



# REPUBLIC OF ALBANIA

## MINISTRY OF DEFENSE



### 10th WORKSHOP OF THE REGIONAL APPROACH TO STOCKPILE REDUCTION OF CONVENTIONAL WEAPONS AND MUNITIONS



**Tirana, 10 - 11 October 2018**





# OUTLINE

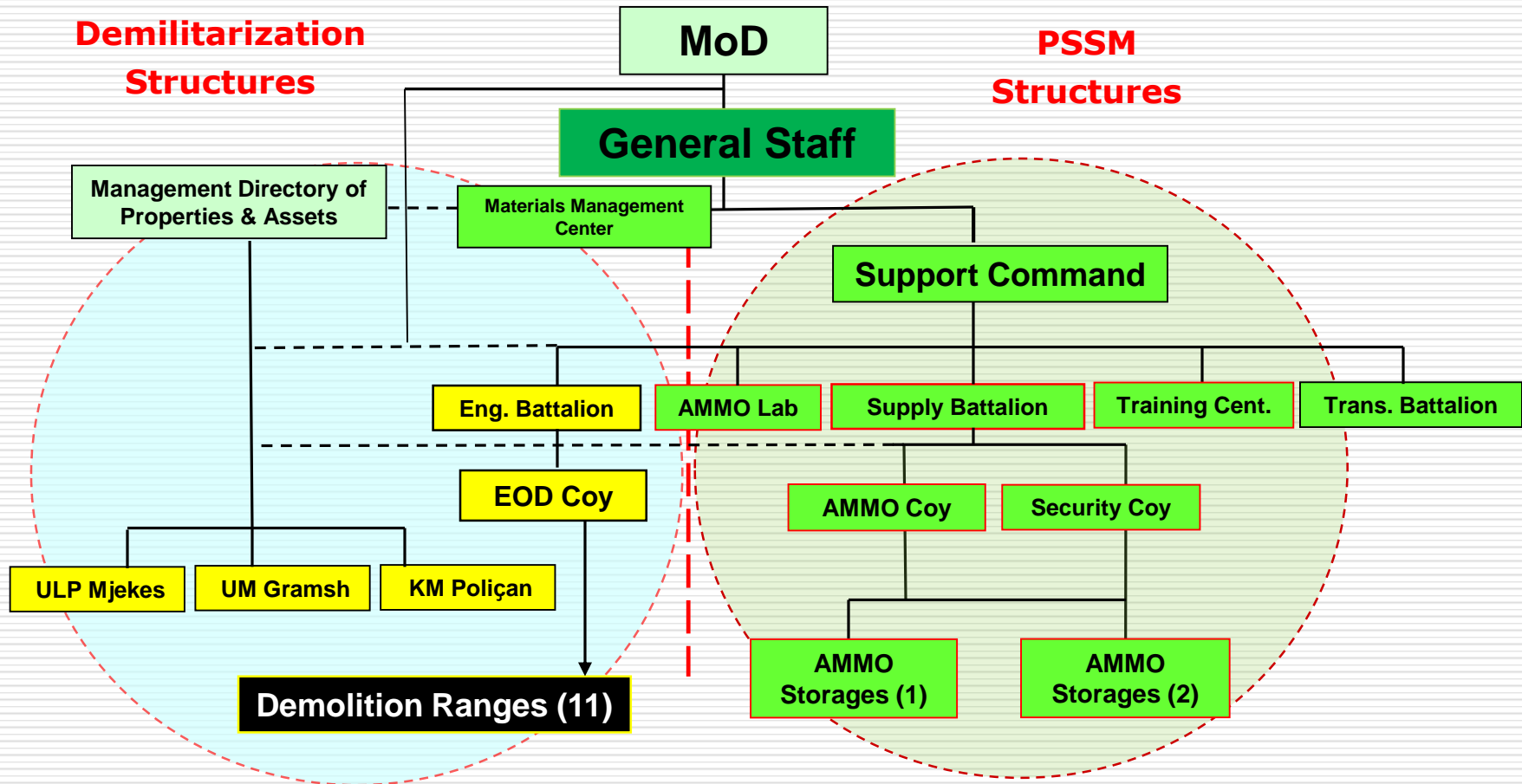
- 
- ❑ **PSSM structure & strategy.**
  - ❑ **National regulations & reference and links to NATO STANAG's or IATG.**
  - ❑ **Country PSSM training strategy and system.**
    - ❑ **Gaps & requirements that the international community can provide in PSSM Training.**
  - ❑ **Ammunition stockpile infrastructure update.**
    - ❑ **Requirements for infrastructure support.**
  - ❑ **Stockpile reduction plan (surplus/unserviceable ammunition).**
    - ❑ **Technical assistance requirements (training, technology- EOD & logistical disposal).**
  - ❑ **Current International support provided.**



# PSSM structure & strategy

## Demilitarization Structures

## PSSM Structures





# PSSM structure & strategy



- 
- Reduction of Armaments and Munitions Storage and Eliminate all Excess Ammunitions by 2015.**
  - “Upgrading Armaments and Munitions Storage in line with the NATO and IATG recommended standards”**
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# National Regulations & Reference to NATO STANAG's or IATG



