

A Guide

to Cluster Munitions

Second Edition

GICHD | CIDHG





The GICHD works to eliminate anti-personnel mines and to reduce the humanitarian impact of other landmines and explosive remnants of war. To this end, the GICHD shall, in partnership with others, strive to provide capacity development support, undertake applied research, and to develop standards, all aimed at increasing the performance and professionalism of mine action. To the same end, the GICHD shall support the implementation of relevant instruments of international law.

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Acknowledgements (Second Edition)

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Figure 1. Russian AO-1SCh submunition, © Colin King

Figure 2. Rockeye anti-armour submunition, © Colin King

A GUIDE TO CLUSTER MUNITIONS

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The Convention on Cluster Munitions represents a major step forward in international efforts to protect civilians from cluster munitions as well as to address their humanitarian and development impact. Its adoption and signature in 2008 by almost 100 states is testament to the work of Norway and the many other governments that drove the Oslo Process, as well as the relentless efforts of the United Nations, the International Committee of the Red Cross and the hundreds of organisations that make up the Cluster Munitions Coalition.

In light of this important new instrument of international law, we have decided to revise and update *A Guide to Cluster Munitions*, the first edition of which was published in November 2007. It not only includes a chapter on the content of the Convention and one on stockpile destruction—a significant obligation for future States Parties which impacts on non-proliferation of cluster munitions—it also takes into account recent experiences in improved procedures for survey and battle area clearance.

As with the previous edition, this second edition of *A Guide to Cluster Munitions* provides information on the impact of cluster munitions on civilians and practical steps on how to prevent and address that impact. The Guide is intended particularly for governments facing a cluster munitions problem or those willing to assist others in mitigating or getting rid of the problem. International and non-governmental organisations involved in clearance of cluster munitions or providing assistance to the victims are also a key audience for this publication, as well as journalists, academics and others who are interested in the issue.

I would like to thank the government of Switzerland for funding this second edition of the Guide.

Ambassador Stephan Husy
Director

Geneva International Centre for Humanitarian Demining



CHAPTER 1

WHAT ARE CLUSTER MUNITIONS?



WHAT ARE CLUSTER MUNITIONS?

This chapter provides an overview of the types of cluster munitions in existence, as well as their use in armed conflict and consequent impact on civilians.¹ The first significant use of cluster weapons was during the Second World War; since then, they have been used in dozens of armed conflicts. Although the Convention on Cluster Munitions prohibits all cluster munitions used to date (see Chapter 2), as with all weapons, the use of any cluster munitions in armed conflict is regulated by the general rules of international humanitarian law that govern the conduct of hostilities.

GENERAL FEATURES OF CLUSTER MUNITIONS

Cluster munitions covered by this publication are conventional munitions each of which is designed to disperse or release multiple submunitions (in some cases called ‘bomblets’) over an area that may extend to several hundred square metres.² The general definition of this weapon describes both the container (also called a dispenser or ‘parent munition’) and the submunitions it holds. The cluster munitions covered here are ones that dispense ‘explosive submunitions’ – not those which produce smoke, chaff flares or pyrotechnics.

A container can be an artillery shell, an air-dropped canister or a rocket/missile. A submunition is an individual item of explosive ordnance contained within the dispenser or ‘parent munition’ and which is ejected, expelled, or dispersed at some point after the cluster munition is fired, launched, expelled, or dropped. Submunitions can also be dispersed from dispensers fixed to an aircraft. Submunitions can be delivered from the air, the ground, or (more rarely) the sea. Today, submunitions typically include a high explosive content, and in many cases a dual method of attack: pre-notched fragmenting metal (similar to a hand grenade) to inflict injury on personnel and damage to materiel, and a shaped charge to penetrate armour and other hard surfaces.

The design of cluster munitions means that they are a particular threat to the civilian population during and after use. First, their wide-area effect means an increased likelihood of civilian victims or collateral damage to civilian objects from the explosion of the submunitions dispersed by each cluster munition during an attack. This problem is worsened by the typically high number of submunitions that are delivered in a single attack. Second, the failure rate of many submunitions means that a single attack may also leave hundreds or thousands of small unexploded, but lethal devices (sometimes called ‘blinds’ or ‘duds’). Third, the sensitive fuzing system of many submunitions means that even minimal disturbance may be enough to cause them to explode. In addition to causing death and injury, the presence of unexploded submunitions endangers the safe return of the displaced and impedes livelihood activities, such as agriculture or grazing.

CHAPTER 1

WHAT ARE CLUSTER MUNITIONS?

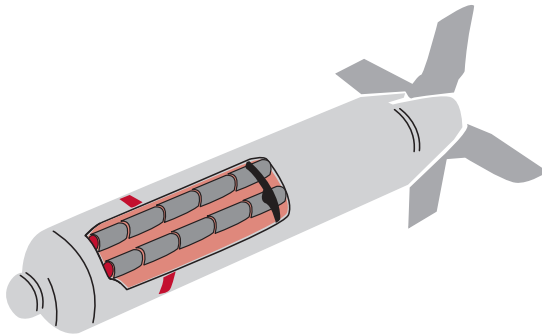
CLUSTER MUNITIONS: TYPES AND CAPABILITIES

The enormous diversity of these weapons makes it difficult to categorise them simply. According to Human Rights Watch, 33 countries have produced at least 208 different types of cluster munitions.³ The main types are described in this chapter by their characteristics and effects.

The different types of submunitions dispersed by cluster munitions are reviewed in five categories, depending on:

- > their means of delivery
- > their intended effects
- > the type of fuzing system they contain
- > whether or not they have a target identification or guidance mechanism, and
- > whether or not they have a self-destruct and/or self-deactivation mechanism.

Figure 1 | Air-dropped cluster munition (before opening)



Means of delivery

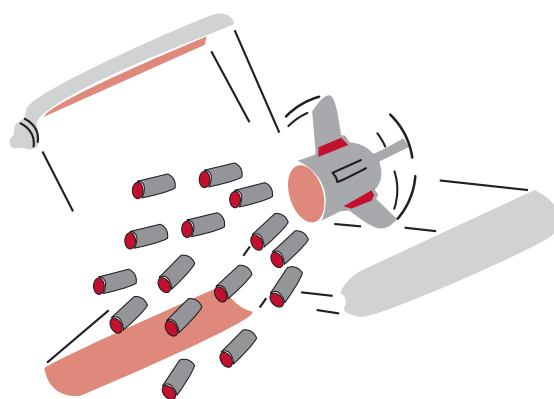
There are four principal ways of delivering submunitions onto a target:

- > tube-launched (e.g. artillery shell, mortar or naval gun)
- > air-dropped container
- > aircraft dispenser, and
- > rocket/missile.

WHAT ARE CLUSTER MUNITIONS?

Although most submunitions used to be air-dropped (e.g. in conflicts in Afghanistan, Cambodia, the former Federal Republic of Yugoslavia, the Lao People's Democratic Republic and Viet Nam), ground-based delivery by artillery or rocket systems has become increasingly prevalent, most notably in the First Gulf War, the conflict between the coalition led by the United States of America (USA) and Iraq in 2003 and the conflict in southern Lebanon in 2006. Human Rights Watch believes that most of the cluster munitions in stockpiles today are ground-based systems.⁴

Figure 1 | Air-dropped cluster munition - dispersal of bomblets after opening



Intended effects

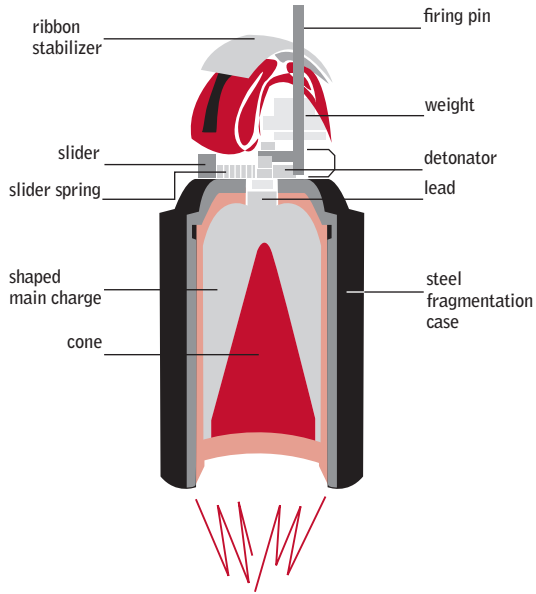
Submunitions are intended for use against different targets and therefore their effects also differ. Some are fragmentation devices intended to kill or injure personnel. Others are anti-armour, typically a High Explosive Anti-Tank (HEAT) shaped charge designed to penetrate the armour of tanks and other protected vehicles.

A HEAT shaped charge incorporates a conical metal liner (usually made from copper). On detonation, the liner is forced into a high velocity molten jet, which is projected forwards into the target. The high density and hyper-velocity of this jet give it the ability to penetrate armour and other hard surfaces to a far greater depth than high explosive could otherwise achieve.

Increasingly, there has been a trend towards combining effects in order to make submunitions more versatile; this allows the same submunition to be employed against multiple target types. This move towards multi-purpose ammunition is partially responsible for the increased employment of cluster munitions in recent conflicts. 'Dual-purpose improved conventional munitions' (DPICM) combine anti-armour and fragmentation effects, while 'combined effects munitions' (CEM), add an additional incendiary element.⁵

WHAT ARE CLUSTER MUNITIONS?

Figure 2 | Cross-section of M85 submunition (showing effect of shaped charge)



An example of an anti-personnel submunition

The Russian AO-1Sch bomblet, which weighs 1.2 kilograms and is 49 x 156 millimetres (see Figure 3), is an anti-personnel submunition.⁶ One hundred and fifty bomblets are dispersed by the container (RBK 250-275) over an area of some 4,800 square metres. These submunitions have been found in Chad, the Russian Federation (in Chechnya), and Tajikistan.⁷



Figure 3 | Russian AO-1Sch bomblet | © Colin King

WHAT ARE CLUSTER MUNITIONS?

An example of an anti-armour submunition

The US Mk 118 'Rockeye' (see Figure 4) is an anti-armour submunition developed in 1968, during the Vietnam War. The parent munition uses an Mk-7 dispenser known as a Tactical Munitions Dispenser containing 247 of the submunitions. The filled dispenser, known as a Cluster Bomb Unit (CBU), weighs around 230 kilograms and is opened in the air after it has been released by explosively splitting the casing when the time-delay fuze functions. The dart-shaped submunitions are 316 millimetres long, weigh 600 grams, and incorporate a 183-gram shaped charge to penetrate armour. When ejected at an altitude of 150 metres, the submunitions cover an area of approximately 4,800 square metres.



Figure 4 | Rockeye anti-armour submunition | © Colin King

An example of a combined effects munition

A widely-used combined effects munition is the CBU-87 cluster munition; the BLU-97 submunitions it disperses incorporate a HEAT warhead capable of penetrating more than 200 millimetres of armour. The body of the submunition, made from internally notched steel, shatters into approximately 300 fragments which are able to kill personnel, disable vehicles and damage to materiel over several dozen square metres. Also incorporated into the body of the submunition is a zirconium ring, which has an incendiary effect intended to ignite fuel and other combustible materials in the target area.

CHAPTER 1

WHAT ARE CLUSTER MUNITIONS?

An example of dual-purpose improved conventional munitions

Dual-purpose improved conventional munitions (DPICM) are dispensed in large numbers, generally from containers that are launched by artillery or missile. The tubular body of the submunition is normally made from steel, with the open end housing a copper shaped charge liner. The other end of the body is usually domed and has a simple impact fuze fitted. The fuze incorporates a small threaded striker attached to a loop of fabric ribbon, folded over the fuze, allowing submunitions to be stacked closely, nose to tail, within the dispenser. The striker retains a spring-loaded slide fitted with a small stab-sensitive detonator.

On impact, inertia carries the striker forward into the detonator, beneath which is a small booster pellet and the main charge. The body is shattered and the shaped charge fired downwards into the target. In some submunitions, ball-bearings surround the body to enhance the anti-personnel fragmentation effect.

A Yugoslav DPICM submunition—the KB-1—is delivered by the Orkan rocket (see Figure 5). It was designed to support large army formations, by neutralising or ‘suppressing’⁸ a variety of targets, from troops to armoured combat vehicles, as well as to provide anti-armour barrage fire.⁹

When used with a warhead filled with submunitions, a single Orkan rocket contains 288 shaped-charge and fragmentation submunitions, each containing 420 ball bearings of 3 millimetres diameter. The warhead casing is opened explosively, ejecting the submunitions from a height of 800 to 1,000 metres.¹⁰ As they fall, the submunitions are stabilised by a fabric ribbon, which also arms a simple mechanical fuze; the submunitions are intended to detonate when they strike the ground. The 288 submunitions are dispersed over an area of about 20,000 square metres; the lethal range of each steel fragment is about ten metres.¹¹

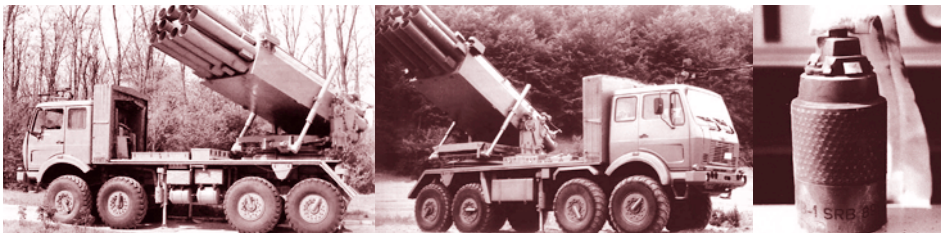


Figure 5 | M87 Orkan rocket

WHAT ARE CLUSTER MUNITIONS?

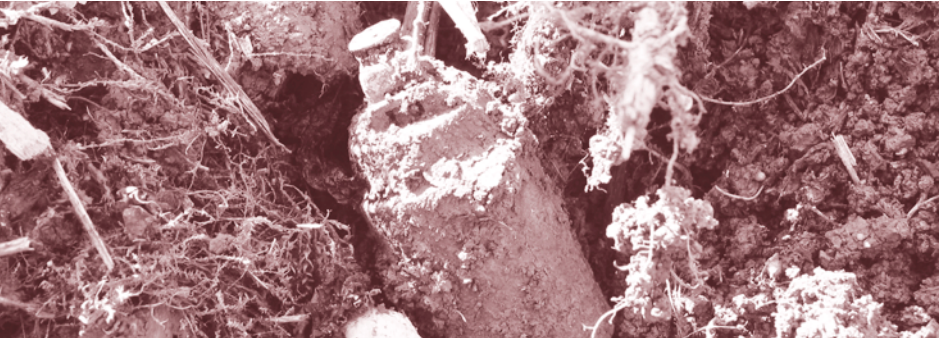


Figure 6 | KB-1 submunition

The fuzing of cluster munitions and submunitions

A wide variety of ways are employed to open the cluster munition containers and to dispense the submunitions. Once the cluster munition has been fired, launched, expelled, or dropped, the opening of the container is normally determined by a time delay or proximity fuze. Case rupture, used in some rocket and missile warheads, is achieved by small explosive linear cutting charges to blow open the container, and may also use a propellant charge to eject the submunitions.

The submunitions are normally dispensed by base ejection, nose ejection, or case rupture. Base ejection is most common in projectiles, but is also used in other carriers. In both nose ejection and base ejection, the fuze usually initiates a small propellant charge, which ejects the base plug or nose, and then pushes the submunitions out.

The majority of submunitions use some form of stabilisation (normally fins, a streamer, or a chute)¹² to bring them into a nose-down attitude. In general, submunitions use spin and air resistance to actuate their arming mechanisms, preparing them to explode on impact. This system is referred to as a fuzing mechanism (or a safety and arming unit). Since submunitions disperse after ejection, the density of the impact “footprint” (see Figure 8) is mainly dependent on the speed and altitude at which the dispenser opens. Most submunitions are designed to detonate on impact with a hard surface.

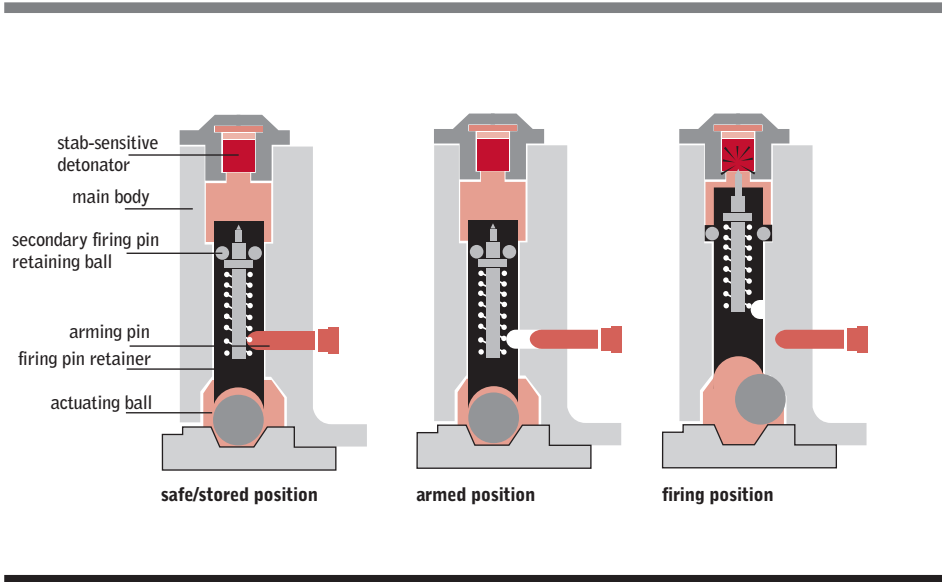
For instance, when an anti-armour submunition strikes a hard object nose-first, the detonator at the rear of the shaped charge is initiated to produce the anti-armour effect. This can be achieved using a firing pin striking a stab-sensitive cap, or a ‘piezoelectric’ element, which generates an electric charge when mechanically deformed.

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Secondary fuze mechanisms may be incorporated to initiate the submunition if the primary fuze fails for any reason, such as impact at the wrong angle. Some use “all-ways acting” mechanisms that incorporate a ball-bearing housed in a chamber with sloping sides, meaning that they should function no matter what direction the submunition hits the ground. Sideways movement of the ball-bearing acts on the sloping surface to push a pin into a stab-sensitive composition. If these mechanisms are not actuated during impact, they can act like de facto anti-handling devices when the submunition is subjected to further sudden movement. Like their fin-stabilised variants, most chute-stabilised submunitions produce an anti-personnel/anti-materiel effect as the body is shattered, and many of the submunitions’ exteriors are scored to produce consistent fragmentation.

Cluster munitions equipped with a radar, infrared, and/or radiometric sensor fuze mechanism (see Figure 7 below for an example of a sensor-fuzed submunition) constitute a special case. After deployment by a ground-based or airborne system, the dispenser releases the submunitions. At this moment the fuze of the submunition is armed and the detection sensors are activated. The detection phase ends when a defined height above ground level is reached. When the confidence level of the sensors is such that target detection is assured, the fuse of the submunition stays in the armed position. If, however, the confidence level of detection is not satisfactory, a self-destruction mechanism will be activated at a given height, destroying the submunition.¹⁵

Figure 7 | BLU-97 secondary “all-ways acting” fuze



WHAT ARE CLUSTER MUNITIONS?

Accuracy of targeting of cluster munitions

This section addresses both the capability of the parent munition to dispense submunitions over its target and the ability of the individual submunitions to fall and detonate where intended.

In addition to leaving behind large areas contaminated with unexploded submunitions, a major humanitarian concern concerns the accuracy of targeting of submunitions during an attack. Most submunitions free-fall in a ballistic trajectory determined by a combination of factors, and can stray far from their intended target. Several anti-armour cluster munition systems now use independently targeted submunitions, which identify and fire at an individual vehicle, although with limited ability to differentiate between military and civilian vehicles. Improvements are also being made to the accuracy of air-launched and missile dispensers, which can incorporate wind correction, or inertial/GPS (Global Positioning System) guidance. However, such advanced systems are expensive and existing data on their performance in combat is very limited.

The US BLU-108 Sensor-Fuzed Weapon (SFW) (see Figure 7) is an example of such a system, developed to detect and engage individual armoured vehicles without creating a wide-area antipersonnel effect. Features include advanced active and passive sensors (infrared, millimetre wave radar) and the ability to loiter above a target area. SFWs carry 40 submunitions, instead of several hundred. There are currently only a few types of sensor-fuzed submunitions (BONUS, SMArt, BAT, SPBE-D), although they are reportedly being researched, produced, or acquired by at least 14 countries. Their first and only use in combat is believed to have been in Iraq in 2003.¹⁴ The US SFW is equipped with a self-destruction and self-deactivation mechanism.

Self-destruct or not self-destruct?

Self-destructing submunitions are designed to automatically detonate after a set period of time if they do not detonate on impact as intended. Mechanisms to ensure this automatic detonation are most commonly either electronic or mechanical. In the view of one leading weapons expert,¹⁵ self-destruct mechanisms are incorporated in submunitions for two reasons. The first is to better protect friendly forces, which may need to move through or occupy an area where submunitions have been dropped (although they may also constitute a hazard to one's own forces). The second reason is to lessen the impact on civilians by reducing the number of unexploded submunitions (also called "blinds" or "duds").¹⁶

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The only DPICM incorporating self-destruction to have seen significant operational use is the Israeli-designed M85. This was used by the UK during the 2003 conflict in Iraq, and then on a larger scale by Israel during the 2006 Lebanese conflict. In southern Lebanon, the M85 was used alongside older DPICM. The self-destruct fuzes did not achieve the reliability claimed by the manufacturers but did appear to have a significantly lower failure rate than the non-self-destructing types. This showed that, at least in this case, incorporation of a self-destruct device reduced the overall failure rate, but was not a solution to submunition contamination. It also illustrated substantial difference between results obtained during testing, and the reality seen during operations.¹⁷

There are also cluster munitions that “self-neutralise” or “self-deactivate”. According to one weapons expert, the Iraq conflict of 2003 saw the first major use of “sensor-fuzed” submunitions, designed to target and defeat armoured vehicles, which incorporate self-deactivation. An electronic fuze, which requires an electrical power supply, allows a sensor-fuzed munition to use a ‘reserve battery’, which is only activated when the munition is deployed. If it fails to explode on impact, the short life span of the battery means that the power source soon becomes unavailable to initiate the warhead, providing a reliable method of “self-deactivation”. This does not make the munition safe, but it does at least minimize the possibility of it functioning through accidental disturbance.¹⁸

USE AND IMPACT OF CLUSTER MUNITIONS IN ARMED CONFLICT

History of the use of cluster munitions¹⁹

The first significant use of cluster weapons was during the Second World War, when German planes dropped SD-2 “Butterfly Bombs” on the British port of Grimsby. Although only 1,000 or so submunitions were dropped, there was chaos in the town for weeks and the subsequent clearance task took around 10,000 man-hours. Almost as many people were killed after the raid as during it, as they attempted to collect or move unexploded submunitions.

The next major use of submunitions was during the Vietnam War, where both mines and impact-fuzed submunitions were dropped by the millions by the USA. It was also in Vietnam that the first combined effects munitions were used. The MK118 Rockeye submunition contains a shaped charge—an inverted copper cone—that is sufficient to penetrate armour.

WHAT ARE CLUSTER MUNITIONS?

The worst affected country, however, is the Lao People's Democratic Republic (Lao PDR), where it is estimated more than 260 million submunitions were dropped on the country during the Indo-China War. The National UXO Programme assumes a 30% failure rate for US submunitions (locally called 'bombies'), meaning an estimate of 78 million unexploded submunitions.²⁰ As in World War II, these 'bombies' were air-delivered in cluster munitions, had mechanical impact fuzes and used a fragmentation effect. Many of those used in Lao PDR were 'spin-armed' and contained an "all-ways acting" fuze designed to operate at any impact angle. This type of fuze is particularly dangerous if it fails to function as intended. Some 40 years after they were dropped in Lao PDR, these submunitions are still causing casualties on a regular basis.

In 1982, the United Kingdom used BL755 cluster munitions during the Falklands conflict against Argentine positions. It is reported by Landmine Action that the only civilian casualties of the conflict were caused by cluster munitions. They believe that, based on the number of cluster munitions dropped and the number of submunitions cleared by British military explosive ordnance disposal teams working on the island after the conflict, the minimum failure rate was 9.6%.²¹

Extensive deployment of both air and ground-delivered cluster munitions occurred during the First Gulf War of 1991. Iraqi units were both devastated and demoralised by the continual submunition strikes that occurred throughout the "air war" phase of the campaign. The fact that the ground war lasted only four days and met little resistance was largely attributed to the effect of cluster munitions. Since the Iraqi forces were mainly in open desert, there was little impact on civilians, although there were many post-conflict casualties among allied troops and explosive ordnance clearance workers.

The First Gulf War also highlighted the excessive failure rate of these munitions. More than 95,000 unexploded submunitions were recorded during the clearance of the US sector of Kuwait, which probably represented around one quarter of the unexploded ordnance throughout the whole country. Despite evidence of high failure rates and the risk of a significant post-conflict hazard, the same weapons types were used again in Kosovo, Afghanistan, and then in Iraq.

In the wars in Chechnya, cluster munitions were extensively deployed by Russian forces in populated areas, particularly in and around Grozny. In a cluster strike on Grozny market in 1999, witnessed by staff from an international demining organisation, 137 people were killed and many more injured.²²

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The Eritrea-Ethiopia conflict of 1998–2000 saw use of cluster munitions by both parties. In June 1998, Eritrean aircraft dropped cluster munitions in the Ethiopian town of Mekele, hitting a school. Fifty three civilians were killed and a further 185 were injured in the attack. Ethiopian aircraft also dropped cluster munitions on civilians in Eritrea. On 9 May 2000, UK-manufactured BL755s were dropped on a camp for displaced people. In the period after the attack, 420 unexploded submunitions were disposed of by an international demining organisation.²⁵

In May and June 1999, allied forces dropped more than 240,000 submunitions (BLU-97s, BL755s, and MK118 Rockeyes) on Kosovo (tens of thousands more were dropped on Serbia and Montenegro), causing at least 75 deaths and injuries to civilians at the time of use and more than 150 post-conflict casualties, and resulted in US\$30 million worth of post-conflict clearance. According to one expert,²⁴ in Kosovo alone, it is believed that the BLU-97 submunitions caused more fatalities than all of the landmines put together. He considers that this is largely due to the presence of an “all-ways acting” secondary fuze; the cause of so many casualties also in Lao PDR. Cluster munitions are still being cleared in Kosovo.

The USA reportedly dropped more than 248,000 submunitions over Afghanistan between October 2001 and March 2002, causing casualties at the time of use, and exacerbating an existing problem with cluster munitions following Soviet use in the 1990s.²⁵

During major hostilities in Iraq in 2003, both air-delivered and artillery-delivered cluster munitions were extensively used. Although use of air-dropped cluster munitions in populated areas had decreased in comparison to past wars, the widespread use of ground launched cluster munitions, including M26 rockets fired by MLRS and M85s launched by artillery, resulted in significant numbers of casualties.

During the 2006 conflict in southern Lebanon, Israel may have fired two million or even more submunitions at the south of the country (the exact number has never been disclosed). Israel used a combination of air, artillery, and rocket delivered cluster munitions. These ranged from those containing Vietnam-era BLU-63 submunitions, (large numbers of which failed to explode) to M77 submunitions ejected from MLRS rockets, (many of which also failed to explode and subsequently caused civilian casualties), to the latest artillery-delivered M85 submunitions fitted with self-destruct fuzes, which again failed in significant numbers. Research undertaken by Landmine Action in September 2006 found that in 60% of cases the centre of the strike was within 500

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metres of the centre of a residential area. In 2008, the UN estimated that 48 square kilometres of southern Lebanon had been contaminated by hundreds of thousands of cluster munitions.²⁶ As of 12 December 2008, 153,755 unexploded submunitions had been destroyed by clearance operations.²⁷

In August 2008, after the adoption of the Convention on Cluster Munitions, both Georgia and Russia used cluster munitions in the armed conflict between the two States. In November, Human Rights Watch reported that at least 17 civilians had been killed and dozens more wounded by cluster munitions used by both sides.²⁸ The organisation documented the use of Russian cluster munitions in six towns and villages and Georgian cluster munitions in nine, though most of the casualties investigated appeared to be caused by the Russian weapons. Cluster munitions failed on both sides, leaving unexploded submunitions as a hazard.

