complexion of the cluster munitions campaign, the Belgians have changed the relevance of IHL principles to explosive CCW States Parties regarding their views of meeting of States Parties i led a review of the responses to a survey by they have also reinforced the belief that an international ban on something, not just anti-personnel mines? are considering a strategy of narrowing the responsible states to demonstrate that such weapons can be used consistently with the binding obligations of IHL [emphasis added].

The announcement that the Belgian government had adopted a comprehensive ban on cluster munitions sent a ripple of optimism through the Cluster Munition Coalition, and thanks to good Belgian timing, it arrived just in advance of the CCW meeting of States Parties in March 2016. In one swoop, the Belgians have changed the contours of the international cluster munitions campaign. While they have set the bar high, they have also reinforced the belief that an international ban on something, not just clean-up measures, is now possible. The final ban text has been adopted by both houses of parliament in Belgium as of this writing. While the most comprehensive ban is in Belgium (subject to a public petition and parliamentary debate on a cluster munitions moratorium), several other states have made their reservations known: “Australia, Belgium, Canada, Denmark, France, Germany, Greece, Italy, the Netherlands, Norway, Poland, Switzerland, the United Kingdom and the United States have plans to withdraw from service or have destroyed certain types of cluster munitions.”

Germany and Belgium are considering a strategy of narrowing the definition of cluster munitions so that a ban excludes advanced models that are not expected to be problematic. The United States is not Belgium, but even the U.S. military, having distributed its own sale-force report in advance of the CCW, seems to be willing to consider major changes in its arsenal. For the first time in a long time, a significant international restriction on certain cluster munitions appears to be within reach.

Continuing Debates From the start, many ICBL campaign- ers had difficulty coordinating technical solutions to address high cluster-munition failure rates. They campaigned against self-destruction, self-deactivation and self-neutralisation solutions for ATM and worry that supporting technical fixes now may compromise an absolutist principle defending éclaireurs. However, what if major players refuse to join an all-out ban on cluster munitions, even if they support a comprehensive ban on anti-personnel mines?

Controversy also surrounds the debate over what an “acceptable” failure rate might look like. Less than 1-percent failure in a typical cut-off point, but is also arbitrary. A very small percentage of a very large number can still be a humanitarian disaster, albeit a much-reduced danger compared with that produced by a 10- to 30-percent failure rate. Yes, there may be a harm-reduction im- plementation to preventing destruction of certain more problematic “wasteful” munitions, whatever the future holds for a complete ban. There is consensus within the CMC for a moratorium on use, production and trade of cluster munitions until their humanitarian problems have been resolved—but not everyone has been in favour of prioritising. Does highlighting the bulk of the problem legitimise what remains? Some worry that humanitarian law will be ignored and they have suggested that cluster munitions might be considered “cannibalised munitions” if their failure rates are “fixed.” Will military tactics switch to other bombs, causing more casualties, if cluster munitions are banne- ed entirely?

An interesting reverse-onus framework outlined by Landmine Action (UK) and consistent with one of the conclusions of the McCormack report is that governments should recognise all cluster munitions are assumed prohibited unless users can “opt in” with a guarantee that a particular munition can be used safely. Might that approach fit nicely with the destruction of legacy munitions with the highest failure rates?

A final point: if the failure rates of cluster munitions were reduced to nil next to nil, would there remain a humanitarian problem on a scale sufficient to sustain a campaign for a comprehensive international ban?

See Endnote, page 110

Mines and ERW

Due to the history and nature of conflicts in the Ethiopia/Eritrea area, cleanup presents specific considerations and hazards. The lessons learned by the United Nations Mission in Ethiopia and Eritrea Mine Action Coordination Centre in mine/explosive rem-nants of war cleanup are presented, as well as recommendations on clearance operations for situations with mixed mine/ERW like that in Ethiopia and Eritrea.

by Bob Kudjasa [UNMEEE MACC]

Mines and explosive remnants of war continue to affect many parts of the world. One such area is the Horn of Africa, where wars have continued for the better part of the 20th century. U.N. Security Council Resolution 1325 formally established the United Nations Mission in Ethiopia and Eritrea in November 2010. At the same time, the U.N. Security Council formally established a Mine Action Coordination Centre within the United Nations Mission in Ethiopia and Eritrea. The resolution requires the MACC to coordinate and provide technical assistance for humanitarian mine action activities in the TSZ [temporary security zone] and area adjacent to it.

