Mick McDonnell, operations manager, iMMAP, to Human Rights Watch, February 16, 2009.

²²³ Human Rights Watch interview with high-ranking Georgian officer of engineering brigade, October 21, 2008.

²²⁴ Email communication from McDonnell, February 16, 2009.

²²⁵ Email communication from Guthrie, February 12, 2009.

²²⁶ Human Rights Watch interview with Amir Musanovic, October 15, 2008.

²²⁷ Human Rights Watch interview with high-ranking Georgian officer of engineering brigade, October 21, 2008; Human Rights Watch interview with Mick McDonnell, October 17, 2008.

Guthrie said that winter had indeed proved to be “a major obstacle” and that clearance efforts had been suspended for parts of December and January.²²⁸

Complications from Civilians

Finally, civilians themselves have presented challenges. As mentioned above, some have tried to clear the submunitions themselves. Others have interfered with the marking process, unsure of what best serves their communities. Vasili Omadze, a 26-year-old farmer, said deminers searched some farms in Sakasheti with metal detectors, which started beeping loudly indicating the presence of unexploded ordnance. “They wanted to mark the fields [with red warning signs], but the locals wouldn’t let them because it makes children more curious,” Omadze said. “They wanted to mark my field, and I wouldn’t let them.”²²⁹

Risk Education

In an effort to reduce further casualties, several groups collaborated immediately after the conflict to provide civilians with information regarding the danger of submunition duds. Risk education efforts included civil service announcements on the radio and television, programs at schools and internally displaced persons (IDP) camps, and fliers and posters.²³⁰ HALO Trust took the lead on many of these efforts,²³¹ but the Georgian Ministry of Education and Science and UNICEF also contributed.²³² The Georgian government responded swiftly to Human Rights Watch’s insistence on risk education in August 2008; it regularly aired educational videos and distributed fliers with a hotline number to call if something suspicious was found. By December 2008, risk education had been conducted in at least 180 schools,²³³ and 44,000 Georgians had received information about the risks of cluster munitions and other unexploded ordnance.²³⁴

Witness testimony and the limited number of civilian casualties from duds suggest that these programs have been successful in at least some cases. They may have saved 68-year-old Tamar Eremov’s life. She was looking for walnuts when she found an unexploded AO-2.5 RTM at the base of a tree in Variani. “I almost touched it, but then I remembered the leaflets

²²⁸ Email communication from Guthrie, February 12, 2009; email communication from McDonnell, February 16, 2009.

²²⁹ Human Rights Watch interview with Vasili Omadze, Sakasheti, October 18, 2008.

²³⁰ Human Rights Watch interview with Mick McDonnell, October 17, 2008.

²³¹ *Ibid.*

²³² Office of the UN Resident/Humanitarian Coordinator in Georgia, Situation Report No. 38 on the Situation in Georgia, p. 1.

²³³ Office of the UN Resident/Humanitarian Coordinator in Georgia, Situation Report No. 36 on the Situation in Georgia, November 13-20, 2008, p. 4.

²³⁴ Office of the UN Resident/Humanitarian Coordinator in Georgia, Situation Report No. 38 on the Situation in Georgia, p. 1.

that were given out and didn't," Eremov said.²³⁵ As described earlier, Omar Mindiashvili knew immediately to stop his daughter and her cousin from playing with an M85 in Ditsi because he had seen warnings on television.²³⁶ While in an IDP tent city between October 7 and 8, Sergo Nikolaishvili said that he and other Brotsleti residents received photos and flyers from Georgians and NGOs alerting them to the danger of duds.²³⁷

Victim Assistance

Victim assistance for individuals and communities is another critical humanitarian measure. According to the *Landmine Monitor Report 2008*, "The medical and rehabilitation sectors in Georgia suffer from lack of funding, poor infrastructure and equipment, inadequate and low-quality services, and corruption."²³⁸ When asked in October 2008 about assistance for cluster munition survivors of the 2008 war, then- Georgian First Deputy Minister of Defense Kutelia said Georgia had not established any formal programs. He explained, "Our general policy is the same regardless of the type of munition. We request assistance from different countries. For the most expensive ones, like those who have lost limbs, we ask governments and companies to collaborate with us to provide assistance. For example, some were taken to Israel for treatment."²³⁹ McDonnell said, in October 2008, that iMMAP was starting to investigate the status of victim assistance, but he did not provide information on the progress of the investigation in an email to Human Rights Watch in February 2009.

²³⁵ Human Rights Watch interview with Tamar Eremov, farmer, Variani, October 18, 2008.

²³⁶ Human Rights Watch interview with Omar Miniashvili, Ditsi, October 17, 2008.

²³⁷ Human Rights Watch interview with Sergo Nikolaishvili, farmer, Brotsleti, October 16, 2008.

²³⁸ International Campaign to Ban Landmines, *Landmine Monitor Report 2008*, p. 842. For complete information on victim assistance for mine and ERW victims, see *ibid.*, pp. 842-843.

²³⁹ Human Rights Watch interview with Batu Kutelia, then Georgian first deputy minister of defense, Tbilisi, October 21, 2008.