In total, cluster munitions are reported to have been used by at least 16 countries²⁹ in some 30 countries and territories since World War II (see Box 1).

Box 1 | Countries and territories in which use of cluster munitions has been reported since 1945*

Afghanistan	Iraq	Uganda
Albania	Israel	UK/Argentina (Falkland Islands/ Malvinas)
Angola	Kuwait	
Azerbaijan (including Nagorno-Karabakh)	Lao PDR	Vietnam
Bosnia & Herzegovina	Lebanon	Zambia
Cambodia	Mauritania	* Source: Human Rights Watch, Survey of Cluster Munition Policy and Practice, February 2007; Human Rights Watch, "A Dirty Dozen Cluster Munitions", June 2007; "Timeline of Cluster Mu- nition Use", February 2009; and International Campaign to Ban Land- mines, Landmine Monitor Report 2008: Toward a Mine-Free World, Mines Action Canada, October 2008.
Chad	Montenegro	
Croatia	Morocco (Western Sahara)	
Democratic Republic of Congo	Russia (Chechnya)	
Eritrea	Saudi Arabia	
Ethiopia	Serbia (including Kosovo)	
Georgia	Sierra Leone	
Grenada	Sudan	
	Syria	
	Tajikistan	

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Customary international law governing the use of cluster munitions

Despite the Convention on Cluster Munitions, which prohibits the use of cluster munitions deemed to cause unacceptable harm to civilians, like all other weapons used in armed conflict, the use of any cluster munitions is regulated by the general rules of international humanitarian law that govern the conduct of hostilities. These rules restrict how weapons may be used and outline measures which need to be taken so as to limit their impact on civilians and civilian objects. The most relevant rules include:

- > The rule of distinction
- > The rule prohibiting indiscriminate attacks
- > The rule of proportionality, and
- > The rule on feasible precautions.³⁰

According to the 1977 Additional Protocol I to the 1949 Geneva Conventions, which governs international armed conflicts, the civilian population is entitled to “general protection against dangers arising from military operations”. Similar obligations are also applicable in non-international armed conflicts.

These obligations require that parties to a conflict—whether a State or non-state armed group—at all times “distinguish” between the civilian population and civilian objects (e.g. homes, schools, and hospitals) and military objectives and that they direct their operations only against military objectives. States or armed opposition groups may not intentionally target cluster munitions against civilians or use them indiscriminately. This would be a war crime (see Box 2).³¹

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Box 2 | The Martić case*

In June 2007, Milan Martić was convicted by the International Criminal Tribunal for the former Yugoslavia of war crimes and crimes against humanity and sentenced to 35 years' imprisonment. His crimes included the targeting of civilians in Zagreb using cluster munitions delivered by the Orkan rocket in early May 1995. These cluster munition attacks were reported to have killed seven civilians and injured 196 others.*

According to the judgment of the tribunal: "The evidence shows that the M-87 Orkan was fired on 2 and 3 May 1995 from the Vojnic area, near Slavsko Polje, between 47 and 51 kilometres from Zagreb. However, the Trial Chamber notes in this respect that the weapon was fired from the extreme of its range. Moreover, the Trial Chamber notes the characteristics of the weapon, it being a non-guided high dispersion weapon. The Trial Chamber therefore concludes that the M-87 Orkan, by virtue of its characteristics and the firing range in this specific instance, was incapable of hitting specific targets. For these reasons, the Trial Chamber also finds that the M-87 Orkan is an indiscriminate weapon, the use of which in densely populated civilian areas, such as Zagreb, will result in the infliction of severe casualties. By 2 May 1995, the effects of firing the M-87 Orkan on Zagreb were known to those involved. Furthermore, before the decision was made to once again use this weapon on Zagreb on 3 May 1995, the full impact of using such an indiscriminate weapon was known beyond doubt as a result of the extensive media coverage on 2 May 1995 of the effects of the attack on Zagreb."**

* See, for example, Landmine Action UK, "International Criminal Tribunal: Milan Martić guilty of indiscriminate use of cluster munitions in Zagreb war crime verdict", London, 12 June 2007; and Virgil Wiebe, "For Whom The Little Bells Toll: Recent Judgments by International Tribunals on the Legality of Cluster Munitions", University of St. Thomas School of Law Legal Studies Research Paper No. 07-23, available at: www.ssrn.com/link/st-thomas-legal-studies.html.

** ICTY, Prosecutor v Milan Martić, Judgement, 12 June 2007, p. 166, available at: www.un.org/icty/martic/trialc/judgement/mar-tcjud070612e.pdf.

Even when cluster munitions are directed against military objectives, there are legal issues which arise. According to the International Committee of the Red Cross (ICRC), "There are questions as to whether cluster munitions can be used in populated areas in accordance with the rule of distinction and the prohibition of indiscriminate attacks. These rules are intended to ensure that attacks are directed at military objectives and are not of a nature to strike military objects and civilians or civilian objects without distinction."³²

International law also requires that parties to a conflict take precautions in any attack to minimise civilian deaths and injuries. It is not lawful to use cluster munitions in a particular attack if excessive harm is likely to be inflicted on civilians either during or subsequent to the attack in relation to the expected military advantage. In such cases, the attack must be cancelled or a weapon causing fewer civilian casualties must be selected.

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These general rules are customary international law, which binds every party to a conflict—government or non-state armed group—whether or not the relevant State has ratified the relevant Protocol.⁵³

The implementation of these rules to cluster munitions has proven to be challenging, especially given the difficulties in foreseeing their impact beyond the immediate dangers to civilians. A further study, conducted in 2006, argued that: “Although precise numbers of munitions or submunitions which will fail to explode cannot be known and precise numbers of civilian deaths and civilian casualties cannot be predicted, it does not follow that civilian damage from UXO (unexploded ordnance) is unexpected. Damage to civilian property and civilian deaths will inexorably flow from the use of such weapons and must be taken into account in the proportionality equation.”⁵⁴

In addition, Article 36 of 1977 Additional Protocol I stipulates that new weapons must be tested to ensure that they meet the requirements of international law, e.g. that they not be inherently indiscriminate or inflict superfluous injury or unnecessary suffering on combatants.

Military utility

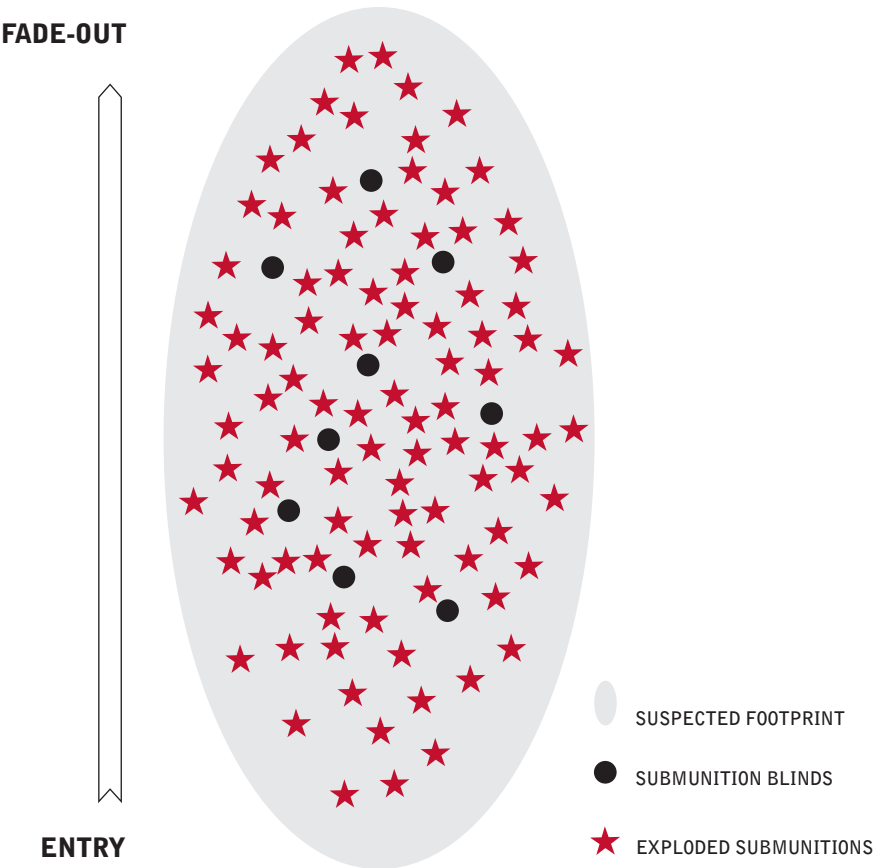
In a military context, cluster munitions are a means of carrying and delivering significant quantities of explosive devices to a wide area in a short space of time. They typically deliver a large number of submunitions per parent munition and are used to damage airfields or roads, and to attack targets, such as infantry, armour, and surface-to-air missile sites.⁵⁵ Columns of infantry, vehicles, armour, and military installations can be targeted with relatively few strikes.

In addition to massed targets, the area effect of cluster munitions makes them suited for targets whose precise location cannot be fixed, such as moving targets or counter-battery fire in response to artillery attacks. The ability to engage these targets with fewer strikes has important force protection implications, as it reduces exposure to enemy counter-attack, as well as logistical and manpower implications, as reducing the number of strikes reduces the number of firing platforms, ammunition and personnel required. Some cluster munitions engage individual targets dispersed over an area or concentrate their effects over a limited area.

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A cluster strike leaves what is known as a “footprint” (see Figure 8), where the impact of up to hundreds of individual detonations are caused by the submunitions from a single cluster munition. The footprint is usually in an ellipse pattern, covering the entry (or beginning of the strike zone) and the “fade-out” (the end of the strike zone). Cluster strikes can deliver thousands of individual explosive devices (a single salvo of 12 MLRS rockets can deliver 7,728 submunitions), leaving a large area of potential contamination if submunitions fail to function as designed, and a confusing picture of overlapping “footprints” for clearance operators.

Figure 8 | Cluster munitions strike footprint



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Submunition failure rates

One of the major humanitarian concerns regarding the use of cluster munitions is the numbers that fail to explode as intended.³⁶ It is very difficult to determine the precise failure rate of submunitions, but there is considerable evidence that the predicted failure rate suggested by a manufacturer is often much lower than the failure rate when submunitions are used. The main reason for this is the different scenarios in test and real combat conditions. Submunition failure rates are dependent on a number of factors, including:

- > design (failures in design or assembly)
- > length and condition of storage (working parts deteriorated over time)
- > drop height, angle, attitude, and velocity (too high, too low, too slow, too fast)
- > vegetation (heavy, dense, or soft)
- > ground conditions at the impact area (e.g. soft, hilly, wet), and
- > interaction (the effects of collisions, blast and fragmentation from other submunitions).

There are many individual factors and combinations which may influence whether a submunition will explode as designed or not. Also, unexploded submunitions may be left in a highly dangerous state: partially or fully armed and often damaged. There are many instances of submunitions being moved several times, and then exploding on the last move. These weapons are extremely unpredictable. In essence, however, all submunitions are inherently dangerous once released from the delivery system and armed, and should be treated as such.

The rigorous design and manufacture of newer munitions may make them less likely to malfunction than older mechanically fuzed types. One weapons expert has found that electronic fuzes have proved more reliable than mechanical fuzes, primarily due to their lack of moving parts, the ability to test electronic circuits more thoroughly and the limitations of reserve batteries. In ammunition testing, it is impossible to check every single mechanical fuze, so sample lots are taken and tested. With electronic fuzes, each and every electronic circuit can be tested quickly and easily and this provides a better indication that the circuits are functioning properly.³⁷

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According to the former head of the UN clearance effort in Southern Lebanon,³⁸ many of the actual areas targeted by cluster munitions were thickly vegetated with natural bush, citrus trees, banana plants and olive groves. This thick vegetation cover had the effect of slowing down the rate of descent of the submunitions and reducing the velocity of final impact. This in turn prevented the striker contacting the detonator with enough force to cause detonation. In such cases the striker may actually be in contact with the stab sensitive/friction activated detonator and any slight movement may cause the unexploded submunition to detonate.³⁹

There is no common cause for the high failure rate of this weapon in the case of Lebanon. Unexploded items have been found properly deployed and properly armed, properly deployed but not fully armed, and not properly deployed. These devices cause a significant post-conflict hazard that result in high levels of casualties for civilians and specialist civilian and military clearance personnel. They act as a lasting impediment to post-conflict rehabilitation and reconstruction.

Impact of submunitions on civilians

The impact of submunitions during and after a cluster strike can be devastating to local communities. Difficulties in accurately targeting submunitions and their wide-area effects mean that civilians may fall victim to the weapons during an attack despite stringent efforts to target only military objectives. Even a low failure rate can result in a large number of unexploded submunitions because of the often high quantities delivered. That impact is felt directly and indirectly. In some countries and regions, submunitions are a major cause of deaths and injuries to civilians. Indeed, in a global study in November 2006, Handicap International concluded that 98% of recorded cluster munition casualties were civilians.⁴⁰ This does not mean, of course, that this is representative of all submunition casualties. The study confirmed a total of 13,306 victims—killed and injured—from cluster munitions.⁴¹

At least as far as children are concerned, submunitions may be a greater threat than landmines. Submunitions are small and often attractive for children to pick up and play with. In 2001 in Kosovo, for example, the ICRC found that as compared to those killed or injured by anti-personnel mines, those killed or injured by submunitions were 4.9 times as likely to be under age 14. Incidents involving submunitions were also much more likely than landmines to result in death or injury to several people.⁴²

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Although the most severe impact of cluster munitions is human, there can also be significant socio-economic consequences:

- > Residential areas can be densely contaminated with large numbers of unexploded submunitions
- > Unexploded submunitions can endanger returning populations and prevent people from returning home
- > Cluster munitions can hinder relief efforts and impede work to rehabilitate communities
- > Unexploded submunitions can affect areas that are already subject to the highest levels of poverty
- > Cluster munitions can seriously affect livelihoods by blocking water supplies, disrupting work to restore power lines and preventing excavation of rubble and reconstruction efforts, and
- > Unexploded cluster munitions can prevent or endanger the harvest of crops.⁴³

In Lao PDR, which suffered one of the heaviest bombardments in history, including massive use of submunitions, a study in 2006 by the UNIDIR concluded that: “Economics and the impact of cluster submunitions are fundamentally bound together. The fact that these devices are still in the ground hinders development by restricting land use and delaying or adding to the costs of infrastructure projects. And because people are poor, they have no choice but to use the land or to collect UXO for the scrap metal, which then creates the possibility of deeper poverty resulting from UXO accidents.”⁴⁴ Indeed, cluster munitions are often encountered in affected nations in the search for scrap metal—a lucrative yet dangerous activity that puts the collectors in danger.

Following the 34-day conflict in Lebanon in the summer of 2006, the south of the country remains littered with a huge number of unexploded submunitions. Since the end of the bombing through to 17 December 2008, 217 civilians were reported killed or injured by submunitions.⁴⁵ In addition, thousands more are denied access to their land and the ability to return to normal life.

ENDNOTES

- ¹ They are also sometimes called cluster bombs.
- ² In the case of mines, the submunitions are called 'minelets'. Anti-personnel mines are prohibited under the Anti-Personnel Mine Ban Convention and anti-vehicle mines are covered by Amended Protocol II to the Convention on Certain Conventional Weapons. They are excluded from the definition of a cluster munition by the Convention on Cluster Munitions (see Chapter 2).
- ³ "Human Rights Watch Memorandum to CCW Delegates: A Global Overview of Explosive Submunitions, Prepared for the Convention on Conventional Weapons (CCW) Group of Governmental Experts on the Explosive Remnants of War (ERW), May 21–24, 2002", Human Rights Watch, Washington DC, 2002, pp. 1–2.
- ⁴ Human Rights Watch, "Survey of Cluster Munitions Produced and Stockpiled", Briefing Paper Prepared for the ICRC Experts Meeting on Cluster Munitions, Montreux, Switzerland, April 2007, available at: www.hrw.org.
- ⁵ In this work, we do not consider landmines delivered by cluster munitions in any detail as they are covered by specific international agreements.
- ⁶ The letters "AO" stand for aviatsionnaya oskolochnaya, or "aircraft fragmentation". See Mennonite Central Committee report at: www.mcc.org.
- ⁷ Handicap International, *Circle of Impact: The Fatal Footprint of Cluster Munitions on People and Communities*, Brussels, May 2007, pp. 48, 84, 90.
- ⁸ "Suppression" is an important role for cluster munitions: meaning to reduce the capability of a hostile force in order to defend, manoeuvre, or counter-attack. Email from Colin King, 6 August 2007.
- ⁹ However, its use against the civilian population in Zagreb in 1995 led to the prosecution by the International Criminal Tribunal for the former Yugoslavia of Milan Martić, an ethnic Serb leader during the war in Croatia (see Chapter 8 of this Guide). See the Tribunal website (www.un.org/icty) and J. Poje, "Report on the Martić Case", p. 38.
- ¹⁰ J. Poje, "Report on the Martić Case", p. 23.
- ¹¹ Ibid.
- ¹² Some of the more modern submunitions use small parachutes to stabilise their descent towards the target. Shortly after deployment from the container, a drag chute or small inflatable "air brake" is ejected from the rear. This is part of the process that allows a telescopic body to extend and arms the fuzing system.
- ¹³ See, for example, "Benchmarks for Alternative Munitions to Cluster Munitions 'Sensor Fused Area Munitions' (SEFAM), Additional explanatory information to the draft CCW Protocol on Cluster Munitions", UN doc. CCW/GGE/2007/WP.1/Add.1.
- ¹⁴ Human Rights Watch, "Survey of Cluster Munitions Produced and Stockpiled", Briefing Paper Prepared for the ICRC Experts Meeting on Cluster Munitions, Montreux, Switzerland, April 2007.
- ¹⁵ Colin King.
- ¹⁶ Colin King, in International Committee of the Red Cross, "Expert meeting: Humanitarian, Military, Technical and Legal Challenges of Cluster Munitions, Montreux, Switzerland, 18 to 20 April 2007", ICRC, Geneva, May 2007, p. 21.
- ¹⁷ Ibid., pp. 12–13: see more generally M85, *An analysis of reliability*, Norwegian People's Aid, Oslo, 2007, available at: www.npaid.org/filestore/M85.pdf.

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- ¹⁸ Colin King, in International Committee of the Red Cross, "Expert meeting: Humanitarian, Military, Technical and Legal Challenges of Cluster Munitions, Montreux, Switzerland, 18 to 20 April 2007", ICRC, Geneva, May 2007, p. 12.
- ¹⁹ This section is based on two presentations to the ICRC's expert meeting on cluster munitions in April 2007 by Colin King and Simon Conway and the subsequent discussions. See International Committee of the Red Cross, "Expert meeting: Humanitarian, Military, Technical and Legal Challenges of Cluster Munitions, Montreux, Switzerland, 18 to 20 April 2007", ICRC, Geneva, May 2007, pp. 11–22.
- ²⁰ See: Lao National Unexploded Ordnance Clearance Programme Annual Report 2007, p. 1.
- ²¹ See ICRC, "Expert meeting: Humanitarian, Military, Technical and Legal Challenges of Cluster Munitions, Montreux, Switzerland, 18 to 20 April 2007", op. cit., p. 15.
- ²² HALO Trust. See *ibid.*
- ²³ HALO Trust.
- ²⁴ Colin King.
- ²⁵ See, for example, Human Rights Watch, "Off Target, The Conduct of the War and Civilian Casualties in Iraq", Washington DC, 11 December 2003, www.hrw.org/en/reports/2003/12/11/target.
- ²⁶ UN, "Portfolio of Mine Action Projects 2009", Twelfth Edition, November 2008, p. 235.
- ²⁷ UN Mine Action Coordination Centre – South Lebanon, "Monthly Reports, November–December 2008", p. 6, www.maccsl.org/reports.
- ²⁸ Human Rights Watch, "Georgia: More Cluster Bomb Damage Than Reported, Georgian Clusters Landed in Villages; Russian and Georgian Duds Still a Threat", Geneva, 4 November 2008, www.hrw.org/en/news/2008/11/04/georgia-more-cluster-bomb-damage-reported.
- ²⁹ According to the Cluster Munitions Coalition (CMC), at least 15 countries have used cluster munitions: Eritrea, Ethiopia, France, Georgia, Israel, Morocco, the Netherlands, Nigeria, Russia, Saudi Arabia, Sudan, Tajikistan, the United Kingdom, USA, and the former Federal Republic of Yugoslavia. In addition, South African submunitions have been found in Zambia. A small number of non-state armed groups have used the weapon (such as ethnic Serb forces in Croatia in 1995, and Hezbollah in Lebanon in 2006). See CMC, "Who Has Used Cluster Munitions?", www.stopclustermunitions.org/the-problem/.
- ³⁰ Observations on the Legal Issues related to the Use of Cluster Munitions, CCW/GGE/2007/WP.8, 25 June 2007, submitted by the ICRC, Point 3.
- ³¹ In addition, in a March 2006 study of State practice based on responses to questionnaires, Timothy McCormack, Paramdeep Mtharu and Sarah Finnan concluded that "It is clear that any attack involving munitions deliberately intended to create an ERW (explosive remnants of war) threat to the civilian population would be in violation of the prohibition of deliberate targeting of civilians and would constitute a war crime." Timothy McCormack, Paramdeep Mtharu and Sarah Finnan, "Report on States Parties' Responses to the Questionnaire, International Humanitarian Law & Explosive Remnants of War", Asia Pacific Centre for Military Law and University of Melbourne Law School, Australia, March 2006, p. 15.
- ³² Observations on the Legal Issues related to the Use of Cluster Munitions, CCW/GGE/2007/WP.8, 25 June 2007, submitted by the ICRC, Point 6.
- ³³ See, for example, International Committee of the Red Cross, *Customary International Humanitarian Law, Volume I: Rules*, Cambridge University Press, Cambridge, 2005.

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- ³⁴ Timothy McCormack and Paramdeep Mtharu, "Expected Civilian Damage and the Proportionality Equation", Asia Pacific Centre for Military Law and University of Melbourne Law School, Australia, November 2006, p. 13.
- ³⁵ It should be noted, however, no detailed military study of the military utility of cluster munitions—if one has been conducted—has ever been made public. This section is not, therefore, exhaustive. For further information on the military utility of cluster munitions, see for example US, "Report to Congress: Kosovo/Operation Allied Force, After Action Report"; UK Ministry of Defence, "Lessons from the Crisis"; and en.wikipedia.org/wiki/Cluster_bomb.
- ³⁶ There is a further failure rate among submunitions equipped with self-destruct devices, some of which also typically fail to detonate as intended.
- ³⁷ Colin King, reported in ICRC, "Expert meeting: Humanitarian, Military, Technical and Legal Challenges of Cluster Munitions, Montreux, Switzerland, 18 to 20 April 2007", ICRC, Geneva, May 2007, p. 20.
- ³⁸ Chris Clarke.
- ³⁹ Chris Clarke, "Unexploded Cluster Bombs and Submunitions in South Lebanon: Reliability from a Field Perspective", in ICRC, "Expert meeting: Humanitarian, Military, Technical and Legal Challenges of Cluster Munitions, Montreux, Switzerland, 18 to 20 April 2007", *op. cit.*, p. 43.
- ⁴⁰ Handicap International, *Fatal Footprint: The Global Human Impact of Cluster Munitions, Preliminary report*, Brussels, November 2006.
- ⁴¹ *Ibid.*, p. 136.
- ⁴² *Explosive Remnants of War: Cluster Bombs and Landmines in Kosovo*, ICRC, Revised Edition, Geneva, June 2001, p. 9.
- ⁴³ See, for example, *Foreseeable Harm: The use and impact of cluster munitions in Lebanon: 2006*, Landmine Action, London, September 2006, p. 5.
- ⁴⁴ Rosy Cave, Anthea Lawson and Andrew Sherriff, *Cluster Munitions in Albania and Lao PDR: The Humanitarian and Socio-Economic Impact*, UNIDIR, Geneva, 2006, p. 35.
- ⁴⁵ A further 55 victims have been recorded among specialist demining personnel. UN Mine Action Coordination Centre – South Lebanon, "Monthly Reports, November–December 2008", p. 3, www.maccsl.org/reports.

CHAPTER 2

CONVENTION ON CLUSTER MUNITIONS



CONVENTION ON CLUSTER MUNITIONS

This chapter describes the negotiation and content of the Convention on Cluster Munitions, the most recent addition to the body of international humanitarian and disarmament law. The convention, which prohibits all cluster munitions deemed to cause unacceptable harm to civilians, was adopted on 30 May 2008 in Dublin, Ireland, and was opened for signature on 3 - 4 December 2008 in Oslo, Norway. It will enter into force after it has been ratified by 30 states.

NEGOCIATION OF THE CONVENTION: THE OSLO PROCESS

The impetus for the negotiation of the Convention, as with the 1997 Anti-Personnel Mine Ban Convention, was concern over the impact of these weapons on civilians. One of the preambular paragraphs of the Convention refers to the determination of States Parties “to put an end for all time to the suffering and casualties caused by cluster munitions at the time of their use, when they fail to function as intended or when they are abandoned.”¹

Norway launched the “Oslo Process” after discussions within the auspices of the Convention on Certain Conventional Weapons (CCW) at the United Nations in Geneva failed to make progress on cluster munitions. Twenty-five States had called for the negotiation of a new international treaty on cluster munitions at the Third CCW Review Conference in November 2006. At the time, however, the development of such a treaty was opposed by a number of major military powers. The Oslo Process sought to negotiate and conclude a treaty outside of the CCW.²

The process formally began in February 2007 at a meeting convened by the Royal Norwegian Ministry of Foreign Affairs in Oslo. On 23 February, 46 States issued the Declaration of the Oslo Conference on Cluster Munitions (the “Oslo Declaration”), committing themselves to:

“Conclude by 2008 a legally binding international instrument that will: (i) prohibit the use, production, transfer and stockpiling of cluster munitions that cause unacceptable harm to civilians, and (ii) establish a framework for cooperation and assistance that ensures adequate provision of care and rehabilitation to survivors and their communities, clearance of contaminated areas, risk education and destruction of stockpiles of prohibited cluster munitions.”

The Oslo Process included a series of global conferences to discuss draft versions of the proposed Convention. These conferences took place in Lima (May 2007), Vienna (December 2007), and Wellington (February 2008) prior to the final diplomatic negotiations in Dublin in May 2008. These global conferences were supported by a series of regional and thematic meetings. These meetings, held in Pnomh Penh, San Jose, Belgrade, Brussels and

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Livingstone, addressed particular aspects of the cluster munitions issue and provided input to the discussions at the global conferences. A total of 79 countries adopted the “Wellington Declaration”⁵ at the meeting in Wellington, New Zealand, which set out the principles to be included in the future convention, in particular:

- > A prohibition on the use, production, transfer and stockpiling of cluster munitions that cause unacceptable harm to civilians, and
- > A framework for cooperation and assistance that ensures adequate provision of care and rehabilitation to survivors and their communities, clearance of contaminated areas, risk education, and destruction of stockpiles.

The convention was negotiated at a Diplomatic Conference convened on 19-30 May 2008 in Dublin. The text was formally adopted on 30 May 2008 by the 107 negotiating states (see Annex 1). In accordance with its Article 15, the Convention on Cluster Munitions was opened for signature on 3 - 4 December 2008 in Oslo. It will remain open for signature at the UN Headquarters in New York until its entry into force.

