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Explosive Ordnance Disposal (EOD) and technical ammunition support to SALW Control programmes

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Foreword

On 08 May 2003 the development of regional micro-disarmament¹ standards and guidelines was discussed during the RACVIAC sponsored seminar on '**SALW - A year after Implementation of the Stability Pact Plan**'. The consensus was that such standards and guidelines were desirable, and SEESAC agreed to develop a framework and then take responsibility for the future development of regional standards. It was agreed RMDS/G would be designed to support the work at the operational level, and would go further than the more generic 'best practice' documents currently available. After a wide-ranging discussion between stakeholders as to the status of RMDS/G it has been agreed that the term 'standards' will refer to the technical issues, whilst 'guidelines' will apply to 'programme' issues.

This RMDS/G² reflects the development of operational procedures, practices and norms, which have occurred over the past four years in the area of Small Arms and Light Weapons (SALW)³ control. Best operational practices have been identified and reviewed from within the region and beyond, and included as appropriate within this RMDS/G.

SEESAC has a mandate under the Stability Pact Regional Implementation Plan to fulfil, among others, operational objectives of 1) sharing information on and enhancing co-operation in the establishment and implementation of SALW control and reduction programmes and approaches among regional actors; and 2) providing linkage and co-ordination with the other relevant regional initiatives. The development of RMDS/G is one means of fulfilling that mandate.

The work of preparing, reviewing and revising these standards and guidelines is conducted by SEESAC, with the support of international, governmental and non-governmental organisations and consultants. The latest version of each standard, together with background information on the development work, can be found at www.seesac.org. RMDS/G will be reviewed at least every three years to reflect developing SALW control norms and practices, and to incorporate changes to international regulations and requirements. The latest review was conducted on 01 March 2006, which has reflected the development of the UN Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS) www.unddr.org, which include RMDS/G as a normative reference in the Disarmament and the SALW Control modules.

¹ Defined as: 'The monitoring, collection, control and final disposal of small arms, related ammunition and explosives and light weapons of combatants and often also of the civilian population. It includes the development of responsible weapons and ammunition management programmes'. Often used interchangeably with SALW control in the past, but SALW Control is now the recognised terminology. The term Micro-Disarmament has only been used here to ensure consistency of the RMDS/G concept, rather than renaming the standards.

² The layout and format of RMDS/G are based on the highly successful International Mine Action Standards (IMAS). The cooperation of the UN Mine Action Service (UNMAS) is acknowledged by SEESAC during the development of RMDS/G.

³ There is no agreed international definition of SALW. For the purposes of RMDS/G the following definition will apply: '**All lethal conventional munitions that can be carried by an individual combatant or a light vehicle, that also do not require a substantial logistic and maintenance capability**'

Introduction

Small arms, light weapons and ammunition are inherently dangerous, and mishandled or mismanaged, they represent grave dangers, not only for a small arms programme, but also for an entire peace-building effort.

SALW Control programmes inevitably lead to the return of unstable and inherently dangerous ammunition and explosives in parallel to the return of weapons. Not only does this create a physical threat to human life, but also it can be a threat to the whole disarmament, demobilisation and reintegration process. Any civilian casualties as a result of the instigation of such programmes can have a negative effect on the credibility of the organisation conducting the operation, leading to a lack of confidence in their abilities by the local community and the subsequent withdrawal of consensual support for the process. Without appropriate weapon and explosive safety measures, past experience has shown that such casualties are inevitable. RMDS/G 05.10 - Collection, addresses this issue in detail and recommends an operationally proven and safe technical methodology for use on all future SALW Control collection operations. Part of those recommendations requires support from Explosive Ordnance Disposal (EOD) and ammunition-qualified personnel.

Additionally EOD and ammunition technical support and advice is necessary for the safe planning and conduct of logistic disposal operations (see RMDS/G 05.20 - SALW Destruction).

Experience has shown that the integration of EOD and ammunition technical support into the wider SALW Control programme from the beginning can save time, ensure a more efficient use of resources and significantly improve safety. EOD and ammunition technical support was integrated into the Albania SALW Control programmes during 1999 - 2002; the result was that there were no civilian or police casualties during the collection and destruction phases of the programme. This has not been the case in other previous SALW Control programmes within the region where there has been either limited or no integral support.

