African Union

# Incremental Steps towards the International Small Arms Control Standards

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As outlined in the International Small Arms Control Standards (ISACS), small arms and light weapons can be defined as:

### Small arms

Any man-portable lethal weapon designed for individual use that expels or launches, is designed to expel or launch, or may be readily converted to expel or launch a shot, bullet or projectile by the action of an explosive.

### Light weapons

Any man-portable lethal weapon designed for use by two or three persons serving as a crew (although some may be carried and used by a single person) that expels or launches, is designed to expel or launch, or may be readily converted to expel or launch a shot, bullet or projectile by the action of an explosive.

Source: ISACS 01:20

Full compliance with international standards can be difficult to achieve, particularly when resources are scarce. Therefore, this Operational Guidance Note (OGN) outlines the incremental "low-cost high-impact steps" that can be taken to achieve minimum standards of safe storage for Small Arms and Light Weapons (SALW).

When only SALW are held in storage, fewer safety and security measures are required than when ammunition is stored, or when SALW and ammunition are stored together. As long as those responsible for weapons storage ensure that weapons are unloaded, with no rounds of ammunition in the firing chamber(s) and no rounds in the magazines, the safety risks are minimal. SALW are, however, often attractive to criminals, terrorists, and other non-state armed groups. Physical security and stock management procedures are therefore important to ensure that SALW do not end up on the illicit market.



The key references for this OGN are:

- The International Ammunition Technical Guidelines (IATGs) https://www.un.org/disarmament/convarms/ammunition/iatg/
- The International Small Arms Control Standards (ISACS) http://www.smallarmsstandards.org/isacs/

This OGN should be read alongside two other guidance notes in this series:

- Incremental Steps towards the International Ammunition Technical Guidelines (IATGs)
- Physical Security and Stockpile Management (PSSM): Preconditions and Sustainability

## Context

The International Ammunition Technical Guidelines (IATGs) provide internationally acknowledged standards for the Physical Security and Stockpile Management (PSSM) of stockpiles of ammunition. Relatedly, the International Small Arms Control Standards (ISACS) provide internationally recognized guidelines for weapons management. The ISACS cover not only small arms, but also light weapons such as light and medium mortars below 100mm calibre, grenade launchers, anti-tank launchers, man-portable air defence systems (MANPADS), and all other man-portable weapons systems. Much of the content contained within this OGN is drawn from ISACS Series Five: Operational Support. The layout of ISACS closely follows the layout of the IATGs, however the scope of ISACS is broader and is illustrated in Figure 1 below:

***Figure 1: The Modules of the International Small Arms Control Standards***

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## Risk Assessment and Prioritization

This OGN is not designed as a substitute for either the IATGs or ISACS but, instead, is intended as an aide memoire. It takes salient points from the ISACS and IATGs to help those in charge of SALW storage to reduce the risk of accidents and stock losses.

Three main factors can cause problems with weapons storage. These are:

1. Inadequate storage conditions (i.e. lack of effective fire prevention procedures, and lack of secure storage).
2. The ineffective physical inspection of weapons.
3. Carelessness during the delivery or transportation of weapons.

In addition to these main causes, others which may occur include:

4. Accidental fires.
5. Environmental effects (e.g. lightning or bush fires).
6. Human error.
7. Sabotage or enemy action.

The above mentioned factors will not result in unplanned explosions unless ammunition is present. However, stockpiles of SALW may come under attack from non-state armed groups or be subject to chronic losses and theft. To assess the different risks that are faced, the Hazard Identification Risk Assessment (HIRA) matrix is a useful tool. The HIRA is shown in Table 1 below and provides users with a way to assess and compare different risks:

*Table 1: The Hazard Risk Assessment Matrix*

| Probability of incidence | | Severity of outcome | |
|---|---|---|---|
| 1 | Very unlikely | A | Negligible |
| 2 | Unlikely | B | Moderate |
| 3 | Possible | C | Significant |
| 4 | Likely | D | Severe |
| 5 | Very Likely | E | Catastrophic |

Thus, 5E would be a very likely event leading to a catastrophic outcome.

Risk assessments must be carried out in all facilities where SALW are stockpiled, and should be reviewed regularly and whenever circumstances change. More specifically, risk assessments should examine SALW stockpile locations and security measures to determine the following:

- The physical risk to the local population. This is not such a risk when only small arms and small arms ammunition are stored. However the risk increases when High Explosive (HE) filled natures such as MANPADS, grenades, and mortar ammunition are present.
- The financial value of the facility and its contents.
- Active threats to the security of the facility (e.g. loss, theft, attacks or sabotage by non-state armed groups).
- Natural threats to the facility and their frequency (floods, earthquakes, fires etc.).
- The attractiveness of the facility to internal or external attack (e.g. numbers of weapons held, types of weapons etc.).
- Vulnerability of the location to theft or loss.
- Vulnerability to sabotage or attack.

The information gathered from a stockpile risk assessment should enable stockpile management priorities to be formulated in a secure and cost effective manner, thus keeping residual risk to a minimum (for further information, see ISACS 05:20 Section 8 Stockpile Management: Weapons).