DEFINITION OF CLUSTER MUNITIONS UNDER THE CONVENTION

The Convention defines a cluster munition as meaning “a conventional munition that is designed to disperse or release explosive submunitions each weighing less than 20 kilograms, and includes those explosive submunitions...”⁴ The Convention also applies to submunitions contained within fixed-wing dispensers, which are termed ‘explosive bomblets’.⁵ This definition covers the vast majority of weapons with submunitions that have been produced, and all that have been used to date.

The Convention excludes from the definition the following:

- (a) A munition or submunition designed to dispense flares, smoke, pyro-technics or chaff; or a munition designed exclusively for an air defence role;
- (b) A munition or submunition designed to produce electrical or electronic effects;
- (c) A munition that, in order to avoid indiscriminate area effects and the risks posed by unexploded submunitions, has all of the following characteristics:
 - (i) Each munition contains fewer than ten explosive submunitions;
 - (ii) Each explosive submunition weighs more than four kilograms;
 - (iii) Each explosive submunition is designed to detect and engage a single target object;

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- (iv) Each explosive submunition is equipped with an electronic self-destruction mechanism;
- (v) Each explosive submunition is equipped with an electronic self-deactivating feature.⁶

The Convention neither prohibits nor restricts the use of these weapons. Their use is permitted on the basis that they will not have the indiscriminate area effects or pose the unexploded ordnance risks of other similar weapons. However, like all other weapons, such munitions are regulated by the general rules of IHL governing the conduct of hostilities. They are also covered by Protocol V on explosive remnants of war.⁷

The Convention also excludes the following from its prohibitions:

- > All landmines⁸
- > A munition or submunition designed to dispense flares, smoke, pyrotechnics, or chaff⁹
- > A munition designed exclusively for an air defence role,¹⁰ and
- > A munition or submunition designed to produce electrical or electronic effects.¹¹

GENERAL PROHIBITIONS

Under Article 1, paragraph 1 of the convention, States Parties are obliged “never under any circumstances” to:

- (a) Use cluster munitions;
- (b) Develop, produce, otherwise acquire, stockpile, retain or transfer to anyone, directly or indirectly, cluster munitions;
- (c) Assist, encourage or induce anyone to engage in any activity prohibited to a State Party under this Convention.

The undertaking “never under any circumstances” to use, develop, produce, stockpile, or transfer cluster munitions, or to assist, encourage or induce anyone to do so, means that the Convention applies in all situations and all circumstances, including peacetime and war or other armed conflict, and during internal disturbances or tensions. States Parties may not resort to cluster munitions in attack or self-defence, even if threatened with imminent military defeat. Furthermore, it is not possible to make any reservations to the provisions of the Convention;¹² States Parties may only take advantage of exceptions specifically provided for, such as the retention of a small number of cluster munitions for training and research into clearance techniques (*see below section on exceptions to the prohibitions on stockpiling and transfer*).

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Although the convention is addressed to States and not to non-State armed groups, the preamble notes that States Parties are resolved that such groups “shall not, under any circumstances, be permitted to engage in any activity prohibited to a State Party to the convention.”¹³ Although there has been relatively limited use by non-State armed groups of cluster munitions, as noted in Chapter 1, a leading member of such a group in Croatia ordered the use of the weapons against Zagreb in 1995, resulting in many civilian casualties. In addition, Human Rights Watch has alleged that Hezbollah used cluster munitions against Israel during the armed conflict in Lebanon in 2006.¹⁴

Prohibition on use

The core of the convention is its prohibition on the use of cluster munitions, as defined in the Convention itself. Indeed, the Oslo Declaration referred to the “grave consequences caused by the use of cluster munitions.” Use covers the employment of cluster munitions all situations, whether in armed conflict, internal disturbances, or peacetime (unless it falls within the permitted exceptions; *see below sections on the prohibitions on stockpiling and transfer*).

A provision entitled *Relations with States not party to this Convention* expressly allows States Parties to engage in military cooperation and operations with States that have not adhered to the Convention on Cluster Munitions and which might commit acts prohibited under the convention (*see below section on interoperability*).¹⁵ It is, however, also provided that in such a situation, no State Party may itself use cluster munitions, or “expressly request the use of cluster munitions in cases where the choice of munitions used is within its exclusive control.”¹⁶ Furthermore, States Parties are required to discourage the use of cluster munitions by States not party to the Convention and to notify them of their obligations under the Convention and promote the norms it establishes.¹⁷

Prohibition on stockpiling

Each State Party undertakes never to stockpile cluster munitions. States may, however, retain a limited number of cluster munitions and explosive submunitions for training in clearance and development of destruction techniques, as well as for the development of counter-measure techniques.¹⁸

Prohibition on production and development

The convention’s prohibition on production of cluster munitions is immediate and absolute. There are no exceptions and in accordance with Article 1 of the convention each State Party is further obliged not to develop or acquire cluster munitions in the future.

CONVENTION ON CLUSTER MUNITIONS

Prohibition on transfer

Each State Party undertakes never to transfer cluster munitions. This includes import, export, gift, and sale of the weapons. Article 2, paragraph 8 of the convention defines transfer as involving, “in addition to the physical movement of cluster munitions into or from national territory, the transfer of title to and control over cluster munitions, but does not involve the transfer of territory containing cluster munition remnants.” It explicitly excludes the transfer of territory on which abandoned or failed cluster munitions or unexploded submunitions are found.

An exception to the prohibition allows the transfer of cluster munitions to another State Party for the purpose of destruction, as well as for training in clearance and development of destruction techniques, as well as for the development of counter-measure techniques.¹⁹ It is therefore not permissible to transfer cluster munitions to a State not party or to a non-state armed group under any circumstances.

Interoperability and assisting, encouraging or inducing a prohibited activity

The Convention on Cluster Munitions is the first international humanitarian or disarmament law treaty to specifically address problems of interoperability. Interoperability covers situations where military alliances of States are operating together and the legal obligations on these States differ (because, for instance, they are party to different international treaties, or have different understandings of the precise content of customary international law).²⁰

As stated above, it is prohibited to assist, encourage or induce anyone in any way to engage in any activity prohibited under the convention.²¹ Thus, a State Party cannot assist anyone, irrespective of whether or not they are an individual, private company, State or non-State armed group or State not party, to use, develop, produce, stockpile or transfer cluster munitions. This provision must, though, be understood in conjunction with the provisions in Article 21 of the Convention, paragraph 3 of which states that:

“Notwithstanding the provisions of Article 1 of this Convention and in accordance with international law, States Parties, their military personnel or nationals, may engage in military cooperation and operations with States not party to this Convention that might engage in activities prohibited to a State Party.”

CONVENTION ON CLUSTER MUNITIONS

The provision in paragraph 3 is limited by the following:

“Nothing in paragraph 3 of this Article shall authorise a State Party:

- (a) To develop, produce or otherwise acquire cluster munitions;
- (b) To itself stockpile or transfer cluster munitions;
- (c) To itself use cluster munitions; or
- (d) To expressly request the use of cluster munitions in cases where the choice of munitions used is within its exclusive control.”²²

In addition, the States Parties in such an operation are required to discourage the use of cluster munitions by States not party to the Convention.

Upon the adoption of the Convention, the representative of Iceland stated with respect to Article 21 that: “While the article sets out an appeal to States which are not parties to join the regime of the Convention, it recognizes the need for continuing cooperation in what is hoped will be a short transition period. This intention is captured clearly in paragraph 3 of the Article which should not be read as entitling States Parties to avoid their specific obligations under the Convention for this limited purpose. The decision to reinforce this position by listing some examples in paragraph 4 cannot therefore be interpreted to allow departures in other respects.”²³

OBLIGATIONS TO DESTROY STOCKPILES OF CLUSTER MUNITIONS

Each State is further required—as soon as possible but not later than eight years after becoming party to the Convention—to destroy stockpiles of cluster munitions that are under both its jurisdiction and its control. The term ‘jurisdiction’ typically covers the whole of the sovereign territory of a State Party (even where the stockpiles may belong to another State); the term ‘control’ may apply extra-territorially, for instance if a State Party occupies territory belonging to another State and gains control of stockpiles of cluster munitions in the process. The formulation, which differs materially from that contained in the Anti-Personnel Mine Ban Convention, means that foreign stockpiles controlled by a State not party to the convention but located on the territory of a State Party may not fall within this requirement.

The destruction of cluster munitions is a complex engineering problem, which often requires remote disassembly because of the initial design of the submunitions. It is therefore a relatively expensive process when compared against the destruction or demilitarization of other conventional ammunition. States should therefore be encouraged to commence their destruction programmes at the earliest opportunity.

CONVENTION ON CLUSTER MUNITIONS

Each State Party undertakes to ensure that destruction methods comply with applicable international standards for protecting public health and the environment.²⁴ For example, the European Union has directives governing the controlled management of hazardous waste.²⁵

The eight-year deadline for stockpile destruction can be extended for an additional four years and further extensions of four years may also be granted in exceptional circumstances.²⁶ As noted above, a limited number of cluster munitions and explosive submunitions can be retained for purposes of training in and development of detection, clearance, destruction techniques, and counter-measures.

OBLIGATIONS TO CLEAR AND DESTROY CLUSTER MUNITION REMNANTS

Each State must also clear territory under its jurisdiction or control of cluster munitions remnants within 10 years of becoming party to the convention.²⁷ Cluster munitions remnants are defined to include the following:

- > Failed cluster munitions (where cluster munitions are dropped or fired but a dispenser fails to disperse the submunitions as intended)²⁸
- > Abandoned cluster munitions (where unused cluster munitions have been left behind or dumped, and are no longer under the control of the party that left them behind or dumped them)²⁹
- > Unexploded submunitions (where submunitions have landed, but have failed to explode as intended),³⁰ and
- > Unexploded bomblets (where explosive bomblets have been dropped from a fixed-wing dispenser but have failed to explode as intended).³¹

If, after becoming a State Party, cluster munitions are used in areas under its jurisdiction or control and become cluster munition remnants, the State Party is given up to ten years after the end of active hostilities to complete clearance and destruction operations.³² Where a State that later becomes party to the convention had previously used cluster munitions against another State Party, the State that used the cluster munitions is “strongly encouraged” to provide assistance for the marking, clearance and destruction of such cluster munition remnants, including, where available, information on types and quantities of the cluster munitions used, precise locations of cluster munition strikes, and areas in which cluster munition remnants are known to be located.³³

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In fulfilling its Article 4 clearance and destruction obligations, an affected State Party is obliged to do the following as soon as possible:

- > Survey, assess and record the threat, making every effort to identify all contaminated areas under its jurisdiction or control
- > Assess and prioritise needs for marking, protection of civilians, clearance and destruction
- > Take “all feasible steps” to perimeter-mark, monitor and fence hazardous areas (see Chapter 6)
- > Conduct risk reduction education to ensure awareness among civilians living in or around cluster munition contaminated areas of the risks and ways to minimise them (see also Chapter 6)
- > Take steps to mobilise resources, and
- > Develop a national plan, building, where appropriate, upon existing structures, experiences, and methodologies.³⁴

In doing so, each State Party must take into account international standards, including the International Mine Action Standards (IMAS).³⁵

Upon completion of its Article 4 clearance and destruction obligations, a State Party is required to make a declaration of compliance to the next Meeting of States Parties.³⁶ If, however, a State is unable to meet its 10-year deadline for clearance and destruction of cluster munitions remnants, it may request extensions from a Meeting of States Parties or a Review Conference for additional periods of up to five years at a time.³⁷

OBLIGATIONS TO ASSIST VICTIMS AND SURVIVORS

The Convention has the most far-reaching provisions on assistance for victims ever included in a disarmament or humanitarian law treaty.³⁸ Each State Party that has cluster munition victims on its territory or under its control must provide for their medical care and physical rehabilitation, psychological support, and social and economic inclusion.³⁹ In addition, the State must assess domestic needs in these areas and develop plans and mobilise resources to meet them.⁴⁰ The definition of victims under the convention is extremely broad (see Box 3), covering not only those who are killed or injured by cluster munitions, but also families and communities that have suffered socio-economic and other consequences.

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Box 3 | The definition of cluster munitions victims

According to Article 2, paragraph 1:

“Cluster munition victims” means all persons who have been killed or suffered physical or psychological injury, economic loss, social marginalisation or substantial impairment of the realisation of their rights caused by the use of cluster munitions. They include those persons directly impacted by cluster munitions as well as their affected families and communities.

INTERNATIONAL COOPERATION AND ASSISTANCE

Article 6 of the Convention contains detailed provisions related to international cooperation and assistance. This article outlines that each State Party, “in fulfilling its obligations under this Convention”, has certain rights, including “the right to seek and receive assistance”,⁴¹ and “the right to participate in the fullest possible exchange of equipment, material and scientific and technological information concerning the implementation of this Convention”.

Article 6 also indicates that each State Party has certain responsibilities—when “in a position to do so”—to provide assistance for victim assistance, risk reduction education, the clearance of cluster munitions remnants, and the destruction of stockpiled cluster munitions.⁴² In addition, each State Party accepts the responsibility not to “impose undue restrictions on the provision and receipt of clearance and other such equipment and related technological information for humanitarian purposes”.⁴³ Assistance can be provided bilaterally, through regional organisations, or internationally, particularly through the UN. The UN, for example, already supports mine action programmes in more than 40 countries. Assistance can also be given through the ICRC, national Red Cross and Red Crescent societies and their International Federation, and NGOs.⁴⁴

ENTRY INTO FORCE OF THE CONVENTION

The Convention on Cluster Munitions will enter into force on the first day of the sixth month after the 30th State ratifies it. As of 18 May 2009, seven states had ratified (Austria, Holy See, Ireland, the Lao People’s Democratic Republic, Mexico, Norway, and Sierra Leone) and another 90 had signed but not yet ratified (see Annex 2 for a list of ratifications and signatures).⁴⁵ Pending ratification, States that sign the convention must refrain from taking any action that would undermine its object and purpose.⁴⁶ Each State Party is obliged to encourage States not party to adhere to the convention, “with the goal of attracting the adherence of all States”.⁴⁷

CONVENTION ON CLUSTER MUNITIONS

IMPLEMENTATION OF THE CONVENTION

The implementation mechanisms of the Convention on Cluster Munitions are similar to those laid down under the Anti-Personnel Mine Ban Convention. As noted by the ICRC, the adoption of domestic legislation and administrative regulations may be required.⁴⁸ This obligation includes the need to impose penal sanctions to prevent and suppress violations by persons, or on territory, under the State's jurisdiction or control.⁴⁹ To this end, specific domestic legislation may have to be adopted and the regulations governing the armed forces amended.

In the interests of transparency, States are required to report annually to the UN Secretary-General on a range of matters, such as the types and numbers of cluster munitions destroyed, the extent and the location of areas contaminated by cluster munitions, the status of clearance programmes, the measures taken to provide risk education and warnings to civilians, the status of programmes for providing assistance to victims and the measures taken domestically to prevent and suppress violations of the convention.⁵⁰ Reporting on these matters also provides an overview on the status of implementation.⁵¹

In addition, meetings of States Parties will be held regularly to review the effectiveness of the convention. The ICRC believes that such meetings "are an important opportunity to review progress in implementation, discuss best practices and resolve issues related to implementation and compliance."⁵²

In accordance with Article 8, paragraph 1, the States Parties agree to consult and cooperate with each other regarding the implementation of the provisions of the convention and to work together in a spirit of cooperation to facilitate compliance by States Parties with their obligations. Should concerns arise about a State's compliance with the convention, clarification may be sought through the UN Secretary-General.⁵³ If necessary, the issue may be submitted to a Meeting of States Parties, which can adopt procedures or specific mechanisms to clarify the situation and draft a resolution.⁵⁴ In any dispute involving two or more States Parties, efforts shall be made to settle the issue by negotiation or other peaceful means of their choice, such as referring the matter to the International Court of Justice in accordance with the Court's statute.⁵⁵

ENDNOTES

- ¹ Second preambular paragraph, Convention on Cluster Munitions. The third preambular paragraph notes the concern of States Parties that “cluster munition remnants kill or maim civilians, including women and children, obstruct economic and social development, including through the loss of livelihood, impede post-conflict rehabilitation and reconstruction, delay or prevent the return of refugees and internally displaced persons, can negatively impact on national and international peace-building and humanitarian assistance efforts, and have other severe consequences that can persist for many years after use.”
- ² For further detail on the Oslo Process, see, for example, John Borrie, “The ‘Long Year’: Emerging International Efforts to Address the Humanitarian Impacts of Cluster Munitions, 2006–2007”, *International Yearbook of Humanitarian Law*, Vol. 10 (2007), T.M.C. Asser Press, Cambridge/Amsterdam, pp. 251–275.
- ³ “Declaration of the Wellington Conference on Cluster Munitions”, available at: www.clusterconvention.org/pages/pages_vi/vic_oslowellington.html.
- ⁴ Article 2, paragraph 2, Convention on Cluster Munitions.
- ⁵ Article 1, paragraph 2.
- ⁶ Article 2, paragraph 2(c).
- ⁷ See, for example, International Committee of the Red Cross, “The Convention on Cluster Munitions”, Fact Sheet, Geneva, November 2008, available at: [www.icrc.org/Web/eng/siteeng0.nsf/htmlall/cluster-munitions-factsheet-301108/\\$File/CCM-cluster-munitions-ENG.pdf](http://www.icrc.org/Web/eng/siteeng0.nsf/htmlall/cluster-munitions-factsheet-301108/$File/CCM-cluster-munitions-ENG.pdf).
- ⁸ Article 1, paragraph 3. As noted in Chapter 1, mines were excluded from the definition as they are covered by other instruments of international law.
- ⁹ Article 2, paragraph 2(b).
- ¹⁰ Ibid.
- ¹¹ Article 2, paragraph 2(a).
- ¹² Article 19.
- ¹³ Twelfth preambular paragraph.
- ¹⁴ Human Rights Watch alleges that Hezbollah fired more than 100 Chinese-produced Type-81 122mm cluster munition rockets into northern Israel. See Human Rights Watch, “Timeline of Cluster Munition Use”, 13 February 2009, www.hrw.org/sites/default/files/related_material/Son%20of%20Dirty%20Dozen%202.2009.pdf.
- ¹⁵ Article 21, paragraph 3.
- ¹⁶ Article 21, paragraph 4(c) and (d).
- ¹⁷ Article 21, paragraph 2.
- ¹⁸ Article 3, paragraph 6.
- ¹⁹ Article 3, paragraph 7.
- ²⁰ The NATO definition of interoperability is: “The ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together.” See, for example, NATO C3 Technical Architecture Management, Volume 1, available at: http://194.7.80.153/website/home_volumes.asp?menuid=15.
- ²¹ Article 1, paragraph 1(c).
- ²² Article 21, paragraph 4.
- ²³ “Statement by the Government of Iceland upon the adoption of the Convention on Cluster Munitions Dublin”, Diplomatic Conference for the Adoption of a Convention on Cluster Munitions, Dublin, 30 May 2008, Conference Doc. CCM/CRP/2, www.clustermunitionsdublin.ie/pdf/CCMCRP2.Icelandicstatementpdf_000.pdf.

ENDNOTES

- ²⁴ Article 3, paragraph 2.
- ²⁵ Directive 2006/12/EC of the European Parliament and of the Council on Waste, 5 April 2006 (Solid Waste). Directive 2000/76/EC of the European Parliament and of the Council on the Incineration of Waste, 4 December 2000 (Emissions to Air). See also <http://europa.eu/scadplus/leg/en/lvb/l21199.htm>.
- ²⁶ Article 3, paragraphs 1–5.
- ²⁷ Article 4, paragraph 1.
- ²⁸ See the definition in Article 2, paragraph 4.
- ²⁹ See the definition in Article 2, paragraph 6.
- ³⁰ See the definition in Article 2, paragraph 5.
- ³¹ See the definition in Article 2, paragraph 15.
- ³² Article 4, paragraph 1(b).
- ³³ Article 4, paragraph 4(a) and (b).
- ³⁴ Article 4, paragraph 2.
- ³⁵ Article 4, paragraph 3.
- ³⁶ Article 4, paragraph 1(c).
- ³⁷ Article 4, paragraphs 5–8.
- ³⁸ See, for example, International Committee of the Red Cross, “The Convention on Cluster Munitions”, Fact Sheet, *op. cit.*
- ³⁹ Article 5, paragraph 1.
- ⁴⁰ Article 5, paragraph 2.
- ⁴¹ Article 6, paragraph 1.
- ⁴² Article 6, paragraph 2.
- ⁴³ Article 6, paragraph 3.
- ⁴⁴ Article 6, paragraph 2.
- ⁴⁵ For details of ratification of the Convention on Cluster Munitions, see, for example, [www.unog.ch/80256EE600585943/\(httpPages\)/67DC5063EB530E02C12574F8002E9E49?OpenDocument](http://www.unog.ch/80256EE600585943/(httpPages)/67DC5063EB530E02C12574F8002E9E49?OpenDocument), or [www.icrc.org/IHL.nsf/\(SPF\)/party_main_treaties/\\$File/IHL_and_other_related_Treaties.pdf](http://www.icrc.org/IHL.nsf/(SPF)/party_main_treaties/$File/IHL_and_other_related_Treaties.pdf).
- ⁴⁶ See, for example, International Committee of the Red Cross, “The Convention on Cluster Munitions”, Fact Sheet, *op. cit.*
- ⁴⁷ Article 21, paragraph 1.
- ⁴⁸ See, for example, International Committee of the Red Cross, “The Convention on Cluster Munitions”, Fact Sheet, *op. cit.*
- ⁴⁹ Article 9.
- ⁵⁰ Article 7.
- ⁵¹ ICRC, “The Convention on Cluster Munitions”, Fact Sheet, *op. cit.*
- ⁵² *Ibid.*
- ⁵³ Article 8, paragraph 2.
- ⁵⁴ Article 8, paragraph 3–6; see also ICRC, “The Convention on Cluster Munitions”, Fact Sheet, *op. cit.*
- ⁵⁵ Article 10.

CHAPTER 3

CLUSTER MUNITIONS AND THE CONVENTION ON CERTAIN CONVENTIONAL WEAPONS



CLUSTER MUNITIONS AND THE CONVENTION ON CERTAIN CONVENTIONAL WEAPONS

The Convention on Certain Conventional Weapons (CCW) addresses the post-conflict clearance of all explosive remnants of war (ERW), including abandoned cluster munitions or unexploded submunitions, through its Protocol V. The protocol also has limited provisions on preventive measures to minimise the amount of ordnance that becomes ERW. In addition, discussions have continued in 2009 on a possible protocol specifically addressing cluster munitions.

PROTOCOL V ON EXPLOSIVE REMNANTS OF WAR

In December 2001, the Second Review Conference of the 1980 Convention on Certain Conventional Weapons (CCW) sought to address growing international concern about the threat to civilians from cluster munitions and other explosive remnants of war (ERW). It agreed on a mandate for an open-ended Group of Governmental Experts to discuss ways to address the issue of ERW, including technical improvements and other measures for relevant types of munitions, including submunitions, which could reduce the risk of such munitions becoming ERW. The Group was also tasked to examine the adequacy of existing international humanitarian law in minimising post-conflict risks of ERW, both to civilians and to the military.¹

As a result, Protocol V on ERW was adopted in November 2003 after a year of formal negotiations (*see Annex 5 for the text of the protocol*), and the protocol entered into force on 12 November 2006 following adherence to it by 20 States Parties to the CCW. As of 1 May 2009, a total of 57 States had adhered to the protocol (*see Annex 4*).

In accordance with Article 10, paragraph 1 of the Protocol, 22 States Parties to the Protocol asked the UN Secretary-General in November 2006 to convene a first Conference of States Parties to the Protocol to discuss its operation. The First Protocol V Conference was held on 5 November 2007. It decided to establish a mechanism for cooperation and assistance, consisting of annual informal meetings of experts reporting to the Conferences of States Parties to the CCW.² The GICHD has published a book on the implementation of the Protocol as a resource for States Parties and other interested actors.³

CCW Protocol V on ERW addresses cluster munitions in three ways:

- > During the design and manufacturing phase
- > As abandoned explosive ordnance (AXO) linked to an armed conflict, and
- > As unexploded ordnance (UXO) linked to an armed conflict.

CLUSTER MUNITIONS AND THE CONVENTION ON CERTAIN CONVENTIONAL WEAPONS

Minimising the occurrence of ERW

Under Article 9 of Protocol V, and “bearing in mind the different situations and capacities”, each State Party is “encouraged to take generic preventive measures aimed at minimizing the occurrence of explosive remnants of war”, including cluster munitions. The non-binding Technical Annex to the protocol suggests ways in which this can be achieved.

States producing or procuring explosive ordnance should seek the greatest reliability of munitions through certified quality control measures and internationally recognised quality assurance standards. Periodically, a sample of stockpiled explosive ordnance should undergo live-fire testing to ensure that munitions function correctly. Testing under controlled or ideal conditions usually produces different results to combat. A State should examine ways of maximising the reliability of explosive ordnance that it intends to produce or procure.

The risk of explosions in stockpiles should be minimised by the use of appropriate stockpile arrangements. In managing stockpiles, States should store unused cluster munitions in secure facilities or appropriate containers that protect the explosive ordnance and its components in a controlled atmosphere. States should apply appropriate explosive ordnance logging, tracking and testing procedures. This should include information on:

- > the date of manufacture of each number, lot or batch of explosive ordnance
- > under what conditions it has been stored, and
- > to what environmental factors it has been exposed.

Finally, the Annex notes that proper training of all personnel involved in the handling, transporting and use of explosive ordnance is an important factor in ensuring its reliable operations. States should therefore adopt and maintain suitable training programmes to ensure that personnel are properly trained for the munitions with which they work.

CLUSTER MUNITIONS AND THE CONVENTION ON CERTAIN CONVENTIONAL WEAPONS

Clearing ERW

Under Article 3 of Protocol V, States Parties, as well as parties to an armed conflict within the territory of a State Party, have obligations to address the threat posed by abandoned cluster munitions or unexploded submunitions on territory under their control after the cessation of active hostilities and “as soon as feasible”. There are four obligations, to:

- > Survey and assess the threat posed by explosive remnants of war
- > Identify priorities for marking and clearance
- > Mark and clear, remove or destroy ERW, and
- > Take steps to mobilise the necessary resources.

Similarly, any State Party that has used cluster munitions on territory controlled by another State Party is required to provide “where feasible” technical, financial, material or human resources to facilitate the marking and clearance, removal or destruction of abandoned cluster munitions or unexploded submunitions. This assistance can be provided bilaterally or through a mutually agreed third party, such as the UN or other “relevant organisations”.

According to Article 5, States Parties and parties to an armed conflict must take “all feasible precautions” in territory under their control that is affected by ERW to protect civilians and civilian objects from the threat. These precautions may include warnings, risk education to the civilian population, marking, fencing and monitoring of territory affected by explosive remnants of war, as set out in the Technical Annex.

Data recording requirements

Under Article 4, paragraph 1 of the Protocol, States Parties and parties to an armed conflict are required “to the maximum extent possible and as far as practicable record and retain information on the use of explosive ordnance or abandonment of explosive ordnance, to facilitate the rapid marking and clearance, removal or destruction of explosive remnants of war, risk education and the provision of relevant information to the party in control of the territory and to civilian populations in that territory.”

The non-binding Technical Annex sets out in more detail some of the data that should be recorded in order to facilitate future clearance efforts. With respect to unexploded submunitions, a State should record the following:

- > the location of areas targeted
- > the approximate number of cluster munitions used in those areas

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- > the type and nature of cluster munitions used in areas, including technical information relevant to clearance, and
- > the general location of known and probable unexploded submunitions.⁴

Where a State has been obliged to abandon cluster munitions in the course of operations, it should endeavour to leave the weapons safe and secure, and record information on their location: the approximate amount at each specific site and the types abandoned at each specific site.

