

This MANPADS Handbook has been produced by Saferworld, in co-operation with the government of the United Kingdom. It has been compiled with the generous financial support of the governments of Australia, the United Kingdom and the United States of America. It is intended as a practical resource for arms export licensing officers in Wassenaar Arrangement participating states and elsewhere.

For a full list of Acknowledgements please see the inside back cover.

# 1

## Characteristics of MANPADS





# 1

## Characteristics of MANPADS

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## 1.1

## General specifications and manufacturers

### What are MANPADS?

Man-Portable Air Defence Systems (MANPADS) are shoulder-fired surface-to-air missiles (SAMs). They are designed to be operated by a single person or a small team of people and are deployed against aerial targets. MANPADS vary in size and capability. They are defined in the Wassenaar Agreement, *Elements for Export Controls of Man Portable Air Defence Systems* (agreed at the 2003 Plenary and amended at the 2007 Plenary) as:

- 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.

[This definition (along with the entire *Elements*) was adopted by the Organisation for Security and Co-operation in Europe at its 423rd meeting in 2004.]

### Types of MANPADS

There are three general types of MANPADS which can be identified by their guidance system, located in the individual missiles:

- **Infrared MANPADS** are designed to 'home in' on a heat source of an aircraft. They utilise passive guidance systems (i.e. they do not emit signals thus making them more difficult to be detected by a targeted aircraft using countermeasure systems). These MANPADS first came into operation in 1967 with the US Redeye. Since they are relatively easier to operate, infrared MANPADS are seen as the MANPADS of choice for terrorists. There are four 'generations' of infrared MANPADS, dependent upon their technological advancement, with the later generations being less susceptible to counter-measures, such as flares. Infrared MANPADS are often colloquially referred to as 'fire-and-forget' missiles, with reference to their ease of use. The US' *Redeye* and *Stinger*, the Soviet *SA* series of MANPADS and the Chinese *HN-5* are all examples of infrared MANPADS missiles.
- **Command line-of-sight MANPADS** are operated by a 'gunner' who visually acquires the target using a magnified optical sight and then uses radio controls to guide the missile to the target. These missiles first went into use in 1968. They are less susceptible to standard countermeasure systems than earlier generation infrared missiles, but they require highly trained and skilled operators. The UK's *Blowpipe* and *Javelin* are both examples of command line-of-sight missiles.
- **Laser beam rider MANPADS** use lasers to guide the missiles to the target. They can engage aircraft from all angles and are also more resistant to countermeasures than earlier generation infrared missiles. These missiles first came into use in 1975. Examples include Sweden's *RBS-70* and the UK's *Starstreak*.

Typically, MANPADS are made up of the following components:

- a tube-like launcher;
- a rocket-propelled missile incorporating some form of guidance system;
- a thermal battery; and
- a reloadable gripstock.

[For pictures of MANPADS and their components see Section 2.]

Complete MANPADS can be disassembled into their component parts for purposes of transportation or storage, and then reassembled, with relative ease.

## Manufacturers

In the initial years of MANPADS manufacture, only the major producers of conventional arms (such as, the US, the UK, Russia and China) were involved in their production. However, in recent years the list of MANPADS producers has grown to over thirty states. Since MANPADS are not easy to produce, this growth in producers can be attributed to three main factors: firstly, the manufacture of variants of original MANPADS models by other countries; secondly, contracted assembly and licensed production deals; and thirdly unauthorised reverse engineering.

The major state manufacturers of MANPADS are:

COUNTRY	DESIGNATIONS
China	<i>HN, QW and FN series</i>
France	<i>Mistral</i>
Russia/CIS	<i>SA Series (both the Strela and Igla systems)</i>
Sweden	<i>RBS-70</i>
United Kingdom	<i>Blowpipe, Javelin, Starbust and Starstreak</i>
United States	<i>Stinger series, and Redeye</i>

[For a full list of MANPADS producers, including the producers of MANPADS derivatives and their products see Annex I.]

The most common types of MANPADS in existence are the Soviet SA-7 and the US' *Stinger*, both of which were widely proliferated during the Cold War era.

## 1.2

### MANPADS uses

MANPADS are a threat to slow-moving aircraft – such as helicopters – and to fixed wing aircraft in the landing and take-off phases. Fast jet aircraft may be less vulnerable as their high speed reduces their engagement windows.

Over the past four decades, MANPADS have become an integral part of many states' military arsenals. However,

the possibility of generating a significant impact with only one shot also makes them attractive to terrorists and non-state actors.

MANPADS have been widely available for several decades. However, the 2002 attempt by an Al-Qaida-affiliated group to down an Israeli civilian airline in Mombasa, Kenya focused international attention on the potential dangers posed by MANPADS and the threat that can arise when they fall into the wrong hands. Prior to the 2002 attack, there had been other incidents in which MANPADS were used in non-combat situations in attempts to down civilian aircrafts, sometimes resulting in loss of life. These included an alleged (unsuccessful) attempt in 2001 by the Basque separatists, ETA, to shoot down a plane carrying the Spanish Prime Minister. According to the US Government, at least 45 civilian aircraft worldwide have been shot down using MANPADS since 1975.

## 1.3 Demand for MANPADS and patterns of supply

### Legal ownership and trade

Due to the grave risks posed by MANPADS in the wrong hands, they should only be stocked by fully accountable and responsible government forces. Small Arms Survey has estimated that around 105 states stockpile MANPADS, with the more sophisticated models being the most widely held.

Although the global, legal, trade in MANPADS is on a lesser scale than that of small arms, individual consignments of MANPADS tend to be of a far greater value. This is due to much higher unit costs, with individual systems selling for up to \$20,000 for more recent versions. For instance, according to the Small Arms Survey, US exports of *Stinger* missiles to Greece, Italy and the UK in 2000 was equivalent to the value of France's combined small arms exports and imports for the same year. However, an accurate value for the global legal trade in MANPADS is not available, in part, due to limited transparency on the part of exporting states.

### The grey and black markets

Unlike other major missile systems which tend to be bulky and require significant operational support and expertise, the basic features of MANPADS of being lightweight and easily concealable, also lend them to easy trafficking within the grey and black markets. The situation is not helped by the fact that earlier MANPADS models are relatively inexpensive, with some earlier models going for as little as \$5,000 each on the black market. As of 2008 it was estimated that at least 42 non-state groups, including the Revolutionary Armed Forces of Colombia (FARC) and Al-Qaida, have arsenals of MANPADS.

Since the 1970s, non-state groups have obtained MANPADS from a variety of sources. Historically, the major source of MANPADS for these groups has been through covert grey-market transfers from governments. In the 1980s the US, through its Central Intelligence Agency (CIA), provided *Stinger* missiles to the Afghan Mujahedeen and trained them in their operation during the Afghan war.

Of the approximately 1000 *Stingers* supplied, between 200 and 600 are estimated as remaining unaccounted for. The supply of MANPADS by governments to non-state groups has carried on beyond the Cold-War era. In 1998, Eritrea was accused of supplying SA-series missiles to a Somali warlord and similarly, Iran is alleged to have supplied MANPADS to Hezbollah.

MANPADS also make their way into the black market through poorly secured stockpiles, corruption and losses on the battlefield. Of the 500,000 to 750,000 MANPADS believed to be in existence at the moment, it is believed that over 90 per cent of these are contained in government arsenals, leaving up to 75,000 MANPADS unaccounted for. However, many of these government arsenals are not fully secured, creating the possibility of loss through theft or the actions of corrupt officials. For instance, following the collapse of Saddam Hussein's government in 2003, looters made away with an estimated 5,000 MANPADS from Iraq's weapons depots.

The grey market, often facilitated by the actions of arms brokers and traffickers currently remains the most viable source of MANPADS for non-state actors. In 2000, Liberia, which was at the time under a UN arms embargo, reportedly received SA-series MANPADS via arms traffickers. Furthermore, according to UN investigators, Russian officials in the mid-1990s were suspicious of false end-user certificates presented by arms traffickers working on behalf of UNITA rebels and refused the request to transfer a consignment of *Igla* missiles.

Another highly publicised incident involving the illicit transfer of MANPADS concerned the arms shipment from North Korea seized by Thai officials in December 2009 which, according to an official Thai Government report, contained "five crates of MANPADS SAM[s]". The report would appear to confirm North Korea as an illicit source of shoulder-fired, surface-to-air missiles, however, information on the manufacturer and model of the missiles remains unavailable. Also in recent years, UN investigators have documented shipments containing dozens of MANPADS from Eritrea to Somalia in violation of a long-standing UN arms embargo.

Whether all existing MANPADS in the hands of unauthorised groups remain operational is debatable. Although some have asserted that the life-span of a typical MANPADS battery cannot exceed 10 years, (rendering useless many that have been in the possession of non-state groups for two or more decades), others claim that MANPADS batteries have a shelf-life of up to 20 years, and possibly even longer. Moreover it is possible that non-state groups could seek illicitly to acquire new batteries and other components in order to maintain the operational effectiveness of MANPADS in their possession.

# 2

## Identification of MANPADS



# 2

## Identification of MANPADS

This section contains a variety of photographs of MANPADS. These are intended to aid customs and licensing officials in recognising MANPADS. Where possible, photographs of MANPADS components are also provided.

Further details of MANPADS formerly and currently in production can be found in Annex I.