## Risk Management

To reduce the risks associated with SALW storage to a level as low as reasonably possible, those responsible for SALW stockpiles can:

1. Reduce weapon stocks.
2. Improve the physical infrastructure of weapon storage.
3. Develop security plans and procedures, and ensure that personnel are trained to implement these plans and procedures.

It may be difficult, however, to put all three of these risk reduction processes into effect in contexts where resources are scarce. Instead, it may be necessary to prioritize certain risk reduction measures, allocating scarce resources to certain measures rather than others. In this regard, the IATGs recommend a risk reduction process that is incremental and proceeds through a series of Risk Reduction Process Levels (RRPL) (see accompanying OGN on the IATGs). There are three main RRPLs, and the aim is for the gradual improvement of PSSM processes, going from Level One (the lowest and least resource intensive) to Level Three (the highest and most resource intensive). The RRPL concept is not included within ISACS, but is particularly useful in resource scarce settings as a way of guiding the user to deal with the most important (and least resource intensive) issues first. For this reason, in this OGN, the use of the RRPL concept is also recommended when dealing with SALW storage.

## Risk Reduction Process Level One

RRPL Level One is the minimum acceptable level, involving minimal investment of resources. It is very important that there is a zero-tolerance policy in regard to non-compliance with Level One measures. Furthermore, this policy should also be enforced at all levels of management. Level One measures are primarily intended to reduce the probability of an incident, such as the loss of SALW stock, and can be divided into three main areas:

### 1. Fire prevention and fire-fighting

Fire is a significant risk, often due to poor procedures including cooking, smoking,

and rubbish burning. Safety measures will significantly reduce the chances of fire occurring within the weapons storage area due to human activity. Although a fire in an armoury is unlikely to cause an explosion (unless combustible or explosive material has been improperly stored there) there is a risk that weapons will be damaged. SALW can also be more easily stolen from a burned down building that is no longer secure. To counter this, procedures should be put in place that allow a fire-fighting plan to be rapidly implemented. Lack of a plan can lead to panic, multiple casualties, and the substantial loss of weapons stocks. For further information see IATG 02:50 Fire Safety.

## 2. Physical security

Weapons may be lost due to theft. Therefore, at Level One, there must be some form of physical security of weapons stocks. The aim of physical security is to reduce both (a) the probability of an incident occurring, and (b) the severity of the incident, by a combination of the following factors (see ISACS 05:20 Section 09:20):

- Deterring and reducing any attempted incursions or internal theft.
- Prevent any attempted security breach from outside.
- Immediately detect a security breach or threat.
- Increase the time required to remove weapons illegally from the storage area.
- Allow security forces to assess the scale of any security breech or threat and make the appropriate response.
- Allow time for guarding forces to react to the attempted security breech/theft and to take appropriate action.

At a minimum it is recommended that the physical security levels for small unit stores are adopted as a Level One measure. Small unit stores differ from larger-scale depot storage, and include weapons held in police stations and military barracks. These facilities are often continuously occupied by armed personnel and have their own security systems in place. In such circumstances, the physical security of weapons should be achieved by the use of an armoury, a secure room, or, for small locations, a secure cabinet (see ISACS 05:20 Section 10). For more information on gun cabinets and safes, see Annex A.



In some circumstances, especially where units are mobile, it may also be appropriate for small unit storage to use forms of mobile storage built into ISO containers or their equivalent. This is similar to the field storage of ammunition discussed in IATG 04.10.

## 3. Accounting and stock taking

At Level One, there must be some form of accounting and stocktaking by quantity in order to identify loss or theft. The exact form of such a stocktaking process can vary, but the minimum information that must be recorded includes:

- The number of weapons being held within the national stockpile.
- Detailed information on the weapons.
- The physical location of weapons stockpiles.
- The condition of weapon stockpiles.
- The designation of the weapons, according to the following seven categories:

Operational weapons: Those weapons required to support routine training and operations of the military, Police, and other state security organisations during internal security operations, peace support operations, external conflict or war.

Operational replacement weapons: These are a necessary stockpile to replace:

- Lost weapons.
- Weapons under repair or maintenance.
- Anticipated weapons losses during operations.

Reservist weapons: These weapons are necessary to support the training and operations of reservist armed forces when these are mobilised for internal security operations or external conflict or war.

Training Weapons: Those weapons required to support the initial training of military, police or other state security organisations at training establishments.

Experimental weapons: This usually involves small quantities of newly designed weapons for trial and evaluation purposes.

Weapons awaiting disposal: Weapons which are surplus to requirements or

stockpiles of seized, captured or surrendered weapons awaiting destruction. This can occasionally be a large, temporary problem during demobilisation, disarmament and reintegration (DDR) programmes at the end of conflicts involving non-state armed groups.

Production weapons: These are weapons awaiting commercial sale to other state parties (not normally part of the national stockpile and may be under the control of a licensed civilian manufacturer).

For further information, see ISACS 05:20, sections 6 and 11.1.

It is strongly recommended that all of the RRPL Level One measures outlined above are adopted as the minimum acceptable standards for weapons storage.

## Risk Reduction Processes Level Two and Level Three

Other risk reduction measures should be adopted on a case-by-case basis, following the results of a risk assessment and subject to resource availability.