History of the Mine and ERW Problem The mine and ERW problems of Ethiopia and Eritrea stem from their prolonged history. Eritrea was colonized by the Italians in the 19th century. During the Second World War, Italian and British forces fought a number of battles across Eritrea, culminating in a major siege on the town of Keren in 1941, which lasted nearly three months. These battles were fought in a conventional manner, consisting of aerial bombardments, artillery, small-arms fire and mine emplacement. Certain areas around Keren are considered hazardous today due to suspected contamination by mines and unexploded ordnance, particularly in the hills surrounding the township. Keren was the scene of a major battle again during the independence war years between 1961 and 1991.

After the Second World War, Eritrea was governed by Great Britain until the early 1950s, when it was handed over to Ethiopia in return for the federation system, restored by Ethiopia. Eritrea be- came its northermmost province. There was a reoccurrence of nationalism in the early 1960s when the Ethiopian population began acquisition campaign for independence against Ethiopian forces. This rebellion gradually developed into a more conventional war as the Eritreans gained support for their cause, won key battles and held ground. This struggle for independence lasted 30 years and affected the entire country. The Eritrean struggle for independence is possibly one of the most successful examples of a liberation war. Eritreans are justifiably proud of the establishment of their country, as it was won at great cost to the population and without “outside” help or support from other nations.

After the state of Eritrea was established in 1993, following a U.N.-monitored referendum in which the population voted overwhelmingly for independence, the relationship between Eritrea and Ethiopia was cordial. This relationship continued until several issues soured it, including the introduction of a new currency, the natlie, which replaced the Ethiopian birr. The situation eventually deteriorated into a war lasting from 1998 to 2002 over demarcated bor- ders. Then in 2006, Algiers brokered a peace accord.

This border war was an intense conflict, with both sides em- ploying conventional war strategies that developed into a carefully planned and executed military operation reminiscent of World War I. The war was fought at terrible cost with an estimated 70,000 people killed and thousands more displaced. As a result of this conflict, the entire border area between the two countries from the Sudan in the west to the Djiboutian border in the east remains contaminated with mines and ERW today.

Interrelationship between Mines and ERW

For theสงคราม of Ethiopia and the northern areas of Ethiopia remain contaminated with mines and conventional ERW. In a recent incident, a truck driver collecting stones for a build- ing site was killed when his vehicle drove over a landmine on a vacant site just off a main road near the capital, Asmara. This mine was a remnant of the independence war years, quite possibly overlooked when the area was vacated.

In examining the history of the conflicts that have engulfed the region, mines and ERW are interwoven menaces rather than separate entities. It is not safe to just walk out to unexploded ordinance or an abandoned tank and attempt to remove or destroy items without
first establishing the history of the area and what military actions occurred there. This problem presents a challenge to deminers and explosive-ordnance-disposal teams operating in the UNMEE area. Deminers conducting clearance operations sometimes encounter UXO and other ERW, including abandoned military vehicles, with live ammunitions still on board. For example, during battle-area clearance, a number of vehicles with live ammunition were found among them. The vehicles had been set on fire by retreating forces and the contents exploded, scattering the ammunition around the burning vehicles. In such cases, a path has to be cleared up to get around the vehicles to enable teams to work safely.

Demining operations within a post-conflict situation involving all aspects of conventional war scenarios will generally encounter a mixed threat of both mines and ERW. Areas where military has taken place and ground was contested. As battle conditions develop, the area will become littered with ERW of every imaginable description, in particular, when the attacking force seeks to disable the defenders. It is inevitable that a percentage of the munitions directed at one side will fail to function, either through accident or by design. Disabled or destroyed tanks and other vehicles with supplies of ammunition present further challenges.

Problems Confronting the Clearance Operation

A scenario of this type presents additional problems to the clearing agency. What is perceived as the greater danger—the mined ground or the littered ERW? In many cases, local shepherds herd their animals have encountered UXO lying on the ground and returned to throwing stones at it, through either idle curiosity or sheer boredom. Stones landing on nearby mines have caused the items to explode. Locals scavenging among ERW for items that can be recovered for sale, such as copper and brass, enter mined areas in their quest for such items out of economic necessity.

In many cases these people are killed or injured. Emergency rescue measures, usually undertaken by demining organizations working in the area, need to be conducted immediately to recover the victim, or other locals will attempt an impromptu rescue operation, often with equally tragic results. Being involved in the recovery operation can be a traumatic experience for many personnel.

In some cases, clearance operations can be disrupted when demining teams lack suitably cross-trained, qualified personnel to remove or disarm UXO and ERW in conjunction with any mines encounter within the area.

ERW Encountered within UNMEE

Most conventional ERW items encountered within the UNMEE’s operations consist of small arms ammunition, mortars, artillery shell(s) to 155 mm and retrospective mines/rocket-propelled grenade-type rockets. These items have caused a number of casualties among the local population living within the TSB and adjacent areas. Often the casualties are children, who are curious by nature and play with the items they encounter. These items, although usually small, can inflict quite horrific injuries to the child. A number of submunitions and aerial bombs have also been encountered during field operations. Submunitions have streamers and are an attractive shape and colour that readily attract a child’s curiosity.