## 1. GROM

ORIGINAL MANUFACTURER: Zakłady Metalowe MESKO SA

COUNTRY OF ORIGINAL MANUFACTURE: Poland



GROM Launch Tube assembled



GROM Missile



GROM in use

## 2. RBS-70

ORIGINAL MANUFACTURER: Saab Bofors Dynamics

COUNTRY OF ORIGINAL MANUFACTURE: Sweden



RBS-70 in use



RBS-70 Launcher

### 3. Starstreak

ORIGINAL MANUFACTURER: Thales Air Defence Ltd

COUNTRY OF ORIGINAL MANUFACTURE: United Kingdom



Starstreak Missile



Starstreak Launcher (front view)



Starstreak Launcher (side view)

### 4. FN-6

ORIGINAL MANUFACTURER: China National Precision Machinery Import and Export Corporation (CNPMEIC)

COUNTRY OF ORIGINAL MANUFACTURE: People's Republic of China



FN-6 Missile and Launch Tube



FN-6 with close up on Thermal Battery

## 5. SA-14/Strela 3/Gremlin

ORIGINAL MANUFACTURER: Kolomna KBM

COUNTRY OF ORIGINAL MANUFACTURE: Russian Federation



SA-14 Launch Tube



SA-14 Missile



SA-14 Gripstock



SA-14 Battery Coolant Unit (BCU)

## 6. Stinger

ORIGINAL MANUFACTURER: Raytheon Missile Systems

COUNTRY OF ORIGINAL MANUFACTURE: United States



Stinger Launch Tube



Stinger Missile



Stinger Gripstock



Battery Coolant Unit (BCU)



Stinger Eject Motor

## 7. Anza MK-II

ORIGINAL MANUFACTURER: Institute of Industrial Control Systems (IICS)  
COUNTRY OF ORIGINAL MANUFACTURE: Pakistan



Anza Launch Tube and Missile

# 3

Special considerations  
when licensing  
transfers of MANPADS





# 3

## Special considerations when licensing transfers of MANPADS

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- 3.1** Implications of characteristics for licensing transfers
- 3.2** Critical elements of a thorough transfer and end-user risk assessment
- 3.3** Safeguards and follow-up of transfers
- 3.4** Transparency and accountability issues

## 3.1

# Implications of characteristics for licensing transfers

As described in Section 1, MANPADS were originally designed for use by ground forces against aerial attack. Compact and lightweight, but still able to bring down or severely damage aircraft, MANPADS have over the decades become integral features of most states' military arsenals.

Licensing officers should remain aware that these basic characteristics of MANPADS also make them greatly attractive to non-state actors and terrorist groups for deployment against both military and civilian targets for the following reasons:

- **Portability:** MANPADS are easily portable and concealable – some types of systems can easily be carried in a golf bag. This makes them attractive to terrorist and non-state groups who often receive their weapons through the illicit or grey markets and these are sustained by the ability of traffickers to smuggle weapons across international borders. The potential to smuggle MANPADS is further enhanced by the possibilities that exist for MANPADS to be relatively easily disassembled. Individual MANPADS components can then be trafficked separately and reassembled once they arrive at their final destination.

- **Lethality:** Individual MANPADS missiles contain warheads which vary in size from 1 to 2kg and typically detonate upon target impact. A minority of MANPADS also have proximity fuses activated by radar or lasers. Successive variants and generations of MANPADS are also less susceptible to countermeasures (e.g. flares and infra-red jammers). Although designed for military use, MANPADS have been used by non-state actors, particularly against helicopters in Iraq and Afghanistan. They could also be used by terrorists or extremists against civilian aircraft, especially during take-off and landing; over 45 civilian aircraft have been shot down since the 1970s resulting in over 850 lives lost. A MANPADS attack on a civilian aircraft could also have a significant impact on the commercial aviation industry and regional economies.
- **Affordability:** A recent study by the Federation of American Scientists observed that individual MANPADS can be bought for as little as \$5,000 on the illicit market. This price undoubtedly refers to earlier MANPADS models. However, even recent MANPADS models can be obtained for only a few thousand dollars more – a price tag that is certainly not beyond the reach of most terrorist and non-state groups. The affordability of MANPADS means that unscrupulous arms dealers have been willing to provide them on the black market, giving rise to a number of cases where individuals have been arrested while endeavouring to arrange the sale of MANPADS to non-state groups.
- **Ease of use:** All MANPADS require some level of training to use. Command-line-of-sight MANPADS require the greatest degree of training due to the requirement that the operator must visually acquire and maintain sight of the target during operation. Infrared MANPADS, on the other hand, are relatively simpler to use and require a lesser

degree of training in order to operate them successfully. MANPADS training has even been passed on by out-of-work servicemen. In Iraq, it is believed that many jobless soldiers joined the insurgency following the fall of Saddam Hussein's regime, taking with them their MANPADS training.

■ **The limited impact of counter-measures:**

Countermeasures such as decoy flares and Direct Infra-Red Countermeasures have proved effective in military environments. However, these countermeasures would cost a prohibitive sum to implement widely throughout the civil aviation industry. In any case, later generations of MANPADS (which can be found in the arsenals of many states) are less susceptible to these countermeasures, making them even more attractive to non-state groups and terrorists than the older models. Transfer licensing officers ought therefore to be alert to the risk of diversion that accompanies these later generation MANPADS.

## 3.2

# Critical elements of a thorough transfer and end-user risk assessment

Because of the risks posed by MANPADS and their attractiveness to unauthorised end-users – including irresponsible governments, non-state armed groups and terrorists – it is vital that state authorities consider MANPADS transfer licence applications – for the export,

import, brokering, transit or transshipment of MANPADS and related components – with the utmost care. This is particularly important in cases where importing or transit states are situated near conflict zones or in regions where controls may be weak.

The Wassenaar Arrangement 2007 *Elements for Export Control of MANPADS* (see Annex II) highlight the need for assessing the risk of diversion of MANPADS within a recipient country. However, in assessing transfer applications, licensing officials should be aware that there are a variety of potential ways in which MANPADS can enter into the possession of illicit end-users, as follows:

- **Fraudulent applications:** Applications may appear to be from a legitimate (government) end-user but may, in fact, be destined for an undisclosed (and unauthorised) recipient. For example, as mentioned in Section 1, Russian officials in the mid-1990s were suspicious of fraudulent end-user certificates presented by arms traffickers who were actually working for National Union for the Total Independence of Angola (UNITA) rebels, and so refused the transfer.
- **Diversion as part of the transfer process:** Licensing authorities should be vigilant to the possibility that MANPADS may be diverted either en route to the purported end-user or soon after they have reached their stated destination. It was claimed in media reports that Swedish RBS-70 MANPADS were purchased by companies in Singapore only to pass them on to Iran during the Iran/Iraq war.
- **Diversion from holdings:** Licensing officials should also consider the possibility that a potential recipient may not be able to maintain secure control over, and management

of, MANPADS in their national holdings thereby increasing the likelihood that MANPADS will be diverted due to loss, theft, corrupt sale or seizure. Between 2008 and 2009, corrupt Peruvian security officials allegedly sold at least seven Strela and Igla MANPADS from Peruvian military stockpiles to buyers for the Revolutionary Armed Forces of Colombia (FARC).

## Identifying and assessing key risk factors

For the licensing authorities of an exporting state, when assessing an application for the export of MANPADS, some proposed arms transfers can be ruled out because the proposed destination is a country or end-user that is prohibited for national foreign policy reasons or according to national or regionally agreed criteria for the export of MANPADS. Similarly, the proposed end-user may be proscribed through the application of a UN Security Council or other arms embargo to which the exporting state is committed.

Beyond this, serious consideration of any MANPADS transfer licence application should incorporate a systematic risk assessment that includes the following:

- **Checks for forged or inauthentic documentation, such as import certificates, end-user documentation, or transit state approvals.** Licensing officers should remain vigilant to the possibility that documentation submitted in support of a MANPADS transfer application may be forged, corruptly approved, or not authorised according to recognised procedures. Often this can be revealed by elementary checks using available resources such as the internet and telephone. However,

unless the licensing officials are thoroughly familiar with the required documentation, approved signatories, and regulatory procedures of the transit authorities, destination country and end-user, some direct confirmation will be necessary. This may necessitate enquiries and/or visits by relevant embassy officials in the transit and/or destination countries.

- **An assessment of the credibility of the stated end-user and end-use.** Officials should consider the possibility that a transfer of MANPADS may be re-exported shortly after they have reached their destination. Licensing officials should therefore assess the legitimacy of the requirement for MANPADS on the part of the stated end-user; any history of supplying arms to non-state armed groups and terrorists should also be considered. If the stated end-user of a prospective MANPADS transfer is dubious, for any reason, the risk of diversion is likely to be increased. Indicators to this effect have been identified by the US Government as part of its 'Blue Lantern' end-use monitoring programme and include:
  - reluctance or evasiveness by the applicant or purchasing agent to provide full end-use or end-user information;
  - scant or dubious background information on the end-user;
  - where the end-user is unfamiliar;
  - where the end-user declines usual follow-on service, installation, warranty, spares, repair or overhaul contracts;
  - where the arms requested appear excessive or inconsistent with the end-user's needs; and
  - where the end-user appears unfamiliar with the product or its use.

