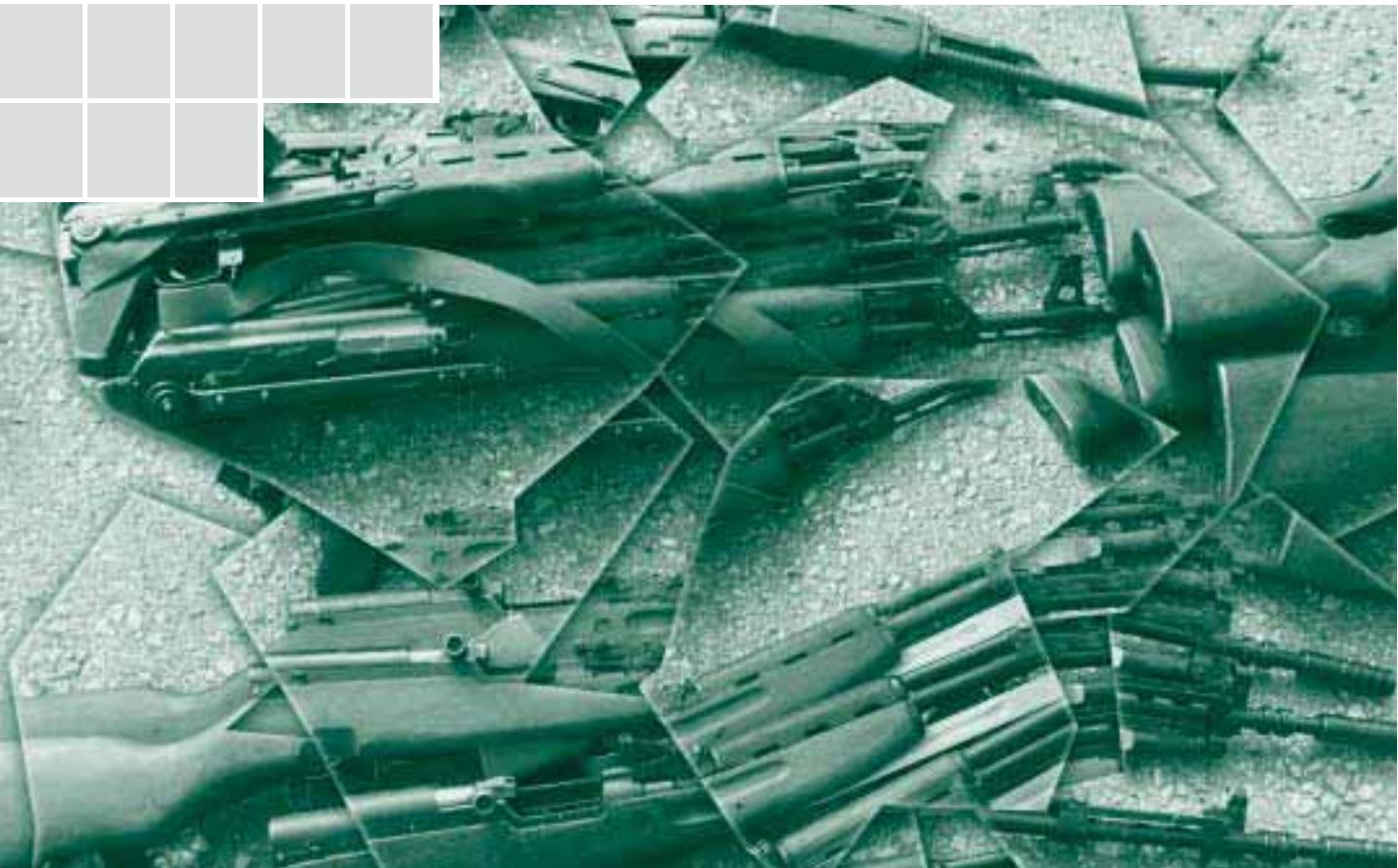
OSCE

Handbook of Best Practices
on Small Arms and Light Weapons

Best Practice Guide on National Procedures for Stockpile Management and Security



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This Guide was drafted by the governments of Spain, Switzerland and the United Kingdom.

I. Introduction

1. Aim

The aim of this best practice guide is to provide guidance for the effective management and security of national Small Arms and Light Weapons (SALW) stockpiles. It is anticipated that this guide will contribute to and facilitate the development and application of high common standards in this field.

2. Scope

This best practice guide deals only with SALW as categorized by the OSCE Document on Small Arms and Light Weapons (OSCE, 2000).[1] This categorization excludes ammunition. The scope of the guide is to elaborate a methodology for the development of policy and general operational guidelines and procedures on all aspects of SALW stockpile management and security procedures. The guide covers primarily the stockpiles of the military (government armed forces) during peacetime. Ammunition for SALW as well as combined ammunition and SALW storage sites are not a main feature of this guide, except in relation to their potential storage and transportation with SALW.

3. References

The primary reference materials for this guide are the national returns to the OSCE Information Exchange on Stockpile Management and Security Procedures of 30 June 2002. A number of additional documents from other international organizations, national governments and non-governmental organizations (NGOs) were also used.

A list of references can be found in Annex A.

4. Methodology

The subject of stockpile management and security can be technically complex. Therefore, it is important to understand the terminology in current use and the way the standards were developed. These standards are a synthesis of practices as identified in the answers of participating States to the OSCE information exchanges as of 30 June 2002 as well as from other sources. While these best practice standards are not exhaustive, they form a sound basis for most cases. Selected answers and information were chosen for best practice only when the following criteria were applied.