NEGOTIATIONS WITHIN THE CCW ON CLUSTER MUNITIONS

In November 2006, at the Third Review Conference of the CCW, States Parties decided to convene in June 2007, “as a matter of urgency”, an inter-sessional meeting of governmental experts to consider further the application and implementation of existing international humanitarian law to specific munitions that may cause explosive remnants of war, with a “particular focus on cluster munitions.”

As a result of the meeting in June, the governmental experts decided to recommend to the 2007 Meeting of States Parties to the CCW to determine how best to address the humanitarian impact of cluster munitions, “including the possibility of a new instrument.” The meeting of States Parties was held in Geneva in November 2007. It decided to establish a Group of Governmental Experts that would meet to consider the issue further.

In 2008, the Group of Governmental Experts met five times (in January, April, July, September, and November, but did not achieve consensus on how to proceed. The 2008 Meeting of States Parties to the CCW decided that the Group of Governmental Experts would meet for up to two weeks in 2009, from 16 to 20 February and then, if required, from 14 to 17 April. The Group, which was to be supported by military and technical experts, was expected to make every effort to conclude its negotiations as rapidly as possible and to report to the 2009 Meeting of States Parties to the CCW.⁵

On 20 February 2009, just prior to the close of the meeting, the chair of the Group of Governmental Experts, Ambassador Gustavo Ainchil of Argentina, proposed a draft text on cluster munitions to the States Parties. At the April session, further progress was made towards a draft protocol, although it fell far short of the aspirations of States supporting the Convention on Cluster Munitions, with a prolonged transition period for the prohibition of any existing weapons. Certain major users of cluster munitions, such as Israel, the Russian Federation, and the USA, claimed that the current text represented

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a good basis for negotiation, and suggested that it would affect more than 85 per cent of existing global stockpiles of cluster munitions. At the opening of the April session, the Czech Republic, on behalf of the European Union, stated that:

“As several High Contracting Parties are not yet in a position to join the CCM (Convention on Cluster Munitions), the EU is convinced that concluding in the framework of CCW a complementary agreement, compatible with the CCM, would significantly contribute to addressing the humanitarian impact of cluster munitions.”⁶

An additional meeting of the group of governmental experts on cluster munitions was set to take place, again in Geneva, on 17–21 August 2009. As of going to press, the results of the negotiations were not known.

ENDNOTES

- ¹ Final Document of the Second Review Conference, UN doc. CCW/CONF.II/2.
- ² See Final Document of the First Protocol V Conference, UN doc. CCW/P.V/CONF/2007/1.
- ³ GICHD, *Mine Action and the Implementation of CCW Protocol V on Explosive Remnants of War*, Geneva, July 2008.
- ⁴ Technical Annex, Article 1.
- ⁵ See United Nations Office in Geneva, “GGE sessions in 2009”, accessed at: [www.onug.ch/80256EE600585943/\(httpPages\)/E70D9C25C860887DC12575280048EC9B?OpenDocument](http://www.onug.ch/80256EE600585943/(httpPages)/E70D9C25C860887DC12575280048EC9B?OpenDocument).
- ⁶ Opening statement by H.E. Ambassador Tomáš Husák, Permanent Representative of the Czech Republic to the United Nations Office in Geneva on behalf of the European Union, Geneva, 14 April 2009, to the Meeting of the GGE of the High Contracting Parties to the CCW, Geneva, 14–17 April 2009.

CHAPTER 4

STOCKPILE DESTRUCTION



STOCKPILE DESTRUCTION

This chapter provides an overview of techniques for the destruction of cluster munition stockpiles. The Cluster Munitions Coalition believes that cluster munitions are stockpiled by at least 82 states.¹ The total number of cluster munitions stockpiled is not known, but probably amounts to several billion submunitions.² Successful stockpile destruction is the surest way to prevent future use of cluster munitions.

The IMAS provide that, in the context of mine action, the term ‘stockpile’ refers to a large accumulated stock of explosive ordnance.³ Stockpile destruction is defined as “the physical destructive procedure towards a continual reduction of the national stockpile”.⁴ A State or other entity holding stocks of weapons may wish to destroy explosive ordnance as part of a disarmament process, to implement a legal obligation, upon expiry of shelf life, or for reasons of safety.⁵

As described in Chapter 2, the Convention on Cluster Munitions requires that each State destroy all stockpiles of cluster munitions under its jurisdiction and control within eight years of becoming a party to the convention. The eight-year deadline for stockpile destruction can be extended for an additional four years and further extensions of four years may also be granted in exceptional circumstances.⁶ Article 6, paragraph 5 of the Convention requires that each State Party in a position to do so shall provide assistance for the destruction of stockpiled cluster munitions.

STOCKPILE DESTRUCTION

Box 4 | Challenges in stockpile destruction: the view of two experts*

In October 2008, at the Croatia Regional Workshop on the Convention on Cluster Munitions, two international experts* gave a presentation on challenges facing States that wished to destroy stockpiles of cluster munitions. They came to the following conclusions:

- > Cluster munition demilitarisation is technically demanding and expensive (particularly if carried out in an environmentally friendly manner)
- > Cluster munition dismantling and destruction techniques are available, with a limited number of specialist demilitarisation companies able to do the job. Demilitarisation of cluster munitions has been ongoing for several years on behalf of certain countries
- > However, these companies have limited capacities, and expansion would require significant investments (amounting to millions of dollars)
- > The precise amount of cluster munition stocks in international stockpiles is not well known, because the information is classified in many cases, which means that precise planning is difficult
- > Even though there are some solutions for cluster munition demilitarisation in developing countries, these techniques can not deal with all types or large-scale stocks
- > Countries with limited budgets will probably require financial support, for example for the establishment of a regional demilitarisation factory or for the transport of the cluster munitions to existing factories in other countries.

The experts expressed their hope that global stockpile figures become clearer after the entry into force of the Convention on Cluster Munitions, to allow better understanding of the demilitarisation needs and thus allow capacity planning and an assessment of financial needs worldwide.

* Vera Bohle of the GICHD, and Peter Courtney-Green, of the NATO Maintenance and Supply Agency (see http://www.namsa.nato.int/NAMSO/namso_1_e.htm).

STOCKPILE DESTRUCTION

TECHNIQUES FOR STOCKPILE DESTRUCTION

There are a variety of techniques available for destruction of cluster munition stockpiles. Physical destruction techniques available range from 'open detonation', through manual disassembly of the munitions to highly sophisticated industrial processes. The decision to opt for any particular technique is likely to be based on cost, safety, and environmental considerations, as well as the type of munitions being destroyed. The Berlin Conference on the destruction of cluster munitions stockpiles, held on 25 - 26 June 2009, was expected to give valuable guidance on stockpile destruction.

As the IMAS note, the destruction of munitions is a potentially hazardous task. The risks are minimised if the correct procedures are followed. If they are not, the possibility of a serious accident becomes very high.⁷

Open detonation

Open detonation techniques may be the only practical solution to destroy stockpiles of cluster munitions for certain countries. This is especially the case where the numbers to be destroyed are limited and where there is no suitable industrial base to develop alternative techniques. It is not, however, suitable for large-scale destruction of cluster munition stocks. Very careful positioning and calculation of donor charges is necessary to ensure the destruction of all submunitions and supplementary charges. Incomplete detonation of submunitions may result in 'throw-outs', requiring additional EOD work in a potentially more dangerous situation.

Closed detonation

Two techniques for closed detonation have been used successfully for cluster munitions destruction: detonation deep underground in worked-out mines in Norway; and destruction in closed detonation chambers.

Closed incineration

Complete cluster munitions cannot be incinerated but explosive components can be incinerated after the munitions have been broken down. Pre-treatment may include the removal of fuzes from submunitions (after which the fuzes can be incinerated), the removal or deformation of the cones of shaped charges and, in the case of rocket-fired cluster munitions, breaking down the rocket motors into segments suitable for incineration. Closed incineration requires highly specialised explosive waste incinerators with pollution control systems to prevent the emission of noxious gases.

STOCKPILE DESTRUCTION

Disassembly

This technique comprises a variety of different methods, from manual disassembly to mechanical or robotic disassembly. Manual disassembly implies the use of people to physically dismantle cluster munitions using simple hand tools or engineering jigs. According to an expert, cluster munitions of Soviet manufacture may be particularly suitable for destruction by disassembly. This technique has the advantage of requiring limited capital investment, but is a labour-intensive process which results in relatively slow production rates. This method requires semi-skilled, yet well-trained staff. A problem during manual disassembly is that certain munition types are designed to arm on separation from the canister, which increases risk during the demilitarisation process.

In contrast to manual disassembly, mechanical disassembly has the advantages of high production rates. It is an efficient system of work and has low staff requirements. It is environmentally friendly for this stage of the demilitarisation cycle and the technology is readily available. A major disadvantage, however, is the requirement for high capital investment. This is further complicated by the need for a wide range of equipment necessary to cope with all pre-processing and safety requirements.

Robotic disassembly is a fully-automated disassembly system. Similar advantages and disadvantages to mechanical disassembly, however the initial capital costs are much greater. This system would be economically efficient for very large production runs due to the high start-up costs.

Disassembly is not a complete solution to cluster munition destruction, because the explosive components require further treatment after disassembly. This may involve closed incineration or the use of the technique known as cryofracture.

Cryofracture

This technique is widely used for the neutralisation of small submunitions such as the M42, M46 and M77 grenades disbursed by artillery cluster munitions. The grenade fuzes are cut off mechanically before the grenades are passed through a bath of liquid nitrogen to embrittle their structures. They are then crushed to expose the explosive filling and passed under a flame in an enclosed environment to ignite the explosives, which burn to extinction. The metal scrap is then separated into ferrous and non-ferrous elements.

STOCKPILE DESTRUCTION

“Harvesting” of components of cluster munitions

In Cambodia, the Explosive Harvesting Project of the Golden West Humanitarian Foundation takes place in Kampong Chhnang, a town about one hour’s drive from the capital, Phnom Penh.⁸ A cutting machine, located behind protective walls and embankments, is used for demilitarisation. The machine can cut ammunition safely, which allows the explosives to be recycled and the metal casing to be turned into scrap, for example, for use in the construction industry.

Shaped-charge artillery submunitions harvested by the process have been used for EOD operations, which may also have the advantage of providing donor charges for mine clearance. In some countries, lack of explosives has been cited as an obstacle to fulfilling clearance obligations under the Anti-Personnel Mine Ban Convention.

STOCKPILE DESTRUCTION

INTERNATIONAL STANDARDS

There are no international standards for the destruction of cluster munition beyond what is set out in the Convention on Cluster Munitions. Thus, each State Party to the Convention on Cluster Munitions undertakes to ensure that destruction methods comply with applicable international standards for protecting public health and the environment.⁹

The IMAS do not provide specific information on the destruction of cluster munition stockpiles, only on anti-personnel mines.¹⁰ Standard NATO agreements (called STANAGs) lay down general standards for the management of conventional ammunition while an OSCE Handbook of Best Practices on Conventional Ammunition provides general guidance on the destruction of conventional ammunition. There are, however, standards for conventional ammunition overall, and there are a number of regional and national laws affecting their destruction, including for example environmental aspects.

Environmental considerations

Concerns have been expressed as to the environmental consequences of destroying cluster munitions by open detonation, both by States holding stockpiles and also potential donors, which may fall foul of national or international environmental legislation and guidelines.¹¹ In Europe, many nations have banned open detonation of all munitions unless there is no alternative and it can only be justified on safety grounds. This has led to the construction of demilitarisation facilities.

There are also internationally-accepted standards for the determination and measurement of air pollution from industrial processes. These standards apply to any pollution control systems used during industrial demilitarisation operations, but only in terms of the measurement of emissions as the standards do not provide any guidance on what the overall emission limits should be: this remains the responsibility of the national authority. The only supra-national legislation that covers emissions into the atmosphere from the incineration of waste is the Directive 2000/76/EC of the European Parliament and of the Council on the Incineration of Waste, 4 December 2000 (Emissions to Air). This provides a comprehensive standard and is in use by all European Union countries and those countries with associate status.

ENDNOTES

- ¹ Algeria, Angola, Argentina, Austria, Australia, Azerbaijan, Bahrain, Belarus, Belgium, Bosnia & Herzegovina, Brazil, Bulgaria, Canada, Chile, China, Croatia, Cuba, Czech Republic, Denmark, Egypt, Eritrea, Ethiopia, Finland, France, Georgia, Germany, Greece, Guinea, Guinea Bissau, Honduras, Hungary, India, Indonesia, Iran, Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kuwait, Latvia, Libya, Moldova, Mongolia, Montenegro, Morocco, Netherlands, Nigeria, North Korea, Norway, Oman, Pakistan, Peru, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Serbia, Singapore, Slovakia, South Africa, South Korea, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syria, Thailand, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Uzbekistan, Yemen, and Zimbabwe.
CMC, "Stockpilers of Cluster Munitions", www.stopclustermunitions.org/the-problem/countries/; see also Human Rights Watch, "Types of Cluster Munitions in Global Stockpiles", 19 May 2008, available at: www.hrw.org/en/news/2008/05/19/types-cluster-munitions-global-stockpiles.
- ² See, for example, Human Rights Watch, "Cluster Weapons: Scourge of Civilians", 2 March 2009, www.hrw.org/en/news/2009/03/02/cluster-weapons-scourge-civilians (visited 26 March 2009).
- ³ IMAS 04.10: Glossary of mine action terms, definitions and abbreviations, Second Edition, 1 January 2003 (incorporating amendment numbers 1, 2 & 3), 3.244.
- ⁴ *Ibid.*, 3.245.
- ⁵ IMAS 11.10: Guide for the destruction of stockpiled anti-personnel mines, Second Edition, 1 January 2003 (incorporating amendment numbers 1, 2 & 3), Section 6.11, p. 6.
- ⁶ Article 3, paragraphs 1–5, Convention on Cluster Munitions.
- ⁷ IMAS 11.20: Principles and procedures for open burning and open detonation operations, Second Edition, 1 January 2003 (Incorporating amendment number(s) 1, 2 & 3), Section 4, p. 2.
- ⁸ See Golden West Humanitarian Foundation, "Transforming Weapons of Warfare into Tools for Peace", www.goldenwesthf.org/index.php?option=com_content&task=blogcategory&id=3&Itemid=3#cambodia.
- ⁹ Article 3, paragraph 2, Convention on Cluster Munitions.
- ¹⁰ IMAS 11.10: Guide for the destruction of stockpiled anti-personnel mines, Second Edition, 1 January 2003 (incorporating amendment numbers 1, 2 & 3).
- ¹¹ The NATO Maintenance and Supply Agency (NAMSA), for instance, will not award contracts for stockpile destruction of any munitions by open detonation. The only exemption to this is the use of open detonation in deep mines in Norway, where an environmental impact assessment has supported the technique.

CHAPTER 5

CLEARANCE AND DISPOSAL OF CLUSTER MUNITIONS



CLEARANCE AND DISPOSAL OF CLUSTER MUNITIONS

This chapter considers the safe clearance and disposal of cluster munition remnants in accordance with the International Mine Action Standards (IMAS),¹ taking into account the lessons learned in recent conflicts in which cluster munitions were used.² The clearance and disposal of certain cluster munitions is required by both the Convention on Cluster Munitions (*see Chapter 2*) and Protocol V to the Convention on Certain Conventional Weapons (*see Chapter 5*).

The clearance of cluster munitions is a challenging and potentially dangerous task, as explosive ordnance disposal (EOD) personnel will readily attest, but is urgently required if casualties from unexploded submunitions are to be minimised. The sensitivity of many fuzing systems means that disposal *in situ* is the only safe option. In some countries, however, untrained personnel have been required to pick up and carry submunitions for destruction elsewhere, sometimes with deadly consequences.

Mine action organisations generally refer to clearance of explosive ordnance other than landmines—i.e. explosive remnants of war (ERW)—as battle area clearance (BAC), explosive ordnance disposal (EOD), or conventional munition disposal (CMD).³ This chapter concentrates on BAC where submunitions are the main hazard rather than other ERW, although it is recognised that other munitions are likely to be found during the clearance process.

CLEARANCE METHODOLOGY

Generally speaking, clearance methodology is a function of ongoing risk assessments made at both national planning and tasking level and on the ground by field operators. A submunition clearance task will normally be either:

- > Visual/surface clearance; or
- > Sub-surface clearance.

Visual / surface clearance

This method has been used on several occasions after conflict as a quick and effective means to remove the immediate hazard in an area, i.e. the visible threat. In many emergency response scenarios this is the kind of clearance methodology employed although it is hazard and terrain dependent. For example, it may be particularly appropriate in urban areas or on rocky hard ground where unexploded submunitions are lying on or above the surface. Surface clearance will normally include both the ground and also above it, e.g. in trees, fencing and/or caught in urban constructions. Visual search may be supported in vegetation by detection instruments, such as a magnetometer.⁴

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Visual/surface clearance is often conducted during the emergency phase of a post-conflict clearance operation. The advantages are that it can be implemented quickly, with limited resources, and can immediately lower the casualty rate. The disadvantages are that the local population tend to believe that the area is then safe, and may resume work there. The task may then be given a low priority for further clearance, or even deleted from the clearance schedule altogether.

In recent operations, many surface clearance tasks have left hazardous areas—in some cases for many years—with inadequate or ambiguous official records and no local markings. Where rapid surface clearance is conducted, it is therefore crucial that:

- > the extent and limitations of the clearance are recorded
- > the local population are aware of the residual hazards, and
- > follow-on (sub-surface) operations must be planned as soon as possible (unless these are not required, i.e. if the ground is hard).

In all instances where visual searches have been conducted, it is essential that accurate recording and reporting of the task is conducted for follow-up tasking if necessary. Each item found should be properly recorded using maps or a GPS in order to be able to establish the footprint of the strike.

Sub-surface clearance

For every cluster munition strike area, the decision must be taken whether or not to conduct sub-surface clearance. This decision is dependent on an objective assessment of the likelihood that there are unexploded submunitions below the surface of the ground. If, for example, part of the footprint is on a tarmac road, the road itself will not normally require more than a visual inspection. If, on the other hand, the ground is extremely soft (e.g. it has been ploughed), then sub-surface clearance will probably be needed. Whatever decision is taken, it must be documented and the reasons recorded.

Sub-surface clearance is much slower than a visual surface sweep, but provides a far more comprehensive solution. The choice of methodology is influenced by:

- > **Casualties**
- > **Ground use:** urban, rural (grazing) or rural (agricultural)
- > **Terrain:** access to the area, the type of terrain – hilly, rocky, soft, etc.
- > **Impact on population:** the population contained within the hazardous area or in the surrounding areas

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- > **Weather:** both at the time of the cluster strike and at the time of the clearance task
- > **Season:** this affects the threat from submunitions as a result of the extent of vegetation, condition of ground, wind, and rain, etc.
- > **Crop cycle**
- > **Submunition hazard:** especially important to the decision whether to undertake sub-surface clearance
- > **Military data:** access to official records of the number and type of cluster munition strikes
- > **Clearance history:** this is especially dependent on the recording and reporting of clearance activities previously conducted.

Where possible, the clearance response should be conducted with a focus on first removing the immediate threat of unexploded submunitions to the population by clearing the surface threat; and following up surface clearance with sub-surface clearance (depending on the factors described above).

The extent and the depth of clearance should be decided by national authorities based on the particular situation they are facing. Generally, a standard should be set, for example to search a distance of 25–50 metres past the last submunition found (to cover ‘fade-out’)⁵ and to search to a depth of 20 centimetres (for DPICM) and sometimes 50 centimetres or more for larger submunitions. This may change as a result of the risk assessment (taking account of soft ground, for example), but in any case, the decision-making of this assessment should be fully documented.

RENDER SAFE PROCEDURES

Render Safe Procedures (RSP) are technical instructions for the destruction or neutralisation of unexploded munitions. They are usually contained in technical manuals and are intended for use by trained EOD operators using specialised equipment. There are four general methods to destroy or neutralise a sub-munition:

- > Destruction by detonation *in situ*
- > Destruction by deflagration (e.g. by the use of a point focal charge or pyrotechnic torch)
- > Alternate methods to separate the fuze mechanism from the main charge, and
- > Manual neutralisation of the fuze.

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These are discussed briefly in turn. It should be stressed, however, that any RSP should only be carried out by appropriately qualified EOD technicians who are familiar with all aspects of the submunition and fuze mechanism design.

Detonation

Destruction by detonation *in situ* is usually the most appropriate RSP for unexploded submunitions. This means placing a high explosive “donor” charge beside the submunition where it landed, and then detonating it, which also explodes the submunition. Of course, where clearance activities have to be conducted in or around populated areas or in areas of intense livelihood value, this may not be a popular decision among the local population.

Where destruction by detonation *in situ* is conducted, sandbags (or some other protective structure capable of containing the fragmentation) should be placed around the device and a high explosive charge placed beside it taking care not to disturb the submunition. In Lebanon, clearance operators have also reported using rubber tyres or a water-based “prill” sandbag system with some success in mitigating damage. Multiple submunitions may be disposed of using electric cable or detonating cord to link charges.

A major factor that should always be considered during the disposal of submunitions is the danger posed by the formation of the jet from the shaped charge. Shaped charge jets have the potential to fly more than 1,800 metres in free air. Therefore every attempt should be made to degrade the performance of this jet. This is usually achieved by placed the destruction charge in such a position that it also attacks the integrity of the cone liner. An alternative is to place a robust barrier in front of the submunition to degrade the charge that way.⁶

Deflagration

Destruction by deflagration is the rapid burning of the submunition explosive content without detonating it; this method is also conducted *in situ*. A purpose-designed shaped charge, (often referred to as a point focal charge), such as the Swiss RUAG SM-EOD system, may be used to induce deflagration of the main filling. It is generally safer than demolition as the charge can be deployed at a distance from the target (at least 80 millimetres), but it requires more training, tends to be more expensive, and takes longer to set up.

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The use of a pyrotechnic charge to induce deflagration of the submunition has been used with some success. There is, however, always a risk of the submunition detonating, and the same precautions and danger areas are needed as for normal demolition. Deflagration may also leave live fragments of explosive and hazardous components, such as detonators, in the area.

Alternate techniques

Alternate techniques, such as the use of small linear cutting charges, water-jet disruptors, or explosively fired projectiles, are designed to separate the fuze mechanism from the main charge of the submunition. Once separated, the fuze well cavity of the munition should be inspected to ensure that no hazardous components of the fuze remain. If the fuze well cavity is clear of hazardous components then the munition can be moved and disposed of in a suitable location. It may even be possible to move the fuze, provided that all component parts can be positively identified and the EOD technician is certain that the initiation mechanism has been totally disrupted.

Manual neutralisation

Manual disarmament is rarely advisable but, in extremis, might be considered by EOD personnel for simple mechanical submunitions (such as the Russian AO-ISCh) in good condition. It should not be conducted for any submunition with electric or piezo-electrical fuze components. In general, it should be considered only where a grave and immediate threat to human life exists.

OPERATIONAL PLANNING

Criteria used in determining operational priorities

The purpose of priority-setting in any field is to ensure we are doing the 'right job' with a view to maximising the ratio of benefits to costs.⁷ When determining clearance priorities for cluster munitions and other ERW, the following factors must be considered and, therefore, reflected in the criteria used for setting priorities:

- > technical data – the nature and extent of the contamination; access to sites; weather conditions; ground cover; etc. These factors determine whether a suspected hazard needs to be cleared at all and, if it does, the assets and time required, costs, etc.
- > risk to lives and limbs for:
 - > civilians, particularly when they are displaced and when they return, as they will not know the nature and location of the hazards
 - > humanitarian and development aid workers
 - > security forces, including international peacekeepers, who are try to restore security in conflict-affected zones

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- > potential value of contaminated or blocked land and other assets, including:
 - > blockages to livelihood assets – farmland, water points, forests, and other assets needed by people for their livelihoods, as well as roads and paths that provide access to markets, health clinics, schools, etc.
 - > constraints to reconstruction and development – even when people can ‘work around’ contamination and get on with their lives, explosives contamination will constrain infrastructure reconstruction and new investments, both public and private, that are needed to lift conflict-affected communities and entire regions out of poverty
- > likelihood that the cleared or unblocked land/assets will be used productively – land disputes; the absence of complementary inputs (e.g. seeds for planting); or the absence of funds for reconstruction and development projects will constrain the productive use of areas cleared or unblocked, which would alter the benefit to cost ratio and the priority of the task
- > international legal obligations and norms – States Parties to the Convention on Cluster Munitions or Protocol V of the CCW have accepted legal obligations and are bound to respect them. Value must also be placed on meeting some or all of these obligations in non-party States when (i) the government seeks to be in compliance with international norms that stigmatise the use of cluster munitions or (ii) the country receives financial or technical assistance from countries that are States Parties to the relevant conventions.

A key issue is what relative weights to attach to the various criteria. Possible operational tasks must be assessed against all criteria. During the Socio-economic Survey and Priority-setting workshop held in Vientiane, March 2009, the GICHD described one way of using criteria to set priorities: Total Benefits = Value of Risk Education + Economic growth + Poverty reduction + Value of Treaty Compliance.⁸

In addition, any priority-setting system for dealing with significant contamination must feature both top-down and bottom-up elements. For example, allocating resources from the national level among provincial districts is a top-down decision. But most impacts of explosives contamination are highly localised, so information about preferences from affected communities is needed to ensure the correct task priorities are identified for the assets available in the province or district.⁹

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Priority-setting and operational planning

A number of special challenges often arise that complicate priority-setting for cluster munition clearance, such as:

- > multiple decision-makers – officials from the local government, UN agencies, and donor countries, plus operations managers, all may have different views on the relevant weights to assign to the priority-setting criteria
- > poor data quality – particularly in the emergency response phase when poor task selection could lead to unnecessary casualties
- > rapidly evolving context due to, for example, changes in national politics and in the security situation – this means that clearance priorities also need to change

Because of such factors, there is no priority-setting blueprint that can be applied in all countries. Even within a country, the system for setting clearance priorities may have to be modified as contamination data improves, displaced people return to their communities, more clearance assets arrive, organisations enter or leave the programme, and government capacities grow. Given this, it is often useful to think in terms of stages in a country's transition from conflict to development, and how clearance priorities might evolve through those stages.¹⁰

Stage in conflict & political transition	Stage of Response	Typical issues for planning & priorities
> Continued conflict/ peace negotiations	> Pre-response planning	> Obtaining data on military strikes; preparation of contingency plans; liaison with national authorities and early response agencies
> Immediate post-conflict	> Emergency	> Survey & clearance of routes for refugee/IDP return and for aid delivery; expanding survey effort; establishing coordination & reporting mechanisms
> Restoration of internal security	> Emergency/ integrated peacekeeping	> As above, plus meeting mobility requirements for security forces; exit planning and establishing national capacities
> Priority reconstruction	> Post-emergency	> Support for reconstruction of infrastructure & developing capacities to address residual hazards
> Development	> Transition	> Support for development investments; ¹¹ transition and exit

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Given this transition, saving lives and limbs typically is given great weight in the early stages of a programme. Economic value of contaminated or blocked land becomes an increasingly important criterion as people return to re-establish their livelihoods and as the pace of reconstruction increases (a process that can continue for over a decade following significant conflicts) and new investments for development are started. Where international peacekeeping forces are present, heavy weight is normally given to their needs for mobility to fulfil their mandate.

Once security is restored and high impact areas have been cleared, the situation is less urgent but often more complicated. A response capacity is normally required to deal with residual threats to lives and limbs, but technical consideration will dominate priority-setting for clearance of low threat hazards to meet international obligations.

