The importance of survey in implementing CCM Art 4

Cluster Munition Remnants Survey (CMR) – theory and practice

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Introduction

• There’s no immediate solutions for increasing “productivity” (speed of clearance) and short of a magic machine being introduced or proving empirically that dogs can find specific submunitions (which may soon be the case) manual clearance is still the tool.

• So, in some of the most affected countries of the world survey will still need to be focus for the foreseeable future, until an estimation is established.
Characteristics

- Unexploded cluster submunitions have several characteristics that lend themselves to structured survey work.
- Records of where bombs were dropped, the intended targets and the content of the CBUs may be of assistance.
- What is mostly true, whatever the failure rate, is that if you find one unexploded submunition you should find more.
Characteristics continued

- Cluster bombs make a known and predictable “footprint” on the ground – the unexploded submunitions will almost always be within the boundary of this footprint.
- The “risk” when surveying for cluster munition remnants may vary from country to country, depending on the types of submunitions dropped – but cluster submunitions are not landmines and so survey from inside out is possible in most cases.
Starting points

- The starting point for a technical survey (CMRS) can either be found through the use of bombing data alone, through non-technical survey or a combination of the two.
- The determination of a starting point through non-technical survey is normally better when personnel with some technical competence is conducting it.
- Once a starting point has been located a survey team can divide up the area around in a structured manner and start the technical survey.
CMRS in the field I
CMRS in the field II

Report on each 1Km square
Identify each 1Km square by MGRS code
Report BLUs found and locations
Build up a national picture of CM contamination

Information can be transferred to ArcGIS

IMSMA
Google Earth
Results
Results II
Application in Lebanon

• Situation differs from that in Lao PDR
• After attacks in summer of 2006, a rapid survey was conducted by UNMACC
• Lebanon thus has a populated database, with currently app. 450 DA reports; most conducted in 2006, 2007.
• The DAs usually contain a UTM, from which a square of app. 200 x 200 m is calculated
• While some DA UTMs are actually inside of the strike, some can be outside by 300 or 400 meters, thus there is a need for good operational planning/survey before the clearance team is deployed, as otherwise one can easily clear without finding anything – if UTM treated as a default starting point.
Application in Lebanon

• After DA is received, an initial visit to the site is conducted by the OPS Manager, together with the RMAC CLO
• Afterwards the Task dossier is issued by RMAC to NPA, also containing additional data not included in initial DA. Most useful data usually being data on spot task clearance conducted in the area (usually after the population found an item), info on the accidents as well as previous clearance in the area. Afterwards additional OPS meeting to the area is conducted, where the threat is confirmed.
• Operational plan is then conducted, using Google Earth. Starting point thus decided based on above investigation/recce.
Application in Lebanon

• Clearance is focused; aiming that the only area without cluster munitions when clearing should be prescribed fadout area from the last cluster munition found.

<table>
<thead>
<tr>
<th>Year</th>
<th>Square meters cleared</th>
<th>Cluster submunitions cleared and destroyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>860,668</td>
<td>559</td>
</tr>
<tr>
<td>2011</td>
<td>716,815</td>
<td>1,259</td>
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</tbody>
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Considerations

- CMRS to establish Confirmed Hazardous Area (CHA), in most cases. Same thinking also to apply throughout the planning of the clearance operations and throughout actual clearance.
- Bombing data may be inaccurate and statistics may not be helpful for some countries (Laos) – need to be considered for CCM obligations
- Survey for evidence of contamination, including fragments – but each country context different
- This survey approach builds on Land Release principles, making decisions in the field based on information gathered - important for efficiency