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SALW destruction activities

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Contents

Foreword

On 08 May 2003 the development of regional micro-disarmament[1] 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/G [2] 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. In the wrong hands, and in sufficient quantities, they can be politically destabilising, and lead to and exacerbate conflict. As such, they can present grave dangers, both to national governments and to international and regional peace-building efforts. The only way they can be kept in check is by SALW control programmes. This RMDS/G establishes best practice technical guidelines and requirements for small arms destruction programmes, from conception to execution, to ensure maximum effectiveness and safety.

The physical destruction of weapons must be approached as a separate issue to the destruction of ammunition and explosives. In comparative terms the physical destruction of the weapons collected is much simpler and safer than the physical destruction of the ammunition.

The destruction of ammunition and explosives is a highly specialist task that can only be safely, efficiently and effectively undertaken by appropriately trained and qualified staff. The United Nations Mine Action Service (UNMAS) has developed International Mine Action Standards (IMAS) that cover the destruction of stockpiles of anti-personnel mines, but these standards are generic in outlook and can be effectively applied to cover the stockpile destruction of most ammunition natures. Therefore IMAS 11.10 to 11.30 will form normative references to this standard, to capitalise on work that has already been done by another international organisation.

This RMDS/G will, therefore, concentrate mainly on the physical destruction of weapons.

SALW destruction activities

1 Scope

This RMDS/G establishes the guiding principles and technical methodology for the safe planning and execution of SALW destruction activities in support of a SALW Control programme.

To be most effective, it is important that this technical methodology is included during the strategic, operational and detailed mission planning phases of programme development. The financial costs of this technical methodology are low when compared to total programme costs, yet they have the potential for high impact on programme success.

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.

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.

a) 'shall' is used to indicate requirements, methods or specifications which are to be adopted in order to satisfy the standard in full.

b) 'should' is used to indicate the preferred requirements, methods or specifications.

c) 'may' is used to indicate a possible method or course of action.

The term 'national 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 Destruction of ammunition and explosives

The safe destruction of recovered or captured ammunition and explosives presents a variety of technical challenges. At the lowest level, the multi-item demolition, as opposed to the in situ destruction of a single UXO, is a complex subject, which requires a significant degree of additional training beyond what is normally provided to the normal field engineer or EOD Technician. Incorrect procedures can lead to further UXO contamination of the local area if the demolition is not prepared correctly and ammunition is then subsequently ‘kicked out’ of the work-site during demolitions. This ‘kicked out’ ammunition could have been subjected to external forces similar to those found when fired from a weapon. These forces, (spin, set back, centripetal and set forward), are the forces used by the fuze designer to arm the munition, so that in effect, the ammunition could end up in an armed condition and therefore be unsafe.

A ‘kick-out’ scenario would require a full planned UXO clearance operation of the entire area around the demolition pits, an operation that is expensive, time consuming and dangerous. The whole scenario can be avoided by proper planning of the demolition at the risk assessment phase of the SALW Control operation. A proper demolition ground should, wherever possible, be sited near every weapons collection point to enable the immediate destruction of any unsafe or unstable

ammunition or explosives that are handed in by the local population.[4] Professional explosive engineering advice must be taken to ensure that the location of these areas does not endanger the civilian population, their property or other fixtures and services.

The industrial level destruction of ammunition and explosives (demilitarization) combines the skills of production, mechanical, chemical and explosive engineering. Again it is a highly specialist occupation, and appropriate independent technical advice shall be taken by SALW programme managers during the planning phase of a SALW Control programme.

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;

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.

Further advice on the application of IMAS to wider ammunition and explosive stockpile destruction operations can be obtained from SEESAC. [5]

5 Destruction of weapons

5.1 General

It has been recognised that the success of a SALW Control programme is directly related to the final disposal of the collected weapons.

The introduction of an immediate and systematic process for the destruction of recovered weapons will significantly contribute to prevent further proliferation. The continued presence of such weapons inevitably acts as a destabilising influence in the area and the potential for illicit trade remains. If the public perceives that the weapons that they had handed in are merely being transferred elsewhere, either legally or illegally, then the essential public confidence in the programme could collapse. Again, the principles of transparency, accountability, safety and control must be followed during the disposal process to ensure that the process is legitimised in the eyes of all stakeholders.

Previous SALW Control programmes have usually considered the final disposal of the recovered weapons on an ad hoc basis. The lack of available finance and resources during many programmes has hampered this final process of destruction. For example, in Mozambique, the weapons were placed initially under UN control, but only a limited number of weapons were destroyed and the 'mission could do no more because it had no budget for destruction and no donor could be found to fund the programme'.[6] This is discouraging because there were a wide range of available destruction techniques and technologies, and the required human and financial resources were not high in terms of the percentage costs of a full UN peacekeeping deployment.

There are, therefore, many good reasons why the planning and resources for a final destruction process must be included in any SALW Control project. Indeed, it could be argued that donors

[4] This will often be a need for informed balance as this requirement may prejudice the conduct of operations. If the decision is taken not to have an appropriate safe demolition area, then a formal threat assessment shall be conducted to identify the risks.

