Destruction of Stockpiled Cluster Munitions in the Croatian Armed Forces

Presented by:
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Background & Policy

Research & Development Phase – NPA SHADOW programme

Explosion of stockpiles of ammunition at the storage site & consequences

Stockpiled CM types & quantity

Disposal and destruction
3 Dec. 2008 the Republic of Croatia signed the CCM

5 Jun 2009 ratification of the Convention

17 Aug 2009 handover of the instruments of ratification (Croatia among the first 30 ratifications)

1 Aug 2010 the CCM entered into force

Croatia’s obligations:
- to destroy all stored CM NLT 1 Aug 2018 (Art. 3)
- to clear its territory NLT 1 Aug 2020 (Art. 4)
10 April 2011 - initial Article 7 report

October, 2015 - mine action legislation adopted

The Office for Mine Action - a focal point for coordination and monitoring of mine action related activities in Croatia

7–11 September 2015 Croatia hosted the convention’s First Review Conference in Dubrovnik
advocacy for the strongest possible provisions on victim assistance

Croatia does not produce cluster munitions, never imported them, and the armed forces of Croatia have not used them.
Research & Development Phase

- 26 June – 07 July 2011 - Norwegian People‘s Aid SHADOW Programme ("Self-Help Ammunition Destruction Options Worldwide")

**Goals / objectives:**
- to disassemble at least one of each type of CM (and their sub munitions)
- establish precise internal structure of the weapons
- conduct experimental demolition processes
- determine the possible destruction options for implementation phase
- create inert training aids to be used in future phases
Norwegian People’s Aid SHADOW Programme

Aerial bomb disassembly at Pleso Military Airfield Complex - Zagreb

Each sub munitions type was broken down into its component parts

M93 KB2 DPICM sub munition
Norwegian People’s Aid SHADOW Programme

• Demolition and burning trials conducted at the proving ground Slunj

Setting up the burning trial with sub munition bodies placed in soil-filled crates
R&D phase was very successful

- each type of cluster munition and sub munition disassembled
- valuable expert technical advice
- useful insights from the demolition trials
September 2011 explosion at storage site Padjene

- explosion at the Padjene site caused by a forest fire
- CM stocks destroyed
- 5 km radius area was affected and contaminated with UXO’s
- exploded & unexploded ordnances
Results of the explosion incident

- Destruction of explosive ordnance stockpiles (declared as non perspective for future use); among others:
  - 68 Aerial bombs BL-755
  - 77 Aerial bombs RBK-250 PTAB-2,5M
  - 8 Aerial bombs RBK-250 ZAB 2,5M (incendiary)

- Support Cmd, AF & AD units and Eng. Batt. personnel involved in sanitizing and cleaning the area

- a cluster bomb remnant (MK-1 bomblet) injured 3 mine clearing engineers of the Croatian Armed Forces, one of whom later died
Cluster munitions stockpile destruction plans (2011 – 2015)

- All cluster munitions transferred to 3 locations

- 14 pcs of CM retained for training and static displays at the military museums, disassembled with all explosive parts disposed (Article 3 (6))

- Development of SOP's: for the final stage of CM disassembly and destruction by techniques OB/OD (open burning and open detonation) and industrial demilitarization
Industrial demilitarization of obsolete stocks

- By the private company “ISL Spreewerk” in Gospic
- Established in 2007, as a “sister company” of Spreewerk Lübben GmbH (DE)
- Disposal of different types of the CAF obsolete stocks
## Disposal of Cluster Stocks in 2015