- ❑ **The Albanian Armed Forces standards for the safe stockpiling, storage, packing of ammunition in army depots, with the aim to minimize the risk of uncontrolled explosions are as follows:**
  - **Law No 9272, date 16.09.2004**, "On the adherence of the Republic of Albania to the European Agreement" On international road transport of dangerous items (ADR) and the signature protocol".
  - **National standards** on management, storage and administration of weapons, ammunition and explosives approved by the Minister of Defence and the Chief of General Staff of the Armed Forces, as set out in technical rules and regulations, manuals, respective orders and instructions.
    1. **MANUAL of Logistics “ Main Documentation of Logistic Support in Armed Forces “ - 2005.**
    2. **MANUAL of Storage and Transportation of Ammunitions.**
    3. **MANUAL of Physical Security and Management of Ammunitions Stocks AVL.**
    4. **Law No 8378, date 22.07.1998 " The Road Code of the Republic of Albania".**
    5. **Law No 8308, date 13.03.1998 "On the road transport".**
    6. **Law No 9126, date 29.07.2003, "On the civilian use of explosive charges in the Republic of Albania".**
    7. **Orders and instructions of the Minister of Defence and the Chief of General Staff of the Albanian Armed Forces.**

## REFERENCE TO NATO STANAG:

1. **STANAG 2143 Ed 6 “EOD principles and minimum standards of proficiency” AEODP-10**
2. **STANAG 4172 Ed 2 “5.56 mm Ammunition”.**
3. **STANAG 2953 Ed 4 Identification of Ammunitions - AOP-2(C)**
4. **STANAG 4441 Ed 1 “Allied Multi-Modal Transportation of Dangerous Goods Directive”.**
5. **STANAG 4440 Ed 1 “NATO Guidelines for the Storage of Military Ammunition and Explosives” AASTP-1**
6. **STANAG 2186 Ed 2 “EOD Information Security Standards”. AEODP-12**
7. **STANAG 4518 Ed 2 Safe Disposal of Munitions, Design Principles and Requirements, and Safety Assessment”.**
8. **STANAG 4675 Ed 1 In-Service Surveillance of Munitions”.**
9. **STANAG 4518 Ed 1 “Safe Disposal of Munitions, Design Principles and Requirements, and Safety Assessment”.**



# PSSM Training Strategy and System



- **National logistics/ammunition school and courses**
  - Ammunitions basic and advance courses
  - EOD basic courses- Level I and Level II –with support of US EUCOM
- **Experience with foreign-supported training**
  - Training Support from US EUCOM and SEESAC
  - New Jersey, Italy, Turkey.
  - PSSM Regional Courses organized by SEESAC in July & November 2016 - Six specialists from the MoD attended.



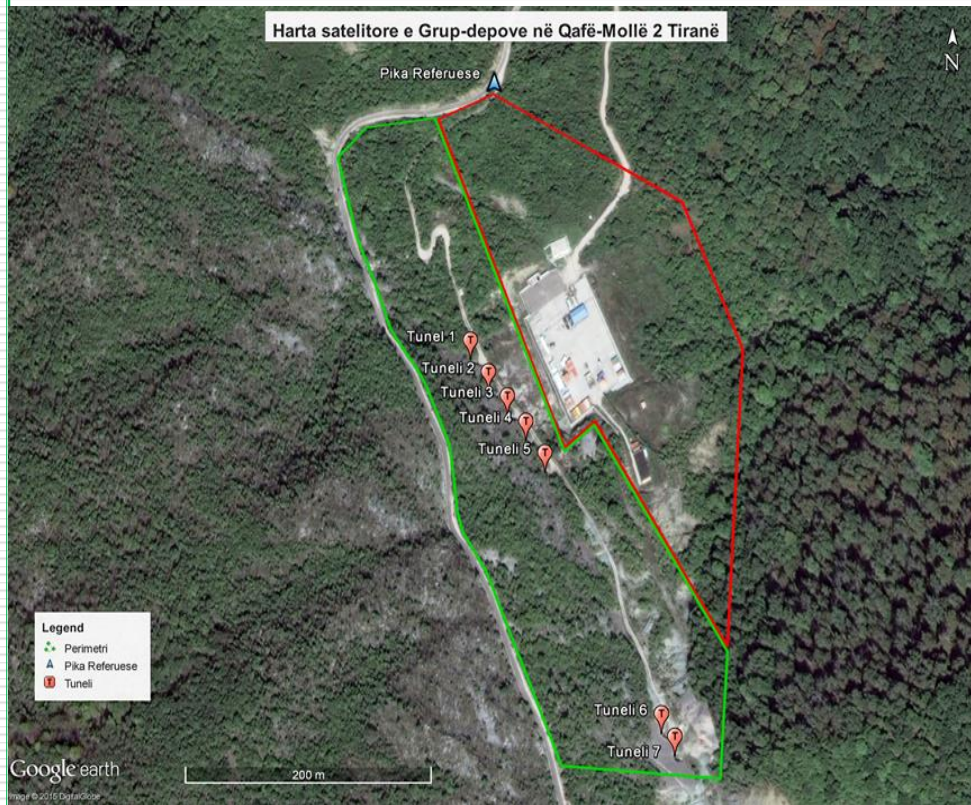
# PSSM Training Strategy & System



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- **Gaps & requirements that the international community can provide in PSSM Training**
    - Training is essential and continues throughout the program.
    - Lack of ammunitions specialists.
    - Lack of equipment, funding for training outside of the country.
    - Obtaining Certification through External Partner.
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# Ammunition Stockpile Infrastructure Update

## Ammunition Storage Unit - Qafe Molla



Upgrading Storage facilities for long-term storage in line with the NATO recommended standards.