[1] According to the OSCE Document, small arms and light weapons are man-portable weapons made or modified to military specification for use as lethal instruments of war. Small arms are broadly categorized as those weapons intended for use by individual members of armed or security forces. They include revolvers and self-loading pistols; rifles and carbines; sub-machine guns; assault rifles; and light machine guns. Light weapons are broadly categorized as those weapons intended for use by several members of armed or security forces serving as a crew. They include heavy machine guns; hand-held under-barrel and mounted grenade launchers; portable anti-tank guns; recoilless rifles; portable launchers of anti-tank missile and rocket systems; portable launchers of anti-aircraft missile systems; and mortars of calibres less than 100mm.

a) Types of stockpile

The different types of stocks taken into account for stockpile management and security of SALW are national stockpiles of the armed forces (e.g. military storage facilities), including reserve stocks and the inventory of reserve organizations, as well as government-held surplus stocks. This excludes manufacturers' stocks, as well as SALW that are part of the personal equipment of armed forces personnel. Former armed forces SALW now in private possession are also excluded.

b) Transport

In this context, transport means secure movement of SALW:

- from provider (manufacturer or dealer) to an ultimate recipient (armed or security forces);
- from a governmental or supplier storage site to a military storage site;
- from one military storage site to another military storage site (including to reserve stocks and inventory of reserve organizations);
- from a military storage site to one or several units/formations;
- from a military storage site to a destruction facility; or,
- from a military storage site to a dealer or buyer (e.g. for elimination of surplus).

Transports can be conducted by land, air, and sea.

II. Procedures

1. The appropriate characteristics of stockpile locations

a) Location of stockpiles

It will normally be most practical to locate stockpiles close to where they are required to be issued to personnel. Depending on the national defence policy and the view of the authorities on how expeditiously the SALW should be available to the personnel, the stockpiles can be concentrated in one location or more broadly spread. This mainly depends on the prevailing threat analysis. Consequently, forces designed for rapid reaction need to ensure that their SALW are available without delay, therefore they are more likely to be stored locally; SALW for reserve forces and surplus weapons will more likely be stored at centralized sites. Wherever stockpiles are located, they should be regularly reviewed in terms of requirement and the stocks should be kept to the minimum levels consistent with the role of the personnel and/or the capacity of the site.

b) Assessment of locale

An assessment of the environment surrounding the stockpile location should be conducted in order to assess the potential security risk to the stockpile. The locale should also be taken into account in the preparation of contingency plans for an emergency situation. For example, a heavily-populated urban environment presents different conditions and factors to be considered from that of an isolated rural environment.

c) Secured site

The stockpile location should be a secure armoury within a secure establishment. The existence of SALW stockpiles should be made known to those in charge of overall security at the site, and, as appropriate, to security authorities in the local area.

d) Standard laws and regulations

The stockpile location should operate within all appropriate national laws and regulations governing the storage of SALW, as well as those covering security and health and safety.

e) Additional regulations governing stockpiles

It is beneficial for a stockpile location to have its own set of regulations covering such issues, for ease of reference and to facilitate quick reaction in the event of an emergency.

Regulations for a stockpile location should:

- Outline the scope of the instructions;
- Detail who is the officer in charge of the location (name, location and telephone number at minimum);
- Outline any security threats;
- Detail all those at the location with security responsibilities (security officers, safety officers, armaments officers, transport officers, stores officers, accounting officers etc);
- Outline security procedures to be followed in different areas of the establishment (storage, servicing etc);

- Outline control of access to buildings, areas, compounds;
- Outline control of security keys;
- Outline accounting procedures, including for audits and spot checks;
- Cover authorization, security training, education and briefing of staff;
- Detail action to be taken on discovery of intrusion, theft, loss or surplus;
- Detail the response to be taken by any emergency or response forces;
- Prescribe actions to be taken in response to activation of alarms.

2. Lock-and-key and other physical security measures

a) Security assessment

A security assessment should be developed for each stockpile, taking into consideration such factors as: object of protection, threat analysis, existing material stockpiled, surrounding area, possible physical measures of protection, other technical measures, access control, and guarding and controlling of stock inventory. Differences regarding the objects to be secured can be very important depending on several factors – among them, the dimension and type of the storage site and the type of armament stored. Unit level stocks and facilities require different means of protection depending on whether they are located inside or outside military facilities. The security system should reduce the possibilities of sabotage, theft, trespass, terrorism or any other criminal acts. The security system should also provide an integrated capability to detect, assess, communicate, delay and respond to any unauthorized attempt at entry.

b) Cost-benefit analysis

Bearing in mind that total security is unattainable, a reasonable cost-benefit relation between the means of physical security and the stores to be secured should be undertaken. Security should be maintained at the maximum level possible, consistent with operational, safety and mission requirements to reduce protection cost.

c) Physical security

Physical security measures should be a combination of:

- security staff;
- active or passive systems; and
- devices.

