Prevention of Unplanned Explosions
Safe and Secure Facilities

Prepared for:
Meeting of Experts
on CCW Protocol V

25 April 2012

Presented by:
Dr Frederic Peugeot
NATO Trust Fund Project Manager
NAMSA General Services Programme
fpeugeot@namsa.nato.int
Organization

North Atlantic Council (NAC)

NAMSO
Board of Directors (BOD)

NATO Maintenance & Supply Agency (NAMSA)

Main Locations

Chartered in 1958

26 Member States

1127 posts

April 2012
NAMSA
Established in September 2000 as a mechanism to assist NATO Partners.
Tragedies can happen
Demilitarization Facility

Demilitarization Facility into town

Current location inappropriate

Population & School
Physical Security
Rocks

AZ ZARQA
500,000 INHABITANTS

Current location inappropriate

15 March 2008
21 death, 500 houses destroyed, 1000 houses damaged

NAMS A
April 2012
Not the First Time!
Ammunition Depot

- 6 May 2004
- July 2005
- 19 August 2006

- 21 August 1991

NATO PfP Trust Fund Project
Not the last time!
Temporary Storage

HELLAS SAT

WorldView-2 © DigitalGlobe; 2011; Distributed by e-GEOS; Processed by ASTRIUM SERV 20 June 2011; Resolution 0.5m
Origin of Accident

- 13 killed, 62 injured
- Blackout in half of the country
- 2 billions EUR cost
- Defense Minister Resigned
- Foreign Minister Resigned

Not the last time!
Temporary Storage

HELLAS SAT

GeoEye-1 © GeoEye; 2011; Distributed by e-GEOS; Processed by ARIUM SERVICES
13 July 2011; Resolution 0.5m

April 2012
Ammunition Depot into town

Current locations inappropriate

Dar Es Salaam Feb 2011
25 killed, 140 Injured, 4000 evacuated
During the life cycle of a munition, the risk of accidental explosions with large consequences to the population can be reduced by the use of appropriate:

- Procedures and Regulations
- Safe & Secured Facilities
  (Storage & Disposal)
- Ammunition Live Cycle Management
  (Throughout the Live Cycle, i.e. Transport, Storage & Disposal)
- Ammunition Related Training
Recommendations on the
TRANSPORT
OF
DANGEROUS GOODS

Manual
of
Tests and Criteria

Fourteenth edition

UNITED NATIONS
New York and Geneva, 2010

International
Security SOPs

All visitors to the site will be given an abridged security brief before being allowed to enter – they will sign to confirm that they have been given, and understood, this brief.

International

Regional

National

Local
Safe & Secured Facilities
National Army Depot (1/3)

Afghanistan
Safe & Secured Facilities
National Army Depot (2/3)

Armed Forces Transformation
Nouakchott depots closure
670 tonnes Ammunition per Depot

Light Structures
- brick walled
- metal shed roofed
- concrete floor

Revised -> Mixed
- 5 without barricades
- 1 with barricades

Fencing (2,100 meters)
Access control gate
Guards centre and towers
Lighting
Additional Land Purchased

358,000 m² total
Safe & Secured Facilities
Demilitarization facility (2/3)

Original Plan

Explosives Area

Administration Area

Revised Plan

Ammunition Storage

Melting Station

Dismantling Workshop

Administration

April 2012  NAMSA
Safe & Secured Facilities
Demilitarization facility (3/3)

- Entrance
- Administration
- Personnel
- Dismantling Workshop
- Ammunition Storage
- Melting Station
- Water
- Electricity
- Protection

Safe & Secured Facilities
Demilitarization facility (3/3)

Jordan
Live Cycle Management
Testing Laboratory (1/3)

Development of a laboratory

Ageing

Requirement to check Safety and Suitability for Service

Equipment

Infrastructure

Training & Maintenance

April 2012 NAMSA
Training in Jordan
16-18 August 2009
06-10 December 2009
20-25 March 2010

Samples Delivered to Switzerland by JAF in April 09

Analysis performed by ArmaSuisse In May-June 09

Training in Switzerland
20 - 26 Sept 2009

JOR-ALB Cooperation in ALB
19 - 23 Sep 2010

JOR-ALB Cooperation in JOR
17 - 19 April 2011
Projects provide opportunity to develop existing skills and experience. Formal training included wherever appropriate.

- Transport Safety
- Stockpile Management
- Explosive Ordnance Disposal
- Ammunition Safety
- Development of Management Processes
- Business
Ammunition Related Training
Ammunition Depot

Storeman Course
3 weeks

Professional and Safe Management

Inspector Course
2 weeks

Depot Manager Course
1 week
Conclusion

Significant projects in terms of their fundamental security implications

Coherent approach to prevent tragedies taking into account nations specificities

Absence of international legally binding treaty for Physical Security and Stockpile Management (PSSM) of ammunition - show stopper for achieving more
Points of Contact

Dr Frédéric PEUGEOT
NATO PfP Trust Fund Section
Ammunition Support Branch
Tel.: (+352) 3063 5994
E-mail: fpeugeot@namsa.nato.int

Scott WILLASON
Head Ammunition Support Branch
General Services Programme
Tel.: (+352) 3063 6777
E-mail: swillason@namsa.nato.int

Murielle ORBAN
Secretary Ammunition Support Branch
Tel.: (+352) 3063 7143
E-mail: morban@namsa.nato.int

www.namsa.nato.int
To establish safety principles to be used as a guide

To develop regulations for the layout of ammunition storage depots

These principles are intended also to form the basis of national regulations as far as possible.

The Manual is intended to serve as a guide for authorities

It also gives principles and criteria for other related matters such as design environment criteria, etc.
It is impracticable to prescribe distances which would be safe

The separation distances between a potential explosion site and an exposed site recommended represent a compromise

The risk deemed tolerable depends upon many factors

It is therefore essential to have a good knowledge of the nature of the main hazard
Consideration of these factors will yield the concept of

- Hazard divisions
- Net explosives quantity
- The mutual influence of potential explosion site and exposed site.

Quantity-distances are detailed in AASTP1 for each case in the form of tables.

These quantity distances imply a degree of harm or damage which is difficult to quantify but which most NATO nations regard as tolerable.