The current upgrade consisted of :

- Construction of new external fencing.
- Installation of exterior lighting.
- Installation of a new entrance gate.
- Installation of a CCTV system.
- Reconstruction of 7 underground tunnels

The current needs consisted of :

- Centralized double authorization entry system.
- Reconstruction of roads and water supply system
- Motion detectors.
- Supply equipment's, forklifts and pallets ect.

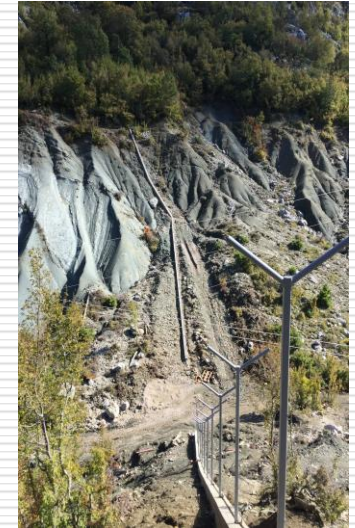


# SEESAC PSSM project Qafe Molla Tirana - 2016



## SEESAC EU Funded Project in Qafe Molla AAMO Depot:

- ❑ SEESAC supported the MoD with the security upgrade of permanent armament storage units in Qafe Molla, Tirana. The upgrade consisted of:
  - Construction of new external fencing.
  - Installation of exterior lighting.
  - Installation of a new entrance gate.
  - Installation of a CCTV system.
- ❑ The implementation of the activity started in June 2016, following an open international tender to select the company for the execution of the works. Along with the selected company, a certified independent company was also engaged to ensure the technical supervision of the works.
- ❑ The security upgrade of the storage location was conducted based on the project designs submitted by the MoD and in close cooperation with the Albanian Armed Forces Support Command.
- ❑ Due to the harsh terrain around the storage location, the activity included substantive preparatory works such as: the opening of access and service roads to the storage site, clearance of the area from dense vegetation, building of pipe culverts and a passage bridge.
- ❑ The external fence and security cameras were installed in compliance with international security standards and up to date parameters.
- ❑ Despite the time constraints and the harsh terrain conditions, the works were completed by the end of December 2016 and a [handover ceremony](#) was organized with the attendance of representatives from the MoD, UNDP and the EU Delegation in Albania.

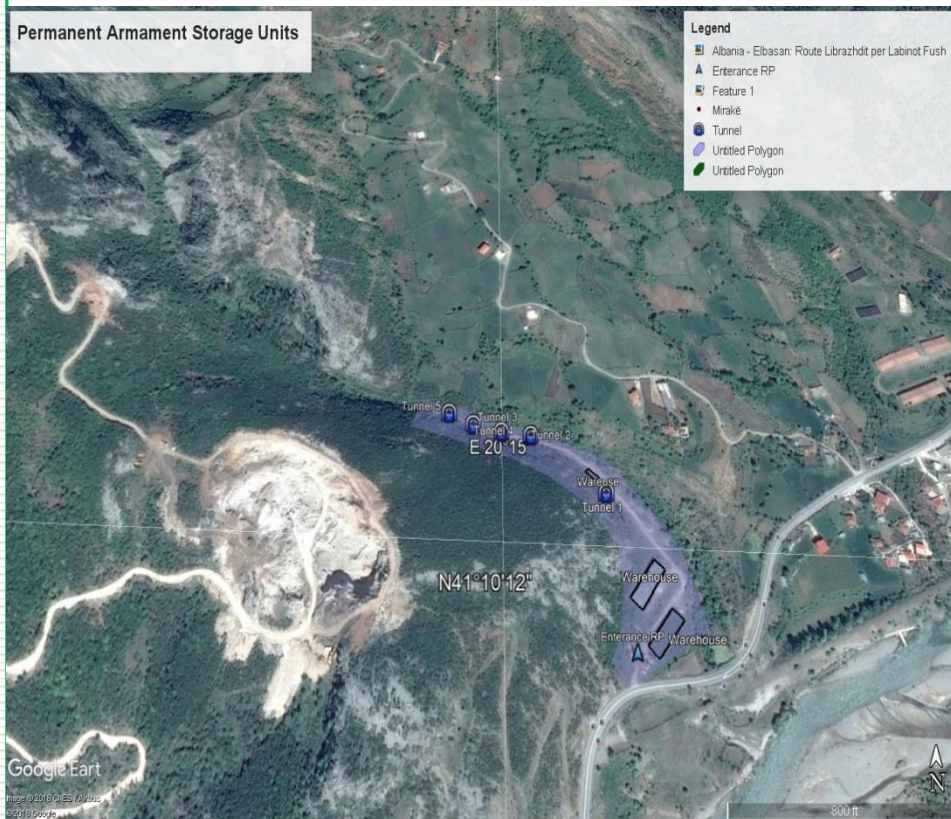


USD 239,000 were implemented under [Component 1](#) of the [EU Support of SEESAC Disarmament and Arms Control Activities in South East Europe \(EUSAC\) project](#).