- **An assessment of the risks of diversion posed by all parties involved in the proposed MANPADS transfer.** Licensing officials should routinely assess the credentials of all those involved in the transfer, checking for suspicious circumstances such as the involvement of agents and/or intermediaries with no apparent connection with the end-user or legitimate interest in the process. Licence applications involving intermediaries should only be considered where the intermediaries in question are operating with the express authorisation of a legitimate governmental authority. Evidence of past involvement in diversion activities should also be sought. However, concerns should relate not only to the risks that any of these might knowingly facilitate diversion, but also that they may take inadequate precautions against diversion or not report suspicions to relevant authorities.
- **An assessment of risks of diversion posed by the proposed transfer shipment arrangements.** A prerequisite for such an assessment is a requirement by the licensing authorities that relevant information on transportation arrangements are submitted with the transfer application, or, if not known at the time of licence application, before the transfer takes place. Transit or transshipment through several countries or involving a number of different companies is a potentially significant indicator of diversion risk. This is particularly so if the states involved have questionable transfer controls or are situated near regions of conflict or instability.
- **An assessment of the possible demand among unauthorised users for MANPADS.** Licensing officials should take steps to ascertain whether there is potential demand for MANPADS among any groups in, near, or connected to the transit and destination countries.

Although this may require a certain level of local and regional knowledge that is not readily available to most licensing officials, such assessments can be improved by multi-agency consultations and by engaging with licensing authorities from other states.

- **An assessment of the risk that the authorised end-user may put the MANPADS to unauthorised uses.** As detailed in Section 1 MANPADS are primarily designed for use against aerial threats, in particular military aircraft, including helicopters. Unauthorised use of MANPADS would, however, include their use against non-military aerial targets, including passenger aircraft. Accordingly, licensing officials should consider the reliability of the end-user and assess any likelihood that, for whatever reason, they may seek to use MANPADS against civilian targets, or that they may facilitate their onward transfer to others who would use MANPADS for such purposes.
- **An assessment of the reliability of controls in the importing country.** The level and reliability of controls on MANPADS in the recipient country is a crucial consideration in any transfer licence assessment. Risks of diversion of MANPADS within the destination country are reduced if there are strong and reliable controls on MANPADS in transit, in storage and in an operational context. In addition to stringent physical security measures for storage and transit (e.g. separation of missiles from launch tubes) rigorous accounting procedures are also necessary. Such measures provide reassurance against unauthorised re-export, as well as of diversion from the end-users holdings. Licensing officers should therefore undertake background checks – possibly with the involvement of embassy officials in the recipient country – with regard to the facilities available and procedures that are in place within the recipient country.

- **An assessment of the risks that a transfer of MANPADS would increase the potential for diversion or irresponsible transfer of the end-user's existing MANPADS holdings.** Licensing officials ought to be aware that, following the import of MANPADS, existing holdings may be rendered surplus-to-requirements and thus may become more vulnerable to diversion. This is because often the stockpile management and security of surplus or less-valued arms attracts less attention and resources. Further, the end-user may be willing to sell these surplus weapons to undesirable recipients. These potential implications of any MANPADS transfer should be assessed at the licensing stage and safeguards put in place e.g. provisions for destruction or other safe disposal of MANPADS rendered surplus by subsequent transfer.

A proper risk assessment is required for each MANPADS transfer licence application and such an assessment needs to systematically address each of the above categories of risk. National officials responsible for such risk assessments will require clear and elaborated guidelines on the factors (including those outlined above) that need to be taken into account, including how to gather and assess the relevant information.

### 3.3

## Safeguards and follow-up of transfers

### Safeguards

In addition to the conduct of a full risk assessment, there are practical steps that licensing authorities can implement at the licensing stage in order to reduce the likelihood of MANPADS transfers going astray. These include measures already agreed by the *Wassenaar Arrangement* in the *2007 Elements for Export Control of MANPADS*:

- **Use only individual licences for MANPADS transfers.** Given that some licences (for example General Licences) can include a variety of open-ended commitments as regards the transfer of strategic goods, the *Wassenaar Arrangement 2007 Elements for Export Control of MANPADS* specify that participating states should not use these for the transfer of MANPADS. Instead states should only authorise the transfer of MANPADS using individual licences together with the appropriate range of end-use guarantees and other safeguards.
- **Ensure the application of comprehensive criteria.** When considering applications for the transfer of MANPADS, participating states are required to evaluate them "in the light of the *Wassenaar Arrangement Initial Elements*, the *Wassenaar Arrangement Elements for Export Controls of Man Portable Air Defence Systems* and the *Wassenaar Elements for Objective Analysis and Advice Concerning Potentially Destabilising Accumulations*

of *Conventional Weapons*. In particular states should consider the potential for the diversion of MANPADS to unauthorised end-users (including terrorists and non-state armed groups) either during transfer, or from the end-user, and the likelihood that MANPADS will be misused (e.g. used against civilian targets).

- **Seeking and verifying government end-user undertakings.** When considering licensing the transfer of MANPADS, Wassenaar participating states are expected to seek provision of an official end-user certificate by the importing government authorities. States licensing the transfer of MANPADS should also verify the authenticity of any end-user undertaking they receive, even when it is provided by a government.
- **Licensing transfers only to governments and their authorised agents.** The Wassenaar Arrangement 2007 *Elements for Export Control of MANPADS* also require that authorisations for transfers of MANPADS be considered only in cases where the recipient is a government or an agent that has been specifically authorised by a government. Accordingly transfers should not be authorised to non-government end-users or through intermediaries that do not have the express authorisation of governmental authorities.
- **The imposition of a no re-export clause.** The Wassenaar Arrangement 2007 *Elements for Export Control of MANPADS* specify that participating states engaging in the transfer of MANPADS should obtain a guarantee that the recipient government will not re-export MANPADS except with the prior consent of the exporting government. There are several ways in which this can be done, for example: it could be written into the contract signed by the recipient government or its authorised

representative; it could be included as part of the end-use undertakings given by the importing government; or it could be the subject of a separate legal undertaking on the part of the recipient. Regardless of the chosen form, any re-export commitment must have legal force and the exporting authorities must ensure that the recipient is aware that any breach will result in clear sanctions or penalties.

## Mitigating the risk of diversion

Wherever a thorough risk assessment by national licensing authorities indicates that a proposed MANPADS transfer poses a substantial risk of diversion – either before or after it reaches its authorised end-user – the governments concerned (whether they are regulating exports, imports, transit, transshipment or brokering activities) should either refuse the licence or take concrete steps to reduce the risk to an acceptable level. Crucially, due to the sensitivity of MANPADS and their attractiveness to non-state armed groups and terrorist organisations, the threshold of acceptable risk associated with their transfer should be set at a very low level.

Even where risks of diversion are considered low it may not be advisable to seek to mitigate particular types of risk factors. For example, the application for an export licence should be refused when there are substantial risks arising out of:

- fraudulent or misleading documentation;
- a lack of credibility of end-user or end-use;
- seriously inadequate controls on the part of the end-user or within the recipient state; or

- where there is a clear risk of the future breakdown of controls.

For other types of risk factors, it may be possible to impose restrictions on the transfer licence, to build relevant capacities, or enhance controls to significantly reduce the identified risks. For example:

- risks of diversion during the shipment process could be reduced by imposing restrictions on shipping agents, on transportation routes and transshipment arrangements, or by employing shipment tracking and the provision of delivery verification documentation;
- risks of diversion while in transit within the recipient country could be reduced by requiring specific measures – such as insisting that the shipment is accompanied by an armed escort – to ensure safe delivery;
- risks of diversion due to slightly inadequate stockpile management and/or security by the end-user, could potentially be mitigated by capacity-building assistance; and
- risks of knock-on effects on MANPADS rendered surplus by the transfer could be reduced by agreements to ensure destruction or other safe disposal of the weapons concerned.

Several of these risk reduction measures (such as capacity-building initiatives) could involve a significant delay in authorising the MANPADS transfer. Nevertheless, wherever it is possible to undertake such efforts lasting benefits could potentially accrue.

## Follow-up of transfers

There are a number of provisions relating to follow-up of MANPADS transfers which are potentially useful for detecting instances where MANPADS have been lost, seized or diverted. It is vital, however, that transferring states take adequate steps at *the licensing stage* to ensure that follow-up of MANPADS transfers is feasible and that the recipient has confirmed a willingness to comply with all necessary measures.

In the first instance, states that license the transfer of MANPADS should impose a clear obligation upon the recipient government to immediately inform the transferring government authorities should there be any instance of compromise, unauthorised use, loss, or theft of any MANPADS.

Following an authorisation to transfer MANPADS, there remains a responsibility on the part of the exporter to follow-up on the transfer through post-export checks. These checks can serve a variety of functions:

- they can assist the exporting state in ensuring that the systems are being used in accordance with the terms set out in the export licence;
- they can help to deter possible future diversion by the importer thus impeding grey market transfers;
- whether positive or negative, the outcomes can help to inform future licensing decisions.

In order to prevent the diversion of MANPADS, a fully effective post-export control system should include a range of mechanisms that, together will work to prevent the diversion and misuse of MANPADS as well as their undesirable re-export, as follows:

- **Delivery verification:** Requiring a Delivery Verification Certificate (DVC) from an importing state places a responsibility on that state to provide proof that the shipment had reached its authorised destination and end-user. The verification certificate should contain details of the serial numbers, make, model, and quantity of the MANPADS received. These requirements place responsibility upon the importing state to maintain adequate controls over its stock.
- **Confirmation of end-use:** If a state that has licensed the transfer of MANPADS has reason for concern regarding their ultimate situation or end-use, a preliminary step in attempting to confirm or dispel these concerns could be to issue a request for written confirmation of the location, end-user and use of the items in question. Should the information provided prove unsatisfactory, the original transferring state could then seek to implement more strident measures, such as an on-site inspection.
- **On-site inspection:** By reserving the right to carry out on-site inspections, an exporter government will be in a better position to definitively confirm that a MANPADS consignment has been received by the named end-user and that the recipient's control and stockpile management procedures are being appropriately followed. In carrying out such inspections a state that has licensed the transfer of MANPADS will be able to check that the MANPADS are stored in conditions that are "sufficient to provide for the highest standards of security and access control", for example by ensuring that missiles and their firing systems are being stored and are transported separately with reassembly taking place only when the systems are to be used. Finally, in situations where exporting states find that the end-user, contrary to the information accrued during

the licensing process, is not capable of executing "prudent control over MANPADS" (as set out in the Wassenaar *Elements for Export Control of MANPADS*), they should assist the recipient government in "disposing of excess stockpiles, including buying back previously exported weapons".