These measures depend on the location and type of the stockpiles and should be based on the security assessment.

d) Storage

Small unit level arms should be stored in arms racks or metal containers that should be constructed in such a way as to prevent easy removal and should be secured with spot-welded bolts, as a minimum. Unless the arms are under constant surveillance, additional security measures should be considered.

e) Storage building doors and windows

The storage building doors should be armoury vault doors or solid hardwood with steel plate on the outside face, with door bucks, frames, and keepers rigidly anchored. They should be secured with security padlocks and hasps. Windows and other openings should be kept to a minimum,

closed and firmly locked. Armoury doors should be kept locked or bolted on the inside when individuals are working inside. Those inside should have the means to communicate with those outside.

f) Alarm and intruder detection systems

Only approved alarm systems (according to international standards) should be used. They should be checked periodically. It is recommended to undertake a daily visual check and periodical in-depth checking. Intruder detection systems should include point sensors on doors, windows and other openings and interior motion or vibration systems. Intruder detection systems should activate a response from the guardforce as soon as possible. The alarm system should be connected to a central monitoring station.

g) External lighting systems

Exterior building and doors should be equipped with appropriate lighting. The intensity of the light should allow detection of unauthorized activities. Switches for the light should be accessible only to authorized staff.

h) Guard patrols and dogs

Patrols should be made at prescribed intervals, and random checks should also be conducted. Security staff should check the arms storage installation during off-duty hours. Security staff should be designated, trained and properly equipped, and should be ready to react in a timely fashion to respond to possible incidents. Military working dogs should be used as a complementary measure.

i) Fencing

Required perimeters should be fenced, and they should meet minimum standards. Clear zones should be established around the fence, both inside and outside, with adequate extension. The perimeter fence should have a minimum number of gates consistent with operational requirement.

j) Key controls

Keys for armouries and/or stores should be issued only to those personnel who require access in order to perform their official duties. The number of keys should be the minimum necessary and the keys themselves should be difficult to reproduce. Keys for SALW storage locations should be held separately from those of their related ammunition stores, and within secure containers. Keys should not be left unsecured or unattended. The handling of keys should be registered. This registration should be kept for a minimum period of at least one year. Inventories of keys should be conducted periodically.

k) SALW and related ammunition

In principle, SALW and related ammunition should be stored separately. Small quantities of arms and ammunitions could be stored together for the purposes of maintaining limited site security (e.g. arming a reaction force to provide security for the storage site or arsenal). Weapons should be stored only fully assembled in secure armouries.

l) Procedures for immediate reporting of any loss

Any losses or recoveries of SALW should be reported as soon as possible to the Security Officer

(who should notify the overall site Security Officer and others as appropriate).

Reports should include :

- Identification of the specific stockpile location and/or the storage sites (if the report is communicated externally) and of the individual reporting;
- Item identification, quantity, serial numbers and other identifying marks;
- Date, time and place of loss/recovery and outline of circumstances of loss or recovery;
- Action taken: who is investigating the loss; who has been informed; any action being taken to prevent any further loss.

m) Additional security measures

Central control or monitoring systems should be installed wherever required to ensure immediate security checks. In this case all alarm signals will emanate from the central control station from which a response force can be dispatched. Other additional systems, such as video cameras, should be used to assist in locating and evaluating an unauthorized intrusion.

3. Access control measures

a) Right of access

The right of access should vary according to the type of installation and the category of SALW. Generally, only approved staff with a legitimate reason should be authorized to gain access, and full records of authorizations and access should be maintained. Authorization should only be granted by designated Commanders or Chiefs of Security.

b) Security clearance

Security clearance should be mandatory for all personnel allowed access to SALW stockpiles.

c) Issuance of and access to keys

Keys for SALW stores should be issued only to those personnel who require access in order to perform their official duties. The handling of the keys should be registered. Ordinarily, no individual should be allowed to have access to the keys to both the SALW and related ammunition stores. If, in certain circumstances, personnel might have access to both areas, a double checking system is recommended.

4. Inventory management and accounting control procedures

a) Management and system

It is essential that a system is in place to manage the inventory of SALW and account for the stores. Whether the records are kept manually on paper or held on a computer database, back up copies of the data should be kept at a separate location in the event of loss or theft of the originals. It should be clear to all those involved in inventory management and accounting for how many years records should be kept. Records should be held for as long as possible, with a view to improving the traceability of SALW.

b) Audit of records

Once a system is in place it should be regularly audited and its effectiveness reviewed. The records should themselves be checked and subject to security inspections at regular intervals – ideally at least once every six months. Checks/inspections should be recorded in dedicated logs that are then themselves inspected at regular intervals.

c) Stock-check or inspection of SALW Stores

Checks of stores, which should also include unannounced 'spot checks', should normally be conducted by authorized personnel other than those allowed unsupervised access to holdings. Where bulk stores are being checked, seals on boxes should be inspected, and where a large amount of boxes are stored, care should be taken to carefully inspect the boxes in the middle of the stockpile, as well as those others which are not easily inspected on a visual basis. SALW should be accurately counted (i.e. individually) and quantities agreed with stock records. Issue, receipt and expenditure documentation should be examined to ensure their accuracy, and that transactions have been correctly authorized. Procedures for immediate reporting of loss and theft must be in place.

5. Protection measures in emergency situations

Protection measures in emergency situations should be complemented by an overall site security plan, together with comprehensive regulations for the stockpile location. An emergency plan should be prepared, which should include details of enhanced security procedures to be followed in emergency situations (or when the site is on a higher alert status than normal). Ideally, stockpile locations should be able to call on armed response forces to prevent loss or damage to the SALW in storage during an emergency situation (and any legal implications should be addressed beforehand).