RRPL Level Two involves greater investment in safety measures than Level One. Level Two measures may also take longer to put into effect than the simpler Level One actions. Level Two measures will help to manage risk by addressing both the probability of the incidence and the severity of the outcome. In terms of SALW storage, this may include the provision of enhanced fencing and the protection of armouries. At Level Two, the installation of anchored and secure weapons racks, electronic stock control measures and Class 2 or 3 fencing should also be used.

RRPL Level Three involves measures that require a significant investment of resources. The full application of Level Three measures will ensure that a safe, secure, effective and efficient conventional weapons management system is in place, and is in line with international "best practice." This will include full provision of the security measures set out in this OGN, including things such as intruder alarm systems. It may not be possible to immediately obtain full Level Three status, and it may be more appropriate to first aim for comprehensive attainment of Level One across the board, before then adopting some Level Two measures. This incremental approach is also preferable to having one 'showcase' location at Level Three, with other locations then being unable to meet even Level One standards.

The following section outlines relevant measures at Level Two and Level Three.

## 1. The location of SALW stockpiles

Stockpiles of SALW should be located as near as possible to the location where they will be needed. However a number of other factors should also be taken into account:

- A stockpile risk assessment.
- Requirements for access.
- The estimated time for external security assets to deploy to the site in the event of an incident.
- Local planning and environmental issues.
- Local infrastructure.
- The number of security personnel required at a specific location e.g., locations with natural defensive features such as rivers or caves may require a smaller security staff than locations in urban areas.

Dispersing different weapons throughout different sites will help to reduce the chances of total stock loss through attack and sabotage. Generally speaking, the following weapons stockpiles may be dispersed among a number of appropriately located local stockpiles:

- Operational weapons (with units).
- Training weapons (with training establishments).
- Production weapons (at production facilities).

The following types of stockpile would normally be held at a centralized storage location:

- Operational replacement weapons.
- Reservist weapons.
- Experimental weapons.
- Weapons awaiting disposal.

For further information on stockpile locations, refer to ISACS 05:20, Section 7.

## 2. Stockpile security management in depots

In addition to the Level One physical security measures outlined above for small unit storage, the following Level Two and Level Three measures are required for large-scale weapons storage areas (depots), where hundreds or thousands of weapons may be stored.

When dealing with SALW depots, the following physical security principles should be applied:

- Physical security systems should be derived from an effective risk assessment.
- The physical security measures should be built into any new storage facility at the design stage.
- Weapons must be stored separately from ammunition (see the accompanying OGN on ammunition storage).
- Particularly hazardous weapons such as MANPADS should be disassembled and essential components (e.g. batteries, launch control units/gripstocks) stored at separate locations (unless operational necessity requires them to be assembled).
- An effective perimeter security infrastructure must be in place.
- Access shall be controlled at all times, and restricted to authorised personnel only.
- Only vetted personnel with security clearance should be permitted to work at the facility.
- Personnel working in the weapons storage facility must receive appropriate training in applicable security regulations, SOPs (Standard Operating Procedures), and security planning. Refresher training should be conducted at regular intervals.
- Temporary personnel/visitors must be accompanied at all times.

Furthermore, the following should be taken into account when determining the physical security requirements for each depot:

- The types of weapons and other weapon components to be protected.
- The location and type of weapons storage facility.
- The usefulness of the weapons (or other assets) to non-state and terrorist actors.
- The monetary value of the weapons or other assets.
- The needed level of protection against such threats (this should be the subject of a cost/benefit analysis).

### Physical Security of Buildings and Structures

The structure of buildings where SALW are stored should be of robust enough construction to minimize the possibility of forced entry through the walls, roof/ ceiling, floor, windows, gates and doors. The building structure should conform to the specifications in Table 2 below.

*Table 2: Armoury specifications*

| Ser | Element | Material | Dimensions | Remarks |
|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) |
| Walls | | | | |
| 1 | New/ existing | Reinforced concrete | 250mm | |
| 2 | | Solid bonded brickwork or masonry | 325mm | |
| 3 | | Cavity walls of dense concrete block, brick or stone | 275mm | Excluding the cavity |
| 4 | | External leaf of cavity | 100mm | |
| 5 | | Internal leaf of cavity | 175mm | |
| 6 | Reinforcement for existing thin or cavity wall | Increase the internal leaf material thickness | Up to 275mm | Walls that do not comply with Ser 1-5 |
| 7 | Reinforcement for existing solid walls | Additional material bonded to the existing thickness | Up to 325mm | |