- **Full licensing assessment of a request to re-export MANPADS:** Should a state that has previously licensed the transfer of MANPADS receive a request from the recipient to approve the re-export of the same items, the relevant licensing authorities should conduct a thorough assessment of the re-export. In doing so, they should use the same criteria and licensing tools as are used in determining the advisability of direct exports of MANPADS from their jurisdiction. In order to conduct such an assessment the original transferring state will require the authorities of the re-exporting state to provide all relevant information relating to the transfer including as regards the end-user, the involvement of any brokering agents, transit routes and the shipping arrangements. Should the re-export be considered inadvisable, the original transferring state should consider taking steps to prevent the unauthorised re-export of the MANPADs e.g. by offering to buy-back the items or to assist in their destruction.

## 3.4

# Transparency and accountability issues

The Wassenaar Arrangement 2007 *Elements for Export Control of MANPADS* contain a range of provisions aimed towards improving transparency amongst participating states in terms of MANPADS transfers, thereby promoting more responsible and accountable transfer decisions.

The Elements require that “exporting governments... report transfers of MANPADS as part of the Arrangement’s Specific Information Exchange reporting requirements”. Fulfilling this provision is a crucial element in the collective effort to prevent MANPADS proliferating amongst unauthorised end-users. By sharing information on MANPADS transfers, all participating states are made aware of the MANPADS procurement activities of particular states. Thus exporting states are better equipped to assess whether any future requirement for MANPADS is legitimate.

Further, the requirement that “exporting governments... share information regarding potential receiving governments that are proven to fail to meet the [specified] export control guarantees and practices” ties in closely with the need for Wassenaar Arrangement participating states to notify denials of conventional weapons transfers. Timely provision of such information should help participating states to assess, more accurately, the advisability of MANPADS transfers to particular end-users. At the same time, the requirement that states “share

information regarding non-state entities that are or may be attempting to acquire MANPADS” can also play a vital role in efforts to prevent MANPADS falling into the hands of unauthorised end-users.

Finally, although not explicitly called for in the 2007 *Elements*, Wassenaar participating states should also take part in exchanges that include sharing information on efforts undertaken to ensure responsible and effective controls on the transfer of MANPADS.

The importance of participating states exchanging comprehensive and accurate information on MANPADS transfers and procurement activities of states and potential illicit end-users cannot be overstated. Moreover the undertaking “to review progress related to the implementation of these steps regularly” is essential if efforts to prevent the irresponsible spread of MANPADS is to keep pace with the activities and strategies of those who would seek to procure them illegally.

# 4

## Best practices for the transfer control of MANPADS





# 4

## Best practices for the transfer control of MANPADS

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- 4.1** National legislation/regulations for controlling transfers of MANPADS
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- 4.3** Stockpile management and security assessment prior to transfer
- 4.4** Transportation of MANPADS during the transfer process
- 4.5** Post-export checks
- 4.6** Reporting procedures
- 4.7** Conclusion

This section is based upon the responses received to a questionnaire circulated to Wassenaar Arrangement participating states plus several other non-participating states. A copy of the questionnaire can be found at Annex III. Nineteen states responded to the request for information.

## 4.1

# National legislation/ regulations for controlling transfers of MANPADS

### Legal framework for MANPADS control

*The 2007 Wassenaar Elements for Export Control of MANPADS require states to apply strict national controls on the export of MANPADS.*

- Most states control transfers of MANPADS under the same laws and regulations that govern the transfer of strategic goods/military weapons or equipment in general.
- At least one state has particular legislative provisions that apply to the brokering, transit and transshipment of MANPADS.
- A number of governments assert that they do not export MANPADS.

### Control List Categories

- In most states, items that constitute MANPADS (including components, spares, technology, etc) are set out in clearly defined lists controlled under national law.
- Most states appear to control MANPADS as 'military items' within the military list categories that cover light weapons or bombs, torpedoes, rockets and missiles.
- At least one state's national arms export controls deal with MANPADS as an individual category of weapons.

### Controls on MANPADS components

*The 2007 Wassenaar Elements assert that national export controls of MANPADS shall apply to complete systems, components, spare parts, models, training systems and simulators.*

- In most states, controls on MANPADS components are the same as for complete systems.
- A few states operate simplified procedures for the transfer of minor components.
- At least one state requires that information regarding the ultimate use of MANPADS components for transfer is included in the licence application.

### Eligibility for MANPADS transfer licences

*According to the 2007 Wassenaar Elements, decisions to permit MANPADS exports should be made by the*

*exporting government only to foreign governments or to agents specifically authorised to act on behalf of a government.*

- Most states will only consider applications for the transfer of MANPADS directly to foreign governments or through a government-authorised intermediary.
- In a number of states, only 'approved' or registered companies may apply for a licence to transfer controlled technologies or military equipment, including MANPADS.
- In a few states, only applications for the international transfer of MANPADS that are presented by state-owned companies or companies acting on behalf of the government will be considered.

## 4.2 Export licensing procedures

### End-use and delivery verification documentation

*The 2007 Wassenaar Elements assert that decisions to permit MANPADS exports should be made only after the presentation of an official end-use certificate certified by the Government of the receiving country. The exporting government should also satisfy itself of the recipient government's willingness and ability to provide written verification of receipt of MANPADS shipments.*

- The majority of states require that an application for export of MANPADS is accompanied by an end-user certificate signed by the competent authorities of the government of the receiving state. One state has specific types of end-user certificate that must be completed in the event of an application to transfer MANPADS.
- A number of states require specific confirmation of delivery of MANPADS to the authorised end-user. Often this takes the form of a Delivery Verification Certificate.
- One state requires that a MANPADS exporter must produce a statement confirming that:
  - the relevant consignment will be shipped only to the purchaser and to an address specified in writing by the purchaser;
  - upon dispatch of the goods, the applicant will require from the purchaser a Delivery Verification Certificate confirming that the consignment is now governed by the importing country's regulations for foreign trade; and
  - after receipt of the Delivery Verification Certificate, the applicant will forward the Certificate to the national Ministry of Justice.
- One state requires a report to be provided by the end-user confirming relevant details concerning the takeover of MANPADS by the end user. These details include:
  - description of goods;
  - quantities (both when crossing the border and on receipt by the end-user);
  - the date, location and parties involved in the handover of the material;
  - confirmation that the delivery was completed including signatures of recipients; and

- other relevant technical details such as serial numbers, where they are available.

## Authentication of documents

- Most states take steps to authenticate information provided by the declared end-user, for example, through diplomatic channels and/or by enlisting the assistance of any diplomatic presence on the ground in the destination country.

## Re-export assurances

*The 2007 Wassenaar Elements assert that prior to authorising MANPADS exports the exporting state should assure itself of the recipient government's guarantees:*

- *not to re-export the MANPADS without the prior consent of the exporting government;*
  - *to transfer MANPADS and their components to any third country only in a manner consistent with the terms of the formal government to government agreements, including co-production and licensing agreements for production, and contractual documents concluded and implemented after the adoption of the Wassenaar Elements, as well as end-use assurances and/or extant export licences;*
  - *to inform promptly the exporting state of any instances of compromise, unauthorised use, loss or theft of any MANPADS.*
- Most states require that recipients of MANPADS give an undertaking that they will not re-export the materiel without the prior written consent of the original exporting states.

- A few states impose a blanket prohibition on the re-export of MANPADS from a recipient state.
- One state requires that a signed and stamped no-re-export undertaking is provided by the end-user and/or their competent export control authorities stating that, except when authorised by prior written approval of the exporting state, the recipient undertakes not to:
  - re-export;
  - sell; or
  - lend the MANPADS/components or associated equipment to any other person, or otherwise dispose of the items concerned.

## Competent authorities

*The 2007 Wassenaar Elements assert that decisions to permit MANPADS exports will be made in the exporting government by competent authorities at senior policy level.*

- A number of states ensure that applications for authorisation of MANPADS transfers are considered by a specially designated authority, in consultation with other advisory authorities. These include relevant Ministries and government agencies such as: the Ministry of Foreign Affairs; Ministry of Economy/Finance; Ministry of Trade; Ministry of Defence; Ministry of Interior; Ministry for International Development; Intelligence Services; Internal Security Services; and Customs Services.