Special issues when dealing with extensive contamination

When contamination is too extensive to be resolved with a short- to medium-term clearance programme, support for the development of national capacities for planning and management (as well as operations personnel and assets) is essential – long-term problems require solutions that can be sustained over the long term. Capacity development to nationalise the planning and management of a programme is itself a medium-term task – typically three to five years even when national authorities have shown commitment and assigned individuals with the right basic capabilities to manage their programme. Therefore, an exit plan must be formulated and agreed well in advance to guide transition planning along with the country's capacity development effort.¹²

Transition, capacity development and exit always entail difficult trade-offs. It is more efficient to use experienced organisations – often internationally managed – to address contamination, but then the necessary local capacities may never develop. A reasonable balance must be struck.

In addition, national responsibility requires that the clearance programme to be aligned with national systems. Relevant factors include how responsibilities are split between national and sub-national governments; how the budgeting and development planning systems work; the mechanisms used for inter-departmental coordination; and how to obtain 'bottom-up' information from the impacted communities. Simply handing over a clearance programme designed and managed by international experts to their national counterparts is not a responsible exit and is unlikely to provide a sustainable solution.

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Box 5 | LAO PDR Risk Management and Mitigation Model

In 2006, the GICHD undertook to develop an 'EOD Risk Management/Mitigation Model' for UNDP Lao PDR. This project was to design and specify a new approach to addressing the LAO PDR contamination problem, which is practical to implement and based on internationally accepted risk management principles.

The tool, which was developed in association with other expert contractors in risk management, is designed to assist when making decisions regarding a specific Suspected Hazardous Area (SHA). It incorporates information on bombing data, accidents, accidents by ordnance type, etc, developed from historical data.

The model classes risks in three categories which correspond to national guidance on actions to be undertaken:

- > Release/Cancel (green) without clearance for areas posing the lowest level of risk
- > Further investigation (orange) required for areas on which insufficient data is available.
- > Clear (red) for areas posing the highest level of risk.

The model allows better decisions on whether full clearance is necessary by assessing SHA in terms of risk (high, medium or low). It also allows resources to be focused towards SHA that represent a high risk to the community (by the likelihood of ERW being present and also the type of ERW that may be present).

The model has been approved by the National Regulatory Authority and training is in place with the national operator (UXO Lao) for implementation in the field.

Recording and reporting

Accurate recording and reporting of clearance conducted along with an auditable record of risk assessments made on site are essential to follow up with sub-surface clearance plans, where necessary. It is also important to ensure reporting demonstrates how the clearance of cluster munition remnants contributes to humanitarian and development outcomes. Reporting only on outputs, such as the number of square metres cleared and the number of items destroyed is not sufficient. There is a need to demonstrate how clearance is improving lives and livelihoods of people living in contaminated communities.

In general, all suspected submunition strike areas should be recorded with a view to identifying the footprint and the centre point of the ellipse (if this can be identified). This would generally be the basis of the strike zone grid reference. This information should be recorded by the central data collection facility (generally the information management section in the national mine action authority or mine action centre).

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Cluster munition strikes are generally recorded as an SHA. In the first instances of response, several individual cluster munition strikes may be recorded as a single SHA. This may have a distorting effect on the actual situation of contamination on the ground as the aim of recording the initial hazard would be to record the centre of the ellipse of a single cluster strike or the pattern of strikes. The disposal of individual submunitions over an area may also have a distorting effect.

Generally, on level ground, the initial cluster strike releasing the submunitions will have created an elliptical pattern of impacts. Whether the submunitions have functioned or not, the pattern may usually be seen either by discovery of unexploded submunitions, signatures (such as packing pieces or parts of the parent munition) or evidence of explosion of individual or multiple submunitions. This was described in Chapter 1 where the cluster munitions strike has both an entry and an exit point. Clearance organisations will normally search out to an agreed distance (e.g. 25 metres in Albania, 50 metres in Lebanon, etc.) from the fade-out (last munition found), with the basic shape of the ellipse forming as finds are recorded.

Where there is a lack of accurate recording of actions and hazards, the true “picture” of the particular strike is lost. This is called “cherry picking”, indicating that there has been a haphazard clearance which has not been properly recorded. Several strikes over a particular area also have a distorting effect where the patterns merge together. This could also be the case where a surface (visual) search is conducted but not adequately recorded and reported. This can make subsequent tasking extremely difficult.

When many individual strikes have been reported, it may be found, upon completion of the task, that several SHAs have been covered in the clearance of a certain area. This takes careful review and management by planning and operational tasking staff to ensure the accurate data is collected, that SHAs are removed and that the true picture is reflected.

Although, in general, all completed surface clearance tasks should be recorded as ‘suspensions’, in some cases completion reports may be provided which include all three variants of search: surface, instrument assisted, and sub-surface. Suspension and completion reports where submunitions clearance activity is recorded should make a clear statement of:

- > Type of clearance
- > Depth of clearance
- > Findings
- > Equipment used

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- > All clearance activity
- > The location and type of individual submunitions (supporting the general picture of the strike zone – or ellipse)
- > Marking
- > Fencing
- > Digital mapping/sketch
- > Community Liaison personnel comments, including usable land, community needs, and general awareness of the problem at hand, before and after clearance, and
- > Process of follow-up for the suspension task.

As with suspension reports, the recording of the risk management process and the clear demarcation of what was done where and how, will be important elements of the completion report. Completion and suspension reports should be the basis for further planning, analysis and tasking. As such, they should place emphasis on community needs.

ENDNOTES

- ¹ A new IMAS on BAC was issued in 2007: IMAS 09.11: Battle Area Clearance.
- ² See, for instance, the Technical Note on Mine Action based on experiences clearing cluster munitions in Lebanon. Clearance of Cluster Munitions based on experience in Lebanon, TNMA 09.30/06, 1 January 2008, available at: [www.mineactionstandards.org/tnma/TN_09.30.06-2008_clearance_of_cluster_munitions_based_on_experience_in_Lebanon_\(version_1.0\).pdf](http://www.mineactionstandards.org/tnma/TN_09.30.06-2008_clearance_of_cluster_munitions_based_on_experience_in_Lebanon_(version_1.0).pdf).
- ³ One view is that BAC focuses on locating the explosive hazard, which then leads to an EOD task. EOD is defined under the IMAS as "the detection, identification, evaluation, render safe, recovery and disposal of EO. EOD may be undertaken:
 - a) as a routine part of mine clearance operations, upon discovery of ERW;
 - b) to dispose of ERW discovered outside hazardous areas, (this may be a single item of ERW, or a larger number inside a specific area); or
 - c) to dispose of EO which has become hazardous by deterioration, damage or attempted destruction."IMAS 04.10: Glossary of mine action terms, definitions and abbreviations, Second Edition, 1 January 2003, 3.90.
- ⁴ A probe is easier to "poke" into the vegetation than a coil head.
- ⁵ In Lebanon, for example, applicable standards require 50 metres clearance past the last submunition found.
- ⁶ Email from Adrian Wilkinson, 12 April 2009.
- ⁷ For more information, see: Ted Paterson, "Priority-setting fundamentals. Ensuring Mine Action Promotes Development: Priority-setting and Pre/Post-clearance assessment workshop, Vientiane, Lao PDR, 11-13 March 2009", GICHD.
- ⁸ For more information, see: Ted Paterson, "Priority-setting fundamentals. Ensuring Mine Action Promotes Development: Priority-setting and Pre/Post-clearance assessment workshop, Vientiane, Lao PDR, 11-13 March 2009", GICHD.
- ⁹ Preferences are 'wish list' while priorities are the tasks to which resources are actually allocated. We have a problem if priorities do not reflect local preferences.
- ¹⁰ For a more thorough discussion see Chapter 3 in GICHD. Guide to Socio-Economic Approaches to Mine Action Planning, 2004. http://www.gichd.org/fileadmin/pdf/publications/Guide_Socio_Economic_Approaches.pdf
- ¹¹ Many more organisations – both public and private – are involved in development than in the reconstruction phase, which often is 'centrally planned'. This places greater burdens on the clearance programme. For more information, see GICHD. Linking Mine Action and Development – Guidelines for Policy and Programme Development: National Mine Action Centres, 2008. http://www.gichd.org/fileadmin/pdf/ma_development/Guidelines/Guidelines-LMAD-NationalMAC-24Nov2008.pdf .
- ¹² The GICHD, on behalf of the UN Mine Action Team, is preparing a Guide to Capacity Development for Transition.

CHAPTER 6

RISK EDUCATION



RISK EDUCATION

While clearance of cluster munition remnants is ongoing or where it is not immediately feasible, other measures can reduce the risk to civilians. These include the marking and fencing of areas affected by cluster munitions and the provision of warnings and other risk education to at-risk groups. These activities are required by international law, in particular the Convention on Cluster Munitions and Protocol V of the Convention on Certain Conventional Weapons (CCW) (*see the respective sections on the legal framework*). This chapter reviews good practice in these activities in support of applicable international legal obligations.

MARKING AND FENCING OF CONTAMINATED AREAS

Increasing attention is being paid to the role of marking and fencing of areas contaminated with explosive remnants of war as a medium- to long-term risk reduction technique in mine action. This has proved necessary because of the high cost and slow pace of clearance of explosive ordnance, forcing mine action programmes to consider other ways of reducing the risk of death or injury to the civilian population.

As noted in the IMAS,¹ mine and other explosive ordnance hazards are marked to provide a clear and unambiguous warning of danger to the local population. Marking of contaminated areas tends to be carried out either immediately prior to clearance (often called “temporary marking”) or in situations where formal clearance is unlikely to occur for a considerable time, often measured in years (sometimes rather misleadingly referred to as “long-term” or “permanent” marking). Fencing of contaminated areas, where it is possible to do so, involves installing a physical barrier to reduce the risk of unintentional entry into hazardous areas.

Marking of areas contaminated with cluster munitions

The IMAS provides detailed guidance on appropriate marking and fencing of contaminated areas (*see Box 6*). Based on legal obligations and the IMAS, as well as research by the GICHD,² this section suggests a ten-step approach to maximise the contribution of medium- to long-term marking of contaminated areas to casualty reduction.

- Step 1 Make marking part of an overall strategy.
- Step 2 Concentrate on marking areas where returnees are expected.
- Step 3 Combine marking with risk education.
- Step 4 Involve the local community in marking efforts.
- Step 5 Make sure the markings can be seen.
- Step 6 Use durable markings of minimal value.
- Step 7 Record the location of markings.
- Step 8 Maintain the markings.
- Step 9 Monitor the status of the markings and any casualties.
- Step 10 Remove the markings when they are no longer needed.

Marking can and does save lives. It should be borne in mind, however, that evidence exists that marking will not be successful in reducing risk-taking if the local population is impoverished and in dire need of contaminated land for livelihoods.

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Box 6 | Summary of IMAS requirements for marking and fencing battle areas*

The design of permanent UXO hazard marking systems shall include a combination of markers, signs and physical barriers that clearly identify the boundary of the hazard area.

Hazard marking symbols shall be clearly visible. Markers and signs shall clearly identify which side of the marked boundary is considered to be within the hazard area and which side is considered to be safe. The warning sign should be clearly displayed facing outwards from the suspected hazardous area.

The words on the warning sign should represent the predominant hazard (mines or UXO) and the symbol should indicate "danger" in a form which will be recognised nationally and locally.

Hazard signs and markers should be clearly visible in daylight at a distance of 30 metres, and from adjacent signs and markers. If markers are masked by vegetation or terrain, the use of a physical barrier should be considered.

The design of UXO hazard marking systems should take account of local materials freely available in the contaminated region and the period for which the marking system will be in place. It is generally accepted that materials used in marking systems should have little, if any, value or practical use for purposes other than UXO hazard area marking. If material of any value is used, then it is likely to be removed. Hazard signs and markers should not be constructed of munition casings, materials that may have contained explosives, or discarded weapon systems.

* IMAS 08.40: Marking mine and UXO hazards, Second Edition (incorporating amendment number 1), 1 January 2003

Fencing of areas contaminated with cluster munitions

There is a general understanding that, assuming it is not removed, fencing can make an important additional contribution to casualty reduction. In Croatia, for example, it is claimed that no incidents have occurred within fenced areas. In Kosovo, permanent fencing is erected in areas where it is not possible to conduct clearance operations in the immediate future due, for example, to poor access to the site, heavy snow, or flooding.

But fencing is generally not an effective means to reduce the risk of intentional entry into a dangerous area; it is also expensive. Indeed, there is broad agreement that while marking of affected areas can prove worthwhile—where it is feasible—the erection of fencing should be much more selective. Fencing can be usefully erected around military installations or heavily UXO/submunition-contaminated sites close to heavily populated areas. It is recommended that such fenced areas be guarded. In Kosovo, for example, although UXO-affected sites were marked with specific warning signs (differing from those used to mark mined areas), permanent fencing has only been used in Lukare (Pristina) around a previous ammunition storage area and military barracks.

Legal framework

As set out in Box 7, the Convention on Cluster Munitions requires that States Parties take “all feasible steps” to ensure that, as soon as possible, areas affected by cluster munition remnants are marked and fenced to ensure the effective exclusion of civilians. The provision recommends that recognised warning signs should be used, which should be:

- > visible
- > legible
- > durable, and
- > resistant to environmental effects.

The obligations on States Parties to CCW Protocol V are similar, although their legal formulation is arguably not as strong. According to Article 5, States Parties and parties to an armed conflict must take “all feasible precautions” in territory under their control that is affected by ERW to protect civilians and civilian objects from the threat.⁵ These precautions “may include”... marking, fencing, and monitoring of territory affected by explosive remnants of war, as set out in the Technical Annex (see Box 7).

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Box 7 | International law on the marking and fencing of explosive remnants of war

Convention on Cluster Munitions

According to Article 4, paragraph 2, each State Party is required, as soon as possible, to do the following:

- (c) Take all feasible steps to ensure that all cluster munition contaminated areas under its jurisdiction or control are perimeter-marked, monitored and protected by fencing or other means to ensure the effective exclusion of civilians. Warning signs based on methods of marking readily recognisable by the affected community should be utilised in the marking of suspected hazardous areas. Signs and other hazardous area boundary markers should, as far as possible, be visible, legible, durable and resistant to environmental effects and should clearly identify which side of the marked boundary is considered to be within the cluster munition contaminated areas and which side is considered to be safe.

Technical Annex | CCW Protocol V on Explosive Remnants of War

Article 2 | Warnings, risk education, marking, fencing and monitoring

- (h) When possible, at any time during the course of a conflict and thereafter, where explosive remnants of war exist the parties to a conflict should, at the earliest possible time and to the maximum extent possible, ensure that areas containing explosive remnants of war are marked, fenced and monitored so as to ensure the effective exclusion of civilians, in accordance with the following provisions.
- (i) Warning signs based on methods of marking recognised by the affected community should be utilised in the marking of suspected hazardous areas. Signs and other hazardous area boundary markers should as far as possible be visible, legible, durable and resistant to environmental effects and should clearly identify which side of the marked boundary is considered to be within the explosive remnants of war affected area and which side is considered to be safe.
- (j) An appropriate structure should be put in place with responsibility for the monitoring and maintenance of permanent and temporary marking systems, integrated with national and local risk education programmes.

The signs should also clearly identify which side of the marked boundary is considered to be hazardous and which side is considered to be safe.

An appropriate structure should be put in place to monitor and maintain permanent and temporary marking systems, which should be “integrated” with national and local risk education programmes.

RISK EDUCATION

RISK EDUCATION⁴

This section of the chapter looks at how to reduce the risk to civilians through warnings and other risk education.⁵ Warnings and risk education can also help to minimise civilian casualties prior to and during clearance operations. Cluster munitions, especially unexploded submunitions, can represent a specific and significant threat to civilians, particularly to children. Indeed, statistics have shown that children are generally at far greater risk from unexploded submunitions than they are from landmines. This should demand a response that highlights the threat from these weapons over and above other initiatives. Although challenging, working with development actors to provide high-risk groups with safer, alternative livelihoods can also help significantly reduce risk by addressing underlying motivations of high-risk behaviour.

Education and warnings

States Parties to the Convention on Cluster Munitions are required to conduct “risk reduction education” for civilians living in or around cluster munition contaminated areas.⁶ No guidance on how to do so is included in the Convention, but each State Party is obliged to “take into account international standards, including the International Mine Action Standards (IMAS).”⁷

In contrast, CCW Protocol V refers to the provision of both ‘warnings’ and ‘risk education’.⁸ Warnings are primarily intended to raise urgent awareness about the threat from unexploded submunitions (or other explosive ordnance), whereas risk education is seen as a longer-term process designed to instil safer behaviour in target populations. Warnings will often be conducted while armed conflict is still ongoing (immediately following an attack, for instance). When the conflict is over (or security allows), more in-depth and sustained communication activities, especially through dialogue with affected communities, will characterise risk education. The aim should be to address people’s vulnerabilities to reduce risk, rather than simply educating people about risk and hazard.

Best practice in warnings and risk education

The non-legally binding Technical Annex to CCW Protocol V outlines a number of “best practice elements” of warnings and risk education. These are discussed below.

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Follow national and international standards

According to the Technical Annex of CCW Protocol V, “All programmes of warnings and risk education should, where possible, take into account prevailing national and international standards, including the International Mine Action Standards.”⁹ Only a small number of affected countries have so far adopted national standards based on the IMAS, although the number is growing.¹⁰ Where national standards exist, these should of course be followed.

Standards for mine risk education (MRE) have been approved as IMAS. In total, seven standards deal with MRE, namely:

- > IMAS 07.11 Guide for the management of MRE
- > IMAS 07.31 Accreditation of MRE organisations and operations
- > IMAS 07.41 Monitoring of MRE programmes and projects
- > IMAS 08.50 Data collection and needs assessment for MRE
- > IMAS 12.10 Planning for MRE programmes and projects
- > IMAS 12.20 Implementation of MRE programmes and projects, and
- > IMAS 14.20 Evaluation of MRE programmes and projects.

MRE has three components: public information dissemination, education and training, and community mine action liaison. They are complementary and mutually reinforcing. Descriptions of the three components are given below. The principles of MRE are exactly the same in the specific case of RE where cluster munitions are the main threat. Additional emphasis should be put on safety messages warning against touching or disturbing unexploded submunitions in any way.

Public information dissemination

Public information dissemination as part of MRE refers primarily to public information activities, which seek to reduce the risk of injury from mines and ERW by raising awareness of the risk to individuals and communities, and by promoting behavioural change. It is primarily a one-way form of communication transmitted through mass media. This may provide relevant information and advice in a cost-effective and timely manner. In an emergency post-conflict situation, due to time constraints and lack of accurate data, public information dissemination is often the most practical means of communicating safety information to reduce risk.

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Education and training

Education and training is a two-way process, which involves the imparting and acquiring of knowledge, attitude and practice through teaching and learning. Education and training activities may be conducted in formal and non-formal environments. This may include teacher-to-child education in schools, parent-to-children and children-to-parent education in the home, child-to-child education, peer-to-peer education in work and recreational environments, landmine safety training for humanitarian aid workers and the incorporation of landmine safety messages in regular occupational health and safety practices.

Community liaison

Community liaison¹¹ refers to the system and processes used to exchange information between national authorities, mine action organisations and communities on the presence of mines and explosive remnants of war, and of their potential risk. It enables communities to be informed when a demining activity is planned to take place, the nature and duration of the task, and the exact locations of areas that have been marked or cleared. Beyond demining, community liaison can support relief and development interventions that reduce the risk to affected communities.

Target efforts at those at risk

Warnings and risk education should be provided to the affected civilian population which comprises civilians living in or around areas containing explosive remnants of war and civilians who transit such areas.¹²

Defining the at-risk groups for warnings is one of the starting points for any effective intervention. The displaced, including refugees, as well as those already living in affected areas, often fall victim to unexploded submunitions on or following their return. In order to be effective, risk education should be given prior to, if possible during, and following return or repatriation.

The return of refugees and/or internally displaced persons could be a planned activity or spontaneously decided by the population themselves. Regardless, experience has shown that population movements are one of the main triggering factors for an increase in incidents involving explosive ordnance. There are two key reasons for this. First, the areas that displaced populations evacuated are sometimes deserted until their return. If they are, this means there will be a lack of knowledge about where and when the clashes took place, what weapons were used and whether there have been any earlier incidents involving ERW. Where areas are not entirely deserted, of course, there may be a reliable local source of knowledge for returnees.

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Second, there is a naturally strong will to investigate the normal habitat. Even though returning populations may have been warned about possible dangers and advised to obtain local knowledge about the situation before approaching their own home, they often go directly home into their deserted gardens and houses to see what has happened while they were gone. This frequently results in tragic incidents in the first days after return.

For those living and working in an area affected by ERW, there is often an economic reason to investigate contaminated areas. For many communities, collecting the scrap metal from ERW is a vital addition to families' income. As the Mines Advisory Group has highlighted, scrap metal is a significant business in Lao PDR, for example, where it is a leading cause of UXO accidents.

Box 8 | Scrap Metal Dealers in Lao PDR*

To help address the dangers of people collecting scrap metal from ERW, the Mines Advisory Group have put a project in place in the Xieng Khouang province. Those involved in the trade, including scrap metal dealers, have participated in mine risk education sessions, learning about how to recognise, categorise and handle ERW safely.

Scrap dealers have stopped buying live UXO and the foundry which buys the material has started to refuse to buy it. In addition, the large stocks of UXO which had built up over years at the foundry have been destroyed in bulk demolitions.

The mine risk education on which this project is based was delivered by MAG's Community Liaison teams, which also helped to survey and map items found in fields, which were then destroyed safely by Explosive Ordnance Disposal teams.

The success of this provincial project has highlighted the benefits of a national project for foundry managers and scrap metal dealers. Removing UXO items from scrapyards and foundries, when combined with MRE messages, can reduce risks to those involved with this dangerous trade.

* Taken from MAG News Spring/Summer 2009.

Time is of the essence

"Warnings should be given, as soon as possible, depending on the context and the information available. A risk education programme should replace a warnings programme as soon as possible. Warnings and risk education always should be provided to the affected communities at the earliest possible time."¹⁵

RISK EDUCATION

It is clear that speed is crucial in any warnings or other risk education initiative. Warnings should be considered a subset of risk education, not a completely separate discipline as is often believed. What distinguishes the two is that warnings are delivered by inherently one-way communication channels in an emergency, whereas risk education is (or should be) a more long-term and participatory process.

Use available expertise

“Parties to a conflict should employ third parties such as international organisations and non-governmental organisations when they do not have the resources and skills to deliver efficient risk education. The best-placed entity to deliver warnings should be assessed on a case-by-case basis.”¹⁴

Some of the issues to consider in decision-making on this include the community perception of the militaries involved (e.g. are they considered an impartial authority or is what they say automatically deemed to be propaganda?), their expertise in risk education and their logistical set-up. Of course, it may not necessarily be an either/or situation: the military, civil defence and humanitarian organisations may all be able to contribute to saving lives and limbs.

It is important to keep the issue of time in mind when deciding who should be involved. The national authorities (military units, civil defence, etc.) have the resources and skills to deliver an effective programme in the long run. Humanitarian organisations can also be usefully involved at the outset of a warnings and risk education campaign, as their experience gained in other contexts may save valuable time and avoid the need to “reinvent the wheel”.

Users of cluster munitions should fund warnings and risk education

“Parties to a conflict should, if possible, provide additional resources for warnings and risk education. Such items might include: provision of logistical support, production of risk education materials, financial support and general cartographic information.”¹⁵

Here, it is implicit that in situations where the military is not best placed to deliver warnings or risk education directly, it can still support others in doing so. Caution must be applied, however. Although this part of the Technical Annex refers to the production of risk education materials, care must be taken not to just adapt materials taken from another context. Cultural and linguistic factors must be taken into account otherwise the entire venture may be a waste of time and effort.

RISK EDUCATION

One of the best ways to support an international organisation to conduct the warnings is to ensure or facilitate access to public information sources without having to go through unnecessarily complicated administrative procedures and, if possible, at no cost. This could be access to broadcasting times on government media (TV and radio stations), the opportunity to include public announcements in newspapers or to facilitate delivery of warnings through the national postal service, and by putting up public warning announcements in public institutions. In the long run this would also mean that the Ministry of Education would facilitate the inclusion of warnings and risk education in the national educational curriculum.

Legal framework

The legal standards set down in both the Convention on Cluster Munitions and, especially, CCW Protocol V, have been reviewed in some detail above. Little reference to risk education is included in the Convention on Cluster Munitions, although each affected State Party is required “as soon as possible” to “(c)onduct risk reduction education to ensure awareness among civilians living in or around cluster munition contaminated areas of the risks posed by such remnants.”¹⁶

As explained above, more detailed guidance on warnings and risk education is given in the Technical Annex to CCW Protocol V, but the legal obligation on States Parties to that instrument is not as strong. According to Article 5, States Parties and parties to an armed conflict must take “all feasible precautions” in territory under their control that is affected by ERW to protect civilians and civilian objects from the threat.¹⁷ These precautions “may include” warnings and risk education to the civilian population, as set out in the non-binding Technical Annex.

ENDNOTES

- ¹ IMAS 08.40: Marking mine and UXO hazards, Second Edition, 1 January 2003.
- ² See GICHD, *A Guide to Marking and Fencing in Mine Action Programmes*, Geneva, November 2008.
- ³ Feasible precautions are defined as those precautions “which are practicable or practicably possible, taking into account all circumstances ruling at the time, including humanitarian and military considerations”. Article 5, Protocol V.
- ⁴ This section is based on *Protecting Civilians from Explosive Remnants of War; A Guide to Providing Warnings under CCW Protocol V*, Landmine Action, London, 2004; and *Mine and ERW Risk Education – A Project Management Guide*, GICHD, 2008.
- ⁵ The term ‘risk education’ is increasingly being preferred to ‘mine risk education’, as much of the education provided to at-risk communities focuses on ERW rather than mines, particularly unexploded submunitions. As is seen below, the Convention on Cluster Munitions uses the term ‘risk reduction education’.
- ⁶ Article 4, paragraph 2(e), Convention on Cluster Munitions.
- ⁷ Article 4, paragraph 3, Convention on Cluster Munitions.
- ⁸ Warnings are defined in the Technical Annex, rather than the body, of CCW Protocol V as “the punctual provision of cautionary information to the civilian population, intended to minimise risks caused by explosive remnants of war in affected territories.” In contrast, risk education is defined indirectly, by reference to how it should be conducted: “Risk education to the civilian population should consist of risk education programmes to facilitate information exchange between affected communities, government authorities and humanitarian organisations so that affected communities are informed about the threat from explosive remnants of war. Risk education programmes are usually a long term activity.”
- ⁹ Technical Annex, Article 2(a), CCW Protocol V.
- ¹⁰ See www.mineactionstandards.org/nmas.htm for examples of national mine action standards.
- ¹¹ Called community mine action liaison in the IMAS.
- ¹² Technical Annex, Article 2(d), CCW Protocol V.
- ¹³ Technical Annex, Article 2(e), CCW Protocol V.
- ¹⁴ Technical Annex, Article 2(f), CCW Protocol V.
- ¹⁵ Technical Annex, Article 2(g), CCW Protocol V.
- ¹⁶ Article 4, paragraph 2(e), Convention on Cluster Munitions.
- ¹⁷ Feasible precautions are defined as those precautions “which are practicable or practicably possible, taking into account all circumstances ruling at the time, including humanitarian and military considerations”. Article 5, Protocol V.

CHAPTER 7

ASSISTING VICTIMS



ASSISTING VICTIMS

The explosion of a submunition can, and often does, cause multiple victims. Some may be killed while others may survive the explosion and require urgent medical assistance and likely ongoing medical care and rehabilitation. Yet, in the vast majority of states, the number of mine/ERW survivors, and especially their needs, are not adequately known or addressed.¹ This chapter assesses the typical assistance needs of the survivors of cluster munition strikes and summarises the major challenges in ensuring that those needs are met.