| | | | | |
|---|---|---|---|---|
| 8 | Wire mesh re-enforcement | Directly to the wall at 300/400mm centres with mild steel washers and proprietary fixings or resin anchors, each sheet should be butt jointed | 2.3mm wire thickness and of 50mm x 20mm maximum mesh size | |
| 9 | | To steel angle frame of not less than 50mm x 50mm x 3mm thick, with cross rails at not more than 1.2 metre centres to form an internal lining cage | | |
| Roof/ceiling | | | | |
| 10 | New/existing | Solid re-enforced concrete tied into the walls. | 150mm | Roof edge not less than 120mm |
| 11 | | Vaulted brickwork or masonry | 300mm | |
| 12 | Reinforcement for existing roof | Upgrading with re-enforced concrete | Up to 150mm | For roof that does not comply with Ser 10-11. |
| 13 | Wire mesh re-enforcement | Secured to the floor joists using washers or proprietary steel clips held by screws of not less than 10 gauge giving a penetration into timber of at least 60mm at not more than 300mm centres.<br>The mesh must be adequately bonded to the walls. | 4.5mm thickness and 50mm x 20mm maximum mesh size | |
| Floors | | | | |
| 14 | New/existing | Solid reinforced concrete, tied to the walls | 150mm | When this forms part of the floor for any other part of the building this required thickness need extend only as far as the armoury |
| 15 | | Vaulted brickwork or masonry | 300mm | |
| 16 | Reinforcement for existing concrete/brick floor | Add additional concrete flooring material | Up to 150mm | |
| 17 | Reinforcement for existing timber floor | Added sheet steel flooring, secured to the joists of the floor by screws not less than 10 gauge giving penetration into timber of at least 60mm at not more than 300mm centres. | 3mm | |
| 18 | | Substantial internal wire reinforcement, covered by 18mm wood panels and secured as per 17(c) | 2.3mm thickness and 50mm x 20mm maximum mesh size. | Mesh to be bonded to walls |
| Doors and gates | | | | |
| 19 | Doors | Doors shall be made of steel or solid hardwood with steel on the outer face | | Doors and gates that provide access to where small arms and light weapons are stored must be robust enough to prevent forced entry. |
| 20 | Doors and gates | Frames must be rigidly anchored so as to prevent disengagement of the lock bolt by prying or jacking the door frame | | |
| 21 | | hinges should be located on the inside and should be of the fixed pin security type or equivalent | | |

Source: ISACS 05.20 Section 10.

Windows and other openings in weapons storage buildings should be kept to a minimum and should be equipped with security bars or grilles equipped with appropriate locks. Inside weapons storage areas, and at Level Two, SALW that are not packed into transport cases or other containers should be individually stored in weapons storage racks to facilitate counting, stock checks, inventory management, and the rapid detection of theft. Weapons storage racks, which may be locally manufactured, should be constructed and installed in such a manner as to prevent easy removal of the whole rack. Bolts should be used to secure storage racks to the wall and/or floor and should be spot welded or otherwise secured in order to prevent their easy removal. If the weapons storage area is not equipped with an Intrusion Detection System (see below), the weapons should be secured to the racks by chains or steel cables secured by padlocks. The chains or steel cables are normally passed through the trigger guards of the weapons.

All facilities used to store stockpiles of SALW should have a wall or fence to identify the boundary of the protected or restricted area. The type of fence used should reflect the type of threat faced (e.g., terrorist, criminal, vandalism etc.), but will also vary contingent on the resources available. The level of protection provided by a fence depends on three factors:

- The height.
- The construction.
- Any material used to increase its performance or effectiveness (e.g. topping with razor wire, perimeter intruder detection systems (PIDS), lighting or closed circuit television (CCTV) systems).

Fences are graded as Class 1 to 4 depending on the level of protection they provide, Class 1 providing the least protection and Class 4 providing the most (see Table 3 below and Figures 2 - 5 in Annex B). As explained in the accompanying OGN on the IATGs, Class 2 and 3 fencing is a Level Two measure, while Class 4 fencing is appropriate at Level Three.

*Table 3. Security fence classification*

| Class | Description | Dimensions | Remarks |
|---|---|---|---|
| (a) | (b) | (c) | (d) |
| 1 | Used to mark a boundary and can be expected to delay a determined intruder only for a short time | 1.5m minimum height | Provides the minimum security |
| 2 | An anti-intruder fence that offers a degree of resistance to climbing and breeching by an opportunist, unskilled intruder that is using materials and breaching items readily at hand | Typically around 3 m high | Supported by other perimeter security systems such as PIDS or CCTV |
| 3 | An intermediate security barrier designed to deter and delay a resourceful intruder equipped with a limited range of hand tools. The design and construction provides resistance to attempts at climbing and breeching. It provides a good balance between delay to intrusion and cost | Typically around 4 m high | Supported by other perimeter security systems such as PIDS or CCTV |
| 4 | A high security barrier designed to offer the maximum deterrence and delay to a skilled, determined and well equipped intruder. It is constructed to offer a high degree of resistance to breaching and climbing. These fences provide the highest level of deterrence and delay to intrusion but are expensive to construct. | Typically around 5 m high | Supported by other perimeter security systems such as PIDS or CCTV |

Drainage structures, pipes, culverts and water passages that breach or run under the perimeter security fencing should have a cross-sectional area no greater than 0.25m$^2$. If the cross-sectional area is any greater, then these structures, pipes etc. should be blocked at either end by security grilles or bars. Furthermore, zones clear of vegetation should be established and maintained for a minimum distance of 4 metres inside the security fence and 10 metres outside.

Where possible, perimeter fences around buildings and structures used to store SALW should also be fitted with the appropriate Perimeter Intrusion Detection System (PIDS). PIDS is a generic term covering a wide range of technologies designed to give advance warning of an intruder gaining access to a secure area. By their nature, PIDS are designed to operate in a less favourable environment than internal intruder detection systems (see ISACS 05:20 Clause 9.9.5). Depending on the type and complexity of the system being considered, PIDS should be regarded as an RRPL Level Two or Three Measure. All detection systems employed should strike a balance between detection capability (sensitivity) and unwanted or nuisance alarm rates (e.g. false alarms caused by birds or other animals or high winds etc.). PIDS are designed to be more weatherproof than internal alarm systems. All alarm signals both internal and external (perimeter) should be received at a central control/monitoring station from which a response force can be dispatched. This force must be capable of reaching the site of the alarm not more than 15 minutes after it has been triggered.