## Transfer licensing and risk assessment

According to the 2007 Wassenaar Elements, decisions to authorise MANPADS exports will take into account:

- *the potential for diversion or misuse in the recipient country;*
  - *the recipient government's ability and willingness to protect against unauthorised re-transfers, loss, theft and diversion; and*
  - *the adequacy and effectiveness of the physical security arrangements of the recipient government for the protection of military property, facilities, holdings, and inventories.*
- Most states assess MANPADS transfer licence applications on a case-by-case basis.
  - Most states appear to take account of a range of factors when assessing MANPADS transfer licence applications. Many of these criteria are set out in existing regional and multilateral arms transfer control agreements such as the 2007 Wassenaar Arrangement Elements for Export Control of MANPADS, the 2004 Wassenaar Arrangement Elements for Objective Analysis and Advice Concerning Potentially Destabilising Accumulations of Conventional Weapons and the 2007 Wassenaar Arrangement Best Practice Guidelines for Exports of Small Arms and Light Weapons (see Annex II for the full text of these agreements) and include considerations such as:
    - whether the recipient country is under arms embargo by the United Nations;
    - whether the proposed transfer is consistent with international agreements and arms control initiatives;
    - the internal situation of the recipient country;

- the stability of the region in which the recipient is situated;
  - whether the recipient country is involved in an armed conflict;
  - whether the recipient country is capable of effectively managing and controlling the MANPADS including the potential for loss or theft of MANPADS;
  - the potential for the unauthorised third-party transfer of MANPADS including unauthorised re-export or in-country diversion to unauthorised users;
  - the ability of the recipient to effectively field, support, and appropriately employ the system;
  - the risk of adverse economic, political, or social impact within the recipient nation; and
  - the degree to which security needs can be address by other means.
- Some states follow the 2008 EU Common Position on Arms Exports when considering MANPADS transfer licence applications.
  - At least three states have specific guidance/directives for licensing officers that are of particular relevance when assessing an application for the export of MANPADS.
  - One state encourages potential exporters to provide specific evidence (e.g. of a photographic or documentary nature) of an end-user's previous compliance with relevant undertakings to support a transfer licence application.
  - Several states undertake a pre-licensing risk assessment including checks on all entities relevant to the proposed MANPADS transfer. One state conducts thorough checks on the proposed handling, transport and possible temporary storage arrangements during the transfer process to ensure the items will be transferred to the

envisaged government end-user without any chance of diversion.

- A few states consider the legitimacy of the need for MANPADS by the recipient country and one undertakes an assessment of the existing air-defence capabilities of the receiving state, in consultation with their Ministry of Defence.
- States' approaches to licensing the transit of MANPADS through national jurisdiction is variable: some states take the same approach to licensing transit as is taken with regard to export of MANPADS; others consider factors such as the export licensing capabilities of the country of origin when assessing an application for transit of MANPADS.

### 4.3

## Stockpile management and security assessment prior to transfer

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*According to the 2007 Wassenaar Elements, the exporting government should satisfy itself of the recipient government's willingness and ability to implement effective measures for secure storage, handling, transportation, use of MANPADS, and disposal or destruction of excess stocks to prevent unauthorised access and use. (For the detailed list of requirements set out within the Wassenaar Elements see Annex II).*

- A few states consider the adequacy and effectiveness of the physical security arrangements of the recipient government before licensing the transfer of MANPADS.
- At least three states seek detailed written assurances from the recipient regarding the extent of the security measures that exist in relation to the safeguarding of MANPADS.
- One state would offer technical assistance to improve the security arrangements for MANPADS within a potential recipient country should there be any doubt regarding their adequacy.
- One state carries out the assessment of stockpile management procedures through the analysis of existing regulations and practices within the recipient country and also through on-site inspections (including visits to storage facilities and interviews with relevant personnel). Special emphasis is placed on: the adequacy of the physical security arrangements; the training of military personnel; and the adequacy of inventory management and accounting control procedures relating to all stored MANPADS from the point of receipt until they are expended or decommissioned.
- Another state will consider exporting MANPADS only upon receipt of an undertaking from the recipient government agreeing to specific security requirements. The recipient must agree to store the missiles in magazines that are at least equivalent in strength to the provisions that exist within the army of the exporting state. The recipient must also agree to comply with specified requirements for lighting, doors, locks, keys, fencing, and surveillance and guard systems. Specific requirements are agreed upon and installed prior to delivery of the missile system. Representatives from the military of the exporting state are

expected to be allowed to verify the security measures and procedures that have been established for implementation of these requirements. A complete physical inventory is required each month and an inventory by serial number is required quarterly.

## 4.4 Transportation of MANPADS during the transfer process

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*The 2007 Wassenaar Elements assert that the exporting state should satisfy itself of the recipient government's willingness and ability to transport MANPADS in a manner that provides for the highest standards and practices for safeguarding sensitive munitions in transit. When possible, missiles and firing mechanisms should be transported in separate containers.*

- A number of states operate restrictions regarding the transportation of MANPADS within or across national territory, for example, requiring contractors to obtain specific authorisation before engaging in such activities.
- Other states prohibit the use of non-governmental transportation companies for the physical transportation of MANPADS relying, instead on the armed forces to carry out such tasks.

- In a few states, regulations that apply to the transportation of dangerous goods are also applicable to the movement of MANPADS.
- Other states have detailed provisions for secure transportation of MANPADS including some or all of the following: the use of locked and sealed containers; vehicle locking requirements; security requirements and responsibilities including supervision by designated personnel; procedures for checking shipments to ensure seals remain in-tact; requirements to restrict access to weapons; separation of missiles and launch and control equipment during transit; and precautions to be followed during use of road vehicles.
- One state requires that delivery of MANPADS to the recipient takes place without any intermediate stops during the transfer process.

## 4.5 Post-export checks

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*The 2007 Wassenaar Elements assert that the exporting state should reserve the right to confirm, when and as appropriate, fulfilment by the importing state of its end-use assurances with regard to MANPADS and their components (this may include on-site inspections of storage conditions and stockpile management or other measures, as agreed between the parties). Exporting states should also ensure that inventories of MANPADS stockpiles are conducted by the recipient state, upon delivery and at regular intervals afterwards.*

- A few states envisage the possibility of follow-up checks within a recipient country as regards the storage conditions and stockpile management facilities pertaining to MANPADS that have been transferred.
- One state ensures that export contracts stipulate the right of the exporting authorities to carry out on-site inspections of exported MANPADS at 48 hours notice.
- One state has in place a dedicated end-use monitoring programme which oversees the monitoring of the end-use of exported defence-related articles and services, including MANPADS, through agreed government-to-government programmes. The overall objective of the programme is to minimize security risks through compliance with arms transfer provisions covering shipment, receipt, use, and final disposition/disposal.

## 4.6

### Reporting procedures

*According to the 2007 Wassenaar Elements, exporting governments within the Wassenaar Arrangement will:*

- *Report transfers of MANPADS as part of the Arrangement's Specific Information Exchange reporting requirements;*
- *Share information regarding potential receiving governments that are proven to fail to meet their export control guarantees;*
- *Share information regarding non-state entities that are or may be attempting to acquire MANPADS.*

- Most states asserted that they would notify partner countries, via multilateral bodies such as the Wassenaar Arrangement, the UN, the OSCE and the EU, of any suspicious attempt to procure MANPADS.
- A number of states also mentioned that they would pursue any attempt to illegally acquire MANPADS through their own domestic law enforcement structures.
- One state requires its defence industry to notify any suspicious procurement activities.

## 4.7

### Conclusion

It is clear from the above analysis that states operate a range of good practices in relation to MANPADS transfer control. Many of these good practices are echoed in provisions of the Wassenaar Elements for the Export Control of MANPADS.

- Those examples of best practice that are most widely adopted include:
  - the requirement that transfer licences are granted only to foreign governments or their specifically authorised agents;
  - the requirement that transfer licence applications must be supported by an official end-user certificate signed by the prospective recipient government;
  - a pre-licensing risk assessment including checks on all entities relevant to the proposed MANPADS transfer;

- a prohibition on the re-export of MANPADS or a prohibition on their re-export without the prior written consent of the original exporting state;
  - the requirement that the authorised end-user provides specific confirmation of delivery of MANPADS;
  - a level of control over transfers of MANPADS components that is comparable with complete systems;
  - authentication of information provided by the declared end-user through diplomatic channels and/or through consular agencies on the ground;
  - assessing the advisability of a MANPADS transfer against a broad range of objective criteria, including the potential for diversion or misuse;
  - the operation of restrictions regarding the transportation of MANPADS within or across national territory for example, requiring contractors to obtain specific authorisation or a prohibition on the use of non-governmental transportation companies;
  - the notification, to partner governments through multilateral bodies, of any suspicious attempt to procure MANPADS.
- Those examples of best practice which are, as yet, supported only by a handful of states include:
- a pre-licensing assessment of the adequacy and effectiveness of the physical security arrangements of the recipient government for the protection of military property, facilities, holdings, and inventories;
  - a pre-licensing assessment of a recipient's willingness and ability to implement effective measures for secure storage, handling, transportation and use of MANPADS;
  - the seeking of detailed written assurances from the recipient regarding the extent of the security measures that exist in relation to the safeguarding of MANPADS;

- reserving the right to confirm the recipient's fulfilment of any end-use undertakings through on-site inspections or other arrangements;
- the possibility of follow-up checks within a recipient country as regards relevant storage conditions and stockpile management facilities;
- allowing only 'approved' or registered companies to apply for a licence to transfer controlled technologies or military equipment such as MANPADS;
- the formulation of specific guidance/directives for licensing officers when assessing an application for the export of MANPADS;
- an assessment of the legitimacy of the need for MANPADS on the part of the recipient country.

Finally, there are a number other examples of emerging best practice – including provisions set out in the Wassenaar Elements – that are followed by only one or two states, if at all, but which could be more widely adopted.