EOD and ammunition technical support to SALW Control programmes

1 Scope

Experience has shown that the integration of EOD and ammunition technical support into the wider SALW Control programme from the beginning can save time, ensure a more efficient use of resources and significantly improve safety. Therefore this RMDS/G illustrates technical areas where EOD and ammunition technical support can make a positive impact on the development and implementation of SALW Control programmes.

It is important that SALW Control programme managers understand the differences between EOD and ammunition technical support. EOD personnel are usually trained and qualified in the disposal of unexploded ordnance (UXO) at the operational level, whilst ammunition technical specialists are trained and qualified to provide additional support for the destruction of ammunition at the logistic level, as well as advise on all aspects of ammunition storage and explosive safety. It is essential that programme managers consult the appropriate level of advice for particular phases of their programme. For example, an EOD technician will be highly unlikely to be able to provide the appropriate level of technical advice on the detailed risks of an undesired explosion in an ammunition storage area.

2 References

A list of normative references is given in Annex A. Normative references are important documents to which reference is made in this standard and which form part of the provisions of this standard. The following IMAS cover the stockpile destruction of ammunition and explosives and shall therefore be normative references to this RMDS/G:

- a) IMAS 11.10 - Stockpile destruction;
- b) IMAS 11.20 - Open Burning and Open Detonation (OBOD) operations; and
- c) IMAS 11.30 - National planning guidelines.

National authorities and destruction organizations shall consult and follow the guidelines contained within the above IMAS when planning and conducting the destruction of ammunition and explosives. The latest IMAS can be found at www.mineactionstandards.org.

3 Terms and definitions

A list of terms and definitions used in this standard is given in Annex B. A complete glossary of all the terms and definitions used in the RMDS/G series of standards is given in RMDS/G 02.10.

In the RMDS/G series of standards, the words 'shall', 'should' and 'may' are used to indicate the intended degree of compliance. This use is consistent with the language used in ISO standards and guidelines.

- d) 'shall' is used to indicate requirements, methods or specifications, which are to be adopted in order to satisfy the standard in full.
- e) 'should' is used to indicate the preferred requirements, methods or specifications.
- f) 'may' is used to indicate a possible method or course of action.

The term 'national SALW authority' refers to the government department(s), organisation(s) or institution(s) in each SALW country charged with the regulation, management and co-ordination of SALW activities.

4 Synergy with other international activities

The technical complexity, vulnerability, inherent risks, wide distribution and large volume of UXO, ammunition and explosives in the community in post conflict environments require that it be efficiently and expertly managed and that appropriate risk analysis be conducted. There are often specific concerns regarding the render safe, disposal, safe storage, handling and transport of UXO, ammunition and explosives and these risks must be minimised, but be in accord with the operational environment. Sound technical advice and support at all levels are a prerequisite for the future success of peace support operations. The balance and emphasis of this advice will be dependent on the quantity of UXO, ammunition and explosives in the community, the perceived risk in theatre and the tempo of operations.

The explosive threat to a community in many post-conflict environments covers three main areas; 1) mines and UXO; 2) Small Arms and Light Weapons (SALW); and 3) the stockpile safety and destruction of conventional ammunition. There is currently no formal integrated response to this threat from the international community. The response is fragmented, with ill-defined areas of responsibility between international and regional organisations. More importantly no integrated threat analysis has ever been conducted by an international or regional organisation before their intervention in a post-conflict environment. This is usually because such organisations do not utilise the experience and knowledge of EOD organisations during their response planning at the strategic level.

The technical background and training of some of the EOD specialists⁴ deployed on mine action programmes can make them ideally suited to provide further technical contributions to operations outside that of mine and UXO clearance. Recent experience in Albania⁵ provides many examples of such support, ranging from stockpile management support to the establishment of technical methodology for the weapons recovery phase of UN SALW Control programmes. This recent experience has identified other areas of technical support that are necessary to ensure the explosive safety of both a deployed UN force and the civil population in the area of operations; these can be considered to be post conflict activities. The evolution and development of this technical support could be a critical factor in reducing the risk to life on future post conflict operations.