# Ammunition Stockpile Infrastructure Update

## □ Ammunition Storage Unit - Miraka

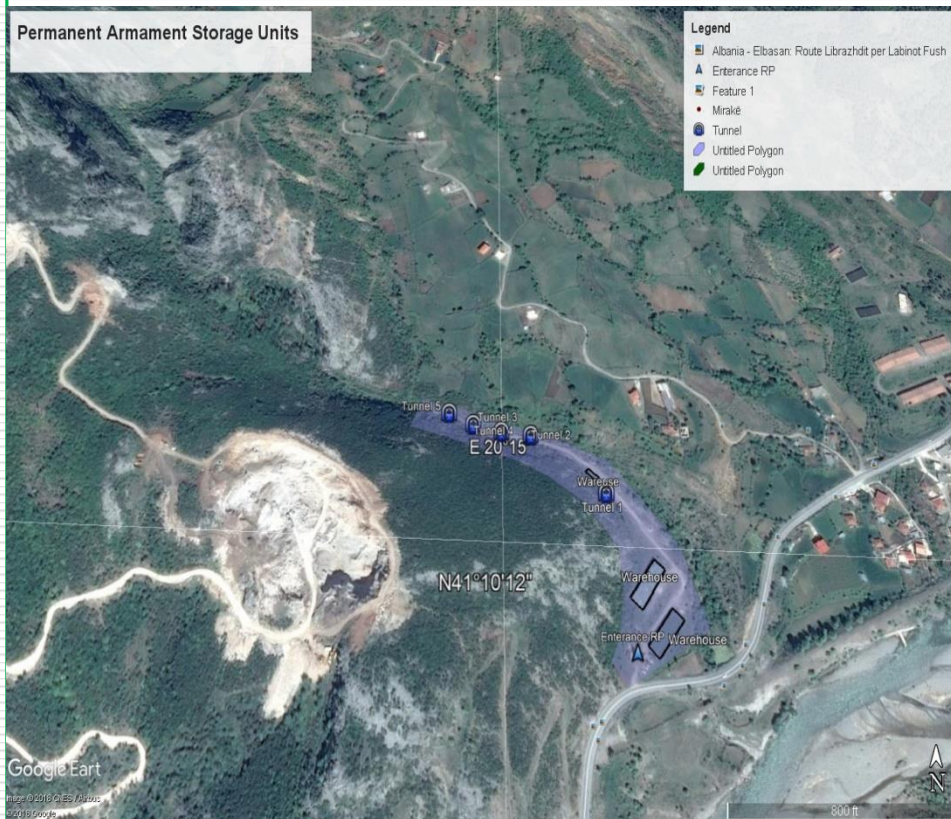


The upgrading of Mirake storage facilities must provide long-term solution and must be accomplished in line with the NATO standards. The criteria to be met are :

- Upgrading must be according to NATO standards.
- Treated the facility as hole not only improvement on separate object.
- To ensure security of SALW stored.
- Provide better working condition for personnel.
- Improving inventory management and exchanging information on real time.

# Ammunition Stockpile Infrastructure Update

## □ Ammunition Storage Unit - Miraka



**Improvement of Mirake ammunition storage facilities must be focus on:**

1. Improvement of security.
2. Improvement of storage object.
3. Provide better working condition for personnel.
4. Improvement of infrastructure.



# Ammunition Stockpile Infrastructure Update



LABORATORY OF AMMUNITIONS is part of Central Laboratory of the Armed Forces:

❖ ***Main Duties:***

- Keeping under control the parameters of the chemical stability of powder of ammunition, explosives and monitors situation of each series (party) munitions and determines the re-test period.
- Analyzing of chemical and physical-mechanical, tests polygonal functioning all of ammunition of AAF.
- Informing immediately when chemical powder tests give very poor results and keeping them in storage presents a risk.

❖ ***Measures and Procedures for lab and firing tests of ammunition are as follows:***

- The test of chemical stability of the propellant with HPTLC.
- Physical-chemical sensitivity tests of the firing primers.

❖ ***Capacities:***

- Chemical analysis (test) - 1500 samples for year;
- Physical-mechanics analysis (test) - 1300 samples for year;





# National Regulations & Reference to NATO STANAG's or IATG



- National standards:** for conducting chemical and physical-mechanical analysis of ammunition and their elements in the Armed Forces are approved by the Minister of Defence, Chief of General Staff of the AAF and Director of Central Laboratory of the Armed Forces (CLAF).
  
  - Reference to NATO STANDAG's :**
    1. **NATO - STANAG 4556**, Explosives: Vacuum Stability Test.
    2. **NATO - STANAG 4022**, Explosives, Specification for RDX (HEXOGENE).
    3. **NATO - STANAG 4025**, Specification for TNT (TOLITE).
    4. **NATO - STANAG 4024**, Specification for AMMONIUM NITRATE CRYSTAL and PRILL-TYPE A and TYPE B (for use in explosives)
  
  - The Albania Armed Forces has ratified NATO STANAG-s which are in the process of study and implementation.**
  
  - HPTLC method for measuring the percentage of humidity in diphenylamine. HPTLC equipment manufactured by CAMAG (Equipment placement and staff qualification were made by the Swiss Army).**
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# Ammunition Stockpile Infrastructure Update