- These emerging best practices include:
- the adoption of particular legislative provisions that are applicable to different forms of MANPADS transfer such as direct export, brokering, transit and transshipment;
  - the requirement that information regarding the ultimate use of MANPADS components for transfer is included in any licence application;
  - the requirement that specific types of end-user certificate must be completed in support of an application to transfer MANPADS;
  - the requirement that a report to be provided by the end-user confirming relevant details concerning the takeover of MANPADS by the end user;

- an assessment of the existing air-defence capabilities of the receiving state as part of an appraisal of the legitimacy of need for MANPADS;
- the potential to provide technical assistance to improve the security arrangements for MANPADS within a prospective recipient country;
- the assessment of stockpile management procedures through the analysis of existing regulations and practices within the recipient country and also through on-site inspections;
- the receipt of an undertaking from the recipient government agreeing to specific security requirements for MANPADS imports;
- an assessment of the recipient government's willingness and ability to implement effective measures for disposal or destruction of excess stocks to prevent unauthorised access and use;
- specific and detailed measures for secure transportation of MANPADS including: the use of locked and sealed containers; vehicle locking requirements; security requirements and responsibilities including supervision by designated personnel; procedures for checking shipments to ensure seals remain in-tact; requirements to restrict access to weapons; and the separation of missiles and launch and control equipment during transit;
- the delivery of MANPADS directly to the recipient without any intermediate stops;
- the provision of assistance to recipient governments not capable of executing prudent control over MANPADS with regard to the disposal of excess stockpiles, including buying back previously exported weapons.

# 5

## Annexes





# 5

## Annexes

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- I List of producers of MANPADS
- II Relevant guidelines of the Wassenaar Arrangement
- III MANPADS transfers: questionnaire

## ANNEX I

# List of producers of MANPADS

Indigenous Production <sup>1</sup>			Copies and Licensed Production <sup>2</sup>		
COUNTRY	DESIGNATION	PRODUCED	COUNTRY	DESIGNATION	PRODUCED
China	HN-5 [IR1]	1985–	Pakistan	Anza-MK I Anza-MKIB HN-5	1989–03
	HN-5A HN-5B HN-5C	1986–	N. Korea		
	QW-1 [IR2] [and variants]	1994–	Iran	Misagh-1	Prod. Complete
			Pakistan	Anza-MK II	1994–
	QW-2	1998–	Pakistan	Anza Mk III	
	QW-3	02/03–	Iran	Misagh-2	2006–
	QW-4 QW-11 QW-18				
FN-6 [IR2] FN-16	2009–				
France	Mistral-1 [IR3]	1988–00			
	Mistral-2	2000–			
Poland	Grom-1	1995–99			
	Grom-2 Piorun (Grom-M)	00–			
Japan	Type-91 Kin-Sam	1991–			
South Korea	Chiron (Singung)	2005–			

<sup>1</sup> Countries which claim to produce MANPADS indigenously without external assistance.

<sup>2</sup> Variants of the indigenously produced MANPADS listed opposite on the left.

Indigenous Production			Copies and Licensed Production		
COUNTRY	DESIGNATION	PRODUCED	COUNTRY	DESIGNATION	PRODUCED
Russia/ CIS	SA-7 (Strela-2; Grail) [IR1]	1970–	China	HN-5	
			N. Korea	SA-7	Late '70s
			Bulgaria	SA-7	
			Romania	CA-94M	Out of production
	SA-7b (Strela-2M)		Bulgaria	Strela-2M	
			Egypt	Ayn-al-Saqr	
			Serbia	SA-7 (Strela-2M/A)	
	SA-14 (Strela-3; Gremlin) [IR2]	1974–	N. Korea	SA-14	
			Bulgaria	SA-14	
	SA-18 (Igla; Grouse) [IR3] [and variants]	1983–	N. Korea	Igla	
Viet Nam			Igla-1		
Bulgaria			Igla-1E	1981–93	
SA-16 (Igla-1; Gimlet) [Variants Igla-1E; Igla-1M]	1981–	N. Korea	Igla-1		
		Poland	Grom-1 <sup>3</sup>		
		Singapore	Igla-1, Igla		
SA-24 (Igla-S; Grinch)	2001–				
Sweden	RBS-70 [LBR] RBS-70 MK-II RBS-90 Bolide [LBR]	1975– 1991– 2002–	Pakistan	RBS-70	
UK	Blowpipe [CLOS] Javelin [CLOS] Starburst [CLOS] Starstreak [LBR]	1968– 1984–93 1990–89 1993–96			

<sup>3</sup> Said to be similar to the Igla-1.

Indigenous Production			Copies and Licensed Production		
COUNTRY	DESIGNATION	PRODUCED	COUNTRY	DESIGNATION	PRODUCED
United States	FIM-43A Redeye [IR1]	1967–			
	FIM-92A Stinger [IR2]	1981–87	Europe <sup>4</sup>	European Stinger Project Group (Fliegerfaust-2)	1983–00
			Germany	Tripod-Adapted Stinger (TAS)	
			Switzerland	Stinger	
			Denmark	Dual-Mounted Stinger (DMS)	
			N. Korea	Unauthorised Copy	
	FIM-92B Stinger [IR3]	1983–87 1987–			
FIM-92C Stinger (Stinger-RMP)					
Stinger Block 2 [IR4]					

**Key to guidance systems** (Source: CRS Report for Congress, 2004)

CLOS: Command Line-of-Sight      IR3: Infrared 3rd Generation  
 IR1: Infrared 1st Generation      IR4: Infrared 4th Generation  
 IR2: Infrared 2nd Generation      LBR: Laser Beam Riders

Component Production		
COUNTRY	DESIGNATION	PRODUCED
Israel	Red Sky Very Short-Range Air Defence System (VSHORAD) Red Sky-2 Short-Range Air Defence (SHORAD)	
Belarus	Partial/assembly production	
Turkey	Partial/assembly production of Stinger	
Ukraine	Upgrades of IR seekers in SA-16 missiles	
India	Overhaul of life-expired SA-16s	
Norway	Radar system for RBS	
Netherlands	Partial/assembly production of Stinger	Out of production

<sup>4</sup> Joint production venture consisting of: Germany, Greece, Netherlands and Turkey.

## ANNEX II

# Relevant guidelines of the Wassenaar Arrangement

## Elements for Export Controls of Man-Portable Air Defence Systems (MANPADS)

(Agreed at the 2003 Plenary and amended at the 2007 Plenary)<sup>5</sup>

Recognising the threats posed by unauthorised proliferation and use of Man-Portable Air Defence Systems, especially to civil aviation, peace-keeping, crisis management and anti-terrorist operations, Participating States affirm that they apply strict national controls on the export of MANPADS.

1. Scope
  - 1.1 These Elements cover:
    - 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.

<sup>5</sup> The text agreed in 2003 replaced the initial version of the Elements adopted in 2000. The revisions introduced in 2007 are shown in bold.

- 1.2 National export controls apply to the international transfer or retransfer of MANPADS, including complete systems, components, spare parts, models, training systems, and simulators, for any purpose, by any means, including licensed export, sale, grant, loan, lease, co-production or licensing arrangement for production (hereafter “exports”). The scope of export regulation and associated controls includes research, design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, servicing, modification, upgrade, modernisation, operation, use, replacement or refurbishment, demilitarisation, and destruction of MANPADS; technical data, software, technical assistance, demonstration, and training associated with these functions; and secure transportation, storage. This scope according to national legislation may also refer to investment, marketing, advertising and other related activity.
- 1.3 Any activity related to MANPADS within the territory of the producing country is subject to national laws and regulations.
- 2. Participating States will exercise maximum restraint in transfers of MANPADS production technologies and, while taking decision on such transfers, will take into account elements, stipulated in paragraphs 3.7, 3.8, 3.9 and 3.11.**
3. Control Conditions and Evaluation Criteria
- 3.1 Decisions to permit MANPADS exports will be made by the exporting government by competent authorities at senior policy level and only to foreign governments or to agents specifically authorised to act on behalf of a government after presentation of an official EUC certified by the Government of the receiving country.

- 3.2 General licences are inapplicable for exports of MANPADS; each transfer is subject to an individual licensing decision.
- 3.3 Exporting governments will not make use of non-governmental brokers or brokering services when transferring MANPADS, unless specifically authorised to on behalf of the government.
- 3.4 In order to prevent unauthorised use, producer countries will implement technical performance and/or launch control features for newly designed MANPADS as such technologies become available to them. Such features should not adversely affect the operational effectiveness of MANPADS for the legal user.
- 3.5 Exporting governments in the Wassenaar Arrangement will report transfers of MANPADS as part of the Arrangement's Specific Information Exchange reporting requirements.
- 3.6 MANPADS exports will be evaluated in the light of the Wassenaar Arrangement Initial Elements and the Wassenaar document “Elements for Objective Analysis and Advice Concerning Potentially Destabilising Accumulations of Conventional Weapons” and any subsequent amendments thereto.
- 3.7 Decisions to authorise MANPADS exports will take into account:
- Potential for diversion or misuse in the recipient country;
  - The recipient government's ability and willingness to protect against unauthorised re-transfers, loss, theft and diversion; and
  - The adequacy and effectiveness of the physical security arrangements of the recipient government for the protection of military property, facilities, holdings, and inventories.

3.8 Prior to authorising MANPADS exports (as indicated in paragraph 1.2), the exporting government will assure itself of the recipient government's guarantees:

- not to re-export MANPADS except with the prior consent of the exporting government;
- **to transfer MANPADS and their components to any third country only in a manner consistent with the terms of the formal government to government agreements, including co-production or licensing agreements for production, and contractual documents, concluded and implemented after the adoption of this document at the 2007 Plenary, as well as end-use assurances and/or extant export licences;**
- **to ensure that the exporting State has the opportunity to confirm, when and as appropriate, fulfilment by the importing State of its end-use assurances with regard to MANPADS and their components<sup>6</sup> (this may include on-site inspections of storage conditions and stockpile management or other measures, as agreed between the parties);**
- to afford requisite security to classified material and information in accordance with applicable bilateral agreements, to prevent unauthorised access or compromise; and
- to inform promptly the exporting government of any instance of compromise, unauthorised use, loss, or theft of any MANPADS material.