Therefore programme managers of SALW Control operations shall investigate the potential synergy with other programmes involved in the wider area of explosive safety in the community. This will make the best use of scarce technical resources and ensure that de-confliction of responsibilities can be agreed from the outset.

5 Functional areas of EOD and ammunition technical support

This clause of the RMDS/G illustrates those areas of technical support that appropriately qualified and trained EOD operators and ammunition specialists should contribute to during a SALW Control operation. The degree of technical contribution shall be determined by the training and qualifications of the EOD operator or ammunition specialist.

5.1 Information gathering and survey

Technical advice and support should be provided to the following areas:

- a) development of the collection and collation plan, (see RMDS/G 05.80);
- b) the threat assessment and analysis during programme development; and

⁴ There are wide differences in the training and education, and hence technical competence, of EOD specialists. Advice should be taken from SEESAC before deciding on the detailed areas of EOD or ammunition technical support that an individual can make to a SALW Control operation.

⁵ NATO EODASTT Post Operation Report dated 05 May 99.

- c) the training and technical capabilities of any indigenous EOD or ammunition technical assets.

5.2 Conventional Munition Disposal (CMD)

Technical advice and support should be provided to the following areas:

- a) the development (and provision if beyond indigenous resources) of a response EOD capability for the render safe of UXO discovered during the collection phase;
- b) the development of a stockpile destruction system for large quantities of recovered ammunition and explosives; and
- c) the EOD training of an indigenous capability in the area of EOD.

5.3 Explosive safety

Technical advice and support should be provided to the following areas:

- a) ammunition and explosive accounting, (see RMDS/G 04.20);
- b) the calculation and establishment of danger areas at Weapons Collection Points (WCP), (see RMDS/G 05.10);
- c) 'Safe to Move' inspections of recovered ammunition and explosives;
- d) the safe movement and storage of ammunition and explosives;
- e) ammunition and explosive surveillance and management;
- f) during negotiations with national authorities for the destruction of SALW; and
- g) the SALW awareness campaign.

6 Areas of responsibility

6.1 United Nations Development Programme (UNDP)

UNDP should apply this RMDS/G to its SALW collection programmes, activities and contracts within South Eastern and Eastern Europe unless the local situation precludes their effective application. In such circumstances, when one or more clauses are not appropriate, UNDP will provide alternative specifications, requirements and guidance.

UNDP should provide the necessary EOD and ammunition technical advice, within resources, to all of its SALW Control programmes within the region. They may delegate this responsibility to SEESAC.

6.2 Regional organizations

Regional organizations shall provide the necessary EOD and ammunition technical advice, within resources, to all of its SALW Control programmes within the region. They may wish to consult with SEESAC on the delegation of this responsibility to SEESAC.

6.3 SEESAC

SEESAC shall provide all appropriate EOD and ammunition technical assistance, within resources and on request, to all SALW programmes within South Eastern and Eastern Europe.

6.4 National SALW authority

The national SALW authority should be responsible for establishing and maintaining national regulations and procedures for EOD and ammunition technical support to SALW programmes. These national regulations and procedures should be consistent with RMDS/G, and other relevant national and international standards, regulations and requirements.

They should provide appropriate EOD and ammunition technical support to the national SALW programme.

6.5 SALW Control organizations

NGOs, commercial companies and other organizations involved in SALW collection operations shall ensure, when necessary, that appropriately qualified and experienced EOD and ammunition technical personnel are used to support their contribution to the SALW programme.

Annex A (Normative) References

The following normative documents contain provisions, which, through reference in this text, constitute provisions of this part of the standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of the standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid ISO or EN:

- a) RMDS/G 05.30 - Weapons Storage and Security;
- b) RMDS/G 05.40 - Ammunition and Explosive Storage and Safety;
- c) IMAS 11.10 - Stockpile destruction;
- d) IMAS 11.20 - Open Burning and Open Detonation (OBOD) operations; and
- e) IMAS 11.30 - National planning guidelines.