6. Procedures aimed at maximising transport security

a) Objective

Transport of SALW requires specific security and safety measures. Transport regulations and security are imperative in order to prevent loss and theft of SALW as well as to prevent abuse and illicit trafficking. Strategies for clandestine transports are part of such standards.[2]

[2] Strategies for clandestine transports, such as air transport, may involve not flying directly to the final destination, using circuitous routes with multiple landings and involving several interacting groups and a number of subsidiary or intermediate actors, not all of whom may be aware of the nature of the cargo. This strategy can also be used for official legal SALW transports in order to enhance security.

b) Regulations

National civilian ordinances and military regulations are an essential basis for the standardization of transport security. These should be combined with international agreements like the "European Agreement on the Transport of Dangerous Goods by Road" or the "International Ordinance on the Transport of Dangerous Goods by Rail (Appendix I to the International Agreement on Rail Freight Transport)." It should be noted that SALW in themselves are not "dangerous goods" in this respect. Transportation should be planned and conducted as is customary for other precious items (e.g. currency, gold, diamonds, etc). It is when SALW are transported with related ammunition that they should considered "dangerous goods." Effective regulation for cargo verification and inspection mechanism can help prevent illicit transfers of SALW that are facilitated by falsified transport documentation.

c) Documentation

Each transport of SALW should be accompanied by cargo documentation/freight papers. Hand-over/take-over protocols requiring signatures upon receipt should also be in place.

d) Emergency Procedures

As a rule, SALW and related ammunition should be transported in separate vehicles. Only in exceptional circumstances should they be transported together. In case of accident, standardized contingency plans should be at hand that include directives for traffic and safety regulation, instructions for medical care, as well as notification procedures in order to contact the authorities in charge, weapons experts, and medical and fire prevention personnel.

e) Land transport

Land transport can be conducted by marked or unmarked military vehicles (sometimes even armoured vehicles), civilian transport, or secured and sealed railway wagons or containers. If civilian contractors are used to move SALW by land, then procedures for authorization, security, monitoring and inspection of both the movements and the contractors themselves should be in place beforehand. They should be either equipped with specific protection measures (e.g. alarm systems on vehicles or electronic tracers in boxes), monitored by the military police, or guarded by military or security forces, depending on the quantity of SALW transported and the respective risk assessment. Transport routes should generally be planned in advance and information concerning these routes should be treated as classified.

f) Air Transport

Military air transports should follow military regulations and procedures.

Air transport can be conducted by transport agents. These are individuals or organizations, such as cargo companies or air freight agencies, who assume primary responsibility for facilitating, managing or organizing the transport of the stocks of SALW from the point of dispatch to their final destination. They may use leased or chartered freighter aircraft with hired air crews. Such agents should purchase or otherwise obtain the necessary overflight authorization for the countries through which the goods will be transported. Detailed flight and routing plans should be charted and overseen to ensure adherence.

g) Sea Transport

SALW shipments should be conducted in locked/sealed containers by cargo companies or agencies by leased or chartered ships with hired crews. Shipments should be inspected in transit and checked upon receipt by the receiving authority to ensure that seals are intact. The shipments should be checked for any other signs of theft or loss.

h) Additional Measures

The following additional measures should be implemented:

- The SALW should be rendered inoperable and functional parts should be stored separately;
- Procedures and arrangements for regular traffic between the same two locations should be varied and reviewed regularly;
- Containers should be placed side-by-side, and use should be made of the barriers of rail doors;
- SALW should be placed in the rear of containers;
- Special training for drivers and accompanying personnel should be provided;
- Transports should be equipped with communication systems.

7. Precautions and sanctions in the event of loss and theft

a) Objective

Impeccable and authoritative regulations for the investigation and clarification of the loss and theft of SALW, as well as the effective prosecution of any violations, can help reduce SALW proliferation. They are also an important factor in preventing the diversion of SALW from the legal to the illicit market. The lack of regulations, lax security, poor record-keeping, neglect and corruption can all increase the likelihood of theft and loss.

b) Authority for Investigation

A designated authority should be responsible for the investigation and clarification of loss and theft of SALW. It should have the necessary competence and the possibility to act without delay. In general, this should be a military prosecutor or military legal authority, or a government authority, acting in co-operation with civil police and local authorities.

8. Security training for personnel regarding SALW stockpile locations/buildings

a) Personnel Selection

The careful and systematic selection and recruitment of all personnel involved in tasks regarding stockpile management and security of SALW is essential. The requirements should include reliability, trustworthiness, and conscientiousness, as well as the appropriate professional qualifications. In addition, every individual should be subject to security clearance.

b) Security Training

Key personnel should receive periodic training on regulations, behaviour and procedures relating to security within SALW stockpile locations, inventory management and record-keeping. This specific security training should be provided at the time of assignment to duty and should be regularly

updated. If any changes are made, or new directives or regulations come into effect, a training update should be provided. For emergency situations, such as damage to property, burglary and theft, intrusion and intelligence activities, or fire and natural disasters, special training should be given which also includes appropriate practical exercises.

9. Assistance for improving stockpile management and security procedures

a) Objective

It is imperative that experience and knowledge is made available for every State, over and above the OSCE information exchanges on SALW and the standards provided by this best practice guide.

b) Assistance

States that have identified problems and discrepancies but which lack the capacity or resources to solve these problems should seek assistance from other States or from regional or international organizations that are in a position to provide it.

c) Training

Countries with the ability and capacity to provide assistance and training in order to improve national stockpile management and security procedures should be encouraged to offer workshops and training courses, or at least designate a point of contact from which other states can request such support.

d) Co-operation

It is also important to co-operate regularly and exchange information and experiences with international organizations (e.g. United Nations, UNIDIR, Wassenaar Arrangement, NATO/EAPC, etc.), research institutes (e.g. Small Arms Survey), and NGOs working on SALW issues (e.g. International Alert, Saferworld, International Action Network on Small Arms, World Forum on the Future of Sport Shooting Activities, etc.).[3]

[3] For the role and engagement of the NGOs in relation to the small arms issue, see Bachelor, P. 'NGO Perspectives: NGOs and the Small Arms Issue', UNIDIR disarmament forum 2002 no. 1, pp. 37-40.