A range of PIDS could be considered for deployment including:

- Buried detection systems.
- Fence mounted systems.
- Electric fence systems.

- Field effect systems.
- Continuity monitoring systems.
- Free standing systems.
- Taut wire systems.
- Rapid deploy systems.

Specialist technical advice should be sought before a PIDS is procured as the suitability and performance of a specific PIDS will depend on a number of factors (e.g. operational requirements, specific conditions of the location of the site on which the system is deployed etc.). PIDS should not operate in isolation but be part of an integrated security system which includes additional physical security measures such as:

- Fences and walls.
- Visual Surveillance Systems (e.g. CCTV) (see ISACS 05:20 Section 9.10.3).
- Perimeter Illumination (see Table 4 below).
- Integration with site security procedures and the guard force. Notably, a guard and response force (which may include police, military or civilian security personnel) should physically check the security integrity of weapons storage areas during non-duty hours at both regularly prescribed and random intervals. The checks should be recorded and the records kept for a minimum of three months.

*Table 4. Specifications for perimeter illumination of weapons storage locations*

| Ser | Attribute | Specification |
|---|---|---|
| (a) | (b) | (c) |
| 1 | Intensity | Exterior and interior perimeter illumination must be of sufficient intensity to allow detection of attempted intrusion by the guard force |
| 2 | Points of access | All points of access (e.g. gates) through the perimeter fencing or walls must have direct illumination from above |
| 3 | Light switches | Light switches must be installed in such a manner that they are only accessible to authorised personnel |
| 4 | Back-up power | An automatic back-up generator and power system must be employed for high risk and high value weapons storage sites |
| 5 | Location | The perimeter illumination system must be located within the security perimeter (i.e. inside the perimeter security fence) thus making it difficult to sabotage and destroy |
| 6 | Direction | The light should be directed slightly outwards to shine towards the intruders whilst keeping the guard force in shadow and improving their night vision |

PIDS should undergo a comprehensive test at least every three months, to ensure the proper functioning of the alarm sensors and other components of the system. More information on perimeter security is also given in ISACS 05.20 Section 9.10.

## Control of access

At Level Two and Level Three, the components of a complete security system should not only comprise the physical security of the buildings and structures holding the weapons and perimeter security, but should also include:

### • Security regulations:

Comprehensive national regulations in the form of legislation, regulations, or statutory instruments for the stockpiling of SALW should be compiled at the national level. These regulations should be as clear and concise as possible so that they do not impose a disproportionate financial or administrative burden on those storing the SALW stockpile. The regulations should be:

- Published as a legal document.
- Freely available and sensitized to all appropriate personnel.
- Consistent, with no legal or operational contradictions.
- Applicable to all stockpiles of SALW within a state's jurisdiction.
- Regularly reviewed and updated.

### • A security plan:

A security plan is essential to the effective management of SALW stockpiles and should be based on the requirements of the national regulations mentioned immediately above.

### • Standard Operating Procedures (SOPs):

Detailed standard operational procedures are designed to back up the security regulations and local security plan by clearly defining operational procedures,

activities, collective and individual responsibilities. All personnel working at a weapons storage site should be trained in, and conversant with the SOP. Each location storing stockpiles of SALW should compile its own SOP because, although many aspects may be generic in principle, different sites will have procedures to be followed that are specific to that site. As a minimum, the SOP should contain the following information:

- The scope of instructions (i.e. what it covers).
- The individual official in charge of the location (by rank, name, location within the facility and telephone contact number).
- Details of any generic security threats.
- Names, functions and telephone numbers/call signs of those at the location with security responsibilities (e.g. security officers, safety officers, armaments officers, accounting officers, etc.).
- The individual terms of reference of all functions with security responsibilities (in simple unambiguous language).
- Access control policies.
- Policy for the control of security keys.
- Inventory and accounting procedures.
- Security procedures to be followed in different parts of the storage facility.
- Actions to be taken on the discovery of incursion, theft, loss or accounting inconsistences.
- Actions to be taken in response to alarm activation.

### • Access control procedures:

Strict access control should be applied to SALW storage areas. Some of these measures include Level One and Two measures such as control over keys and combination locks (see accompanying OGN on the IATGs). In addition, only authorized personnel should be allowed access to the weapons storage area. Personnel employed by and based at the weapons storage facility, whose duties require them to have access to the weapons, may be issued with a standing authorization. The standing authority will cease once the person concerned no longer requires access to the weapons as part of his/her duties. A list of standing authorities issued is to be kept indefinitely, regardless of whether or not they are still valid, by the authority responsible for security. Personnel not employed at the weapons storage facility, will require authorization, in writing, from the authority responsible for weapons security, for each time he/she requires entry into the weapons storage facility. A record will be kept by the security authority, indefinitely, of all visits. The record should have the following details:

- Name, address and contact details (of the visitor to the weapons storage area).
- Job title.
- Reason for visit.
- Date of visit.
- Time of entry to, and exit from, the weapons storage area.