The latest version/edition of these references should be used. SEESAC hold copies of all references used in this standard. A register of the latest version/edition of the RMDS/G standards, guides and references is maintained by SEESAC, and can be read on the RMDS/G website: www.seesac.org. National SALW authorities, employers and other interested bodies and organisations should obtain copies before commencing SALW programmes.

Note: ISO Guide 51 defines the concepts of 'risk' and 'safety' and provides guidance for their use in other ISO documents. The definitions and procedures provided in Guide 51 are used in this standard and others in the RMDS/G series of standards and guidelines.

Annex B **(Informative)** **Terms and definitions**

B.1.1
ammunition
See **munition**

B.1.2
explosives
a substance or mixture of substances, which, under external influences, is capable of rapidly releasing energy in the form of gases and heat. [AAP-6]

B.1.3
Explosive Ordnance Disposal (EOD)
the detection, identification, evaluation, render safe, recovery and final disposal of unexploded explosive ordnance. It may also include the rendering-safe and/or disposal of such explosive ordnance, which have become hazardous by damage or deterioration, when the disposal of such explosive ordnance is beyond the capabilities of those personnel normally assigned the responsibility for routine disposal.⁶

Note: The presence of ammunition and explosives during SALW Control operations will inevitably require some degree of EOD response. The level of this response will be dictated by the condition of the ammunition, its level of deterioration and the way that the local community handles it.

B.1.4
micro-disarmament
the collection, control and disposal of small arms, ammunition, explosives, light and heavy weapons of combatants and often also of the civilian population. It includes the development of responsible arms management programmes.

B.1.5
national authority
the government department(s), organization(s) or institution(s) in a country charged with the regulation, management and coordination of **SALW** activities.

B.1.6
Render Safe Procedure (RSP)
the application of special explosive ordnance disposal methods and tools to provide for the interruption of functions or separation of essential components to prevent an unacceptable detonation.⁷

B.1.7
risk
combination of the probability of occurrence of **harm** and the severity of that **harm**. [ISO Guide 51: 1999(E)]

B.1.8
risk analysis
systematic use of available information to identify **hazards** and to estimate the **risk**. [ISO Guide 51: 1999(E)]

⁶ UN Guidelines for Stockpile Destruction, June 2000.

⁷ NATO Definition.

**B.1.9
risk assessment**

overall process comprising a **risk analysis** and a **risk evaluation**. [ISO Guide 51: 1999(E)]

**B.1.10
risk evaluation**

process based on **risk analysis** to determine whether the **tolerable risk** has been achieved [ISO Guide 51: 1999(E)]

**B.1.11
Safe to Move**

a technical assessment, by an appropriately qualified technician or technical officer, of the physical condition and stability of ammunition and explosives prior to any proposed move.

Note: Should the ammunition and explosives fail a 'Safe to Move' inspection, then they must be destroyed in situ, or as close as is practically possible, by a qualified EOD team acting under the advice and control of the qualified technician or technical officer who conducted the initial Safe to Move inspection.

**B.1.12
safety**

freedom from unacceptable **risk**. [ISO Guide 51: 1999(E)]

**B.1.13
Small Arms and Light Weapons (SALW)**

all lethal conventional munitions that can be carried by an individual combatant or a light vehicle, that also do not require a substantial logistic and maintenance capability.

Note: There are a variety of definitions for SALW circulating and international consensus on a 'correct' definition has yet to be agreed. For the purposes of RMDS/G the above definition will be used.

**B.1.14
standard**

a standard is a documented agreement containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes and services are fit for their purpose.

Note: RMDS/G aim to improve safety and efficiency in SALW Control by promoting the preferred procedures and practices at both headquarters and field level. To be effective, the standards should be definable, measurable, achievable and verifiable.

**B.1.15
Unexploded Ordnance (UXO)**

explosive ordnance which has been primed, fuzed, armed or otherwise prepared for action, and which has been dropped, fired, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel or material and remains unexploded either by malfunction or design or for any other cause.⁸

**B.1.16
Weapons Collection Point (WCP)**

a temporary, or semi-permanent, location laid out in accordance with the principles of explosive and weapons safety, which is designed to act as a focal point for the surrender of SALW by the civil community.

⁸ NATO Definition.