As the ICRC has observed, only the most fortunate receive the necessary level of assistance, and many victims of ERW do not even receive adequate medical treatment (see Box 10). In many affected areas, health care systems are either inadequate or non-existent. The survivors or their families may not be able to pay for appropriate care and rehabilitation. Many never get help because they live in highly insecure environments. Travel may be restricted because the conflict is still going on, or because hospitals are in zones held by the adversary. To make matters worse, many affected areas may simply be too dangerous for humanitarian agencies to operate in.²

AT-RISK GROUPS

Based on available casualty data,³ boys and young men are typically a very high risk group as far as submunitions are concerned. Playing with ERW is typical of these groups, but the sensitivity of many fuzing systems of submunitions means that the results are more often tragic than with other unexploded ordnance. Moreover, disability among this pool of existing or future manpower clearly has consequences that reverberate more broadly within communities.

The link between displacement and propensity to injury is less marked with submunitions than is the case with anti-personnel mines, but is clearly still a factor as returnees often fall victim to these weapons. Of course those engaged in clearing submunitions are also at serious and obvious risk (see Box 10).

Along with disability, gender is an important issue as women and girls have differing vulnerabilities, particularly as their role in the family significantly changes when a male member of the family is injured or killed.

TYPICAL INJURIES AND MEDICAL NEEDS

The extent of injuries suffered—typically as a result of fragmentation—obviously depends on the type of submunition that has detonated, as well as the proximity to the explosion. However, for the survivors of a submunition explosion, long-term injury and disability is a likely outcome, even if, statistically, they are less likely than anti-personnel mine victims to suffer traumatic amputation of one or more limbs. Instead, many survivors will be left with fragmentation injuries and burns that may be life-threatening. Survivors may also suffer abdominal, chest and spinal injuries, blindness, deafness, and less visible psychological trauma.

The medical needs of survivors of submunition explosions are similar to those injured by other explosive devices, namely first aid to stop the bleeding, antibiotics to prevent infection (though these are not always available), and transport to a medical facility for treatment as soon as possible. This facility should be stocked with blood for an infusion or transfusion and antibiotics. Surgical intervention will likely then be a priority, and will often include a need for skin grafts but may not extend to a requirement for surgical amputation. In some cases, pieces of fragmentation are too difficult to remove and the survivor must live out the rest of his or her life with the metal remnants of a cluster munition inside them.⁴

ASSISTANCE BEYOND MEDICAL NEEDS

Indeed, although the physical wounds caused by submunitions can be horrific, the psychological and social impact is also extremely significant. Individual difficulty in relationships and daily functioning can be considerable and the survivor sometimes faces social stigmatisation, rejection and unemployment. Therefore, long-term rehabilitation should be offered to survivors to enable them to fully reintegrate into society. This should extend to health, employment and education. Peer support is a recognised component of recovery, as it addresses individual needs and helps break the isolation survivors may experience.

Physical and attitudinal barriers can prevent full participation and inclusion of survivors in the community. Along with assistance provided to survivors, society must recognize and dismantle these barriers by, for example, making public places and services, as well as workplaces and schools, accessible to survivors and persons with disabilities.

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Box 9 | Victim assistance challenges: the reality*

Handicap International tells the story of a 33-year-old woman in Lao PDR who is married with four children. She lives in Villabury district, Savannakhet province. She earns a living as a rice farmer.

In February 2006, she and six other people were sitting around a fire because it was still chilly. The fire was built in a place where they had made a fire many times before. All of a sudden, a hidden cluster submunition exploded, giving her severe shrapnel injuries in the waist area.

Within 25 minutes she was transported to the nearest local health care post, where she received only minor treatment. She was advised to go to the district hospital for specialized care, but her husband said they could not afford this and they went back to the village. However, she continued to bleed, and eventually they had to go to the district hospital, almost one and a half hours away.

By that time she could not be treated there either and had to move on to the inter-district hospital, which was again one hour of travel in a private car. She was treated there, but the remaining shrapnel can only be removed at the better-equipped provincial hospital. The family does not have the resources for this and she still feels pain in her waist when she walks or sits. Her eyes and ears are still affected as well, and she feels nervous and scared when making fires.

The total cost of treatment was 500,000 Lao Kip (KAP, US\$55) and the inter-district hospital provided 150,000 KAP (US\$16) for transportation.

* Taken from Handicap International, *Circle of Impact: The Fatal Footprint of Cluster Munitions on People and Communities*, Brussels, May 2007, p. 38.

Ensuring assistance is provided to the victims of cluster munitions is the primary responsibility of the affected state, as has been recognised in the AP Mine Ban Convention's Nairobi Action Plan and codified in the Convention on Cluster Munitions. But, as Handicap International (HI) has noted,⁵ consistent and long-term support by the international community is needed when and where states are unable to provide these services. In turn, assistance can only be sustainable and efficient if it builds on national ownership and systematic coordination between all stakeholders.

The main challenges for victim assistance that HI has identified are the following:

Access to care. This includes physical access, economic accessibility, and access to information, all of which must be provided in a culturally appropriate manner.

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Variety and effectiveness of assistance. All components of victim assistance should be considered interrelated and equally important. Referral systems need to be in place and reinforced.

Capacity and sustainability. This includes infrastructure and human resource capacity, reinforced by training and increased retention of staff. National and local services should gradually replace international ones, for which states should seek increasingly diversified funding.

Rights implementation. Implementation of general and specific rights-based legislation addressing discrimination against people with disabilities should be reinforced.

Monitoring of progress. Due to the diverse nature of victim assistance and to the voluntary nature of reporting on it, progress for both victim assistance-specific and cross-cutting programmes beneficial to all persons with disabilities is not being adequately mapped.

Prioritisation. Victim assistance is often not seen as a priority in comparison to other emergencies, such as conflicts and HIV/AIDS; this is especially the case for assistance to submunition victims.⁶

As the ICRC has pointed out, after leaving the hospital, a survivor must rebuild his/her life. To do this, the survivor will first need to recover his/her mobility, and then reintegrate into society and the economy. Physical rehabilitation and socio-economic reintegration are closely linked needs. Assisting survivors to attain physical well-being is in itself a great achievement. But it is also an indispensable pre-condition for the person's participation in family and community life, work and education.⁷

Physiotherapy is a critical – and often neglected – contribution to this process. Unfortunately, suitably qualified physiotherapists are typically in short supply in areas affected by submunitions and other ERW.

Victim assistance should not be carried out in isolation, but incorporated within national disability, development and human rights frameworks and mechanisms, thereby increasing its sustainability. In this vein, where appropriate, victim assistance should be part of initiatives for war-wounded and other persons with disabilities. It is important to ensure that all persons with disabilities, including survivors of weapons, are treated equally and can, without discrimination access medical care, rehabilitation and other services required for reintegration into society.

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Victim assistance is not only about medical treatment or rehabilitation but an issue of human rights. As Survivor Corps notes, the Convention on the Rights of Persons with Disabilities provides the newest and highest applicable standard of human rights law, and should inform the way victim assistance is provided. The increased awareness within the mine action community of the importance of linking assistance to public health, rehabilitation and poverty reduction strategies is of growing significance.⁸

In conclusion, as Handicap International has observed, victim assistance programming can only be effective if it is based on the needs identified by the victims themselves and if they have direct input into policy-making and planning at the local, national and international levels.⁹ This remains a significant challenge.

Box 10 | Story of a deminer casualty from a submunition in Serbia*

Branislav Kapetanovic, born in 1965, was an EOD operative working for the army during the 1999 conflict. He received limited special training in cluster-munition disposal two months prior to the NATO air campaign. During the campaign and for one year afterwards he was working on submunition clearance in almost all the affected areas in the country.

On 9 November 2000, Branislav was accompanying a group of engineers during a routine visit to Dubinje airport in Sjenica. Their job was to assess the damage to airport facilities. Six new submunitions had been reported, having been seen lying on the ground. Not wanting to put off disposal of the duds, Branislav went to the marked location. The first one he approached exploded with terrible force after he “barely” touched it.

He suffered cardiac arrest upon arrival at hospital. Both his arms and legs had to be amputated; he has had more than 20 operations in total. His eyes were damaged by the explosion, leaving him completely blind for five months after the event. He spent four years at a medical facility in rehabilitation. One of his eyes is still seriously damaged and he has lost the hearing in his left ear.

Today, Branislav Kapetanovic lives in Belgrade, where he must cope on his own. He was given the status of a civilian war victim, since the accident took place after the war and the current provisions within the army did not provide for him to be awarded the status of war veteran. He says that his greatest wish is to see cluster munitions banned forever.

* Taken from *Yellow Killers: The Impact of Cluster Munitions in Serbia and Montenegro*, Norwegian People's Aid, Belgrade, 2007, p. 49. Branislav has since played an important role in advocacy for a ban on cluster munitions.

ASSISTING VICTIMS

LEGAL FRAMEWORK

According to the Landmine Monitor, the Convention on Cluster Munitions is a “landmark treaty” for victim assistance because it makes the provision of assistance a formal requirement for all States Parties with victims, and calls for international assistance (see Box 12). It formally adopted “the common understanding that the definition of a ‘victim’ expands to the affected individual, their families, and affected communities, and that victim assistance has to be rights-based and in line with other relevant disability or development strategies.” Drawing on lessons learned from the implementation of the Anti-Personnel Mine Ban Convention, it specifies that victim assistance needs to be “focused, measurable, coordinated, and result-oriented.”¹⁰

Box 11 | Victim assistance provisions in the Convention on Cluster Munitions

Article 5 | Victim assistance

1. Each State Party with respect to cluster munition victims in areas under its jurisdiction or control shall, in accordance with applicable international humanitarian and human rights law, adequately provide age- and gender-sensitive assistance, including medical care, rehabilitation and psychological support, as well as provide for their social and economic inclusion. Each State Party shall make every effort to collect reliable relevant data with respect to cluster munition victims.
2. In fulfilling its obligations under paragraph 1 of this Article each State Party shall:
 - (a) Assess the needs of cluster munition victims;
 - (b) Develop, implement and enforce any necessary national laws and policies;
 - (c) Develop a national plan and budget, including timeframes to carry out these activities, with a view to incorporating them within the existing national disability, development and human rights frameworks and mechanisms, while respecting the specific role and contribution of relevant actors;
 - (d) Take steps to mobilise national and international resources;
 - (e) Not discriminate against or among cluster munition victims, or between cluster munition victims and those who have suffered injuries or disabilities from other causes; differences in treatment should be based only on medical, rehabilitative, psychological or socio-economic needs;
 - (f) Closely consult with and actively involve cluster munition victims and their representative organisations;
 - (g) Designate a focal point within the government for coordination of matters relating to the implementation of this Article; and
 - (h) Strive to incorporate relevant guidelines and good practices including in the areas of medical care, rehabilitation and psychological support, as well as social and economic inclusion.

ASSISTING VICTIMS

In a presentation to a regional workshop in Croatia on the Convention on Cluster Munitions on 21 - 24 October 2008, Handicap International Belgium and Bosnia and Herzegovina summarised the Convention's victim assistance requirements as follows:

- > Medical care
- > Rehabilitation
- > Psychological support
- > Social inclusion
- > Economic inclusion, and
- > Collection of relevant data.

As part of the victim assistance process, they advocated that focal points for victim assistance should be created, and the necessary budgets provided.

According to Article 8, paragraph 2, of CCW Protocol V, "Each High Contracting Party in a position to do so shall provide assistance for the care and rehabilitation and social and economic reintegration of victims of explosive remnants of war." This obligation is similar to the framework developed in the context of anti-personnel landmines under the Anti-Personnel Mine Ban Convention. In 2008, the Second Conference of States Parties to Protocol V decided to adopt a Plan of Action on Victim Assistance, as a political tool for addressing in an effective way and on a voluntary basis the problems of ERW victims.¹¹

CHALLENGES AND LESSONS LEARNT: VICTIM ASSISTANCE IN THE CONTEXT OF THE AP MINE BAN CONVENTION

The Anti-Personnel Mine Ban Convention was the first multilateral disarmament treaty that aimed to assist victims and to understand lessons learnt from implementing the victim assistance provision of that Convention may provide useful input for those working in the field of cluster munitions.

In examining victim assistance in the context of the Convention, experts have also reaffirmed the importance of national ownership of victim assistance, building local capacities, sustainability of services, and a holistic approach to assisting survivors and other persons with disabilities. Collaboration and cooperation between government ministries and other actors as well as the inclusion of persons with disabilities in decision-making processes are seen as key factors in the success of victim assistance activities. Recommendations to take into account available resources – not being too ambitious about what can be achieved in a limited timeframe – have also been made within the context of the Anti-Personnel Mine Ban Convention.¹²

ASSISTING VICTIMS

Based on the logic that the ultimate responsibility of meeting the rights and needs of victims within a particular state lies with that state, a ten-step approach to developing a national response to address the rights and needs of survivors has been developed:

- > Sensitise relevant ministries to Convention obligations. Many may not know that the State has accepted obligations in a weapons-related treaty that concerns healthcare, rehabilitation, reintegration and human rights.
- > Establish an inter-ministerial group, inclusive of survivors and civil society organisations, to oversee the process.
- > Assign responsibility to various ministries according to competence.
- > Organise a national workshop to begin a situation analysis and to develop goals.
- > Complete the situation analysis, establishing an inventory of who is doing what and where, and, what plans and strategies are already in place. That is, many States may already have well-developed health-care and disability strategies. The key is to see what is there and to ensure that it takes into account the specific needs of survivors.
- > Review the situation analysis to project what the situation should look like in the future.
- > Establish SMART objectives.
- > Organise a second workshop to seek views on the development of a national plan.
- > Complete a plan, taking into account plans and budgets of existing ministerial activities.
- > Mobilise resources, ensuring integration into broader appeals for development assistance.¹³

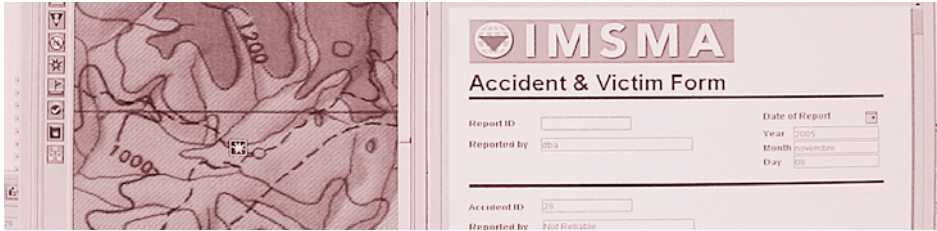
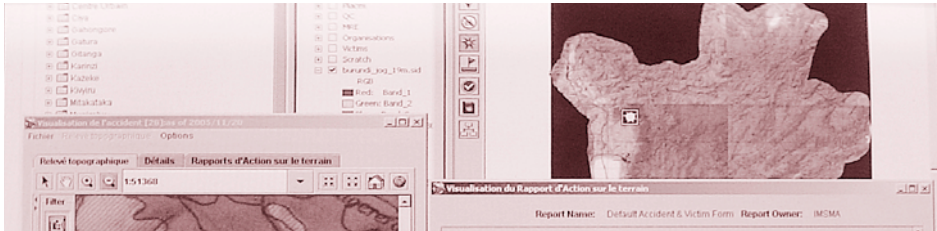
The experiences gained within the Anti-Personnel Mine Ban Convention may provide those working within the CCW and the Convention on Cluster Munitions with a method of fulfilling obligations to survivors – in the context of broader State healthcare, rehabilitation, reintegration and human rights responses/structure, without discrimination, according to cause of injury and disability.¹⁴

ENDNOTES

- ¹ ICBL, *Landmine Monitor Report 2008, Toward a Mine-Free World*, Mines Action Canada, Ottawa, 2008, p. 39.
- ² ICRC, *Explosive remnants of War: The lethal legacy of modern armed conflict*, Second Edition, July 2004, Geneva, p. 9.
- ³ ICBL, *Landmine Monitor Report 2008, Toward a Mine-Free World*, Mines Action Canada, Ottawa, 2008, p. 54.
- ⁴ For the purposes of this publication, a submunition survivor is considered a person injured but not killed by a submunition. Victims include people killed by submunitions, submunition survivors, and other persons affected by a submunition explosion.
- ⁵ See, for example, *Yellow Killers: The Impact of Cluster Munitions in Serbia and Montenegro*, Norwegian People's Aid, Belgrade, 2007, p. 22.
- ⁶ Handicap International, *Circle of Impact: The Fatal Footprint of Cluster Munitions on People and Communities*, Brussels, May 2007, p. 12.
- ⁷ *Ibid.*, pp. 12–13.
- ⁸ ICRC, *Caring for Landmine Victims*, Geneva, 2004, p. 8.
- ⁹ For more information see GICHD, *A Guide to Mine Action and Explosive Remnants of War*, Geneva, April 2007, pp. 117–131.
- ¹⁰ Handicap International, *Circle of Impact: The Fatal Footprint of Cluster Munitions on People and Communities*, op. cit., p. 12.
- ¹¹ ICBL, *Landmine Monitor Report 2008, Toward a Mine-Free World*, Mines Action Canada, Ottawa, 2008, p. 50.
- ¹² See Final Document of the Second Conference of States Parties to Protocol V, UN doc. CCW/P.V/CONF/2008/12, 23 January 2009, Annex IV, p. 21.
- ¹³ Anti-Personnel Mine Ban Convention Implementation Support Unit, *A Guide to Understanding Victim Assistance in the Context of the AP Mine Ban Convention*, November 2008
- ¹⁴ APMBC Implementation Support Unit, *Evolution of Victim Assistance and the Needs of Survivors*, Presentation to the Protocol V of the CCW Session on Victim Assistance, Geneva, 23 April 2009 by Sheree Bailey.

CHAPTER 8

INFORMATION MANAGEMENT



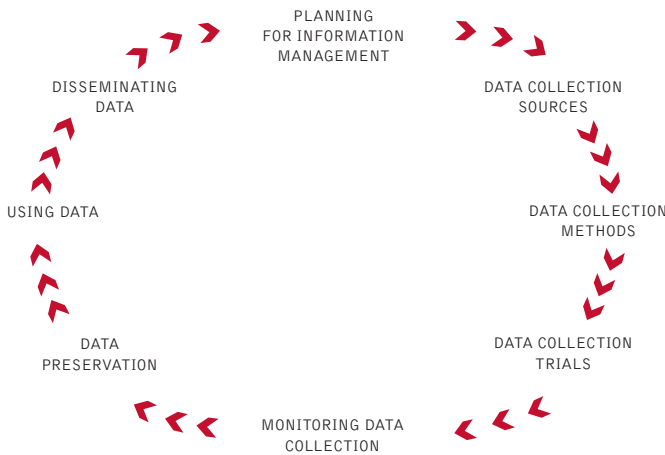
INFORMATION MANAGEMENT

This chapter addresses information needs in support of the clearance of cluster munition remnants, especially unexploded submunitions, as well as the appropriate storage, analysis and use of cluster-munition-related data. Effective information management is one of the key elements required for success in addressing the threat of cluster munitions. The chapter begins by reviewing the “cycle” of information management, including the data that should be recorded and the activities needed to turn that data into information, notably exchange, storage, analysis and use.

THE INFORMATION MANAGEMENT CYCLE

The first step in the information management process is collection of the necessary data (or receipt from others, such as the users of cluster munitions). Once the necessary data has been collected or received, turning data into information requires that it be stored, analysed, shared and, above all, used. Figure 9 illustrates the information management life cycle.

Figure 9 | The Information Management Cycle



To be successful, this cycle requires a systematic approach to data and data quality. Mistakes at any stage to understand the overriding need for data quality—especially when it is being collected, stored or analysed—can jeopardise the reliability of the data and hence its usability. Information management systems too often fail to work properly because the people engaged in the process lack the necessary training, discipline and understanding about the critical importance of data accuracy.

DATA RECORDING NEEDS

The clearance of unexploded submunitions is greatly facilitated by the provision of data from the user on the types and quantities of cluster munitions used and their area target data. Difficulties in the release of relevant data are discussed briefly below, but a prerequisite for data exchange is that it first be recorded, and in a format that enables its subsequent sharing with other relevant parties.

Protocol V's non-binding technical annex sets out in more detail some of the data that should be recorded in order to facilitate future clearance efforts. With respect to unexploded submunitions, a State should record the following:

- > the location of areas targeted
- > the approximate number of cluster munitions used in those areas
- > the type and nature of cluster munitions used in areas, including technical information relevant to clearance, and
- > the general location of known and probable unexploded submunitions.¹

Where a State has been obliged to abandon cluster munitions in the course of operations, it should endeavour to leave the weapons safe and secure, and record information on their location: the approximate amount at each specific site and the types abandoned at each specific site.

There is no internationally agreed format for recording this data. What is important is that it is both clear and accurate with—if possible—GPS coordinates of point targets. While submunitions may not have landed at these coordinates, this will be a useful starting point for a survey of contaminated areas. Similarly, where a State has recorded information related to its use of cluster munitions, it should be stored in a manner which permits retrieval and subsequent release.

INFORMATION MANAGEMENT

RELEASE OF DATA

The release or exchange of data on the use of cluster munitions has been a contentious issue in several armed conflicts over the past decade, but is now required by international treaty. The Convention on Cluster Munitions requires all States Parties to report annually on the following:

- > The technical characteristics of each type of cluster munition produced by each State prior to becoming party to the Convention, with “such categories of information as may facilitate identification and clearance of cluster munitions”
- > The information should include, at a minimum, the dimensions, fusing, explosive content, metallic content, colour photographs and other information that may facilitate the clearance of cluster munition remnants.²

The Convention also has an innovative provision that applies in cases in which cluster munitions have been used or abandoned by one State prior to becoming party to the Convention and which have become cluster munition remnants in areas under the jurisdiction or control of another State Party. In such cases, the ‘user’ State is “strongly encouraged” to provide assistance to the affected State Party, including, “where available”, information on:

- > types and quantities of the cluster munitions used
- > precise locations of cluster munition strikes, and
- > areas in which cluster munition remnants are known to be located.³

CCW Protocol V sets out a qualified obligation to share relevant data, subject to a caveat as to the legitimate security interests of the user.⁴ According to the protocol, relevant information should be released to the party (or parties) in control of the affected territory and others engaged in clearance of the affected areas or in the provision of risk education. If the State that has used cluster munitions does not wish to provide the relevant data directly to the party in control of the affected areas, it can make use of mechanisms established internationally or locally for the release of information, such as through the UN Mine Action Service, and other expert agencies.

According to the Technical Annex to CCW Protocol V the information should be released “as soon as possible, taking into account such matters as any ongoing military and humanitarian operations in the affected areas, the availability and reliability of information and relevant security issues.”⁵

It is also important to gather and use data on cluster munition remnants to demonstrate how the contamination impedes post-conflict humanitarian and development efforts. Furthermore, this data should be systematically shared with relief, reconstruction, and development actors.

STORAGE DATA

When the party that intends to conduct clearance of contaminated areas is in possession of the necessary data, it in turn must store it safely. It is critical that all the available data is regularly entered into a single master database, which is open to all interested parties. This database should contain all of the data relevant to cluster munitions collected at all levels for the entire area being serviced. The establishment and regular update and dissemination of this single master data-set greatly improves the chances that all those engaged in addressing the threat from cluster munitions will be working from a common picture of both the hazard and the progress being made to address it.

Information Management System for Mine Action

The Geneva International Centre for Humanitarian Demining has supported the development and deployment of the Information Management System for Mine Action (IMSMA). The system is currently installed in almost 50 mine action programmes around the world.⁶

Based on requirements submitted by users in the field, the system has been continuously revised and upgraded since its initial release in the summer of 1999 and has become the de facto standard in mine action information management. It was field tested in Kosovo, where the use of cluster munitions was prevalent, and has demonstrated its capacity from the outset to enable the storage and manipulation of the requisite data.

The latest version of the IMSMA software has undergone a complete redesign. The new system combines a full-featured Geographic Information System (GIS) with a powerful relational database to produce an easy-to-use and maintain information management tool. The most noticeable of innovations in the latest version of IMSMA is the inclusion of a map driven navigation system that significantly improves both data entry and retrieval operations.

Distribution of the system is managed by the GICHD. It is provided free of charge to affected countries and to the governments of countries actively involved in peacekeeping and mine action support operations.

Practically, IMSMA can be used to:

- > Plan, manage, report and map cluster munition clearance activities;
- > Plan, manage, report and map risk education activities;
- > Record, report on, and map information on the assistance needs of submunition victims, and
- > Record, report on, and map relevant socio-economic information.

INFORMATION MANAGEMENT

A general Hazard Data Collection Form for ERW is already in use, which includes the ability to record various types of cluster munitions along with more than 5,000 other types of explosive ordnance. A cluster-munition-specific Hazard Data Collection Form could be easily developed, with assistance from the GICHD or independently by system users, with the data collected, based on requirements submitted by users in the field.

According to one weapons expert, an alternative to IMSMA for this specific type of work is EOD Frontline (see Box 12), which can be easier to use and quicker to train people on.⁷

Box 12 | EOD Frontline*

EOD Frontline is an explosive ordnance disposal (EOD) risk management software application. It is designed to assist EOD Operators with the management of EOD incidents, by providing accurate real time information. It can be used to assist the operational tasking of both military and civil emergency agencies. It was developed by Bruhn Newton, a UK company.

EOD Frontline provides the ability to record danger areas (explosive remnants of war and mines) and surveys of regions. The system contains a database of danger area details, making a list of danger areas available to the operator for creating, editing, and drawing or deleting danger areas. The system can record data on items found in the danger area.

EOD Frontline is currently in operational use with defence agencies, armed forces and forensic units in several countries and international organisations. It has been used operationally in areas, such as Afghanistan, Bosnia and Herzegovina, Denmark, Iraq, Kosovo and the United Kingdom.

* Source: www.bnl-cbrn.co.uk/Downloads/EOD-CBRN/EODF.pdf

INFORMATION MANAGEMENT

DATA ENTRY AND ANALYSIS

Errors inevitably creep into any information management system at the data entry point. This means that monitoring of data entry and the resultant database to minimise those errors is necessary. Point target data for cluster munitions may — correctly — be entered on the database, but then subsequent survey activities may identify the actual strike data at different coordinates. This can result in duplication of suspected hazard areas and lead to inefficient use of clearance assets. A regular cross-check of target data against actual strike areas can save valuable time and money.

Similarly, the data entry phase also provides a valuable opportunity to check the accuracy of the data that has been provided. There may be mistakes in recording or duplication of suspected hazard areas as a result of one or more surveys conducted. For example, where a survey of several impacted communities has identified multiple strike zones close to one another, it is worth trying to verify whether it is not actually one single strike zone that is affecting the different community members. This can help save time and resources.

ENDNOTES

- ¹ It is also important to identify and record the level of tolerable risk in the event of major contamination as this will help to guide clearance plans. What is deemed tolerable should be led by the affected communities themselves.
- ² Article 7, paragraph 1(c), Convention on Cluster Munitions.
- ³ Article 4, paragraph 4, Convention on Cluster Munitions.
- ⁴ See Article 4, CCW Protocol V.
- ⁵ Technical Annex, Article 1, CCW Protocol V.
- ⁶ See www.gichd.org/operational-assistance-research/information-management/imsma/overview/.
- ⁷ Email from Adrian Wilkinson, Head, SEESAC, Belgrade, 17 July 2007.