Vehicles and individuals should be subject to random search on entry to, and exit from, the weapons storage area.

### • Staff vetting and selection:

All physical security and accounting systems can fail to prevent theft/loss or diversion of weapons if the staff lack motivation or are lax in their duties. Such incidents are more likely to occur if staff are poorly paid or trained. Poorly paid staff may also be more open to bribery or even actively participate in theft to supplement their income. To counter this, proper vetting (security checks) may help to identify those who potentially have sympathies or links with criminals or hostile groups. Personnel working at a weapons storage facility should:

- Not have a criminal record or have any associations with criminal/hostile groups.
- Receive adequate training on commencement of service (including SOP and the security plan) and receive refresher training at regular intervals.
- Receive adequate monetary reward from employment to provide for the basic needs of the staff member and their dependents.

## 3. Weapons accounting systems

In addition to the physical security and location of SALW stockpiles, inventory management is a fundamental component of stockpile management (see ISACS 5.20 Section 11.1). In addition to the information that should be collected as a

basic Level One requirement (see previous section on small unit SALW storage), at Level Two and Three, the following information should be held in a centralized national database controlled by an established national authority:

- Make.
- Model.
- Calibre.
- Serial numbers (unique manufacture and national numbers).
- Country of manufacture or most recent import.
- Current holding unit location.
- Date entered into account.
- Date transferred to another storage location.
- Record of modifications and repairs.

The information listed immediately above forms the basis of an effective weapons stockpile management system and helps to assess:

- Individual weapon locations.
- Future weapon procurements and supply requirements.
- Weapons movements.
- Requirements for weapons disposal (e.g. obsolete, surplus to requirements, unserviceable and uneconomical to repair etc.).

Checks and balances should be put in place to ensure that the personnel involved in the management of SALW stockpiles do not, at the same time, hold responsibilities that make it easier to steal or otherwise divert weapons whilst being able to hide these activities. In other words, those responsible for SALW management should not also be responsible for stock checks of weapons. The following safeguards should apply:

- The same personnel should not be responsible simultaneously for conducting storekeeping accounting and auditing functions.
- Personnel responsible for physically verifying the transfer of weapons should not be responsible for compiling the physical records of weapons transfers.
- Personnel responsible for weapons accounting should not participate in stock checks without direct supervision of storage personnel (this helps protect weapons accounting personnel from blame if discrepancies are found).
- Regular external audits of weapons stocks should be carried out by independent bodies.

An account must be maintained at each weapon storage facility and this account must record the same information for each weapon in storage. The weapons account should be in electronic form but may also be in hard copy, and must always be backed-up. Backups should be stored separately from originals to prevent the loss of all records in the event of fire or theft at the weapons accounting office. Weapon accounts should, preferably, be kept indefinitely, but the minimum period should be 20 years following the sale, transfer, destruction or demilitarization of weapons.

The daily management of the storage facility will be determined by the type of unit, organization and local procedures. However, the following general points should be applied:

- Weapons should be stored together by type, as this assists the inventory management process and stocktaking procedures.
- The essential working parts, bolts, breech blocks, should be stored separately from the weapons during long term storage.
- Locks securing crates, containers, cabinets, racks etc. containing weapons in long term storage should be sealed with official tamper disclosing tape, seals or other materials, in order to reduce the need to open them during stock checks.

Only authorized officials should remove SALW from storage areas. A system to positively identify and authenticate personnel authorised to remove weapons from storage areas must be developed and implemented. Such a system should include a register log, which can be easily cross referenced with the weapons account. As a minimum, the following information should be recorded:

- Name and signature of person removing the weapon(s).
- Date and time of issue and return of weapon(s).
- Calibre, make model and serial number of weapon(s) removed and returned.
- Purpose for which the weapon(s) were removed.

Weapons stocks must be verified on a regular basis against the local weapons account to identify discrepancies through loss or theft. These checks should be undertaken as follows:

- A physical stock check by quantity and type of weapons conducted on a daily basis for smaller volume unit storage, and on a weekly basis for larger volume depot storage.
- A minimum 10% sample physical stock check by serial number of the weapons held in stock on a weekly basis for smaller volume unit storage, and on a monthly basis for larger volume depot storage.
- A 100% physical stock check by quantity, type and serial number should be conducted every six months (regardless of the quantity of weapons in storage) or whenever the custody of keys is permanently transferred between an incoming and outgoing key custodian.
- A physical stock check by type and serial number on weapons assigned to specific personnel on a daily basis should take place.

Any suspected loss or theft of a weapon must immediately be reported to the appropriate authority which should immediately initiate an independent investigation by an individual or organization unconnected with the weapons management system. An investigation report should be compiled and should include the following information:

- Details of the lost/stolen weapon(s) to include:
  - Calibre.
  - Make.
  - Model.
  - Serial Number (unique manufacture and national numbers).
  - Country of manufacture or most recent import.
- Date, location and unit involved.
- Summary of circumstances of loss.
- Explanation of loss (e.g. negligence, theft etc.).
- Disciplinary and/or criminal action taken.
- Recommendations to prevent a re-occurrence.
- Date and location of recovery of the weapon(s) (if applicable).
- Summary of circumstances of recovery (if applicable).