III. Security Plan

1. Context

This section outlines the procedure for the development of a security plan, and the attached Annex gives an example of a model plan. Because security plans should be tailored to the requirements of specific locations and their holdings, a standard model cannot be prescribed in its entirety. Nevertheless, some essential elements can be identified. The elements outlined in this section should be taken into account in developing a specific security plan for SALW stockpiles.

Sites at which SALW stockpiles are located should ideally have a specific security plan for each SALW location, or, at minimum, information reflecting the SALW locations should be included in the overall security plan of the parent site.

2. Purpose and elements

The security plan can be used for the following purposes:

i) Analysis: The plan can be used as an analytical tool for planning and updating the security system of a site.

ii) Allocating responsibilities: After a thorough risk assessment, the commander of the responsible authority will have the fullest information readily available for deciding security priorities, as well as for addressing any residual risk not covered by the security system.

iii) Inspections: Examination of a security plan will allow well-prepared inspections to focus on the weakest areas of the security system.

iv) Investments in security: These priorities should be a consequence of the security plan.

v) Determining the role of personnel: In assessing the situation, distribution and functions of the security staff and others with access to SALW locations.

3. Structure

The following elements for the structure of a security plan should be considered:

i) Denomination of the site.

ii) Description of the site, including the surrounding area (especially insofar as it may affect the security); identification of areas at different levels of security, main buildings and their functions; type of content and value of the various stocks; aspects of safety and environmental conditions; as well as any further information which may be used for the security plan. Section II paragraph 1 should be taken into account.

iii) Risk assessment should include all possible risk and should not only be an essential part of the planning procedure but also of the security plan.

iv) Physical security measures, such as active and passive systems, as well as the tasks of the security staff, should be described in detail for all areas of the site, in line with the conclusions of the risk assessment.
v) Contingency plans should be developed for all possible emergency scenarios in accordance with a risk assessment. These plans should be kept as a separate annex of the security plan.
vi) Procedures for reporting loss, damage and further incidents should be considered. Prescriptions regarding maintenance of means, training of security staff and any other indications concerning security should be included.
vii) The security plan should be signed by the commander of the unit or chief of security.

4. Updating and classification

The security plan should be updated periodically, and especially if a change in any of the factors on which it is based occurs (e.g. changes in the chain of command, in the function of the security chief, in the security means, or in the results of risk assessment). It should be a flexible document, easily adaptable to changing requirements and circumstances.

A minimum number of complete copies of the security plan should be made. One copy should be given to the officer responsible for inspection. Additional copies should only be provided if the recipient's "need to know" can be confirmed. The complete document should be classified at a high level. Dissemination of parts of the document which are classified at a lower level should also be done on a restricted basis.

ANNEX A

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ANNEX B

Model for a Security Plan

This is an indicative list of subjects that should be covered in a security plan:

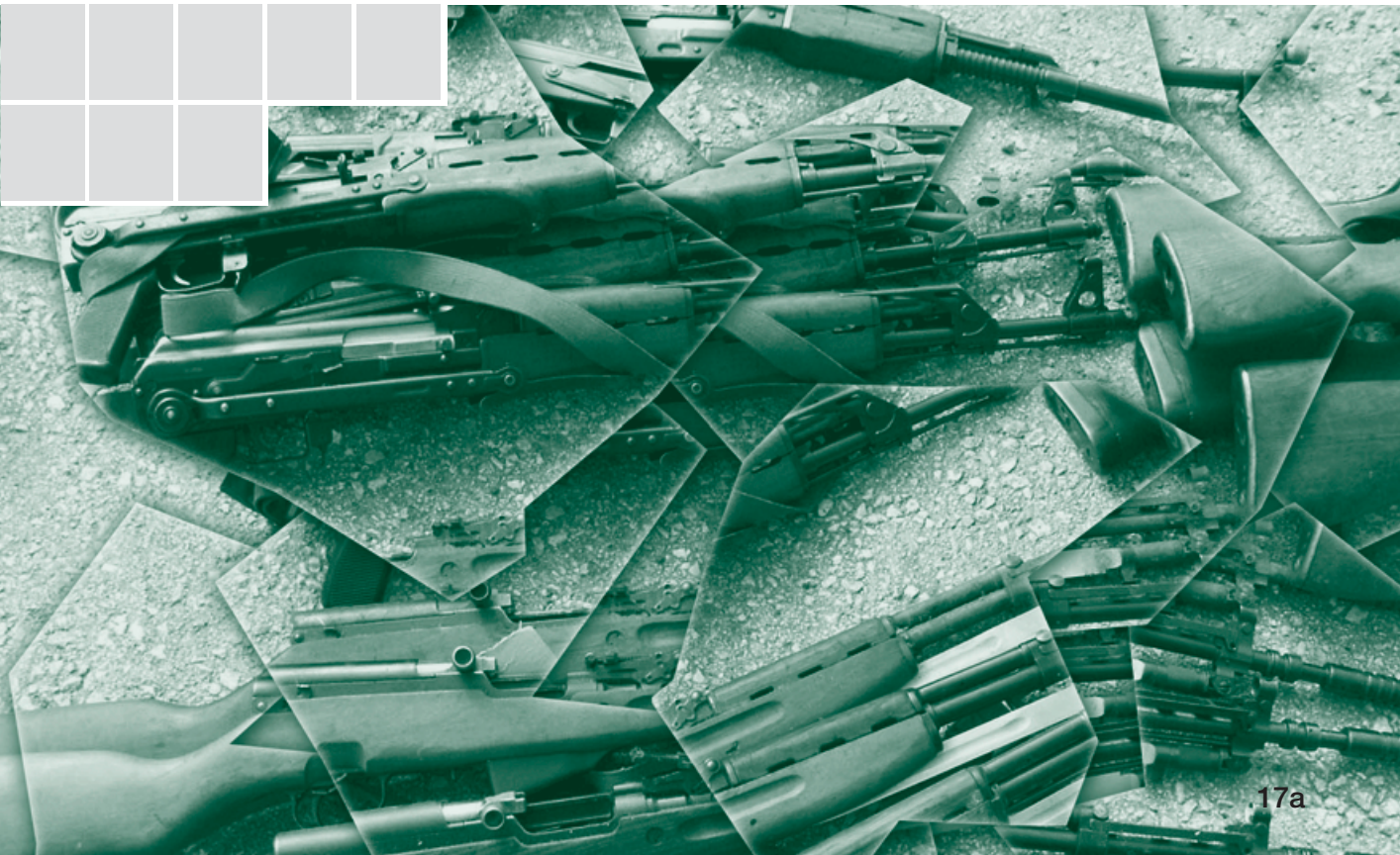
1. Name, location and telephone number of the establishment security officer.
2. Scope of the plan.
3. Content and value of the stocks.
4. The security threat.
5. Detailed geographic map of the site location and its surroundings.
6. Detailed diagrams of the layout of the site, including all its buildings, entry and exit points, and of the location of all features such as electricity generators/substations; water and gas main points; road and rail tracks; wooded areas; hard and soft-standing areas etc.
7. Outline of physical security measures for the site, including but not limited to details of:
   - fences, doors and windows
   - lighting
   - perimeter intruder detection systems
   - intruder detection systems
   - automated access control systems
   - guards
   - guard dogs
   - locks and containers
   - control of entry and exit of persons
   - control of entry and exit of goods and material
   - secure rooms
   - hardened buildings
   - closed circuit television

8. Security responsibilities (including but not limited to the following personnel, as applicable):
   - security officer
   - explosives/safety officer
   - armament officer
   - production manager
   - transport officer
   - heads of department
   - stores/supply officers
   - foreman in charge of operations/accounting/movement
   - explosives workers
   - all personnel authorized to have access to the site
9. Security procedures to be followed in production/process areas; storage servicing; processing; trials; quality assurance; climatic and other tests as well as further activities in respect of SALW.
10. Control of access to buildings, areas, compounds.
11. Procedures in case of handling and transport.
12. Control of security keys – those in use and their duplicates.
13. Accounting – audit and spot checks.
14. Security education and briefings of staff.
15. Action on discovery of loss/surplus.
16. Details of response force arrangements (e.g. size, response time, orders, activation and deployment).
17. Actions to be taken in response to activation of alarms.
18. Actions to be taken in response to emergency situations (e.g. fire, flood, raid etc).

Handbook of Best Practices
on Small Arms and Light Weapons

Best Practice Guide on National Procedures for Stockpile Management and Security

Annex C: Man-Portable Air Defence Systems (MANPADS)



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This annex was drafted by the governments of Germany, United States of America, Canada, France, United Kingdom, Italy, Russian Federation, Sweden, and Turkey.

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I. Introduction

1. Aim

Man-Portable Air Defence Systems (MANPADS) require special attention and consideration in view of the devastating loss of life and potential effect on the civil aviation industry that a single MANPADS attack could cause. The aim of this best practice guide is to provide best practice guidance on stockpile management and security for MANPADS including:

a) surface-to-air missile systems designed to be man-portable and carried and fired by a single individual; and
b) other surface-to-air missile systems designed to be operated and fired by more than one individual acting as a crew and portable by several individuals.

2. Scope

This best practice guide covers rules and procedures applying to MANPADS, encompassing both the complete MANPADS systems, light weapons elements (i.e. grip-stock, etc) and ammunition elements (i.e. missiles). They are recommended for complete MANPADS explosive rounds, MANPADS systems in a ready-to-fire configuration, and for jointly stored or transported MANPADS launcher tubes and/or grip stocks and the explosive round, though not in a ready-to-fire configuration. These best practices are also broadly applicable to other man-portable missile and rocket systems in similar configurations as outlined above, such as man-portable anti-tank missile systems.

3. References

A list of references can be found at the end of this document.

II. Procedures

1. Physical Security Measures for MANPADS stockpiling

a) The appropriate characteristics of stockpile location

Where the design of MANPADS permits, missiles and firing mechanisms (gripstocks) should be stored in separate storehouses and in locations sufficiently separate so that a penetration of the security of one site will not place the second site at risk.

MANPADS should be stored in the most secure accommodation, providing the highest standards of physical security. MANPADS missiles should be stored in permanent structures, preferably in concrete ammunition storehouses equipped with adequate security doors, secured with at least two separate locks at each door (key control see below). Firing mechanisms should be stored under physical security measures, which meet at least the requirements for SALW.