3.9 In addition, the exporting government will satisfy itself of the recipient government's willingness and ability to implement effective measures for secure storage, handling, transportation, use of MANPADS material, and disposal or destruction of excess stocks to prevent unauthorised access

<sup>6</sup> "End-use assurances with regard to MANPADS and their components" should be understood as their use only for purposes stipulated in the end-user certificate or any other document containing the obligations of the importing State.

and use. The recipient government's national procedure designed to attain the requisite security include, but are not limited to, the following set of practices, or others that will achieve comparable levels of protection and accountability:

- Written verification of receipt of MANPADS shipments.
- Inventory by serial number of the initial shipments of all transferred firing mechanisms and missiles, if physically possible; and maintenance of written records of inventories.
- Physical inventory of all MANPADS subject to transfer, at least once a month; account by serial number for MANPADS components expended or damaged during peacetime.
- Ensure storage conditions are sufficient to provide for the highest standards of security and access control. These may include:
  - Where the design of MANPADS permits, storing missiles and firing mechanisms in locations sufficiently separate so that a penetration of the security at one site will not place the second site at risk. Ensuring continuous (24-hour per day) surveillance. Establishing safeguards under which entry to storage sites requires the presence of at least two authorised persons.
  - Transport MANPADS in a manner that provides for the highest standards and practices for safeguarding sensitive munitions in transit. When possible, transport missiles and firing mechanisms in separate containers.
  - Where applicable, bring together and assemble the principal components – typically the gripstock and the missile in a launch tube – only 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 will be withdrawn from storage and

assembled; when systems are deployed as part of the point defences of high priority installations or sites; and in any other circumstances which might be agreed between the receiving and transferring governments.

- Access to hardware and any related classified information, **including training, technical and technological documentation (e.g. MANPADS operation manuals)**, will be limited to military and civilian personnel of the receiving government who have the proper security clearance and who have an established need to know the information in order to perform their duties. Any information released will be limited to that necessary to perform assigned responsibilities and, where possible, will be oral and visual only.
  - Adopt prudent stockpile management practices that include effective and secure disposal or destruction of MANPADS stocks that are or become excess to national requirements.
- 3.10 Participating States will, when and as appropriate, assist recipient governments not capable of executing prudent control over MANPADS to dispose of excess stockpiles, including buying back previously exported weapons. Such measures are subject to a voluntary consent of the exporting government and the recipient state.
- 3.11 Exporting governments will share information regarding potential receiving governments that are proven to fail to meet the above export control guarantees and practices outlined in paragraphs 3.8 and 3.9 above.
- 3.12 To enhance efforts to prevent diversion, exporting governments will share information regarding non-state entities that are or may be attempting to acquire MANPADS.

- 3.13 **Participating States will, when and as appropriate, provide to non-participating States, upon their request, technical and expert support in developing and implementing legislative basis for control over transfers of MANPADS and their components.**
- 3.14 **Participating States will, when and as appropriate, provide to non-participating States, upon their request, technical and expert assistance in physical security, stockpile management and control over transportation of MANPADS and their components.**
4. Participating States will ensure that any infringement of export control legislation, related to MANPADS, is subject to adequate penalty provisions, i.e. involving criminal sanctions.
5. The Participating States will exchange information and review progress related to the implementation of these steps regularly.
6. Participating States agree to promote the application of the principles defined in these Elements to non-**Participating States**.

## Best Practice Guidelines for Exports of Small Arms and Light Weapons (SALW)

*(Agreed at the 2002 Plenary and amended at the 2007 Plenary)*

### I. Participating States of the Wassenaar Arrangement,

*Having regard to the Initial Elements of the Wassenaar Arrangement; and in particular the objectives of:*

- (i) greater responsibility in transfers of conventional arms;
- (ii) the prevention of destabilising accumulations of such arms; and
- (iii) the need to prevent the acquisition of conventional arms by terrorist groups and organisations, as well as by individual terrorists;

*Bearing in mind the 2001 UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in SALW in All Its Aspects (UNPOA), and, where appropriate, the relevant provisions of the 2000 OSCE Document and other regional initiatives that Participating States are party to,*

*Affirm that they apply strict national controls on the export of SALW, as well as on transfers of technology related to their design, production, testing and upgrading,*

#### **And agree that:**

SALW exports will be evaluated carefully against the Wassenaar Arrangement Initial Elements and the Wassenaar document 'Elements for Objective Analysis and Advice Concerning Potentially Destabilising Accumulations of Conventional Weapons' and any subsequent amendments thereto. In particular:

1. Each Participating State will, in considering proposed exports of SALW, take into account:
  - (a) The need to avoid destabilising accumulations of arms, bearing in mind the particular circumstances of the recipient country and its region;
  - (b) The internal and regional situation in and around the recipient country, in the light of existing tensions or armed conflicts and details of the recipient within that country;
  - (c) The record of compliance of the recipient country with regard to international obligations and commitments, in particular on the suppression of terrorism, and on the non-use of force, and in the field of non-proliferation, or in other areas of arms control and disarmament, and the record of respect for international law governing the conduct of armed conflict;
  - (d) The nature and cost of the arms to be transferred in relation to the circumstances of the recipient country, including its legitimate security and defence needs and to the objective of the least diversion of human and economic resources to armaments;
  - (e) The requirements of the recipient country to enable it to exercise its right to individual or collective self-defence in accordance with Article 51 of the Charter of the United Nations;
  - (f) Whether the transfers would contribute to an appropriate and proportionate response by the recipient country to the military and security threats confronting it;
  - (g) The legitimate domestic security needs of the recipient country;
  - (h) The requirements of the recipient country to enable it to participate in peacekeeping or other measures in accordance with decisions of the United Nations, OSCE or other relevant regional organisations with a peacekeeping mandate;

- (i) The respect for human rights and fundamental freedoms in the recipient country;
  - (j) The risk of diversion or re-export in conditions incompatible with these Guidelines, particularly to terrorists.
2. Each Participating State will avoid issuing licences for exports of SALW where it deems that there is a clear risk that the small arms in question might:
- (a) Support or encourage terrorism;
  - (b) Threaten the national security of other States;
  - (c) Be diverted to territories whose external relations are the internationally acknowledged responsibility of another State;
  - (d) Contravene its international commitments, in particular in relation to sanctions adopted by the Security Council of the United Nations, agreements on non-proliferation, small arms, or other arms control and disarmament agreements;
  - (e) Prolong or aggravate an existing armed conflict, taking into account the legitimate requirement for self-defence, or threaten compliance with international law governing the conduct of armed conflict;
  - (f) Endanger peace, create an excessive and destabilising accumulation of small arms, or otherwise contribute to regional instability;
  - (g) Contrary to the aims of this document, be either re-sold (or otherwise diverted) within the recipient country, re-produced without licence, or be re-exported;
  - (h) Be used for the purpose of repression;
  - (i) Be used for the violation or suppression of human rights and fundamental freedoms;
  - (j) Facilitate organised crime;

- (k) Be used other than for the legitimate defence and security needs of the recipient country.

Furthermore,

3. Participating States agree to ensure, as far as possible, without prejudice to the rights of States to re-export SALW that they have previously imported, that the original exporting Participating State, in accordance with bilateral agreements, will be notified before re-export/re-transfer of those weapons.
4. Participating States agree that unlicensed manufacture of foreign-origin SALW is inconsistent with these Best Practice Guidelines.
5. Participating States will take especial care when considering exports of SALW other than to governments or their authorised agents.

**II.** In addition, The Participating States of the Wassenaar Arrangement,

*Recognising* that uncontrolled flows of illicit SALW pose a serious threat to peace and security, especially in areas beset by conflicts and tensions;

*And noting* that poorly managed stocks of SALW, which are particularly liable to loss through theft, corruption or negligence, pose a similar threat;

**Agree that:**

1. Participating States will take into account, as far as possible, the stockpile management and security procedures of a potential recipient, including the recipient's ability and willingness to protect against unauthorised re-transfers, loss, theft and diversion.

## Elements for Objective Analysis and Advice Concerning Potentially Destabilising Accumulations of Conventional Weapons

*(As amended by the December 2004 Plenary)*

### 1. Assessment of Motivation of the State under Study

- a. What is the state's military doctrine? How do its weapons and their deployment posture fit with the implementation of the doctrine and/or meet national security requirements?
- b. What do we believe to be the motivation of the state in accumulating conventional weapons beyond its current holdings, either through import or national production? How are such weapons likely to be used? Does the state believe its accumulation of conventional weapons is necessary in the exercise of its right to self-defence in accordance with the UN Charter? Does the state wish to gain a tactical or strategic advantage, status or national prestige, improved indigenous production capability, a capability to reverse-engineer or entrance to the export market? If conventional weapons or military technology are being acquired through import, does the state provide valid and credible end-use/end-user or re-transfer assurances? Are there risks of diversion to unauthorised end-use/end-users?
- c. What are the general directions of the state's foreign policy? Is there a clearly identifiable risk that the state

2. Participating States will fully implement their commitments under the United Nations' International Instrument to Enable States to Identify and Trace, in a Timely and Reliable Manner, Illicit Small Arms and Light Weapons, adopted by the 60th Session of the UN General Assembly on 8 December 2005 (A/RES/60/81 of 11 January 2006).
3. Further, each Participating State will:
  - (a) Ensure that these principles are reflected, as appropriate, in their national legislation and/or in their national policy documents governing the export of conventional arms and related technology.
  - (b) Consider assisting other Participating States in the establishment of effective national mechanisms for controlling the export of SALW.
  - (c) Put in place and implement adequate laws or administrative procedures to control strictly the activities of those that engage in the brokering of SALW and ensure appropriate penalties for those who deal illegally in SALW.

would use its weapons offensively against another country or in a manner inconsistent with the UN Charter; assert by force a territorial claim; or otherwise project power in a region?

