

The Convention on Cluster Munitions: considering implementation from a battle area clearance perspective

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The Oslo Declaration of 23 February 2007 set out to achieve a legally binding international instrument that would address those cluster munitions that “cause unacceptable harm to civilians”. The end result of this very clear statement of intent was the Convention on Cluster Munitions (CCM), agreed in Dublin, Ireland, on 30 May 2008 and opened for signature in Oslo, Norway, on 3 December 2008.

The CCM is considered to be a ground-breaking international treaty regarding the detailed nature of its various articles. In this paper we are only going to consider those articles that have a direct bearing on necessary practical clearance operations on the ground: Article 3, Storage and Stockpile Destruction; Article 4, Clearance and Destruction of Cluster Munition Remnants and Risk Reduction Education; and Article 6, International Cooperation and Assistance.

Let us first consider what clearance and destruction of cluster munition remnants involves. Article 2(7) comprehensively defines cluster munition remnants as “failed cluster munitions, abandoned cluster munitions, unexploded submunitions and unexploded bomblets”. It is the large numbers of unexploded submunitions that present the main element of unacceptable harm to the civilian population and the greatest challenge to the clearance organization. These unexploded submunitions will invariably be spread over a wide geographical area and, depending on the soil consistency, the type and weight of the individual submunitions, the height of deployment and correct functioning of the in-flight stabilization system, they may be on the surface, below the surface (possibly up to 50cm deep), caught up in trees or bushes, on the roofs of houses and, when dropped in urban areas, often inside the houses themselves. As you can easily imagine, this creates a very different reality to that of clearance of anti-personnel landmines. While there have been numerous lessons learned regarding the clearance of landmines since the adoption of the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on Their Destruction (Mine Ban Treaty) in 1997, not all of those lessons are directly transferable to the clearance of an unexploded submunition strike. In fact, changing the mindset of clearance personnel from landmines to submunitions is one of the greatest and earliest challenges that will be met in a large cluster munition clearance operation.

Defining a cluster munition contaminated area

Article 4 of the CCM requires the “clearance and destruction of cluster munition remnants located in cluster munition contaminated areas”. These areas are defined in Article 2(11) as “an

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area known or suspected to contain cluster munition remnants". It is almost impossible for the exact and true extent of a contaminated area to be "known" and the "suspicion" can go on over a huge area.

Most cluster munition weapon systems are intended to disperse munitions over a pre-defined area on the ground; this is normally referred to as the "footprint" and is generally elliptical in shape with a long axis along the line of deployment and a shorter axis at its waist. In relation to clearance, once the weapon type and characteristics are known and a specific item is identified on the ground, it should then be a simple matter to superimpose the standard footprint and stop clearance at the identified boundaries. Unfortunately, cluster munitions are never dropped or fired in this textbook manner, and factors affecting the actual deployment at the time of firing, such as wind speed or height of drop or deployment, are not always known. The reality on the ground seen time and again in Iraq and Kuwait in 1991, Kosovo in 1999, Afghanistan in 2002, Iraq in 2003 and Southern Lebanon in 2006, is that continued and multiple strikes against the same target, or target area, result in an often indefinable area of contamination as individual elliptical footprints are overlaid on top of or adjacent to each other. Additionally, as some submunitions may have exploded as designed, random "gaps" are created in the footprint and the immediate area is covered with a huge number of small metal fragments, which, once buried below the surface, need to be investigated as if they were buried submunitions. All of this creates an undeterminable perimeter of the contaminated area.

It is therefore of vital importance that those authorities responsible for the implementation of a cluster munition clearance programme on the ground quickly develop and enforce criteria to establish a clearance methodology that starts at the perceived centre of a suspected contaminated area and works outwards, with an agreed set distance ("fade out") to be added from the last located submunition in any individual direction. By doing so they will not only ensure that minimum time is wasted searching large areas of ground which actually contain no submunitions, but also that the always scarce clearance assets will not routinely be bogged down in single, large "suspected areas" but rather put to task on confirmed contaminated areas where actual unexploded submunitions present a real and dangerous hazard to the civilian population. While this is now more common practice in landmine clearance it was not generally the case ten years ago and is a vital planning element in dealing with the much more widespread submunition strike areas.

Without such an approach from the outset it will be very difficult for those authorities responsible to achieve the clearance deadline set by the Convention: the CCM commits states parties to the clearance and destruction of cluster munition remnants from contaminated areas within 10 years of entry into force, or within 10 years of the end of the active hostilities during which the cluster munitions were dropped (Article 4(1)). Unless work begins now, a decade may in fact prove an ambitious target, due to the sheer number of unexploded submunitions to be cleared.

