



# **Ammunition Management and Education in the Croatian Armed Forces**

**DS Ivanela Križanović, MoD – M3**



# Contents



- **Introduction**
- **Disposal of Weapons and ammunition Surplus**
- **Cooperation and donation**
- **Education and training for ammunition management**



# Introduction



**Ammunition & Weapons disposal processes are covered by ministerial decisions which include types and quantity of A&W intended for disposal at three ways: sale, donation and destruction/ disabled,**

**Procedures of ammunition destroying are based on the open burning/open detonation and industrial demilitarization techniques,**

**Procedures for weapons destruction are based on the disable of armaments (SALW and heavy weapon) and partly selling scrap materials,**

**Processes are conducted through activities of MoD and General Staff inside Army Repair Facility according to prescribed regulations and commands.**



# Disposal of Surplus Ammunition



- In the period 2001-2012 around 6,035 tons of various types of ammunition were sold. Income from sale was about 15 million €.
- Between 2001 and 2012 about 6,800 tons of various ammunition were destroyed with OB/OD technique in capacity of the CAF.



- The current capacity of destruction by OB/OD technique in the Armed Forces is about 500 tons/year.



# Disposal of Surplus Ammunition



- In the period 2011-2013 about 600 tons different types of ammunition were destroyed by industrial demilitarization technique, in the civilian company ISL "Sprewerk" in Gospić.)  
The facility demil capacity is around 3,000 tons/year.





## **Disposal of Surplus Ammunition - continue**

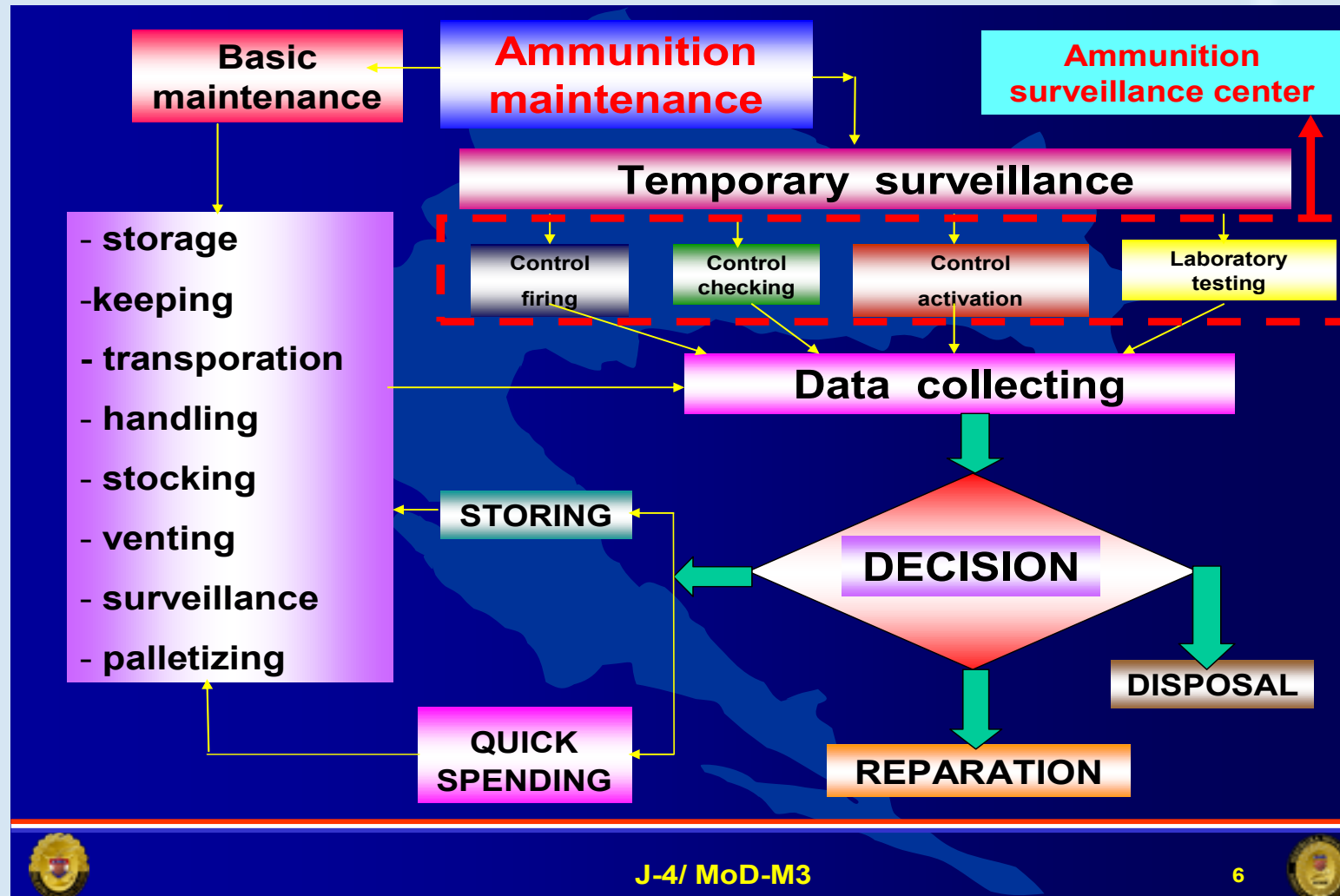


- **In 2013 CAF disposed about 5,000 tonnes of surplus ammunition by industrial demilitarization and OB/OD techniques, as well as sales and donation,**
- **During 2013 CAF destroyed by OB/OD technique all tear gas (CS) filled ammunition,**
- **With financial support of NGO's ITF (International Trust Fund Enhancing Human Security), in the amount of 1.5 million USD, civilian plant for industrial demil of ammunition destroyed significant quantity of ammunition surplus,**
- **Currently we are in the process of approving grant, 1 million USD, from U.S. Government, for MANPADS surplus disposal, also we expect additional financial support of ITF for surplus ammunition industrial demilitarization, both for the period 2014./2015.**