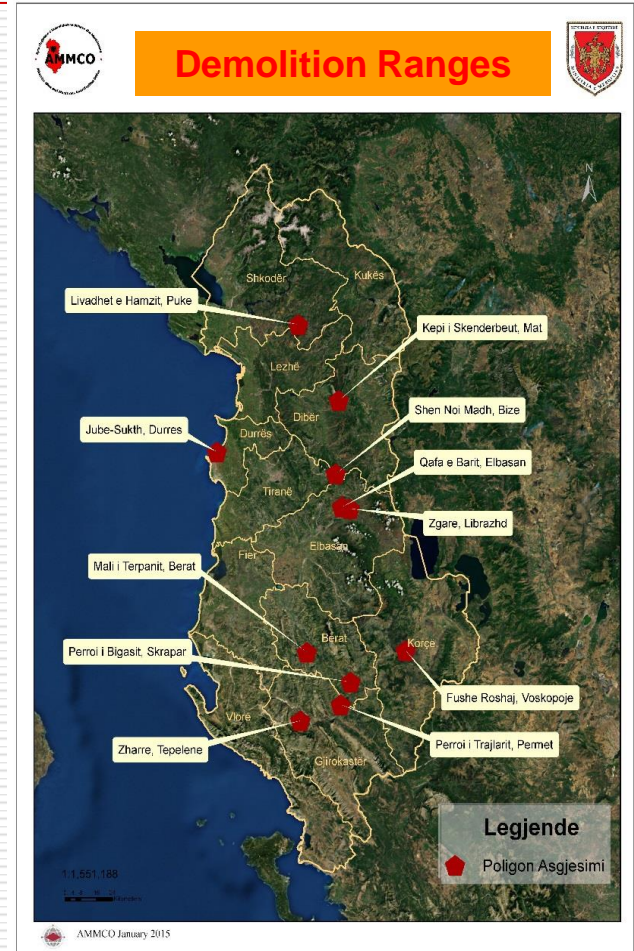
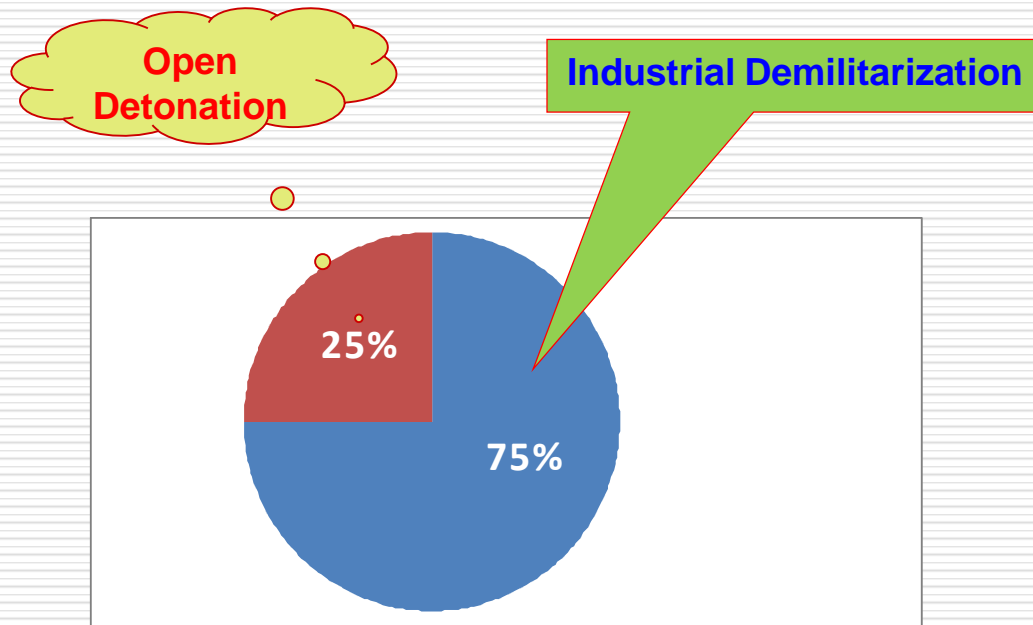
- **Requirements for infrastructure support:**
  - **Need for maintaining of current tools and equipment.**
  - **Training on the new methods and equipment.**
  - **Cooperation with Physical-Chemical laboratory which can perform different propellant stability tests in accordance with NATO standards and current military standards.**
  - **Transfer of knowledge, experience, exchange of materials and expert opinions, participation on the Int. training, seminars, workshops and also work visit to the laboratory.**



# Ammunition Demilitarization

## Three Methodologies Utilized

- ❖ Industrial Demilitarization (3 Factories)
- ❖ Open Detonation (11 Ranges)
- ❖ Sale and Export through MEICO





# Demilitarization & Capacities



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## MILITARY FACTORIES

- ULP Mjekës:** Military factory, profiled in the production of Explosive materials and now for the industrial demilitarization.
- KM Poliçan:** Military factory has been profiled in the production of ammunitions, and now is for the industrial demilitarization.
- UM Gramsh:** Military factory has been profiled in the production of weapons and now for the industrial demilitarization.
-

# Experience & Capacities ULP Mjekës

The Explosive Materials Factory in Mjekës has been the major conductor in the process of industrial demilitarization of ammunitions. It has functional (active) several disposal lines.