Details of lost or stolen weapons should be maintained for a minimum period of 20 years by an appropriate national authority in case the weapon(s) are subsequently recovered. When processing inventory adjustments, no weapon loss shall be attributed to an accounting or inventory discrepancy unless an investigation has determined that the loss was not the result of theft.

## 4. Weapons disposal

The destruction of illicit and surplus SALW constitutes an important element of a comprehensive SALW control program (see ISACS 05.50). Destruction is an effective method of reducing the actual number of weapons on the illicit market, as well as the potential supply of weapons to the illicit market. Destruction, rather than sale overseas, is the recommended method of disposal of SALW which fall into the following categories:

- Handed in as part of a weapons collection program.
- Recovered from scenes of crime or from criminal elements (once no longer required as evidence).
- Otherwise declared to be illicit.

As part of an overall risk management approach, it is recommended that weapons falling into the above categories should be destroyed as soon as possible, once they are no longer required for evidentiary purposes. Weapons that are surplus to requirements by the armed forces (e.g. through downsizing of the armed forces, or replaced as obsolete weapons) may also be destroyed, especially when damaged beyond economic repair.

To ensure proper accounting, and to identify any losses or thefts during the destruction process, the following information on the weapons being destroyed should be recorded:

- Make.
- Model.
- Calibre.
- Serial number (unique manufacture and national numbers).

- Country of manufacture.
- Country of import (if it bears an import mark).
- Date of destruction.
- Location of destruction.
- Agency carrying out the destruction.

A record of the destruction should also be retained for a minimum period of 20 years, and preferably, indefinitely.

Destruction should render SALW, as well as their associated components, permanently inoperable (i.e., destruction of the barrel, frame or receiver, and side, bolt, cylinder or breech block). A number of different methods can be used and these vary in the level of training and resources required (see Table 5 below). As Table 5 indicates, methods such as burning, crushing, cutting, and casting weapons into cement, require only few resources and a limited training period. For example, with cutting methods, a single cut, well placed, can often destroy all these components as set out below:

- Semiautomatic pistols. One angled cut at about a 45°angle can cut through the chamber , slide, frame and trigger mechanism
- Revolvers. A single cut at a 45° angle can cut through the cylinder, frame and trigger mechanism. A separate cut might be needed for the barrel.

More resource intensive (i.e., Level Two and Level Three) methods, include shredding and smelting and recycling.

A number of hazards can also be encountered when destroying SALW:

- Ammunition in loaded weapons can function or cook off in heat.
- The heat of the furnace (if weapons are destroyed by methods involving heat).
- Toxic fumes (if heat is used for destruction of the weapons).
- Mechanical cutting machines used incorrectly or without adequate safety training causing injuries.
- Sparks and fragments of metal causing injuries during the cutting process.
- Mishandling of construction equipment used to crush weapons.

In addition to these hazards, it is important to note that, if weapons are recovered as part of a weapons collection program, it is entirely possible that various forms of explosive ordnance (EO) may also be handed in. None of the processes set out in Table 5 (with the exception of detonation), are suitable for the destruction of EO. It is therefore vital to have trained explosive ordnance disposal (EOD) personnel present during weapons collection programs.

Table 5. Alternative methods of weapon destruction

| Ser | Method | Description | Advantages | Disadvantages | Remarks |
|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) |
| 1 | Burning | A field expedient method using Kerosene. | Very public<br>Easy to account for weapons | Not very efficient or effective | |
| 2 | Casting in concrete blocks and burying | A field expedient method which | | Not very efficient or effective | The weapons could be dug up and recovered but this would be very labour intensive |
| 3 | Crushing by AFV | A field expedient which can also use large pieces of construction equipment | Very public<br>Easy to account for weapons | Not always effective<br>Weapons must be carefully inspected to ensure they have been rendered totally inoperative | |
| 4 | Band saw | Using an industrial metal band saw to cut up weapons into unusable pieces. Can be a Field or Industrial process, but may require equipment to be imported | Easy to train personnel to use | Needs good supervision to ensure all weapons are destroyed | |
| 5 | Hydraulic shears. | Using Hydraulic shears to cut up weapons into unusable pieces. Can be a Field or Industrial process, | Easy to train personnel to use<br>Faster than Ser 4 | May require equipment to be imported<br>Needs good supervision to ensure all weapons are destroyed | |
| 6 | Hydro-abrasive Cutting | Using high pressure water jets to cut up weapons into unusable pieces. Can normally only be Industrial process, | | Not so easy to train personnel to use<br>Will require equipment to be imported.<br>More expensive and less productive than other methods<br>Needs good supervision to ensure all weapons are destroyed | |
| 7 | Cutting torch of oxy acetylene or Plasma | Using an oxyacetylene or plasma high temperature cutting torch to cut up weapons into unusable pieces. Can be a Field or Industrial process | Easy to train personnel to use | Needs good supervision to ensure all weapons are destroyed | |
| 8 | Hand held or bench mounted rotating disc cutter | Cuts up weapons into unusable pieces. Can be a Field or Industrial process. | Easy to train personnel to use | Needs good supervision to ensure all weapons are destroyed | |
| 9 | Detonation | An expedient Field method using HE donor charges to destroy weapons. | Very public<br>Easy to account for weapons<br>Large numbers could be dealt with at one time | Requires a large amount of explosives<br>Requires a demolition ground<br>Requires EOD trained personnel | |