# Ammunition maintenance process



J-4/ MoD-M3

6



# Education and training



## Centre for Logistic Training and Doctrine







## Education and training



- **The Centre for logistic training and doctrine with headquarters in Požega (as unit of General Staff Support Command) was established in 2007 within the reform process of the Croatian Armed Forces. This organizational entity integrates missions of three ex units: centre for infantry training, traffic and logistic specialities.**
- **The fundamental mission of this Centre is training and upgrading logistic personnel – officers and NCOs – among them ammunition specialists.**
- **The Centre is composed of five companies of which four are training and one is logistic.**



# Education and training



**The Centre conducts education and training to ensure:**

- **Developing and adopting the necessary theoretical knowledge and skills in the field of ordnance storage, preservation, in-service-surveillance, transporting and maintaining ammunition and weapons stockpiles.**
- **Training personnel (officers and NCOs) for the practical application of acquired knowledge and skills in the field of storage, preservation, manufacturing, transporting and maintaining ammunition stockpiles.**
- **Training personnel in the development of the necessary documentation (studies, technological procedures, reports) to implement the tasks of storage and maintenance of ammunition.**



# Education and training



## Training course for ammunition management

- **Course training plan is carried out in two phases: education in the Center and internships in CAF units.**



- **Personnel education for ammunition management includes courses for officers and NCOs.**
- **First phase is theoretical and second phase is internships in the units.**
- **Number of specialist course teaching hours, in the first phase, is about 660 teaching hours (110 working days) for officers and 670 teaching hours for NCOs – pyrotechnicians.**
- **The second phase – internships at CAF units – lasts one year.**



# Education and training



## Education – first phase for officers – acquiring the first officer rank

### The course covers following items in the first phase (theoretical):

- Functioning logistics system in the Croatian Armed Forces and NATO for class V (ammunition)
- Explosive materials – physics and chemistry
- Primary and high explosives
- Gun powder, rocket propellants and pyrotechnics
- Explosives and ammunition laboratory testing,
- Internal and external ballistics
- Knowledge and maintenance of ammunition in the stockpiles (missiles, infantry, gun, explosive devices etc.)
- Knowledge of weapons
- Storage handling and transportation of ammunition
- Ammunition maintenance
- Dismantling and destruction of ammunition
- EOD – tactics, technics and procedures
- Record keeping and material accounting of ammunition (inventory)
- Health care (personal protection) in the ammunition handling
- Final exams and certification issue



# Education and training



## Education - second phase for officers

- The second phase, which lasts 12 months, is performed as internships for professional careers at CAF units, by mentoring and supervision of experienced personnel.
- Internships implemented a system of mentoring in which experienced personnel supervise and train course attendees.
- Upon successful completion of internships, the evaluation of training is conducted together with the final exam by the expert committee.
- The expert committee issues ammunition specialist certificates to course attendees.





# Education and training



## Education – first phase for NCOs

### Education and training for ammunition specialists–pyrotechnicians

- There are two types of pyrotechnicians education and training: for missiles and for classical ammunition,
- Education is carried out in two phases: theoretical in the Center and internships, under mentoring, in the CAF units,
- Number of specialist course teaching hours is 670 teaching hours (110 working days)
- Second phase – internship: lasts 24 months (420 working days) in the CAF units
- After final exam NCOs get certificate for handling, safekeeping and demilitarization of ammunition



## Education and training

### **The NCOs course – pyrotechnicians - covers following items in the first phase (theoretical):**

- Ammunition storing, safekeeping, handling and transportation
- Material accounting of ammunition inventory
- Basic knowledge of missiles systems and classical amunition,
- Knowledge of explosive materials (explosives, propellant, gun powder, pyrotechnics)
- Knowledge of ammunition (Navy, Army and Air Forces),
- Ammunition management and maintenance,
- Ammunition dismantling and destruction (OB/OD)
- EOD – procedures,
- Final exam - in front of expert committee. The committee issues ammunition specialist certificates to course attendees.



# Education and training



## Second phase education for NCOs

- The second phase performed an internships for professional careers at CAF units, by mentoring, supervise, of experienced personnel, for the period of 24 months.
- Internships implemented a system of mentoring in which experienced personnel supervise and train course attendees.
- Upon successful completion of the internships the final exam of future pyrotechnicians (NCOs) conducted in front the expert committee. The committee issue ammunition specialists certificate for independent ammunition maintenance.



# Conclusion

- Education system, in the Center, provides continuous training of officers and NCO's (also some personnel for Ministry of Interior) for ammunition inventory management through its life cycle (from receipt of ammunition to its disposal).
- From 2007 until today, the education system has trained numerous officers and NCO's who are assigned to logistic units of the Croatian Armed Forces.





# Thank you for your attention!