## Ammo disposal line in ULP Mjekës

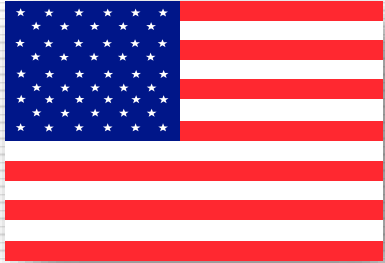
<b>Line No. 1</b>	Line of disposal of Anti -Tank Mines
<b>Line No. 2</b>	Line of disposal of Mortar rounds (60-160mm).
<b>Line No. 3</b>	Line of disposal of Artillery rounds.
<b>Line No. 4</b>	Line of disposal of Artillery rounds (20-45 mm).
<b>Line No. 5</b>	INSENERATORY (bullet, inflames, burns, elements).

**Monthly disposal capacity, around 650 tons ammo  
(bruto weight).**





# NATO Trust Fund Project in Albania



**USD 10 Millions**



Bureau of Political-Military Affairs  
U.S. Department of State



**Contribution in kind**

**2009** Albania Delegation to NATO and US DoS PMWRA requested NSPA develop a project to destroy all 85,000 tonnes surplus ammunition over 4 years in EUR 38M project.

**2010** Re-scope project to match US funding \$2M over 5 years and fit with Albanian National Action Plan/other donors. (Jan 2011-2015)



# Pilot project MNE & ALB 2014

From 25 Nov. – 04 Dec. 2014



Delegation from MNE / MOD visited the factory on 03 Dec.2014

Alb MoD visit on 02 Dec.2014



- 17 tones (50,380) - 20 mm API Cannon were destroyed



# Experience & Capacities KM Poliçan



During the process of demilitarization of ammunitions in mechanical Factory, Poliçan has five Industrial demilitarization of Ammos



## Ammo disposal line, in KM Poliçan

<b>Line No. 1</b>	Line of disposal Anti tank Mines and Engineering Weight
<b>Line No. 2</b>	Line of disposal Mortar rounds 82 mm.
<b>Line No. 3</b>	Line of mechanical disposal Bullet 7,62 mm.
<b>Line No. 4</b>	Line of destroy with burn of bullets 7,62; 12,7; 14,5 mm.
<b>Line No. 5</b>	Line of disposal of Handle Granada



**Monthly disposal capacity, around 600 tons ammo (bruto weight).**

# Experience & Capacities UM Gramsh

During the ammo disposal process, Gramsh Mechanical Factory has been functioning several ammo disposal lines.

## Ammo disposal line, in the UM Gramsh

<b>Line No. 1</b>	Line of disposal of artillery rounds 37 mm
<b>Line No. 2</b>	Line of disposal of ammo, caliber 12.7mm; 14.5 mm
<b>Line No. 3</b>	Line for destruction of SALW-s (NSPA – US Funded)



# Open Detonation Activities

- ❑ All Ranges Approved by Parliament - 11
- ❑ Open Burning & Open Demolitions conducted by EOD AAF.
- ❑ Only non industrialized munitions – is being destroyed.
- ❑ Only 1 demolition range is active – Biza.
- ❑ Safety and minimizing concerns to local communities – remain priority for the EOD AAF.



## Demolition Ranges



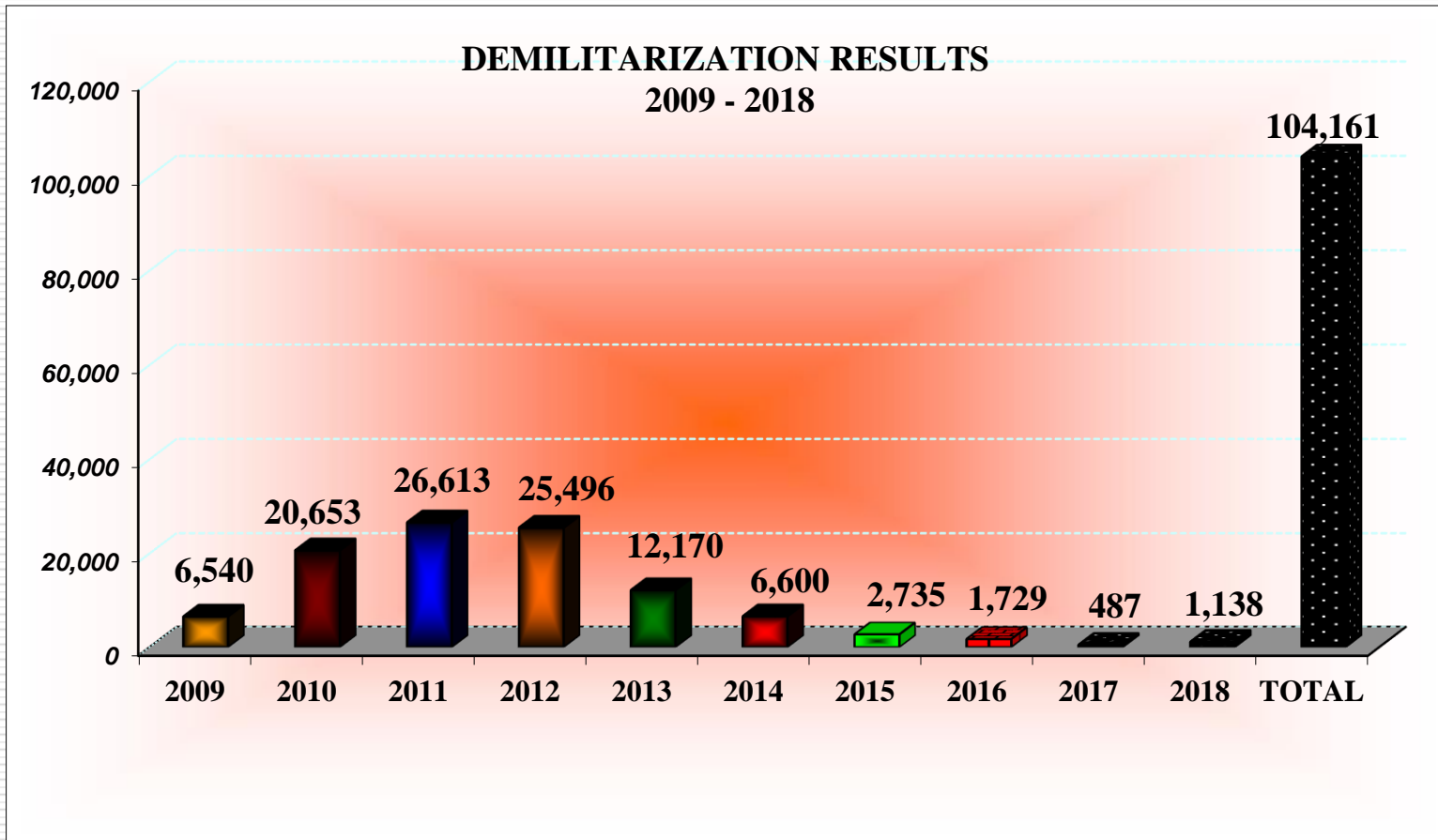
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AMMCO January 2015