Article 4 also requires that cluster munition contaminated areas are “perimeter-marked, monitored and protected by fencing or other means to ensure the effective exclusion of civilians”. While seeming straightforward, this provision is much more difficult to implement with any validity on the ground. As shown above, a cluster munition footprint is invariably ill-defined on the ground and its perimeters are best established by working from the inside out, pausing when no more submunitions are encountered and then continuing for an agreed fade-out distance. To avoid duplication of efforts, this demarcation of the clearance area is normally undertaken simultaneously with actual clearance, so often it is not practical to attempt to mark the perimeter prior to clearance. In addition, the size of a cluster munition strike area can (and often does) extend over entire square kilometres: is it therefore realistic, in resources, time and effort, to attempt to fence and allocate the resources to continually maintain the integrity of a fence over such a large distance? The issue of fencing is complicated by the fact that when you erect a physical barrier you are implying that the near side is safe and that beyond the barrier is not. This can be done with relative validity for a minefield, but it is fraught with danger for a cluster munition strike area. Even when an area has been subject to a systematic clearance operation, including an appropriate fade-out distance, there is no guarantee that one or two live, unexploded submunitions are not just beyond the stop point. Given that arable and grazing land is at a premium in an immediate post-conflict environment, the erecting of a physical fence could encourage farmers and herders to work right up to the fence, with potentially lethal results.

Focusing on the term “perimeter-marked” is a better way to approach the demarcation of a cluster munition contaminated area. Warning signs can be placed along the approximate edge of the strike, using natural barriers such as hedges, tree lines or roads. Such signs should be large and visible and clearly state (in the appropriate local language) that you are now crossing into an unexploded cluster bomb contaminated area. This approach can be carried out quickly and, coupled with a robust and community-orientated safety awareness and education process, can significantly help to mitigate against casualties until such time as each strike area can be physically searched and cleared.

Clearing a contaminated area

Not only is a cluster munition contaminated area likely to contain more unexploded ordnance over a space that is less easy to define than a minefield, but actual clearance of the remnants will also be more difficult. Much progress has been made in developing machines and refining mechanical procedures to aid and enhance clearance of landmines, but this is not the case with cluster munitions. Many submunitions that have to be cleared from affected countries are dual-purpose improved conventional munitions (DPICM), the dual-purpose referring to an anti-armour as well as an anti-personnel capability. This invariably means that the submunition contains a shaped charge warhead capable of penetrating military-grade armour, especially that of tanks. In almost all cases this will preclude the deployment of a mechanical asset in

clearance as the inadvertent disturbance and subsequent detonation of the unexploded submunition will cause the shaped charge to activate; this is dangerous for the machine and for the operator if the submunition is angled toward the machine, and poses potentially lethal danger for any person within a 1000m radius (in comparison, an anti-personnel mine has a maximum danger radius of 25–35m).

Stockpile destruction

Clearing contaminated areas is a challenge, but given the vast numbers of cluster munitions currently stockpiled, Article 3 on Storage and Stockpile Destruction could prove harder to comply with. The required destruction period of eight years should be considered the maximum time frame and all states should endeavour to fulfil this obligation as soon as possible: appropriate planning and resource mobilization must commence immediately and not necessarily await formal treaty ratification.

The destruction of stockpiled cluster munitions can be extremely complicated because of a number of factors: large numbers of individual submunitions are contained within the overall cluster munition container or carrier, and they all need to be individually removed for destruction; most explosive submunitions incorporate an integral detonator (certainly all those prohibited under the Convention), which complicates the process as the detonator must be manually removed from each submunition; and the removal of the explosives leaves a large amount of metal casing and packaging, which must also be destroyed or recycled.¹ The CCM requires that destruction methods comply with international standards for protecting public health and the environment. This is a factor common with the Mine Ban Treaty, and the United Nations Environment Programme (UNEP), which has worked with states on the Mine Ban Treaty and is already working on cluster munitions, may be of key assistance in this.

In accordance with the CCM, states must immediately separate those stocks of cluster munitions prohibited under Article 1 from other operational munitions and mark them for destruction. As all such cluster munitions contain an integral detonator, they may already be stored separately from other ammunition. It may be more efficient to move the prohibited cluster munitions directly to the destruction site. Consideration must be given to adequate storage and security facilities at the destruction site. Paramount importance and priority should be given to immediately removing access to those cluster munitions currently stored at forward or operational locations from combat-ready units in order to prevent accidental use.

Early planning and logistical management will be critical to achieving compliance within the eight-year deadline. Such planning will need to take into account a number of technical and practical challenges.

- There is no “one size fits all”: all of the existing cluster bomb destruction facilities—most of which are privately owned—were originally established to destroy particular types of weapons as part of a country’s routine armament management programme. They

therefore have a finite capacity and are designed to deal with only one type of cluster munition. There are a limited number of facilities around the world and they cannot be expected to deal with the massive increase in need generated by Article 3 obligations.