The perimeter of MANPADS storage sites should have clear zones, fences and internal and external lighting. Windows and other openings or access points should be kept to a minimum. All structures should be checked by facility security personnel at prescribed intervals, and random checks should also be conducted, including during off-duty hours. In cases where two or more units share a facility, one unit should be designated as responsible for the security of the entire facility.

In addition to outer perimeter fencing, the inner (actual) MANPADS storage area should either be continuously monitored (either by personnel or video surveillance) or have its own inner fencing. The inner fencing should be situated in relation to the structure so that a breach of the fence with an explosive device would not also breach the storage structure. Unless continuously guarded, any fence gates should be kept locked. Drainage structures, water passages or other objects penetrating the fence should be small enough to prevent any possible passage. A recommended minimum height of fences for MANPADS storage sites is 2 meters (or 6.5 feet).

Locks should be certified and tested to delay unauthorized intruders attempting to gain access using battery powered tools by at least 10 minutes in order to permit security forces to respond before weapons can be removed.

Exterior building and door lighting should be provided for all structures storing MANPADS. The lighting should be of sufficient brightness to allow easy observation of unauthorized activity. Switches for exterior lights shall be installed in such a manner that they are accessible only to authorized individuals.

Additional security measures could include use of a combination of high security fencing, extra detection devices, CCTV, improved security lighting, biometric security devices, increased patrolling or the introduction of guard dogs.

b) Surveillance

MANPADS storage sites should be placed under armed guards, and subject to continuous (24-hour per day) surveillance that will immediately detect any breach of security. The sites should therefore generally be equipped with an automatically operating, electronic intruder detection alert system. Implementation of electronic security measures to prevent simultaneous access to separately stored missiles and firing mechanisms should be considered.

MANPADS storage facility sites should incorporate an intrusion detection system with the physical security measures. The facility intrusion detection system should

include point sensors on doors and other apertures allowing access by intruders, and interior motion or vibration sensors. All alarm signals should sound at a central control or monitoring station from which a response force can be dispatched. When a MANPADS storage facility is located outside a military installation, arrangements should be made to connect to local law enforcement or commercial security services from which immediate response to activated alarms can be directed. Alarm transmission lines should either have line security (electronically monitored to detect evidence of tampering or attempted compromise) or include two independent means of alarm signal transmission. Any visible lines should be regularly inspected for tampering. Alarm systems should also be tested regularly.

The intrusion detection alarm system, facility physical security measures and first responder security forces should be integrated so that, if an intrusion is detected and the alarm is transmitted, the physical security measures would delay any intruders and prevent access to stored MANPADS long enough for security forces to respond to the intrusion.

Storage areas should have a primary and backup means of communications that permit notification of emergency conditions. The backup system should be different from the primary. The communication system should be tested daily. Radio could be one of the modes of communication.

Storehouses not being under permanent technical surveillance should alternatively be permanently guarded. Ammunition storehouses, which have a defective intruder detection system or none at all, should be checked by guards at irregular intervals not exceeding 60 minutes. Additionally, quick-reaction forces should permanently be kept on standby, to be dispatched to any ammunition storehouse in order to establish the cause of an alert.

c) Storage

MANPADS should normally be stored in original containers, banded, and sealed with tamper detection seals to reflect the integrity of the contents. Generally containers weighing less than 225 kilograms (or 500 pounds) should be fastened to the structure, or fastened together in groups, which have a total weight exceeding 500 pounds with bolts or chains secured with padlocks unless such fastening would impede facility operations. Recommended additional security measures include the use of internal locking devices and two person key control procedures. Hinge pins to doors should be welded or otherwise secured and windows and other openings kept to a minimum.

Unit-level stored stocks should typically be housed in a building used to store ammunition on a rifle range, or a military police/security force operations room. They should be stored in a secured arms room, vault, or a secured weapons storage container with minimum standards for their structural integrity and access doors or points. If secured in combat vehicles, aircraft, ships, trailers, or in other configurations required by operational or training requirements, constant surveillance of the items should be established and maintained.

d) Review

The existing physical security measures for MANPADS stockpiling should regularly be reviewed and - if necessary - be adjusted.

2. Access Control Measures

a) Personal Security

Access to MANPADS and parts thereof and any related classified material and information should be limited to military and official personnel that meet the following requirements:

- with proper security clearance and an established need to know the information in order to perform their duties;
  and
- with access granted through a list of names issued by the head of the relevant storage facility.

Safeguards could be established under which entry to storage sites requires the presence of at least two authorised persons. All entries to MANPADS storage sites should be recorded in an access log, which should be kept as a record for a minimum period of at least one year. The quantity of MANPADS to be removed should be as small as possible to support specific missions or projects.

b) Lock-and-key handling and security

Keys to MANPADS storage areas should be stored separately from keys and devices for other conventional storage areas. Only personnel with authorised access to MANPADS should have access to keys.

Any authorised person should be authorised to receive only one key, ensuring that access to MANPADS storehouses is generally subject to a "two-person principle."

Whenever a key is issued or returned, the following items of information should be recorded in writing:

- the date and time when the key is issued or returned;
- the key's serial number;
- the signature of the person issuing or returning the key;
- the name and signature of the recipient.

All documents in which the issuance and return of keys is recorded should be kept for a period of at least one year after the last entry has been made.

At prescribed intervals, typically every six months, the responsible officer of the storage facility concerned should check if the keys to the MANPADS storehouses are still complete. The date and result of this check should be recorded in a security logbook, which should periodically be examined by the superior agency.