# Stockpile Reduction Plan (surplus/unserviceable ammunition)



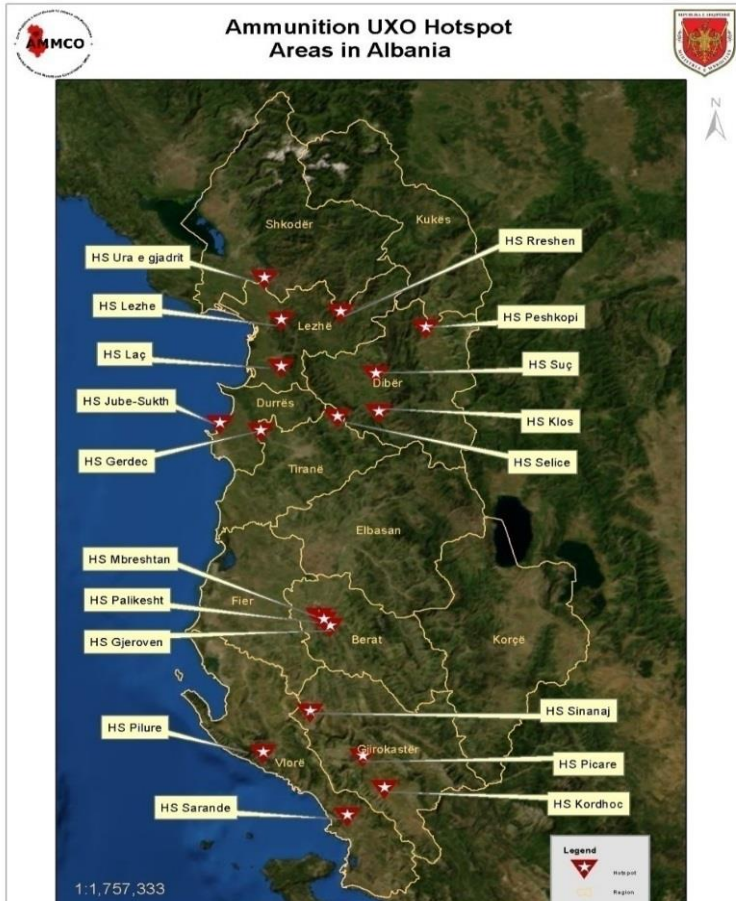


# Stockpile Reduction Plan (surplus/unserviceable ammunition)



- 
- **Technical assistance requirements (training, technology- EOD & logistical disposal).**
    - **Technical assistance for organizing trainings on the EOD level 2 and 3 with EOD unit of AAF.**
    - **Technical assistance for organizing PSSM trainings with AMMO units of AAF.**
    - **Training and equipment for the AMMO Laboratory on the new technology for the new ammunitions.**
    - **Training and equipment for Underwater EOD Diving team.**
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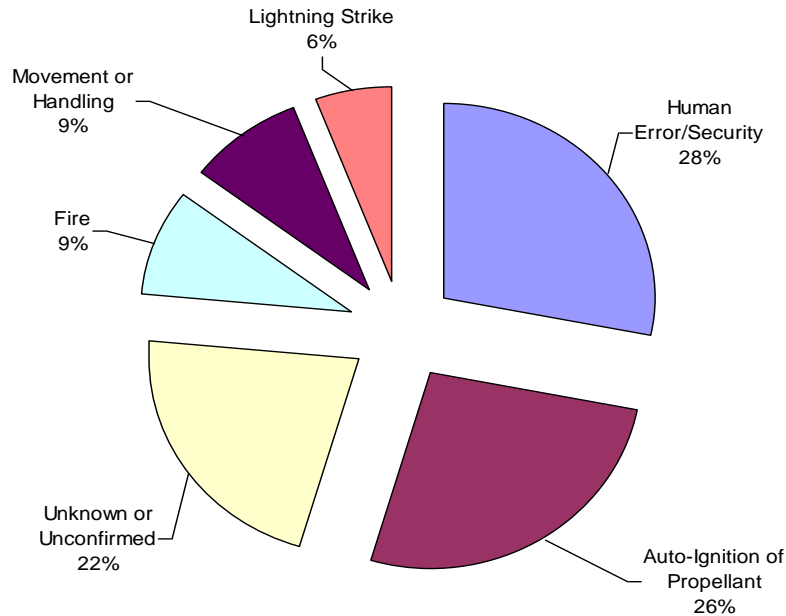
# UXO & ERW Hotspots