[5] OSCE Document on Stockpiles of Conventional Ammunition, FSC.DOC/1/03, Vienna, 19 November 2003 provides a mechanism for assistance in the management and destruction of conventional ammunition stockpiles.

[6] Workshop on Small Arms, 18 - 20 February 1999, Geneva, Herbert WULF, BICC.

have a moral imperative to ensure that such a process is included in the project plan before funding is authorised. Provisions for destruction are as important to the success of a programme as the initial political will, and the methodology for weapon recovery.

5.2 Destruction techniques and technologies

The destruction technology or technique selected for a particular programme will be dependent on a number of factors:

a) the type of weapons;

b) the quantity of weapons;

c) the available indigenous resources and technology;

d) any financial considerations;

e) the infrastructure available for movement of weapons;

f) any security constraints; and

g) SALW awareness needs.

A summary of the currently available destruction techniques and technologies is at Annex C for reference. These vary widely in terms of cost and efficiency, and more importantly in terms of verification ability.

Whatever the destruction technique used, a public destruction ceremony with mass media coverage is an important component. Such a ceremony has tremendous symbolic power in helping the public develop confidence in the both the security and confidence building measures and in the national peace building process.

5.2 Planning and destruction sequence

The following sequence should be followed for the destruction of weapons:

a) establishment of the type and quantity of weapons to be destroyed;

b) examination and selection of the most suitable destruction option. (Technical advice should be taken at this stage of the planning process);

c) establishment of the financial costs of destruction. (Technical advice will be necessary here to ensure that a fair price is established; SEESAC maintains a data bank of related prices in the region);

d) development of the media plan;

e) the informing of international organizations, media and NGOs of date and location of destruction operation;

f) establishment of a security plan for the movement of weapons and destruction operations;

g) the conduct of any necessary weapon pre-processing operations, (removal of components, accounting procedures[7], deformation etc), although these can also be undertaken at the final destruction facility;

h) the movement of weapons to the destruction location, ensuring that all appropriate security measures are in place to protect the weapons during transit;

[7] Ideally, the weapon's information (i.e. type, calibre, serial number, country and/or manufacturer monograms/markings) should be registered in a database. This information could be useful in future weapons tracking.

i) the establishment of an effective and accurate accounting system in the destruction facility;

j) the physical destruction of weapons;

k) the monitoring and verification of the destruction operation should be undertaken by international observers, media and NGOs; and

l) the maintenance of destruction records within the national SALW authority.

6 Areas of responsibility

6.1 United Nations Development Programme (UNDP)

UNDP has a general responsibility for enabling and encouraging the effective management of SALW control programmes by continuously maintaining an overview of RMDS/G to reflect developing SALW control norms and practices, and to inform of any changes to international regulations and requirements.

UNDP should apply RMDS/G to its SALW destruction 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 RMDS/G is not appropriate, UNDP will provide alternative, specifications, requirements and guidance.

6.2 Regional organizations

In certain areas of the world, regional organizations have been given a mandate by their member states to coordinate and support SALW control programmes within a state's national boundaries. (For example SFOR within Bosnia and Herzegovina).

In these circumstances the regional organization should assume many of the responsibilities and roles of the national SALW authority, and could also act as a conduit for donor resources. The responsibilities and roles of regional organizations for SALW control will vary from state to state and may be subject to a specific Memorandum of Understanding, or similar agreement.

6.3 SEESAC

SEESAC shall provide operational assistance, technical assistance and management information, within resources and on request, to all SALW destruction programmes within South Eastern and Eastern Europe.

6.4 National SALW authority

The national SALW authority should be responsible for ensuring the conditions that enable the effective management of national SALW destruction projects. The national SALW authority is ultimately responsible for developing and managing the SALW collection programme within its national boundaries.

The national SALW authority should be responsible for establishing and maintaining national regulations and procedures for the management of SALW destruction operations. These national regulations and procedures should be consistent with RMDS/G, and other relevant national and international standards, regulations and requirements.

6.5 SALW Control organizations

NGOs, commercial companies and other organizations involved in SALW destruction operations shall establish SOPs, instructions and procedures which enable SALW destruction operations to be conducted effectively, efficiently and safely. These SOPs should be based on the appropriate national regulations, or in their absence RMDS/G.

6.6 National and Regional Communities

It is the responsibility of national and regional communities, or other involved stakeholders, to assist the national SALW authority, and other regional and international authorities in the establishment and implementation of SALW collection measures in order that weapons can be destroyed as a result.

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) OSCE Document on Stockpiles of Conventional Ammunition, FSC.DOC/1/03, Vienna, 19 November 2003;

b) IMAS 11.10 - Stockpile destruction;

c) IMAS 11.20 - Open Burning and Open Detonation (OBOD) operations; and

d) 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.

Annex B
(Informative)
Terms and definitions

B.1.1
ammunition
See **munition**

B.1.2
demilitarization
the complete range of processes that render weapons, ammunition and explosives unfit for their originally intended purpose. [8]

Note: Demilitarization not only involves the final destruction process, but also includes all of the other transport, storage, accounting and pre-processing operations that are equally as critical to achieving the final result.

