



MINISTRY OF DEFENCE - REPUBLIC OF  
CROATIA  
DEFENCE POLICY DIRECTORATE  
ARMS CONTROL SECTION

# **Destruction of Stockpiled Cluster Munitions in the Croatian Armed Forces**

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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

# Background & Policy

- 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)

## Background & Policy (cont.)

- 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



## Background & Policy (cont.)

- 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



M93 KB2 DPICM sub munition

Each sub munitions type was broken down into its component parts



Aerial bomb disassembly at Pleso Military Airfield Complex - Zagreb

# Norwegian People's Aid SHADOW Programme



- Demolition and burning trials conducted at the proving ground Slunj

Setting up the burning trial with submunition bodies placed in soil-filled crates



# R&D phase results

- 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 (2011 – 2015)

## Industrial demilitarization of obsolete stocks

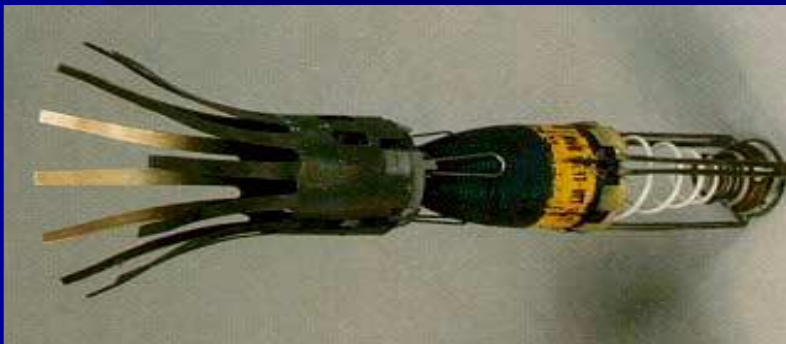
- ❑ By the private company “ISL Spreewerk” in Gospic
- ❑ Established in 2007, as a “sister company” of Spreewerk Lübben GmbH (DE)
- ❑ Disposal of different types of the CAF obsolete stocks



# Disposal of Cluster Stocks in 2015

## Industrial Demilitarization

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



# 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

Cluster munition	Type of submunitions	Quantity	Total quantity of submunitions
Mortar, 120 mm M93	KB-2, DPICM	6.541 (x23)	150.443
MRLS M87 ORKAN, 262 mm	KB 1, DPICM	1 (x288)	288
Air bomb BL-755	MK 1, dual- purpose	3 (x147)	441
Air bomb RBK-250 PTAB-2,5M	PTAB-2,5M Shaped charged	2 (x42)	84
Air bomb RBK-250- 275 AO-1 Sch	AO 1 Sch	5 (x150)	750
Air bomb RBK-250 ZAB-2,5M	ZAB-2,5M incendiary	44 (x48)	2.112
<b>Total:</b>		<b>6.596</b>	<b>154.118</b>



# Form C - Cluster Munitions retained or transferred

Cluster munition type	Quantity	Lot number	Explosive sub munition type	Quantity	Lot number	Planned use	Supplementary information
MRLS M87 ORKAN 262mm	1 (x288)		KB-1			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.	
Air bomb BL-755	3 (x147)		MK-1				
Air bomb RBK-250 PTAB-2,5M	2 (x42)		PTAB-2,5M				
						<b>NOT ACTUAL RETENTION</b>	
Total:	<b>6</b>		Total:			These Cluster munitions are already Included in Form B	

# 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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