- UXO hotspots are mainly a result of explosions at ammunition storage sites.
- AAF and AMMCO technical assessments have identified initially 19 UXO hotspots,
- The contamination includes unexploded ordnance of various types.
- **The last accident recorded in 29 March 2017.**

# Causes of Ammunition Accidents

March 1997-1998



- AAF surveys have identified that time 16 hotspots.
- **5700** of Tons of Munitions Scattered.
- A total of **58** Explosive Storehouses were involved in these explosions.
- **56** Fatalities and **59** Injured Military and Civilians.
- The contamination includes unexploded ordnance of various types.





# Ammunition Hotspots Programme in Albania



Unexploded Ordnances Hotspots  
Contaminated Areas in Albania



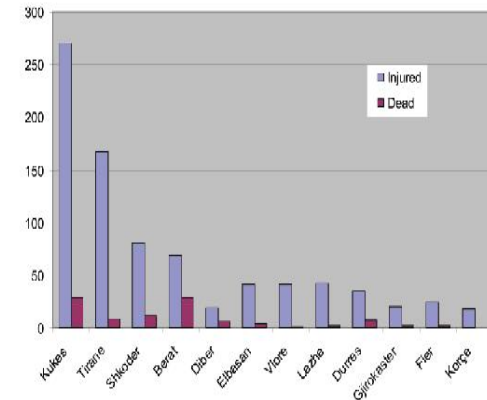
Ammunition Hotspots Clearance Activity



Risk Education Activity



Mines and Unexploded Ordnance Casualties



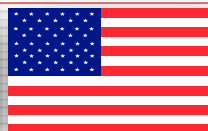


# EOD CLEARANCE RESULTS

## 2013-2018



No.	UXO Hotspot	Clearance period	Cleared Area (m <sup>2</sup> )	ITEMS REMOVED
1	Otlake- Berat	2013	3,000	2,081 UXO
2	Gerdec- Vore	2013-2014	75,000	2,493 UXO
3	Klos- Burrel	2016	180	2,321 UXO
4	Laç	2016	350	981 UXO 4,823 SAA
5	Suç- Burrel	2018	84,000	133 UXO
6	Qaf Shtame-Burrel	2018 in progress	871	43,612 UXO 353,586 SAA
<b>TOTAL</b>			<b>163,401</b>	<b>51,621 UXO</b>





# Norwegian People's Aid

## Humanitarian Disarmament Albania

Gjeroven - Berat  
T-HS-002

**Project:** EOD Clearance of Hotspots in Albania

**Task:** Gjeroven - Berat

**Task Number:** T-HS-002

**Implemented by:** Norwegian People's Aid in Albania  
in Cooperation with Albanian Ministry of Defence

**Supported by:** United States Department of State, Office of Weapons Removal and Abatement through ITF Enhancing Human Security.

**Monitored by:** Albanian Mines and Munitions Coordination Office (AMMCO)

**Start date:** November 2014



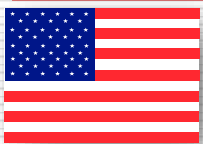


# NPA CLEARANCE RESULTS

## 2014 - 2018



NO.	UXO Hotspot	Clearance period	Cleared Area (m <sup>2</sup> )	ITEMS REMOVED
1	Gjroven-Berat	2014-2016	68,423	4,228 UXO 36,501 SAA
2	Palikesht- Berat	2015	13,321	1,679 UXO 1,778 SAA
3	Mbreshtan-Berat	2015-2016	65,227	7,659 UXO 61,442 SAA
4	Kordhoc-Gjirokaster	2016-2017	24,470	1,822 UXO 748 SAA
5	Picar- Gjirokaster	2016-2017	28,285	2,590 UXO 14,007 SAA
6	Sinanaj-Tepelene	2017 Technical Survey	0	67 UXO 66 SAA
7	Jube-Sukth, Durres	2017 in progress	380,330	9,071 UXO 7 SAA
<b>TOTAL</b>			<b>580,056</b>	<b>27,124 UXO</b>



Norwegian People's Aid  
Albania





# CONCLUSION



1. In past several years has been significant progress in demilitarization process.
2. MOD is totally committed to continue with process of all:
  - ❖ **Surplus Ammunition Destruction.**
  - ❖ **Renovation & Upgrading the Permanent AMMO Stores to meet International Standards (ITAG).**
  - ❖ **Clearance and Certification of UXO/ERW contaminated Hotspots.**
3. International support of the process are much needed and welcomed.
4. Demilitarization Capacities in Albania – available for Regional Demilitarization Requirements!