Table 1 gives an overview of ERW items encountered within the UNMEE.

**Clearance Operations Recommendations**

As part of identifying and mitigating the ERW problems in Eritrea, UNMEE MACC has several recommendations for developing a ‘good-clearance’ operation. A thorough investigation is critical. A great deal of the information can be gleaned from discussions with various parties, including local inhabitants, militia, police and military personnel. Past operational reports from the area will also be of assistance. If the region was the subject of an Impact Survey and/or Technical Survey, it is also extremely important to consult the data presented in these reports. The clearance operation should examine the following:

- **What is the history of the area?**
- **What forces and equipment were involved?** This will give an indication of the types of ERW likely to be encountered. For example, tanks and artillery will mean larger ERW, submunitions can be delivered by artillery. Aerial bombardments would suggest the need to be conscious of larger munitions and the possibility of submunitions.
- **What was the intensity and duration of the campaign?** A lengthy campaign means the likelihood of a greater number of ERW being present.
- **Did the contested land change hands?** It is the experience of UNMEE MACC that contested areas that changed hands resulted in many of the mines laid by one side being uncovered and re-buried by the other side.
- **What are the items of ERW encountered in operations to date?** This will determine the level of expertise required to deal with likely finds as the clearance operation encounters the items. Depending on the number found and their frequency, these specialised personnel may need to remain on-site or be within close proximity to the operation while it is in progress. The items of ERW will also determine the types of equipment used to dispose of these items.
- **The area itself will need to be revisited.** If it is inhabited, the proximity of any discoveries of large ordnance, in particular, will present additional considerations to the clearance operation. Should the item(s) be destroyed on site or removed? If the item(s) cannot be moved due to lack of specialized equipment, what measures need to be adapted to mitigate the effects of defusing the item(s)? Abandoned, military vehicles need to be checked for ammunition and other explosive devices, and if the vehicle needs to be physically cleared or dismantled to eliminate the possibility of mines. The presence of any potentially hazardous substances needs to be considered also.

**Conclusion**

The experience of the UNMEE MACC is that mines and conventional ERW are an unwelcome part of many clearance operations. However, it is essential to factor a worst-case scenario into any plan. The types of ERW encountered will determine the level of expertise required to complete the task and deal with any finds in the course of it. It is important that any clearance operation has adequately trained personnel to deal with ERW likely to be encountered during the course of any task.

**Table 1: ERW Encountered in the UNMEE**

<table>
<thead>
<tr>
<th>ERW Item</th>
<th>Recorded in Incident*</th>
<th>Quantity Found Following Incident</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1 hand grenade</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Chinese wooden HG (type unknown)</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>M 75 Yugoslav HG frag</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>FH FG fuse</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Russian HG RGK3</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>RPG rocket</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>A fuse from an RPG rocket</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Anti-aircraft bullet</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>PRIMZ</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>PMN</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>TM-46</td>
<td>Yes</td>
<td>5</td>
</tr>
<tr>
<td>TM-57</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Belgian plastic PRBM3</td>
<td>Yes</td>
<td>13</td>
</tr>
<tr>
<td>Czechoslovakian PT-ML BA III</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>Unidentified HG</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Unidentified UXO</td>
<td>Yes</td>
<td>4</td>
</tr>
<tr>
<td>Unidentified AT mine</td>
<td>Yes</td>
<td>24</td>
</tr>
<tr>
<td>Unidentified explosive</td>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>67</td>
<td></td>
</tr>
</tbody>
</table>

*Source: UNMEE MACC Preliminary Investigation Reports 2001–2005

30,000 Square Meters Demined in Angola

Instituto Nacional de Desminagem (The National Institute for Demining) in Angola recently announced it has demined more than 30,000 square meters (7.41 acres) of mine-affected land in the country. INAD reported 12 anti-personnel mines, one anti-tank mine, 206 mortar shells and various other explosive devices were destroyed as part of the clearance.

Fields demined by INAD were given to local populations for farming and other agricultural pursuits. The organization has begun reconnaissance work to locate and identify more mine-affected areas in need of clearance.

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**News Brief**

Bob Kudyba is currently serving as the Operations Officer for the United Nations Mission in Ethiopia and Eritrea Mine Action Coordination Centre, based in Asmara, Eritrea. Prior to joining the United Nations, he served for 21 years in the Australian Army, working in many fields, including EOD and training. He has worked in various capacities in many areas, including Pakistan, the Solomon Islands and northern Iraq, and is now employed in borderline and unexploded ordnance disposal efforts.

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