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GLOSSARY OF ABBREVIATIONS AND ACRONYMS

AXO	abandoned explosive ordnance	MLRS	Multiple Launch Rocket System
BAC	battle Area Clearance	MRE	mine risk education
CBU	Cluster Bomb Unit	NGO	non-governmental organisation
CCW	Convention on Certain Conventional Weapons (1980)	RSP	Render Safe Procedure
CEM	Combined effects munition	SD	self-destruct
CLO	community liaison officer	SFW	Sensor-Fuzed Weapon
CMC	Cluster Munitions Coalition	SHA	Suspected Hazard Area
DPICM	Dual-purpose improved conventional munitions	UK	United Kingdom
EOD	explosive ordnance disposal	UN	United Nations
ERW	explosive remnants of war	UNIDIR	UN Institute for Disarmament Research
GICHD	Geneva International Centre for Humanitarian Demining	UNMAS	UN Mine Action Service
GIS	Geographic Information System	USA	United States of America
GPS	Global Positioning System	UXO	unexploded ordnance
HEAT	High Explosive Anti-Tank		
ICRC	International Committee of the Red Cross		
IMAS	International Mine Action Standards		
IMSMA	Information Management System for Mine Action		
Laos	Lao People's Democratic Republic		



ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

30 MAY 2008

DIPLOMATIC CONFERENCE FOR THE ADOPTION OF A CONVENTION ON CLUSTER MUNITIONS | DUBLIN 19 - 30 MAY 2008

CONVENTION ON CLUSTER MUNITIONS

The States Parties to this Convention,

Deeply concerned that civilian populations and individual civilians continue to bear the brunt of armed conflict,

Determined to put an end for all time to the suffering and casualties caused by cluster munitions at the time of their use, when they fail to function as intended or when they are abandoned,

Concerned that cluster munition remnants kill or maim civilians, including women and children, obstruct economic and social development, including through the loss of livelihood, impede post-conflict rehabilitation and reconstruction, delay or prevent the return of refugees and internally displaced persons, can negatively impact on national and international peace-building and humanitarian assistance efforts, and have other severe consequences that can persist for many years after use,

Deeply concerned also at the dangers presented by the large national stockpiles of cluster munitions retained for operational use and determined to ensure their rapid destruction,

Believing it necessary to contribute effectively in an efficient, coordinated manner to resolving the challenge of removing cluster munition remnants located throughout the world, and to ensure their destruction,

Determined also to ensure the full realisation of the rights of all cluster munition victims and recognising their inherent dignity,

Resolved to do their utmost in providing assistance to cluster munition victims, including medical care, rehabilitation and psychological support, as well as providing for their social and economic inclusion,

Recognising the need to provide age- and gender-sensitive assistance to cluster munition victims and to address the special needs of vulnerable groups,

Bearing in mind the Convention on the Rights of Persons with Disabilities which, *inter alia*, requires that States Parties to that Convention undertake to ensure and promote the full realisation of all human rights and fundamental freedoms of all persons with disabilities without discrimination of any kind on the basis of disability,

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

Mindful of the need to coordinate adequately efforts undertaken in various fora to address the rights and needs of victims of various types of weapons, and resolved to avoid discrimination among victims of various types of weapons,

Reaffirming that in cases not covered by this Convention or by other international agreements, civilians and combatants remain under the protection principles of international law, derived from established custom, from the principles of humanity and from the dictates of public conscience,

Resolved also that armed groups distinct from the armed forces of a State shall not, under any circumstances, be permitted to engage in any activity prohibited to a State Party to this Convention,

Welcoming the very broad international support for the international norm prohibiting anti-personnel mines, enshrined in the 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction,

Welcoming also the adoption of the Protocol on Explosive Remnants of War, annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, and its entry into force on 12 November 2006, and wishing to enhance the protection of civilians from the effects of cluster munition remnants in post-conflict environments,

Bearing in mind also United Nations Security Council Resolution 1325 on women, peace and security and United Nations Security Council Resolution 1612 on children in armed conflict,

Welcoming further the steps taken nationally, regionally and globally in recent years aimed at prohibiting, restricting or suspending the use, stockpiling, production and transfer of cluster munitions,

Stressing the role of public conscience in furthering the principles of humanity as evidenced by the global call for an end to civilian suffering caused by cluster munitions and recognising the efforts to that end undertaken by the United Nations, the International Committee of the Red Cross, the Cluster Munition Coalition and numerous other non-governmental organisations around the world,

Reaffirming the Declaration of the Oslo Conference on Cluster Munitions, by which, *inter alia*, States recognised the grave consequences caused by the use of cluster munitions and committed themselves to conclude by 2008 a legally binding instrument that would prohibit the use, production, transfer and stockpiling of cluster munitions that cause unacceptable harm to civilians,

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

and would establish a framework for cooperation and assistance that ensures adequate provision of care and rehabilitation for victims, clearance of contaminated areas, risk reduction education and destruction of stockpiles,

Emphasising the desirability of attracting the adherence of all States to this Convention, and determined to work strenuously towards the promotion of its universalisation and its full implementation,

Basing themselves on the principles and rules of international humanitarian law, in particular the principle that the right of parties to an armed conflict to choose methods or means of warfare is not unlimited, and the rules that the parties to a conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly direct their operations against military objectives only, that in the conduct of military operations constant care shall be taken to spare the civilian population, civilians and civilian objects and that the civilian population and individual civilians enjoy general protection against dangers arising from military operations,

Have agreed as follows:

Article 1 | General obligations and scope of application

1. Each State Party undertakes never under any circumstances to:
 - (a) Use cluster munitions;
 - (b) Develop, produce, otherwise acquire, stockpile, retain or transfer to anyone, directly or indirectly, cluster munitions;
 - (c) Assist, encourage or induce anyone to engage in any activity prohibited to a State Party under this Convention.
2. Paragraph 1 of this Article applies, *mutatis mutandis*, to explosive bomblets that are specifically designed to be dispersed or released from dispensers affixed to aircraft.
3. This Convention does not apply to mines.

Article 2 | Definitions

For the purposes of this Convention:

1. "Cluster munition victims" means all persons who have been killed or suffered physical or psychological injury, economic loss, social marginalisation or substantial impairment of the realisation of their rights caused by the use of cluster munitions. They include those persons directly impacted by cluster munitions as well as their affected families and communities;
2. "Cluster munition" means a conventional munition that is designed to disperse or release explosive submunitions each weighing less than 20 kilograms, and includes those explosive submunitions. It does not mean the following:
 - (a) A munition or submunition designed to dispense flares, smoke, pyrotechnics or chaff; or a munition designed exclusively for an air defence role;
 - (b) A munition or submunition designed to produce electrical or electronic effects;

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

- (c) A munition that, in order to avoid indiscriminate area effects and the risks posed by unexploded submunitions, has all of the following characteristics:
 - (i) Each munition contains fewer than ten explosive submunitions;
 - (ii) Each explosive submunition weighs more than four kilograms;
 - (iii) Each explosive submunition is designed to detect and engage a single target object;
 - (iv) Each explosive submunition is equipped with an electronic selfdestruction mechanism;
 - (v) Each explosive submunition is equipped with an electronic selfdeactivating feature;
3. "Explosive submunition" means a conventional munition that in order to perform its task is dispersed or released by a cluster munition and is designed to function by detonating an explosive charge prior to, on or after impact;
4. "Failed cluster munition" means a cluster munition that has been fired, dropped, launched, projected or otherwise delivered and which should have dispersed or released its explosive submunitions but failed to do so;
5. "Unexploded submunition" means an explosive submunition that has been dispersed or released by, or otherwise separated from, a cluster munition and has failed to explode as intended;
6. "Abandoned cluster munitions" means cluster munitions or explosive submunitions that have not been used and that have been left behind or dumped, and that are no longer under the control of the party that left them behind or dumped them. They may or may not have been prepared for use;
7. "Cluster munition remnants" means failed cluster munitions, abandoned cluster munitions, unexploded submunitions and unexploded bomblets;
8. "Transfer" involves, in addition to the physical movement of cluster munitions into or from national territory, the transfer of title to and control over cluster munitions, but does not involve the transfer of territory containing cluster munition remnants;
9. "Self-destruction mechanism" means an incorporated automatically functioning mechanism which is in addition to the primary initiating mechanism of the munition and which secures the destruction of the munition into which it is incorporated;
10. "Self-deactivating" means automatically rendering a munition inoperable by means of the irreversible exhaustion of a component, for example a battery, that is essential to the operation of the munition;
11. "Cluster munition contaminated area" means an area known or suspected to contain cluster munition remnants;
12. "Mine" means a munition designed to be placed under, on or near the ground or other surface area and to be exploded by the presence, proximity or contact of a person or a vehicle;
13. "Explosive bomblet" means a conventional munition, weighing less than 20 kilograms, which is not self-propelled and which, in order to perform its task, is dispersed or released by a dispenser, and is designed to function by detonating an explosive charge prior to, on or after impact;
14. "Dispenser" means a container that is designed to disperse or release explosive bomblets and which is affixed to an aircraft at the time of dispersal or release;
15. "Unexploded bomblet" means an explosive bomblet that has been dispersed, released or otherwise separated from a dispenser and has failed to explode as intended.

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

Article 3 | Storage and stockpile destruction

1. Each State Party shall, in accordance with national regulations, separate all cluster munitions under its jurisdiction and control from munitions retained for operational use and mark them for the purpose of destruction.
2. Each State Party undertakes to destroy or ensure the destruction of all cluster munitions referred to in paragraph 1 of this Article as soon as possible but not later than eight years after the entry into force of this Convention for that State Party. Each State Party undertakes to ensure that destruction methods comply with applicable international standards for protecting public health and the environment.
3. If a State Party believes that it will be unable to destroy or ensure the destruction of all cluster munitions referred to in paragraph 1 of this Article within eight years of entry into force of this Convention for that State Party it may submit a request to a Meeting of States Parties or a Review Conference for an extension of the deadline for completing the destruction of such cluster munitions by a period of up to four years. A State Party may, in exceptional circumstances, request additional extensions of up to four years. The requested extensions shall not exceed the number of years strictly necessary for that State Party to complete its obligations under paragraph 2 of this Article.
4. Each request for an extension shall set out:
 - (a) The duration of the proposed extension;
 - (b) A detailed explanation of the proposed extension, including the financial and technical means available to or required by the State Party for the destruction of all cluster munitions referred to in paragraph 1 of this Article and, where applicable, the exceptional circumstances justifying it;
 - (c) A plan for how and when stockpile destruction will be completed;
 - (d) The quantity and type of cluster munitions and explosive submunitions held at the entry into force of this Convention for that State Party and any additional cluster munitions or explosive submunitions discovered after such entry into force;
 - (e) The quantity and type of cluster munitions and explosive submunitions destroyed during the period referred to in paragraph 2 of this Article; and
 - (f) The quantity and type of cluster munitions and explosive submunitions remaining to be destroyed during the proposed extension and the annual destruction rate expected to be achieved.
5. The Meeting of States Parties or the Review Conference shall, taking into consideration the factors referred to in paragraph 4 of this Article, assess the request and decide by a majority of votes of States Parties present and voting whether to grant the request for an extension. The States Parties may decide to grant a shorter extension than that requested and may propose benchmarks for the extension, as appropriate. A request for an extension shall be submitted a minimum of nine months prior to the Meeting of States Parties or the Review Conference at which it is to be considered.
6. Notwithstanding the provisions of Article 1 of this Convention, the retention or acquisition of a limited number of cluster munitions and explosive submunitions for the development of and training in cluster munition and explosive submunition detection, clearance or destruction techniques, or for the development of cluster munition counter-measures, is permitted. The amount of explosive submunitions retained or acquired shall not exceed the minimum number absolutely necessary for these purposes.

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7. Notwithstanding the provisions of Article 1 of this Convention, the transfer of cluster munitions to another State Party for the purpose of destruction, as well as for the purposes described in paragraph 6 of this Article, is permitted.
8. States Parties retaining, acquiring or transferring cluster munitions or explosive submunitions for the purposes described in paragraphs 6 and 7 of this Article shall submit a detailed report on the planned and actual use of these cluster munitions and explosive submunitions and their type, quantity and lot numbers. If cluster munitions or explosive submunitions are transferred to another State Party for these purposes, the report shall include reference to the receiving party. Such a report shall be prepared for each year during which a State Party retained, acquired or transferred cluster munitions or explosive submunitions and shall be submitted to the Secretary-General of the United Nations no later than 30 April of the following year.

Article 4 | Clearance and destruction of cluster munition remnants and risk reduction education

1. Each State Party undertakes to clear and destroy, or ensure the clearance and destruction of, cluster munition remnants located in cluster munition contaminated areas under its jurisdiction or control, as follows:
 - (a) Where cluster munition remnants are located in areas under its jurisdiction or control at the date of entry into force of this Convention for that State Party, such clearance and destruction shall be completed as soon as possible but not later than ten years from that date;
 - (b) Where, after entry into force of this Convention for that State Party, cluster munitions have become cluster munition remnants located in areas under its jurisdiction or control, such clearance and destruction must be completed as soon as possible but not later than ten years after the end of the active hostilities during which such cluster munitions became cluster munition remnants; and
 - (c) Upon fulfilling either of its obligations set out in sub-paragraphs (a) and (b) of this paragraph, that State Party shall make a declaration of compliance to the next Meeting of States Parties.
2. In fulfilling its obligations under paragraph 1 of this Article, each State Party shall take the following measures as soon as possible, taking into consideration the provisions of Article 6 of this Convention regarding international cooperation and assistance:
 - (a) Survey, assess and record the threat posed by cluster munition remnants, making every effort to identify all cluster munition contaminated areas under its jurisdiction or control;
 - (b) Assess and prioritise needs in terms of marking, protection of civilians, clearance and destruction, and take steps to mobilise resources and develop a national plan to carry out these activities, building, where appropriate, upon existing structures, experiences and methodologies;
 - (c) Take all feasible steps to ensure that all cluster munition contaminated areas under its jurisdiction or control are perimeter-marked, monitored and protected by fencing or other means to ensure the effective exclusion of civilians. Warning signs based on methods of marking readily recognisable by the affected community should be utilised in the marking of suspected hazardous areas. Signs and other hazardous area boundary markers should, as far as possible, be visible, legible, durable and resistant to environmental effects and should clearly identify which side of the marked boundary is considered to be within the cluster munition contaminated areas and which side is considered to be safe;

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

- (d) Clear and destroy all cluster munition remnants located in areas under its jurisdiction or control; and
 - (e) Conduct risk reduction education to ensure awareness among civilians living in or around cluster munition contaminated areas of the risks posed by such remnants.
3. In conducting the activities referred to in paragraph 2 of this Article, each State Party shall take into account international standards, including the International Mine Action Standards (IMAS).
4. This paragraph shall apply in cases in which cluster munitions have been used or abandoned by one State Party prior to entry into force of this Convention for that State Party and have become cluster munition remnants that are located in areas under the jurisdiction or control of another State Party at the time of entry into force of this Convention for the latter.
 - (a) In such cases, upon entry into force of this Convention for both States Parties, the former State Party is strongly encouraged to provide, *inter alia*, technical, financial, material or human resources assistance to the latter State Party, either bilaterally or through a mutually agreed third party, including through the United Nations system or other relevant organisations, to facilitate the marking, clearance and destruction of such cluster munition remnants.
 - (b) Such assistance shall include, where available, information on types and quantities of the cluster munitions used, precise locations of cluster munition strikes and areas in which cluster munition remnants are known to be located.
5. If a State Party believes that it will be unable to clear and destroy or ensure the clearance and destruction of all cluster munition remnants referred to in paragraph 1 of this Article within ten years of the entry into force of this Convention for that State Party, it may submit a request to a Meeting of States Parties or a Review Conference for an extension of the deadline for completing the clearance and destruction of such cluster munition remnants by a period of up to five years. The requested extension shall not exceed the number of years strictly necessary for that State Party to complete its obligations under paragraph 1 of this Article.
6. A request for an extension shall be submitted to a Meeting of States Parties or a Review Conference prior to the expiry of the time period referred to in paragraph 1 of this Article for that State Party. Each request shall be submitted a minimum of nine months prior to the Meeting of States Parties or Review Conference at which it is to be considered. Each request shall set out:
 - (a) The duration of the proposed extension;
 - (b) A detailed explanation of the reasons for the proposed extension, including the financial and technical means available to and required by the State Party for the clearance and destruction of all cluster munition remnants during the proposed extension;
 - (c) The preparation of future work and the status of work already conducted under national clearance and demining programmes during the initial ten year period referred to in paragraph 1 of this Article and any subsequent extensions;
 - (d) The total area containing cluster munition remnants at the time of entry into force of this Convention for that State Party and any additional areas containing cluster munition remnants discovered after such entry into force;
 - (e) The total area containing cluster munition remnants cleared since entry into force of this Convention;
 - (f) The total area containing cluster munition remnants remaining to be cleared during the proposed extension;

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

- (g) The circumstances that have impeded the ability of the State Party to destroy all cluster munition remnants located in areas under its jurisdiction or control during the initial ten year period referred to in paragraph 1 of this Article, and those that may impede this ability during the proposed extension;
 - (h) The humanitarian, social, economic and environmental implications of the proposed extension; and
 - (i) Any other information relevant to the request for the proposed extension.
7. The Meeting of States Parties or the Review Conference shall, taking into consideration the factors referred to in paragraph 6 of this Article, including, inter alia, the quantities of cluster munition remnants reported, assess the request and decide by a majority of votes of States Parties present and voting whether to grant the request for an extension. The States Parties may decide to grant a shorter extension than that requested and may propose benchmarks for the extension, as appropriate.
 8. Such an extension may be renewed by a period of up to five years upon the submission of a new request, in accordance with paragraphs 5, 6 and 7 of this Article. In requesting a further extension a State Party shall submit relevant additional information on what has been undertaken during the previous extension granted pursuant to this Article.

Article 5 | Victim assistance

1. Each State Party with respect to cluster munition victims in areas under its jurisdiction or control shall, in accordance with applicable international humanitarian and human rights law, adequately provide age- and gender-sensitive assistance, including medical care, rehabilitation and psychological support, as well as provide for their social and economic inclusion. Each State Party shall make every effort to collect reliable relevant data with respect to cluster munition victims.
2. In fulfilling its obligations under paragraph 1 of this Article each State Party shall:
 - (a) Assess the needs of cluster munition victims;
 - (b) Develop, implement and enforce any necessary national laws and policies;
 - (c) Develop a national plan and budget, including timeframes to carry out these activities, with a view to incorporating them within the existing national disability, development and human rights frameworks and mechanisms, while respecting the specific role and contribution of relevant actors;
 - (d) Take steps to mobilise national and international resources;
 - (e) Not discriminate against or among cluster munition victims, or between cluster munition victims and those who have suffered injuries or disabilities from other causes; differences in treatment should be based only on medical, rehabilitative, psychological or socio-economic needs;
 - (f) Closely consult with and actively involve cluster munition victims and their representative organisations;
 - (g) Designate a focal point within the government for coordination of matters relating to the implementation of this Article; and
 - (h) Strive to incorporate relevant guidelines and good practices including in the areas of medical care, rehabilitation and psychological support, as well as social and economic inclusion.

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Article 6 | International cooperation and assistance

1. In fulfilling its obligations under this Convention each State Party has the right to seek and receive assistance.
2. Each State Party in a position to do so shall provide technical, material and financial assistance to States Parties affected by cluster munitions, aimed at the implementation of the obligations of this Convention. Such assistance may be provided, inter alia, through the United Nations system, international, regional or national organisations or institutions, non-governmental organisations or institutions, or on a bilateral basis.
3. Each State Party undertakes to facilitate and shall have the right to participate in the fullest possible exchange of equipment and scientific and technological information concerning the implementation of this Convention. The States Parties shall not impose undue restrictions on the provision and receipt of clearance and other such equipment and related technological information for humanitarian purposes.
4. In addition to any obligations it may have pursuant to paragraph 4 of Article 4 of this Convention, each State Party in a position to do so shall provide assistance for clearance and destruction of cluster munition remnants and information concerning various means and technologies related to clearance of cluster munitions, as well as lists of experts, expert agencies or national points of contact on clearance and destruction of cluster munition remnants and related activities.
5. Each State Party in a position to do so shall provide assistance for the destruction of stockpiled cluster munitions, and shall also provide assistance to identify, assess and prioritise needs and practical measures in terms of marking, risk reduction education, protection of civilians and clearance and destruction as provided in Article 4 of this Convention.
6. Where, after entry into force of this Convention, cluster munitions have become cluster munition remnants located in areas under the jurisdiction or control of a State Party, each State Party in a position to do so shall urgently provide emergency assistance to the affected State Party.
7. Each State Party in a position to do so shall provide assistance for the implementation of the obligations referred to in Article 5 of this Convention to adequately provide age- and gender-sensitive assistance, including medical care, rehabilitation and psychological support, as well as provide for social and economic inclusion of cluster munition victims. Such assistance may be provided, inter alia, through the United Nations system, international, regional or national organisations or institutions, the International Committee of the Red Cross, national Red Cross and Red Crescent Societies and their International Federation, non-governmental organisations or on a bilateral basis.
8. Each State Party in a position to do so shall provide assistance to contribute to the economic and social recovery needed as a result of cluster munition use in affected States Parties.
9. Each State Party in a position to do so may contribute to relevant trust funds in order to facilitate the provision of assistance under this Article.
10. Each State Party that seeks and receives assistance shall take all appropriate measures in order to facilitate the timely and effective implementation of this Convention, including facilitation of the entry and exit of personnel, materiel and equipment, in a manner consistent with national laws and regulations, taking into consideration international best practices.

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11. Each State Party may, with the purpose of developing a national action plan, request the United Nations system, regional organisations, other States Parties or other competent intergovernmental or non-governmental institutions to assist its authorities to determine, inter alia:
 - (a) The nature and extent of cluster munition remnants located in areas under its jurisdiction or control;
 - (b) The financial, technological and human resources required for the implementation of the plan;
 - (c) The time estimated as necessary to clear and destroy all cluster munition remnants located in areas under its jurisdiction or control;
 - (d) Risk reduction education programmes and awareness activities to reduce the incidence of injuries or deaths caused by cluster munition remnants;
 - (e) Assistance to cluster munition victims; and
 - (f) The coordination relationship between the government of the State Party concerned and the relevant governmental, intergovernmental or non-governmental entities that will work in the implementation of the plan.
12. States Parties giving and receiving assistance under the provisions of this Article shall cooperate with a view to ensuring the full and prompt implementation of agreed assistance programmes.

Article 7 | Transparency measures

1. Each State Party shall report to the Secretary-General of the United Nations as soon as practicable, and in any event not later than 180 days after the entry into force of this Convention for that State Party, on:
 - (a) The national implementation measures referred to in Article 9 of this Convention;
 - (b) The total of all cluster munitions, including explosive submunitions, referred to in paragraph 1 of Article 3 of this Convention, to include a breakdown of their type, quantity and, if possible, lot numbers of each type;
 - (c) The technical characteristics of each type of cluster munition produced by that State Party prior to entry into force of this Convention for it, to the extent known, and those currently owned or possessed by it, giving, where reasonably possible, such categories of information as may facilitate identification and clearance of cluster munitions; at a minimum, this information shall include the dimensions, fusing, explosive content, metallic content, colour photographs and other information that may facilitate the clearance of cluster munition remnants;
 - (d) The status and progress of programmes for the conversion or decommissioning of production facilities for cluster munitions;
 - (e) The status and progress of programmes for the destruction, in accordance with Article 3 of this Convention, of cluster munitions, including explosive submunitions, with details of the methods that will be used in destruction, the location of all destruction sites and the applicable safety and environmental standards to be observed;
 - (f) The types and quantities of cluster munitions, including explosive submunitions, destroyed in accordance with Article 3 of this Convention, including details of the methods of destruction used, the location of the destruction sites and the applicable safety and environmental standards observed;

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- (g) Stockpiles of cluster munitions, including explosive submunitions, discovered after reported completion of the programme referred to in sub-paragraph (e) of this paragraph, and plans for their destruction in accordance with Article 3 of this Convention;
 - (h) To the extent possible, the size and location of all cluster munition contaminated areas under its jurisdiction or control, to include as much detail as possible regarding the type and quantity of each type of cluster munition remnant in each such area and when they were used;
 - (i) The status and progress of programmes for the clearance and destruction of all types and quantities of cluster munition remnants cleared and destroyed in accordance with Article 4 of this Convention, to include the size and location of the cluster munition contaminated area cleared and a breakdown of the quantity of each type of cluster munition remnant cleared and destroyed;
 - (j) The measures taken to provide risk reduction education and, in particular, an immediate and effective warning to civilians living in cluster munition contaminated areas under its jurisdiction or control;
 - (k) The status and progress of implementation of its obligations under Article 5 of this Convention to adequately provide age- and gendersensitive assistance, including medical care, rehabilitation and psychological support, as well as provide for social and economic inclusion of cluster munition victims and to collect reliable relevant data with respect to cluster munition victims;
 - (l) The name and contact details of the institutions mandated to provide information and to carry out the measures described in this paragraph;
 - (m) The amount of national resources, including financial, material or in kind, allocated to the implementation of Articles 3, 4 and 5 of this Convention; and
 - (n) The amounts, types and destinations of international cooperation and assistance provided under Article 6 of this Convention.
2. The information provided in accordance with paragraph 1 of this Article shall be updated by the States Parties annually, covering the previous calendar year, and reported to the Secretary-General of the United Nations not later than 30 April of each year.
 3. The Secretary-General of the United Nations shall transmit all such reports received to the States Parties.

Article 8 | Facilitation and clarification of compliance

1. The States Parties agree to consult and cooperate with each other regarding the implementation of the provisions of this Convention and to work together in a spirit of cooperation to facilitate compliance by States Parties with their obligations under this Convention.
2. If one or more States Parties wish to clarify and seek to resolve questions relating to a matter of compliance with the provisions of this Convention by another State Party, it may submit, through the Secretary-General of the United Nations, a Request for Clarification of that matter to that State Party. Such a request shall be accompanied by all appropriate information. Each State Party shall refrain from unfounded Requests for Clarification, care being taken to avoid abuse. A State Party that receives a Request for Clarification shall provide, through the Secretary-General of the United Nations, within 28 days to the requesting State Party all information that would assist in clarifying the matter.

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3. If the requesting State Party does not receive a response through the Secretary-General of the United Nations within that time period, or deems the response to the Request for Clarification to be unsatisfactory, it may submit the matter through the Secretary-General of the United Nations to the next Meeting of States Parties. The Secretary-General of the United Nations shall transmit the submission, accompanied by all appropriate information pertaining to the Request for Clarification, to all States Parties. All such information shall be presented to the requested State Party which shall have the right to respond.
4. Pending the convening of any Meeting of States Parties, any of the States Parties concerned may request the Secretary-General of the United Nations to exercise his or her good offices to facilitate the clarification requested.
5. Where a matter has been submitted to it pursuant to paragraph 3 of this Article, the Meeting of States Parties shall first determine whether to consider that matter further, taking into account all information submitted by the States Parties concerned. If it does so determine, the Meeting of States Parties may suggest to the States Parties concerned ways and means further to clarify or resolve the matter under consideration, including the initiation of appropriate procedures in conformity with international law. In circumstances where the issue at hand is determined to be due to circumstances beyond the control of the requested State Party, the Meeting of States Parties may recommend appropriate measures, including the use of cooperative measures referred to in Article 6 of this Convention.
6. In addition to the procedures provided for in paragraphs 2 to 5 of this Article, the Meeting of States Parties may decide to adopt such other general procedures or specific mechanisms for clarification of compliance, including facts, and resolution of instances of non-compliance with the provisions of this Convention as it deems appropriate.

Article 9 | National implementation measures

Each State Party shall take all appropriate legal, administrative and other measures to implement this Convention, including the imposition of penal sanctions to prevent and suppress any activity prohibited to a State Party under this Convention undertaken by persons or on territory under its jurisdiction or control.

Article 10 | Settlement of disputes

1. When a dispute arises between two or more States Parties relating to the interpretation or application of this Convention, the States Parties concerned shall consult together with a view to the expeditious settlement of the dispute by negotiation or by other peaceful means of their choice, including recourse to the Meeting of States Parties and referral to the International Court of Justice in conformity with the Statute of the Court.
2. The Meeting of States Parties may contribute to the settlement of the dispute by whatever means it deems appropriate, including offering its good offices, calling upon the States Parties concerned to start the settlement procedure of their choice and recommending a time-limit for any agreed procedure.