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|---|---|---|---|---|---|
| | | | | | |
| 10 | Shredding | This an Industrial method using industrial metal shredding technology. | It guarantees complete destruction of the weapons | Uses expensive machinery which needs to be imported. | |
| 11 | Smelting and recycling | This is an industrial process to melt the metal components in weapons using iron/ steel smelting furnaces (producing typically a temperature in excess of 2,700°F / 1,482°C. | This will produce complete destruction of the weapon. Large numbers of weapons can be dealt with in a short time | Can only be used where the facilities already exist. | |
| 12 | Welding for art | This can be used as a field process, welding them together to produce a work of art. | Very public results | It normally is only used by artists and destroys only a small number of weapons | |

There are a number of ways to reduce the risks involved in the destruction process. These include:

- Development, training and use of SOP reflecting safe working practices.
- Adequate training in all equipment used.
- Correct weapon handling (especially weapon unloading drills).
- Use of destruction equipment which is inherently safe.
- Use of appropriate personnel protective equipment (PPE) (e.g. goggles, helmets, hearing protection, gloves etc.).
- Effective management and supervision of staff.

In the event of an accident during the destruction process, the following actions should be carried out:

- Stop work immediately.
- Render on site first aid and medical treatment of casualties.
- Medical evacuation.
- Report and investigate the accident.
- Learning from accidents and taking the appropriate actions to prevent their re-occurrence.

# Conclusion

Poor weapons storage will not result in a catastrophic event such as an explosion if ammunition is not present. It may, however, increase the risk that weapons are stolen and used illegally. International best practice for weapons storage is drawn from the International Small Arms Control Standards (ISACS), but the complete adoption of these standards, particularly ISACS 05.20, comes with significant expense. As the cost of meeting the full standards may be prohibitive, this Operational Guidance Note (OGN) is intended to act as an aide memoire for the incremental application of the ISACS in resource scarce settings. To do this, it draws on the Risk Reduction Process Levels (RRPLs) outlined in the IATGs, where Level One is the lowest standard requiring the fewest resources, and Level Three is the highest, most resource intensive standard, that is fully compliant with international best practice.

## Annex A: Gun Cabinets and Safes

The following details are extracted from the 2005 UK Firearms Security Handbook, as recommended by ISACS 05.20.

### Cabinets

Cabinets which may be considered suitable for the security of firearms, shotguns and ammunition should be expected to provide the resistance equal to a sheet steel body of not less than 2mm, formed by either folding, continuous welding or a combination of these methods. The frame should be designed so that the door, when closed, can resist attempts to force it inwards. Doors should be formed from the same material with ribs welded to the inside of the door to prevent the flexing or bending of the door when closed. Hinges should be internally fitted. Doors should be secured with padlocks, with staples the same strength as the lock. Full length doors for rifles/shotguns should be fitted with two locking devices.

When ammunition or firing mechanisms are to be kept separately from the firearms, a smaller cabinet of similar construction or a separately lockable container, either as an extension of the cabinet, or internally fabricated, can be manufactured.



### Safes

An ammunition safe.

Assuming they are physically capable of containing a firearm, commercially manufactured safes may be considered suitable for the securing of firearms. Even early models, if tight and in good condition, can provide physical protection. The following considerations should be applied as appropriate:

- Safes weighing less than 1,000kg should be secured in accordance with the manufacturer's instructions, or in the case of one already possessed, that from a manufacturer or safe engineer.
- Safes have a considerable floor loading implication. Advice must be sought for any proposal to fit a safe other than on a solid ground floor.
- To protect those safes with thinner plate backs, they must always be installed with the back against a solid wall or be built into a wall or recess to prevent attack at the rear.
- Where the safe is secured by driven bolt work, a single key lock or dial lock (either combination or digital) is often provided.
- Unless there is some particular requirement, double locking is not necessary.

# Annex B: Class One to Class Four Fencing

**Figure 2:** *Class One Fencing*

A Class 1 chain linked fence height 2.9 metres high, constructed with chain link fabric and topped with barbed wire topping. The supporting posts are either of reinforced concrete or tubular steel set in concrete foundations. The chain link does not hold intruder detection owing to its construction. BS 1722 part 2.

**Figure 3:** *Class Two Fencing*

A Class 2 Anti Intruder fence 2.9 metres high constructed with welded mesh fabric and topped with barbed wire systems.

BS1722 Part 10.



**Figure 4:** *Class Three Fencing*

A Class 3 welded mesh fence which complies with BS 1722 part 14. The fence is 4 metres in height, and is constructed using narrow aperture welded mesh to resist climbing and cutting and is topped with barbed tape/razor wire concertina.

**Figure 5:** *Class Four Fencing*

A Class 4 high security welded mesh fence to BS1722 Part 14 standard. It is 4.8 metres high including barbed tape/ razor wire topping. It is constructed using narrow aperture welded mesh with an additional layer up to 3 metres in height.


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# Incremental Steps towards the International Small Arms Control Standards

Peace and Security Department

African Union Commission