- Transportation: if states are intending to “outsource” their stockpile destruction they must take into account that the costs of transportation will significantly increase the overall destruction costs.
- Planning: potentially the biggest challenge at the outset is to identify clearly amounts and types of cluster munition held; the vast numbers involved often make this harder than expected. Once numbers and types have been properly identified a valid plan for separation, storage, transportation and ultimately destruction must be established. This plan must be allocated an appropriate and complete budget to avoid a “start/stop” process that is ultimately more costly and jeopardizes meeting the 8-year deadline.

Assistance in clearance and destruction

While the Convention on Cluster Munitions is new, severe unexploded submunition contamination is not. Many countries and clearance organizations have been working to clear vast areas of cluster bomb contamination for many years. The author first came into contact with the extensive complications and sheer magnitude of a post-conflict cluster bomb clearance operation in Kuwait and southern Iraq following the Gulf War in 1991 and most recently in Southern Lebanon in 2006, both before the CCM. There is already a pool of knowledge and experience in the clearance of cluster munition contaminated areas from which CCM states parties can benefit.

Article 6, International Cooperation and Assistance, makes a provision for affected states to seek and receive assistance. However, those in a position to offer assistance must consider all elements of the hazard posed by explosive remnants of war (ERW), including landmines, general unexploded ordnance (UXO) and submunitions, and priority should be given according to the prevailing threat to the civilian population and their livelihood. Very few countries are solely contaminated by cluster munitions and most have a mix of landmine, UXO and cluster munition remnants to deal with. To further complicate matters, several countries have a cluster munition problem superimposed on a landmine problem. It would therefore not be a practical course of action to single out assistance for the clearance of one particular type of explosive hazard over another.

The systematic clearance of a cluster bomb strike is very different from the clearance of a minefield: it is not possible to identify and follow any pattern, the use of mechanical assistance is an extremely limited and problematic option, the number of unexploded submunitions far outweighs those of emplaced landmines, and there are fewer (safe) possibilities to manually neutralize a submunition for later bulk destruction. In fact, many submunitions cannot be neutralized at all due to the fuzing mechanism being contained internally. So while cluster

munition clearance can be quicker—depending on terrain and vegetation—it is invariably more resource heavy, in particular because it requires many more explosives and accessories in order to conduct “blow in situ” demolitions. In most countries the acquisition or import of appropriate explosives and subsequent maintenance of supply is problematic. One important aspect of assistance is therefore that those organizations conducting cluster bomb clearance operations are properly, and continually, supplied with explosives and accessories to enable their work to progress unhindered.

There is also a need for training. Most organizations providing assistance in cluster munition clearance are originally demining organizations, and they need to alter the perceptions of their workforce, both national and international, regarding the inherent differences between demining and submunition clearance. Generally, deminers are equipped and trained to search for the smallest amounts of metal contained in minimum metal landmines (unfortunately there is still no such thing as a “mine detector”, only a metal detector that detects the metal present in the mine). In contrast, an unexploded submunition is invariably a large piece of metal and much easier to detect, even when located in heavily metal-contaminated ground. This implies that the detection of individual unexploded submunitions is easier and while it often is, this is of little benefit if clearance personnel are still employing demining procedures and techniques that require the smallest indication of metal to be investigated and unearthed. Maximum use of opportunities to cross-train and expose conventional deminers to the differences relevant to the clearance of unexploded submunitions should therefore be taken.

The United Nations has been assisting governments dealing with cluster bomb contamination for many years and therefore stands ready to use this knowledge in support of the CCM. This support may include, *inter alia*, acting as a common focal point for lessons learned and best practices, both new and those established through the implementation of the Mine Ban Treaty, and working to develop a specific International Mine Action Standard (IMAS) for cluster bomb stockpile destruction.² The United Nations is also well placed to provide key assistance with initial planning for clearance and stockpile destruction and may also develop tools such as templates and checklists to pool our global knowledge.

The Voluntary Trust Fund for Assistance in Mine Action and other UN-managed funds currently serve as an effective depository for financial assistance in landmine and other explosive remnants of war clearance and destruction activities and may be well utilized in support of the CCM.

The systematic response to and clearance of unexploded cluster munitions has been ongoing for over a decade now, the hard-won lessons learned in intense and complicated situations in the Lao People’s Democratic Republic, Kosovo, Southern Lebanon and elsewhere have yielded many best practices and effective approaches and procedures in this time-consuming and dangerous activity. Affected states are encouraged to seek access to and thereby benefit from this experience and states offering assistance are urged to build on this practical knowledge to

better focus their support and thereby quickly fulfil the intent of rapidly removing unexploded submunitions that “cause unacceptable harm to civilians”.

Notes

1. For more details on the stockpile destruction issue, including methods of destruction, see Vera Bohle’s article in this issue of *Disarmament Forum*.
2. For more information on IMAS, see Phil Bean, *International Mine Action Standards: Some Frequently Asked Questions and Answers*, at <maic.jmu.edu/journal/8.2/notes/bean.htm>, and <www.mineactionstandards.org/imas.htm>.