Conclusion

The use of cluster munitions in Georgia in August 2008 highlighted the danger of the weapons and the need to ban them. Both Russia and Georgia launched cluster munition attacks yet came from different positions—producer and importer, large stockpiler and small stockpiler, repeat user and new user. In all, their cluster munition attacks caused the death or injury of 70 civilians during and after the conflict as well as ongoing socioeconomic harm.

Russia violated multiple provisions of international humanitarian law with its use of cluster munitions. Its attacks in or near villages, towns, and one city were inherently indiscriminate and thus unlawful. They were also likely disproportionate. Human Rights Watch presumes that cluster attacks in or near populated areas are disproportionate, and the lack of evidence of Georgian troops in the vicinity combined with the foreseeable civilian harm supports that presumption. Russian authorities continue to deny they used cluster munitions in the course of the conflict.

Georgia also used cluster munitions that landed in or near populated areas in the Gori District, but it said they were aiming at Russian military personnel and equipment north of Tskhinvali. The possibility that the Georgian weapons suffered a massive failure would explain why the cluster munitions fell short, why they had such high failure rates, why so many submunitions were unarmed, and why witnesses reported no Russian troops in the vicinity of the strikes. Georgian authorities told Human Rights Watch they are investigating what happened. Regardless of their conclusion, these incidents underscore the unreliability and humanitarian risks of these weapons.

The use and effects of cluster munitions in this conflict should serve as an impetus for all states to sign and ratify the Convention on Cluster Munitions as soon as possible. Although not yet legally binding, the fact that 96 states have signed the Convention on Cluster Munitions as of March 2009 demonstrates that there is widespread international support for its principles. Russia and Georgia's actions ignored this expression of ever-increasing condemnation of the weapon. Looking to the future, they should now not only become parties to the convention but also immediately comply with its standards on clearance, risk education, and victim assistance. If they cannot sign and ratify the convention at this point, they should establish interim measures to reduce the humanitarian impact of cluster munitions. The international community should strive to make the Georgian conflict the last in which civilians lose both lives and livelihoods to this pernicious weapon.

Acknowledgments

This report was written by Bonnie Docherty, researcher in the Arms Division of Human Rights Watch. Field research was conducted by Bonnie Docherty, Marc Garlasco, senior military analyst in the Emergencies Division, Giorgi Gogia, Caucasus researcher, and Ole Solvang, consultant for the Europe and Central Asia Division. Steve Goose, director of the Arms Division, edited the report. Rachel Denber, deputy director of the Europe and Central Asia Division, and Mark Hiznay, senior researcher in the Arms Division, reviewed it. Rebecca Agule and Vladyslav Lanovoy, students in the International Human Rights Clinic at Harvard Law School's Human Rights Program, contributed to the writing of the report.

Aisling Reidy, senior legal advisor, provided legal review. Andrew Mawson, deputy program director, provided program review. Kerri West, associate in the Arms Division, provided research and production assistance. This report was prepared for publication by Kerri West, Anna Lopriore, creative manager and photo editor, Grace Choi, publications director, and Fitzroy Hepkins, mail manager.

Human Rights Watch would like to thank Matthew McKinzie for providing maps and satellite imagery graphics and Digital Globe for the satellite images.

Human Rights Watch would also like to thank all of the people in Georgia who provided assistance with this report, including victims, witnesses, deminers, NGO representatives, and government officials.

A Dying Practice

Use of Cluster Munitions by Russia and Georgia in August 2008

During their August 2008 conflict over the breakaway region of South Ossetia, both Russia and Georgia used cluster munitions, a weapon that the international community was in the process of banning. Together, their cluster munitions, many of which landed in populated areas, caused dozens of civilian casualties at the time they were fired or afterwards. Civilians and their livelihoods remain at risk as deminers continue to clear submunitions. The use of cluster munitions was a vivid reminder of why states must as soon as possible sign and ratify the new Convention on Cluster Munitions, a categorical prohibition of this notorious weapon.

Although Russia continues to deny launching cluster munitions, Human Rights Watch researchers on the ground during and after the conflict confirmed several strikes directly on villages, towns, and one city. These indiscriminate and disproportionate attacks violated the laws of war.

Human Rights Watch also documented Georgian cluster munitions in populated areas south of the South Ossetian administrative border. Submunitions killed or injured civilians during strikes as well as after. Evidence, including their location and high dud rates, suggests the weapons may have suffered a massive failure, which highlights that cluster munitions are highly dangerous wherever they are used.

These events came less than three months after 107 states from around the world adopted the Convention on Cluster Munitions. Neither Russia nor Georgia took part in the negotiation process, and their use of cluster munitions was in defiance of an emerging consensus on a basic prohibition on the weapon.

In addition to signing and ratifying the convention, both sides of the conflict should contribute to the ongoing clearance efforts, including by sharing technical information about strikes. They should also conduct independent, impartial, and rigorous investigations into their use of cluster munitions and make the results public.

A crater and fragmentation marks consistent with a cluster munition strike remain five days after an August 12, 2008, attack on the main square of Gori, Georgia. Russia struck the square with an Iskander cluster munition missile, killing six civilians and injuring 24 more.

© 2008 Marcus Bleasdale