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS**Article 11 | Meetings of States Parties**

1. The States Parties shall meet regularly in order to consider and, where necessary, take decisions in respect of any matter with regard to the application or implementation of this Convention, including:
 - (a) The operation and status of this Convention;
 - (b) Matters arising from the reports submitted under the provisions of this Convention;
 - (c) International cooperation and assistance in accordance with Article 6 of this Convention;
 - (d) The development of technologies to clear cluster munition remnants;
 - (e) Submissions of States Parties under Articles 8 and 10 of this Convention; and
 - (f) Submissions of States Parties as provided for in Articles 3 and 4 of this Convention.
2. The first Meeting of States Parties shall be convened by the Secretary-General of the United Nations within one year of entry into force of this Convention. The subsequent meetings shall be convened by the Secretary-General of the United Nations annually until the first Review Conference.
3. States not party to this Convention, as well as the United Nations, other relevant international organisations or institutions, regional organisations, the International Committee of the Red Cross, the International Federation of Red Cross and Red Crescent Societies and relevant non-governmental organisations may be invited to attend these meetings as observers in accordance with the agreed rules of procedure.

Article 12 | Review Conferences

1. A Review Conference shall be convened by the Secretary-General of the United Nations five years after the entry into force of this Convention. Further Review Conferences shall be convened by the Secretary-General of the United Nations if so requested by one or more States Parties, provided that the interval between Review Conferences shall in no case be less than five years. All States Parties to this Convention shall be invited to each Review Conference.
2. The purpose of the Review Conference shall be:
 - (a) To review the operation and status of this Convention;
 - (b) To consider the need for and the interval between further Meetings of States Parties referred to in paragraph 2 of Article 11 of this Convention; and
 - (c) To take decisions on submissions of States Parties as provided for in Articles 3 and 4 of this Convention.
3. States not party to this Convention, as well as the United Nations, other relevant international organisations or institutions, regional organisations, the International Committee of the Red Cross, the International Federation of Red Cross and Red Crescent Societies and relevant non-governmental organisations may be invited to attend each Review Conference as observers in accordance with the agreed rules of procedure.

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

Article 13 | Amendments

1. At any time after its entry into force any State Party may propose amendments to this Convention. Any proposal for an amendment shall be communicated to the Secretary-General of the United Nations, who shall circulate it to all States Parties and shall seek their views on whether an Amendment Conference should be convened to consider the proposal. If a majority of the States Parties notify the Secretary-General of the United Nations no later than 90 days after its circulation that they support further consideration of the proposal, the Secretary-General of the United Nations shall convene an Amendment Conference to which all States Parties shall be invited.
2. States not party to this Convention, as well as the United Nations, other relevant international organisations or institutions, regional organisations, the International Committee of the Red Cross, the International Federation of Red Cross and Red Crescent Societies and relevant non-governmental organisations may be invited to attend each Amendment Conference as observers in accordance with the agreed rules of procedure.
3. The Amendment Conference shall be held immediately following a Meeting of States Parties or a Review Conference unless a majority of the States Parties request that it be held earlier.
4. Any amendment to this Convention shall be adopted by a majority of two-thirds of the States Parties present and voting at the Amendment Conference. The Depositary shall communicate any amendment so adopted to all States.
5. An amendment to this Convention shall enter into force for States Parties that have accepted the amendment on the date of deposit of acceptances by a majority of the States which were Parties at the date of adoption of the amendment. Thereafter it shall enter into force for any remaining State Party on the date of deposit of its instrument of acceptance.

Article 14 | Costs and administrative tasks

1. The costs of the Meetings of States Parties, the Review Conferences and the Amendment Conferences shall be borne by the States Parties and States not party to this Convention participating therein, in accordance with the United Nations scale of assessment adjusted appropriately.
2. The costs incurred by the Secretary-General of the United Nations under Articles 7 and 8 of this Convention shall be borne by the States Parties in accordance with the United Nations scale of assessment adjusted appropriately.
3. The performance by the Secretary-General of the United Nations of administrative tasks assigned to him or her under this Convention is subject to an appropriate United Nations mandate.

Article 15 | Signature

This Convention, done at Dublin on 30 May 2008, shall be open for signature at Oslo by all States on 3 December 2008 and thereafter at United Nations Headquarters in New York until its entry into force.

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

Article 16 | Ratification, acceptance, approval or accession

1. This Convention is subject to ratification, acceptance or approval by the Signatories.
2. It shall be open for accession by any State that has not signed the Convention.
3. The instruments of ratification, acceptance, approval or accession shall be deposited with the Depositary.

Article 17 | Entry into force

1. This Convention shall enter into force on the first day of the sixth month after the month in which the thirtieth instrument of ratification, acceptance, approval or accession has been deposited.
2. For any State that deposits its instrument of ratification, acceptance, approval or accession after the date of the deposit of the thirtieth instrument of ratification, acceptance, approval or accession, this Convention shall enter into force on the first day of the sixth month after the date on which that State has deposited its instrument of ratification, acceptance, approval or accession.

Article 18 | Provisional application

Any State may, at the time of its ratification, acceptance, approval or accession, declare that it will apply provisionally Article 1 of this Convention pending its entry into force for that State.

Article 19 | Reservations

The Articles of this Convention shall not be subject to reservations.

Article 20 | Duration and withdrawal

1. This Convention shall be of unlimited duration.
2. Each State Party shall, in exercising its national sovereignty, have the right to withdraw from this Convention. It shall give notice of such withdrawal to all other States Parties, to the Depositary and to the United Nations Security Council. Such instrument of withdrawal shall include a full explanation of the reasons motivating withdrawal.
3. Such withdrawal shall only take effect six months after the receipt of the instrument of withdrawal by the Depositary. If, however, on the expiry of that sixmonth period, the withdrawing State Party is engaged in an armed conflict, the withdrawal shall not take effect before the end of the armed conflict.

Article 21 | Relations with States not party to this Convention

1. Each State Party shall encourage States not party to this Convention to ratify, accept, approve or accede to this Convention, with the goal of attracting the adherence of all States to this Convention.
2. Each State Party shall notify the governments of all States not party to this Convention, referred to in paragraph 3 of this Article, of its obligations under this Convention, shall promote the norms it establishes and shall make its best efforts to discourage States not party to this Convention from using cluster munitions.

ANNEX 1 | CONVENTION ON CLUSTER MUNITIONS

3. Notwithstanding the provisions of Article 1 of this Convention and in accordance with international law, States Parties, their military personnel or nationals, may engage in military cooperation and operations with States not party to this Convention that might engage in activities prohibited to a State Party.
4. Nothing in paragraph 3 of this Article shall authorise a State Party:
 - (a) To develop, produce or otherwise acquire cluster munitions;
 - (b) To itself stockpile or transfer cluster munitions;
 - (c) To itself use cluster munitions; or
 - (d) To expressly request the use of cluster munitions in cases where the choice of munitions used is within its exclusive control.

Article 22 | Depositary

The Secretary-General of the United Nations is hereby designated as the Depositary of this Convention.

Article 23 | Authentic texts

The Arabic, Chinese, English, French, Russian and Spanish texts of this Convention shall be equally authentic.

ANNEX 2 | LIST OF STATES PARTIES AND SIGNATORIES* | CONVENTION ON CLUSTER MUNITIONS

States Parties

A

Austria

H

Holy See

I

Ireland

L

Lao People's
Democratic Republic

M

Mexico

N

Norway

S

Sierra Leone

* As of 29 May 2009.

Signatories**

A

Afghanistan
Albania
Angola
Australia

B

Belgium
Benin
Bolivia
Bosnia and Herzegovina
Botswana
Bulgaria
Burkina Faso
Burundi

C

Canada
Cape Verde
Central African Republic
Chad
Chile
Colombia
Comoros
Republic of Congo
Cook Islands
Costa Rica
Côte d'Ivoire
(4 December 2008)
Croatia
Czech Republic

ANNEXES

ANNEX 2 | LIST OF STATES PARTIES AND SIGNATORIES* | CONVENTION ON CLUSTER MUNITIONS

D

the Democratic
Republic of Congo
(18 March 2009)

Denmark

E

Ecuador
El Salvador

F

Fiji
France

G

The Gambia
Germany
Ghana
Guatemala
Guinea
Guinea-Bissau
(4 December 2008)

H

Honduras
Hungary

I

Iceland
Indonesia
Italy

J

Japan

K

Kenya

L

Lebanon
Lesotho
Liberia
Liechtenstein
Lithuania
Luxembourg

M

Madagascar
Malawi
Mali
Malta
Monaco
Montenegro
Mozambique

N

Namibia
Nauru
Netherlands
New Zealand
Nicaragua
Niger

P

Palau
Panama
Paraguay
Peru
Philippines
Portugal

R

Republic of Moldova
Rwanda

S

Samoa
San Marino
São Tomé and Príncipe
Senegal
Slovenia
Somalia
South Africa
Spain
Sweden
Switzerland

T

the former Yugoslav
Republic of Macedonia
Togo
Tunisia (12 January 2009)

U

Uganda
United Kingdom
of Great Britain
and Northern Ireland
United Republic
of Tanzania
Uruguay

Z

Zambia

* As of 29 May 2009.

** Signature on 3 December 2008, unless otherwise stated.

ANNEX 3 | PROTOCOL V TO THE CCW

PROTOCOL ON EXPLOSIVE REMNANTS OF WAR OF 28 NOVEMBER 2003 (Protocol V)

The High Contracting Parties,

Recognising the serious post-conflict humanitarian problems caused by explosive remnants of war,

Conscious of the need to conclude a Protocol on post-conflict remedial measures of a generic nature in order to minimise the risks and effects of explosive remnants of war,

And willing to address generic preventive measures, through voluntary best practices specified in a Technical Annex for improving the reliability of munitions, and therefore minimising the occurrence of explosive remnants of war,

Have agreed as follows:

Article 1 | General provision and scope of application

1. In conformity with the Charter of the United Nations and of the rules of the international law of armed conflict applicable to them, High Contracting Parties agree to comply with the obligations specified in this Protocol, both individually and in cooperation with other High Contracting Parties, to minimize the risks and effects of explosive remnants of war in post-conflict situations.
2. This Protocol shall apply to explosive remnants of war on the land territory including internal waters of High Contracting Parties.
3. This Protocol shall apply to situations resulting from conflicts referred to in Article 1, paragraphs 1 to 6, of the Convention, as amended on 21 December 2001.
4. Articles 3, 4, 5 and 8 of this Protocol apply to explosive remnants of war other than existing explosive remnants of war as defined in Article 2, paragraph 5 of this Protocol.

Article 2 | Definitions

For the purpose of this Protocol,

1. Explosive ordnance means conventional munitions containing explosives, with the exception of mines, booby traps and other devices as defined in Protocol II of this Convention as amended on 3 May 1996.
2. Unexploded ordnance means explosive ordnance that has been primed, fused, armed, or otherwise prepared for use and used in an armed conflict. It may have been fired, dropped, launched or projected and should have exploded but failed to do so.

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3. Abandoned explosive ordnance means explosive ordnance that has not been used during an armed conflict, that has been left behind or dumped by a party to an armed conflict, and which is no longer under control of the party that left it behind or dumped it. Abandoned explosive ordnance may or may not have been primed, fused, armed or otherwise prepared for use.
4. Explosive remnants of war means unexploded ordnance and abandoned explosive ordnance.
5. Existing explosive remnants of war means unexploded ordnance and abandoned explosive ordnance that existed prior to the entry into force of this Protocol for the High Contracting Party on whose territory it exists.

Article 3 | Clearance, removal or destruction of explosive remnants of war

1. Each High Contracting Party and party to an armed conflict shall bear the responsibilities set out in this Article with respect to all explosive remnants of war in territory under its control. In cases where a user of explosive ordnance which has become explosive remnants of war, does not exercise control of the territory, the user shall, after the cessation of active hostilities, provide where feasible, inter alia technical, financial, material or human resources assistance, bilaterally or through a mutually agreed third party, including inter alia through the United Nations system or other relevant organizations, to facilitate the marking and clearance, removal or destruction of such explosive remnants of war.
2. After the cessation of active hostilities and as soon as feasible, each High Contracting Party and party to an armed conflict shall mark and clear, remove or destroy explosive remnants of war in affected territories under its control. Areas affected by explosive remnants of war which are assessed pursuant to paragraph 3 of this Article as posing a serious humanitarian risk shall be accorded priority status for clearance, removal or destruction.
3. After the cessation of active hostilities and as soon as feasible, each High Contracting Party and party to an armed conflict shall take the following measures in affected territories under its control, to reduce the risks posed by explosive remnants of war:
 - (a) survey and assess the threat posed by explosive remnants of war;
 - (b) assess and prioritize needs and practicability in terms of marking and clearance, removal or destruction;
 - (c) mark and clear, remove or destroy explosive remnants of war;
 - (d) take steps to mobilize resources to carry out these activities.
4. In conducting the above activities High Contracting Parties and parties to an armed conflict shall take into account international standards, including the International Mine Action Standards.
5. High Contracting Parties shall co-operate, where appropriate, both among themselves and with other states, relevant regional and international organizations and non-governmental organizations on the provision of inter alia technical, financial, material and human resources assistance including, in appropriate circumstances, the undertaking of joint operations necessary to fulfil the provisions of this Article.

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Article 4 | Recording, retaining and transmission of information

1. High Contracting Parties and parties to an armed conflict shall to the maximum extent possible and as far as practicable record and retain information on the use of explosive ordnance or abandonment of explosive ordnance, to facilitate the rapid marking and clearance, removal or destruction of explosive remnants of war, risk education and the provision of relevant information to the party in control of the territory and to civilian populations in that territory.
2. High Contracting Parties and parties to an armed conflict which have used or abandoned explosive ordnance which may have become explosive remnants of war shall, without delay after the cessation of active hostilities and as far as practicable, subject to these parties' legitimate security interests, make available such information to the party or parties in control of the affected area, bilaterally or through a mutually agreed third party including inter alia the United Nations or, upon request, to other relevant organizations which the party providing the information is satisfied are or will be undertaking risk education and the marking and clearance, removal or destruction of explosive remnants of war in the affected area.
3. In recording, retaining and transmitting such information, the High Contracting Parties should have regard to Part 1 of the Technical Annex.

Article 5 | Other precautions for the protection of the civilian population, individual civilians and civilian objects from the risks and effects of explosive remnants of war

1. High Contracting Parties and parties to an armed conflict shall take all feasible precautions in the territory under their control affected by explosive remnants of war to protect the civilian population, individual civilians and civilian objects from the risks and effects of explosive remnants of war. Feasible precautions are those precautions which are practicable or practicably possible, taking into account all circumstances ruling at the time, including humanitarian and military considerations.

These precautions may include warnings, risk education to the civilian population, marking, fencing and monitoring of territory affected by explosive remnants of war, as set out in Part 2 of the Technical Annex.

Article 6 | Provisions for the protection of humanitarian missions and organizations from the effects of explosive remnants of war

1. Each High Contracting Party and party to an armed conflict shall:
 - (a) Protect, as far as feasible, from the effects of explosive remnants of war, humanitarian missions and organizations that are or will be operating in the area under the control of the High Contracting Party or party to an armed conflict and with that party's consent.

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- (b) Upon request by such a humanitarian mission or organization, provide, as far as feasible, information on the location of all explosive remnants of war that it is aware of in territory where the requesting humanitarian mission or organization will operate or is operating.
2. The provisions of this Article are without prejudice to existing International Humanitarian Law or other international instruments as applicable or decisions by the Security Council of the United Nations which provide for a higher level of protection.

Article 7 | Assistance with respect to existing explosive remnants of war

1. Each High Contracting Party has the right to seek and receive assistance, where appropriate, from other High Contracting Parties, from states non-party and relevant international organizations and institutions in dealing with the problems posed by existing explosive remnants of war.
2. Each High Contracting Party in a position to do so shall provide assistance in dealing with the problems posed by existing explosive remnants of war, as necessary and feasible. In so doing, High Contracting Parties shall also take into account the humanitarian objectives of this Protocol, as well as international standards including the International Mine Action Standards.

Article 8 | Co-operation and assistance

1. Each High Contracting Party in a position to do so shall provide assistance for the marking and clearance, removal or destruction of explosive remnants of war, and for risk education to civilian populations and related activities inter alia through the United Nations system, other relevant international, regional or national organizations or institutions, the International Committee of the Red Cross, national Red Cross and Red Crescent societies and their International Federation, non-governmental organizations, or on a bilateral basis.
2. Each High Contracting Party in a position to do so shall provide assistance for the care and rehabilitation and social and economic reintegration of victims of explosive remnants of war. Such assistance may be provided inter alia through the United Nations system, relevant international, regional or national organizations or institutions, the International Committee of the Red Cross, national Red Cross and Red Crescent societies and their International Federation, non-governmental organizations, or on a bilateral basis.
3. Each High Contracting Party in a position to do so shall contribute to trust funds within the United Nations system, as well as other relevant trust funds, to facilitate the provision of assistance under this Protocol.

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4. Each High Contracting Party shall have the right to participate in the fullest possible exchange of equipment, material and scientific and technological information other than weapons related technology, necessary for the implementation of this Protocol. High Contracting Parties undertake to facilitate such exchanges in accordance with national legislation and shall not impose undue restrictions on the provision of clearance equipment and related technological information for humanitarian purposes.
5. Each High Contracting Party undertakes to provide information to the relevant databases on mine action established within the United Nations system, especially information concerning various means and technologies of clearance of explosive remnants of war, lists of experts, expert agencies or national points of contact on clearance of explosive remnants of war and, on a voluntary basis, technical information on relevant types of explosive ordnance.
6. High Contracting Parties may submit requests for assistance substantiated by relevant information to the United Nations, to other appropriate bodies or to other states. These requests may be submitted to the Secretary-General of the United Nations, who shall transmit them to all High Contracting Parties and to relevant international organizations and non-governmental organizations.
7. In the case of requests to the United Nations, the Secretary-General of the United Nations, within the resources available to the Secretary-General of the United Nations, may take appropriate steps to assess the situation and in co-operation with the requesting High Contracting Party and other High Contracting Parties with responsibility as set out in Article 3 above, recommend the appropriate provision of assistance. The Secretary-General may also report to High Contracting Parties on any such assessment as well as on the type and scope of assistance required, including possible contributions from the trust funds established within the United Nations system.

Article 9 | Generic preventive measures

1. Bearing in mind the different situations and capacities, each High Contracting Party is encouraged to take generic preventive measures aimed at minimizing the occurrence of explosive remnants of war, including, but not limited to, those referred to in part 3 of the Technical Annex.
2. Each High Contracting Party may, on a voluntary basis, exchange information related to efforts to promote and establish best practices in respect of paragraph 1 of this Article.

Article 10 | Consultations of High Contracting Parties

1. The High Contracting Parties undertake to consult and co-operate with each other on all issues related to the operation of this Protocol. For this purpose, a Conference of High Contracting Parties shall be held as agreed to by a majority, but no less than eighteen High Contracting Parties.

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2. The work of the conferences of High Contracting Parties shall include:
 - (a) review of the status and operation of this Protocol;
 - (b) consideration of matters pertaining to national implementation of this Protocol, including national reporting or updating on an annual basis.
 - (c) preparation for review conferences.
3. The costs of the Conference of High Contracting Parties shall be borne by the High Contracting Parties and States not parties participating in the Conference, in accordance with the United Nations scale of assessment adjusted appropriately.

Article 11 | Compliance

1. Each High Contracting Party shall require that its armed forces and relevant agencies or departments issue appropriate instructions and operating procedures and that its personnel receive training consistent with the relevant provisions of this Protocol.
2. The High Contracting Parties undertake to consult each other and to co-operate with each other bilaterally, through the Secretary-General of the United Nations or through other appropriate international procedures, to resolve any problems that may arise with regard to the interpretation and application of the provisions of this Protocol.

Technical Annex

This Technical Annex contains suggested best practice for achieving the objectives contained in Articles 4, 5 and 9 of this Protocol. This Technical Annex will be implemented by High Contracting Parties on a voluntary basis.

1. Recording, storage and release of information for Unexploded Ordnance (UXO) and Abandoned Explosive Ordnance (AXO)

- (a) Recording of information: Regarding explosive ordnance which may have become UXO a State should endeavour to record the following information as accurately as possible:
 - (i) the location of areas targeted using explosive ordnance;
 - (ii) the approximate number of explosive ordnance used in the areas under (i);
 - (iii) the type and nature of explosive ordnance used in areas under (i);
 - (iv) the general location of known and probable UXO;

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Where a State has been obliged to abandon explosive ordnance in the course of operations, it should endeavour to leave AXO in a safe and secure manner and record information on this ordnance as follows:

- (v) the location of AXO;
 - (vi) the approximate amount of AXO at each specific site;
 - (vii) the types of AXO at each specific site.
- (b) Storage of information: Where a State has recorded information in accordance with paragraph (a), it should be stored in such a manner as to allow for its retrieval and subsequent release in accordance with paragraph (c).
- (c) Release of information: Information recorded and stored by a State in accordance with paragraphs (a) and (b) should, taking into account the security interests and other obligations of the State providing the information, be released in accordance with the following provisions:
- (i) Content:
 - On UXO the released information should contain details on:
 - (1) the general location of known and probable UXO;
 - (2) the types and approximate number of explosive ordnance used in the targeted areas;
 - (3) the method of identifying the explosive ordnance including colour, size and shape and other relevant markings;
 - (4) the method for safe disposal of the explosive ordnance.
 - On AXO the released information should contain details on:
 - (5) the location of the AXO;
 - (6) the approximate number of AXO at each specific site;
 - (7) the types of AXO at each specific site;
 - (8) the method of identifying the AXO, including colour, size and shape;
 - (9) information on type and methods of packing for AXO;
 - (10) state of readiness;
 - (11) the location and nature of any booby traps known to be present in the area of AXO.

- ii) Recipient: The information should be released to the party or parties in control of the affected territory and to those persons or institutions that the releasing State is satisfied are, or will be, involved in UXO or AXO clearance in the affected area, in the education of the civilian population on the risks of UXO or AXO.
- iii) Mechanism: A State should, where feasible, make use of those mechanisms established internationally or locally for the release of information, such as through UNMAS, IMSMA, and other expert agencies, as considered appropriate by the releasing State.
- iv) Timing: The information should be released as soon as possible, taking into account such matters as any ongoing military and humanitarian operations in the affected areas, the availability and reliability of information and relevant security issues.

2. Warnings, risk education, marking, fencing and monitoring

Key terms

- (a) Warnings are the punctual provision of cautionary information to the civilian population, intended to minimise risks caused by explosive remnants of war in affected territories.
- (b) Risk education to the civilian population should consist of risk education programmes to facilitate information exchange between affected communities, government authorities and humanitarian organisations so that affected communities are informed about the threat from explosive remnants of war. Risk education programmes are usually a long term activity.

Best practice elements of warnings and risk education

- (c) All programmes of warnings and risk education should, where possible, take into account prevailing national and international standards, including the International Mine Action Standards.
- (d) Warnings and risk education should be provided to the affected civilian population which comprises civilians living in or around areas containing explosive remnants of war and civilians who transit such areas.
- (e) Warnings should be given, as soon as possible, depending on the context and the information available. A risk education programme should replace a warnings programme as soon as possible. Warnings and risk education always should be provided to the affected communities at the earliest possible time.

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- (f) Parties to a conflict should employ third parties such as international organisations and non-governmental organisations when they do not have the resources and skills to deliver efficient risk education.
- (g) Parties to a conflict should, if possible, provide additional resources for warnings and risk education. Such items might include: provision of logistical support, production of risk education materials, financial support and general cartographic information.

Marking, fencing, and monitoring of an explosive remnants of war affected area

- (h) When possible, at any time during the course of a conflict and thereafter, where explosive remnants of war exist the parties to a conflict should, at the earliest possible time and to the maximum extent possible, ensure that areas containing explosive remnants of war are marked, fenced and monitored so as to ensure the effective exclusion of civilians, in accordance with the following provisions.
- (i) Warning signs based on methods of marking recognised by the affected community should be utilised in the marking of suspected hazardous areas. Signs and other hazardous area boundary markers should as far as possible be visible, legible, durable and resistant to environmental effects and should clearly identify which side of the marked boundary is considered to be within the explosive remnants of war affected area and which side is considered to be safe.
- (j) An appropriate structure should be put in place with responsibility for the monitoring and maintenance of permanent and temporary marking systems, integrated with national and local risk education programmes.

3. Generic preventive measures

States producing or procuring explosive ordnance should to the extent possible and as appropriate endeavour to ensure that the following measures are implemented and respected during the life-cycle of explosive ordnance.

(a) Munitions manufacturing management

- (i) Production processes should be designed to achieve the greatest reliability of munitions.
- (ii) Production processes should be subject to certified quality control measures.
- (iii) During the production of explosive ordnance, certified quality assurance standards that are internationally recognised should be applied.
- (iv) Acceptance testing should be conducted through live-fire testing over a range of conditions or through other validated procedures.
- (v) High reliability standards should be required in the course of explosive ordnance transactions and transfers.

(b) Munitions management

In order to ensure the best possible long-term reliability of explosive ordnance, States are encouraged to apply best practice norms and operating procedures with respect to its storage, transport, field storage, and handling in accordance with the following guidance.

- (i) Explosive ordnance, where necessary, should be stored in secure facilities or appropriate containers that protect the explosive ordnance and its components in a controlled atmosphere, if necessary.
- (ii) A State should transport explosive ordnance to and from production facilities, storage facilities and the field in a manner that minimises damage to the explosive ordnance.
- (iii) Appropriate containers and controlled environments, where necessary, should be used by a State when stockpiling and transporting explosive ordnance.
- (iv) The risk of explosions in stockpiles should be minimised by the use of appropriate stockpile arrangements.

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(v) States should apply appropriate explosive ordnance logging, tracking and testing procedures, which should include information on the date of manufacture of each number, lot or batch of explosive ordnance, and information on where the explosive ordnance has been, under what conditions it has been stored, and to what environmental factors it has been exposed.

(vi) Periodically, stockpiled explosive ordnance should undergo, where appropriate, live-firing testing to ensure that munitions function as desired.

(vii) Sub-assemblies of stockpiled explosive ordnance should, where appropriate, undergo laboratory testing to ensure that munitions function as desired.

(viii) Where necessary, appropriate action, including adjustment to the expected shelf-life of ordnance, should be taken as a result of information acquired by logging, tracking and testing procedures, in order to maintain the reliability of stockpiled explosive ordnance.

(c) Training

The proper training of all personnel involved in the handling, transporting and use of explosive ordnance is an important factor in seeking to ensure its reliable operation as intended. States should therefore adopt and maintain suitable training programmes to ensure that personnel are properly trained with regard to the munitions with which they will be required to deal.

(d) Transfer

A State planning to transfer explosive ordnance to another State that did not previously possess that type of explosive ordnance should endeavour to ensure that the receiving State has the capability to store, maintain and use that explosive ordnance correctly.

(e) Future production

A State should examine ways and means of improving the reliability of explosive ordnance that it intends to produce or procure, with a view to achieving the highest possible reliability.

ANNEXES

ANNEX 4 | LIST OF STATES PARTIES TO PROTOCOL V

A

Albania
Australia
Austria

B

Belarus
Bosnia and Herzegovina
Bulgaria

C

Canada
Costa Rica
Croatia
Czech Republic

D

Denmark

E

Ecuador
El Salvador
Estonia

F

Finland
France

G

Georgia
Germany
Guatemala
Guinea-Bissau

H

Holy See
Hungary

I

Iceland
India
Ireland

J

Jamaica

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Liberia
Liechtenstein
Lithuania
Luxembourg

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Madagascar
Mali
Malta
Moldova

N

The Netherlands
New Zealand
Nicaragua
Norway

P

Pakistan
Paraguay
Portugal

R

Republic of Korea
Romania
Russian Federation

S

Senegal
Sierra Leone
Slovakia
Slovenia
Spain
Sweden
Switzerland

T

Tajikistan
The former Yugoslav
Republic of Macedonia
Tunisia

U

Ukraine
United Arab Emirates
United States of America
Uruguay

* As of 29 May 2009.





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