B.1.3
destruction
the process of final conversion of weapons, ammunition and explosives into an inert state that can no longer function as designed.

B.1.4
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.1.5
munition
a complete device charged with **explosives**, propellants, pyrotechnics, initiating composition, or nuclear, biological or chemical material for use in military operations, including **demolitions**. [AAP-6].

Note: In common usage, 'munitions' (plural) can be military weapons, ammunition and equipment.

B.1.6
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.1.7
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.1.8
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.

[8] IMAS 11.10.

B.1.9
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.1.10
stockpile
in the context of SALW, the term refers to ….. a large accumulated stock of **weapons** and **EO**.

B.1.11
stockpile destruction
the physical activities and destructive procedures towards a continual reduction of the national **stockpile**.

Annex C
(Informative)
Destruction technology and techniques

SER	TECHNIQUE / TECHNOLOGY	EXPLANATION	EXAMPLE COUNTRY	ADVANTAGES	DISADVANTAGES
(a)	(b)	(c)	(d)	(e)	(f)
1	**Smelting and recycling**	The use of industrial steel smelting facilities to melt down complete processed weapons.	Serbia and Montenegro	❑ Limited training period ❑ Simple ❑ Cheap and efficient ❑ Limited pre-processing ❑ Minimal labour required ❑ Highly visible and symbolic ❑ Destruction guaranteed ❑ Some costs recovered by sale of scrap	❑ Requires suitable industrial facility ❑ Limited pre-processing required
2	**Bandsaw**	The use of industrial band saws to cut SALW into unusable pieces.		❑ Limited training period ❑ Simple	❑ Labour intensive ❑ Minimum of 3 cuts per weapon, dependent on type ❑ Inefficient
3	**Burning**	The destruction of SALW by Open Burning using Kerosene.	Mali Nicaragua	❑ Cheap and Simple ❑ Highly visible and symbolic ❑ Limited training requirements	❑ Labour intensive ❑ Environmental pollution ❑ Not particularly efficient ❑ Visual inspection essential, but difficult
4	**Cement**	Cast weapons into cement blocks.		❑ Cheap and simple ❑ Limited training period	❑ Recovery possible, but very labour intensive to achieve ❑ High landfill requirements ❑ High transport requirements to landfill ❑ Final accounting difficult
5	**Crushing by Armoured Fighting Vehicles (AFV)**	The use of AFVs to run over and crush the SALW.	Republic of Serbia	❑ Cheap and Simple ❑ Highly visible and symbolic ❑ Limited training requirements	❑ Not particularly efficient ❑ Visual inspection essential

SER	TECHNIQUE / TECHNOLOGY	EXPLANATION	EXAMPLE COUNTRY	ADVANTAGES	DISADVANTAGES
(a)	(b)	(c)	(d)	(e)	(f)
6	**Cutting by Oxy-acetylene or Plasma**	The use of high temperature cutting technology to render the SALW inoperable.	Albania	❑ Established and proven method ❑ Cheap and Simple ❑ Limited training requirements ❑ Equipment available worldwide ❑ Maintenance free	❑ Labour intensive. (One operative can process 40 weapons per hour) ❑ Risk of small functioning components (Bolts etc) not being destroyed
7	**Cutting using Hydro Abrasive technology**	The use of hydro abrasive cutting technology.		❑ Limited training requirements ❑ Technology readily available ❑ High production levels possible using automation ❑ Environmentally benign	❑ Medium initial capital costs ❑ Equipment requires transporting to affected country
8	**Cutting by Hydraulic Shears**	The use of hydraulic cutting and crushing systems.	Australia Canada South Africa	❑ Limited training requirements ❑ Technology readily available ❑ High production levels possible using automation ❑ Environmentally benign	❑ Medium initial capital costs ❑ Equipment requires transporting to affected country
9	**Deep Sea Dumping**	The dumping at sea in deep ocean trenches of SALW.		❑ Traditional technique ❑ Efficient	❑ Constraints of Oslo Convention ❑ More environmentally benign than many other techniques
10	**Detonation**	The destruction of SALW by detonation using donor high explosives.	NATO SFOR NATO KFOR	❑ Highly visible and symbolic ❑ Destruction guaranteed if sufficient donor explosive used	❑ Labour intensive ❑ Environmental pollution ❑ Requires highly trained personnel ❑ Expensive in terms of donor explosive
11	**Shredding**	The use of industrial metal shredding technology.	Australia Canada	❑ Highly efficient ❑ Limited training requirements ❑ Technology readily available ❑ High production levels possible using automation ❑ Environmentally benign	❑ High initial capital costs ❑ Equipment requires transporting to affected country

SER	TECHNIQUE / TECHNOLOGY	EXPLANATION	EXAMPLE COUNTRY	ADVANTAGES	DISADVANTAGES
(a)	(b)	(c)	(d)	(e)	(f)
12	**Safe Storage**	The storage of recovered weapons in secure accommodation.	Albania	❑ Cheap and simple ❑ SALW move under direct control of national government or international organisation	❑ Potential for proliferation in the future exists if there is a significant political change of circumstances ❑ Requirement for adequate and secure infrastructures