As soon as it becomes known or there is suspicion that a key has been lost or a duplicate key has been produced, the lock concerned should urgently be replaced.

3. Handling and Transport

a) Secure handling

Where applicable, principal components - typically the missile in a launch tube and the gripstock - should only be brought together and assembled:

- in the event of hostilities or imminent hostilities;
- for firing as part of regularly scheduled training, or for lot testing, for which only those rounds intended to be fired should be withdrawn from storage and assembled; and
- when systems are deployed as part of the point defences of high priority installations or sites.

Anyone handling or having direct access to these classified MANPADS assemblies, components or pertinent documents (e.g. user manuals) should be required to undergo a security clearance check.

b) Procedures aimed at maximising transport security

MANPADS should be transported in a manner that provides for the highest standards and practices for safeguarding sensitive munitions in transit.

Where the design of MANPADS permits, missiles and firing mechanisms should always be transported and transhipped separately, wherever possible in separate vehicles and at different times. MANPADS missiles and launch and control equipment should not be loaded into the same freight container. When missiles or firing mechanisms are transported or transhipped on public roads or inside civilian/military facilities, security should be provided by armed military transportation escort detachments. Transhipments should be conducted only by cleared and authorised personnel. In the event that transportation is halted, the transport vehicles should be guarded permanently. Whenever possible rests or technical halts during a MANPADS transport should always be conducted in military facilities and placed under constant guard.

MANPADS should be transported in sealed and locked containers. When feasible, MANPADS shipments should be provided with a security vehicle escort. Positive control should be maintained over MANPADS transport as much as is possible. Clandestine transport, as detailed on page 8 of the OSCE Best Practice Guide on National Procedures for Stockpile Management and Security, is not recommend for MANPADS transport under normal circumstances.

Shipments should be tracked and monitored via satellite tracking devices and/or with escorts in contact with a command and control center to ensure additional response should the shipment come under attack or require additional assistance.

Serial number accountability should be maintained at all times from shipper to consignee. Shipping should be direct to the intended final destination, with no delays or stop-overs in transit locations. Items moved by a unit or organization transportation should be placed in the custody of a commissioned officer, warrant officer, senior noncommissioned officer, or civilian of equivalent rank.

A minimum of two personnel should be required if access to the MANPADS is necessary during transport. Each container should be checked, tamper-detectable sealed, and locked by two agents of the shipper (in each other's presence) before delivery to the carrier. This two-person integrity should be required at each transshipment point and terminal whenever the shipment loses its original identity (e.g., when two or more shipments are consolidated into another container for further movement or if repacking is required).

In the case of MANPADS shipments over water, prior to the voyage a written stow plan should be provided to the ship's captain detailing the location of the arms, ammunition, and explosives aboard ship and its protection requirements. MANPADS should be stowed in separate, lokked containers, inaccessible to unauthorized personnel during ocean transit. MANPADS shipments should be direct-voyage to destination. If the cargo must be offloaded en route, it should be provided constant surveillance by government personnel, if available, or by national crew-members pending reloading.

4. Inventory management and accounting control procedures

a) Management and system

A strong system of positive controls and accountability, from the lowest to the highest level should be put into place. Written verification should be provided on the receipt of MANPADS. Diligent record keeping is required for securing stockpiles, ensuring control, and providing safety surveillance. Training and staffing should be carefully managed to ensure dependable funding and personnel support to ensure accountability.

Inventory should be by serial number of firing mechanisms and missiles, with written records including serial numbers maintained. Procedures should be put into place that ensure regular reporting of missiles and rockets issued for training; missiles and rockets returned unexpended from training; and expended residue, as applicable. Procedures should be established for appropriate MANPADS inventory managers to verify requisition of MANPADS. These requisition verification procedures should include positive steps for rejecting excess and unauthorized requisitions. Any procurement plans or contracts should provide for individual item serialization.

Complete physical inventory of all MANPADS should be compiled at least once a month at the unit level, semi-annually at the installation level and annually at the depot level. A centralised national inventory should be maintained. Controls would include reconciliation of accounting documents against existing stockpiles. Such regular inspection ensures that any discrepancies are reported promptly. A complete count of the contents of any box should be undertaken if there is any evidence of tampering

MANPADS components expended or damaged during peacetime should be accounted for by serial number. Obsolete MANPADS, MANPADS components or items beyond economical repair should be destroyed in a timely manner and in such a way as to avoid subsequent repair and re-use, with destruction accounted for by serial number. Responsibility for destruction rests with the country owning the MANPADS. However, the original producing country should provide technical advice and assistance on destruction procedures when requested. All confirmed thefts, losses, and recoveries of MANPADS should be promptly reported to the appropriate national law enforcement. All records of MANPADS turnover should be kept indefinitely.

As far as the issuance and return of classified and/or sensitive equipment, components, documents etc. relating to MANPADS are concerned, it should be ensured that the whereabouts of the issued materiel are traceable physically and to the responsible person(s) at any time.

MANPADS producing and / or exporting countries could supplement controls further by the introduction of invisible marking procedures into the missile and firing mechanism (gripstock) technology process.

References

OSCE Strategy to Address Threats to Security and Stability in the 21st Century (interalia, paragraphs 9, 15, 29, 31, 46, 47, 48 and 54) MC(11).JOUR/2.

FSC Decision on MAN-Portable Air Defence Systems **FSC.DEC/7/03.**

FSC Decision on OSCE Principles for Export Controls of MANPADS **FSC.DEC/3/04.**