### Industrial Demilitarization

<table>
<thead>
<tr>
<th>Cluster munition type</th>
<th>Quantity</th>
<th>Explosive submunition type</th>
<th>Total quantity of explosive submunitions</th>
<th>Supplementary information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortar, 120 mm M93</td>
<td>586 (x23)</td>
<td>KB-2</td>
<td>13.478</td>
<td>industrial demilitarization</td>
</tr>
<tr>
<td>MRLS M87 ORKAN, 262 mm</td>
<td>26 (X288)</td>
<td>KB-1</td>
<td>7.488</td>
<td>industrial demilitarization</td>
</tr>
<tr>
<td>Air bomb BL-755</td>
<td>20 (X147)</td>
<td>MK-1</td>
<td>2.940</td>
<td>industrial demilitarization</td>
</tr>
<tr>
<td>Air bomb RBK-250 PTAB-2,5M</td>
<td>7 (X42)</td>
<td>PTAB-2,5M</td>
<td>294</td>
<td>industrial demilitarization</td>
</tr>
<tr>
<td>Not contained in CM</td>
<td></td>
<td>KB-1</td>
<td>156</td>
<td>destruction by OB/OD</td>
</tr>
<tr>
<td>Not contained in CM</td>
<td></td>
<td>MK-1</td>
<td>127</td>
<td>destruction by OB/OD</td>
</tr>
<tr>
<td>Not contained in CM</td>
<td></td>
<td>PTAB-2,5M</td>
<td>37</td>
<td>destruction by OB/OD</td>
</tr>
<tr>
<td>Not contained in CM</td>
<td></td>
<td>AO-1 SČ</td>
<td>147</td>
<td>destruction by OB/OD</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>639</strong></td>
<td></td>
<td><strong>Total:</strong> <strong>24.667</strong></td>
<td></td>
</tr>
</tbody>
</table>
Destroyed cluster submunitions in 2016

- Bomblet KB-1 “Zvončić” (M87)
  Total no. of destroyed bomblets: 214

- Bomblet MK-1 (BL-755) &
  KB-1 “Zvončić” (M87)
  Total no. of destroyed bomblets: 37
## Stockpiled cluster munitions

<table>
<thead>
<tr>
<th>Cluster munition</th>
<th>Type of submunitions</th>
<th>Quantity</th>
<th>Total quantity of submunitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortar, 120 mm M93</td>
<td>KB-2, DPICM</td>
<td>6.541 (x23)</td>
<td>150.443</td>
</tr>
<tr>
<td>MRLS M87 ORKAN, 262 mm</td>
<td>KB 1, DPICM</td>
<td>1 (x288)</td>
<td>288</td>
</tr>
<tr>
<td>Air bomb BL-755</td>
<td>MK 1, dual-purpose</td>
<td>3 (x147)</td>
<td>441</td>
</tr>
<tr>
<td>Air bomb RBK-250 PTAB-2,5M</td>
<td>PTAB-2,5M Shaped charged</td>
<td>2 (x42)</td>
<td>84</td>
</tr>
<tr>
<td>Air bomb RBK-250-275 AO–1 Sch</td>
<td>AO 1 Sch</td>
<td>5 (x150)</td>
<td>750</td>
</tr>
<tr>
<td>Air bomb RBK-250 ZAB-2,5M</td>
<td>ZAB-2,5M incendiary</td>
<td>44 (x48)</td>
<td>2.112</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td><strong>6.596</strong></td>
<td><strong>154.118</strong></td>
</tr>
</tbody>
</table>
The Croatian Armed Forces are planning to keep a total of 6 bombs for training and educational purposes, including some for the static display at the military museum. All cluster bombs will be disassembled and disarmed, with all explosive components removed during the stockpile destruction process.
The final stage of stockpile destruction programme

- Large scale of remaining stocks (approx. 110 tons in total)
- Most of remaining CM - mortar cluster mines
- Croatia’s armed forces (AF&AD, Supp Cmd) tasked to destroy the stockpile in accordance with SOPs
- May-July 2018 - destroying of remaining CM with own recourses with OB/OD techniques (at military range “Eugen Kvaternik” Slunj)
Destroyed cluster submunitions

120 mm Mortar Cluster Bomb M93

Aerial Cluster Bomb RBK-250 AO-1SCh bomblets

Aerial Cluster Bomb BL 775, MK-1 bomblets (before ...

... and after destruction)
In conclusion

- task of destruction of stockpiled CM successfully carried out; no more CM stockpiles
- all safety measures obeyed; no injuries
- Croatia determined to show strong commitment against any use of CM; to promote the Convention, including through national and regional events; ready to share experiences
Thank you for your attention

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Defence Policy Directorate

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