- d. Are the quantities involved in the state's accumulation of conventional weapons inconsistent with its likely requirements, suggesting possible diversion to an unauthorised end-user or efforts to reverse-engineer?
- e. Is there a clearly identifiable risk that the weapons might be used for the violation and suppression of human rights and fundamental freedoms?

## 2. Regional Balance of Forces and the General Situation in the Region

- a. What is the nature of the relationship among the states of the region? Are there territorial claims or disputes among them, including questions of unlawful occupation with the intent of annexation? Are there economic, ethnic, religious or other disputes or conflicts among them? Are one or several states of the region prepared to use force or the threat of the use of force in a manner inconsistent with the UN Charter to resolve disputes with other states of the region?
- b. What are the state's national security requirements? Is the state's accumulation of conventional weapons greater than that required by its legitimate defence and security interests? Does it represent an appropriate and proportionate response to a threat? Consider the balance of forces and relative capabilities (offensive and defensive) between and among neighbouring and regional states and their relative expenditure on defence. The following factors, *inter alia*, might be considered, both individually

for each state and comparatively: Size of the armed forces of the state, including trained reserves; quantity of weapons and related military equipment in service and in store; technical characteristics of weapons; their level of performance and maintenance; level of combat-readiness of the troops, including the quality of training of military personnel and their morale; and whether the deployment and training of forces is best suited for offensive or defensive action.

- c. What would be the perception of the state's accumulation of conventional weapons by other states in the region? Would political, historical, territorial, geographic or logistic considerations cause the accumulation to be perceived as a direct threat or to be otherwise intimidating? Does the actual balance of forces in the region provide a sound basis for such a perception?
- d. Could the accumulation of conventional weapons lead to an increase in tension or instability in the region or to the exacerbation of an existing conflict? Would potential adversaries perceive a need to prepare, deploy, or use additional forces or countermeasures? In a crisis, would they perceive a need to risk using force first? Is the accumulation of conventional weapons difficult or impossible to counter by forces in the region? Given the relative capabilities of states in the region, would the accumulation of conventional weapons provide sufficient protection or defence to offensive assets in such a manner as to be perceived as destabilising?
- e. Would other states in the region wish to acquire (including through national production, if possible) similar quantitative or qualitative capabilities, or acquire offsetting capabilities? Could the accumulation of conventional weapons contribute to a destabilising regional arms race

or to an accelerating process of competitive production or procurement?

### 3. Political/Economic Standing/Status of the State

- a. Has the state signed and/or ratified relevant international or regional agreements and treaties pertaining to arms control and limitation, non-proliferation, and confidence and security building? What is its record of compliance with those agreements and treaties? Does the state participate in the UN Register of Conventional Arms? Does the state comply with internationally-recognised human rights, anti-terrorism and non-proliferation norms? Does the state have the intention to develop weapons of mass destruction (WMD); does it possess WMD; what are its views on the use of WMD? What is the general nature of the state's political system and what is the level of internal stability? Is there a civil armed conflict?
- b. What is the state's military expenditure? What percentage of GDP does it spend on the military? Is the information it gives on its military expenditures open and accurate, or does it seek to conceal the true costs?
- c. Does the accumulation of conventional weapons by the state exacerbate an already economically insupportable burden of defence? Does it risk economic or social destabilisation, either nationally or regionally?

## 4. Operational Capability

### Equipment

- a. How would the accumulation of conventional weapons by the state affect the regional balance of forces and the situation in the region? A particular import or procurement through national production of an individual weapon, weapon system or sub-system may not be destabilising per se, but it may have a potentially destabilising character in combination with other equipment.
- b. Would an additional conventional weapons acquisition, whether by import or through national production, introduce a new capability to the region?
- c. Would an additional conventional weapons acquisition, whether by import or through national production, supplement or replace existing equipment? Would it substitute for current forces? If an import, are construction and maintenance (equipment support/spares) deals included? What is the operational life of the equipment with and without provision of maintenance?
- d. Would an additional conventional weapons acquisition, whether by import or through national production, provide the state with an additional strategic capability? Consider weapon system characteristics that have greater inherent potential to be destabilising (e.g., because they enhance power projection; there are few or no countermeasures; they contribute to the infliction of strategic harm).
- e. Would an additional conventional weapons acquisition, whether by import or through national production, provide the state with new or otherwise increased quantitative or qualitative operational capabilities, or increased sustainability? Would it allow more effective operational use of existing military assets or a bypass of force

weakness? If ammunition or missiles, will the quantities significantly enhance operational sustainability?

### **Manpower**

- f. Is the additional conventional weapons acquisition, whether by import or through national production, appropriate given the manpower capabilities of the state? Consider equipment/manpower levels, training, combat experience and leadership/morale.
- g. If acquired by import, is a training package being provided in conjunction with the import?
- h. Will the equipment itself enhance manpower effectiveness (e.g. simulators)?

## **5. Acquisition of Military Technology**

- a. Would the acquisition of particular technology, whether by tangible or intangible means or by indigenous development, provide a substantial technological advantage to the state's military capability? How will it affect the regional balance of forces and overall regional situation?
- b. If by import, would the acquisition itself, or the terms of the deal, such as offset agreements, lead to an indigenous production capability?
- c. If by import, is a design or technology package being provided in conjunction with the acquisition?
- d. If by import, is there a possibility of reverse engineering, *inter alia*, does the acquisition involve components, spares or prototypes that can be reverse-engineered?

## **6. Other Factors**

- a. Would an additional conventional weapons system, if acquired by import, put the exporter's national forces or those of its friends and allies or of a UNSC-approved operation at risk?
- b. Does the method used to import the additional conventional weapons raise concerns about how the weapons are likely to be used?
- c. Would the equipment or technology (including any training) be at risk of diversion to terrorist groups and organisations, as well as individual terrorists?

## Best Practices for Effective Enforcement

*(Agreed at the Wassenaar Arrangement Plenary, 1 December 2000)*

The following list of “best practices” for effective export control enforcement were adopted by the Wassenaar Plenary as a non-binding amalgam of the enforcement practices followed by different Wassenaar Arrangement Participating States which are illustrative of an effective enforcement programme.

### Preventive enforcement

1. Use threat assessment techniques and procedures for evaluating parties involved in a proposed export transaction, paying particular attention to those considered to be suspicious, unreliable, or presenting a high risk of diversion.
2. Maintain a list of problem end-users to identify license applications deserving closer scrutiny.
3. Confirm the stated end-user and end-use of items to be exported prior to issuing an export license. As appropriate, this can be accomplished by several means, ranging from documentation to on-premise checks of the end-user and end-use.
4. Obtain assurances regarding the end-use and non re-export of licensed items, as appropriate.
5. Examine goods and the documentation required to be presented at point of export, using risk assessment techniques to aid selection. Detain suspect shipments and

seize unauthorised or illegal exports, which may include those that are passing in-transit.

6. As necessary, confirm that exported goods have reached their intended destinations using appropriate means, ranging from documentation to on-site verification.
7. Conduct industry awareness programs to improve exporters’ understandings of the objectives and coverage of export controls, including controls on software and technology.
8. Seek voluntary compliance by industry. As appropriate, encourage development by industry of internal compliance programs.
9. Keep industry and the general public apprised of penalties for failure to comply, using, as appropriate, cases of successful prosecution as examples.

### Investigations

10. Designate law enforcement responsibilities for detection, prevention, and punishment of violations of export control laws.
11. Provide adequate resources and training for enforcement officers.
12. Ensure that national laws and regulations have statutes of limitations sufficiently long to permit the detection and prosecution of export control violations.
13. Consistent with national laws, policies and regulations and on a mutually-agreed basis, including international agreements for legal and customs assistance, and mutually respecting national sovereignty, governments may

cooperate in the investigation and prosecution of violations of export controls cases, by:

- a. Furnishing relevant documents and items relating to violations;
- b. Facilitating the availability of witnesses; and
- c. Providing for the extradition of violators, consistent with treaty obligations.

### **Effective penalties**

14. Establish effective penalties (including, as appropriate, criminal sanctions, civil fines, publicity and restriction or denial of export privileges) sufficient to punish and deter violations of export controls.

### **International cooperation/information exchanges**

15. Consistent with national laws, policies and regulations and on a mutually-agreed basis, including international agreements for legal and customs assistance, governments may, as appropriate, share information bilaterally on persons and companies considered to present a high risk of diversion. Examples of information to share include:
  - a. Information obtained in the course of pre-license and post-shipment verifications; and
  - b. Information about export control prosecutions, convictions, and restrictions or denials of export privileges.
16. Consistent with national laws, policies and regulations, governments may, as appropriate, share information in the context of multilateral export control arrangements. Examples of information to share include:

- a. General information on risks associated with destinations of concern;
  - b. Information on license denials;
  - c. Information on networks, agents, brokers and end-users of concern.
17. Senior enforcement officials may maintain, as appropriate, formal and informal information exchanges with their counterparts in member country governments.
  18. Licensing and enforcement officials should respect the confidentiality of information received and should ensure that access to it is restricted to those officials who have been duly authorised.

## End-user Assurances Commonly Used Consolidated Indicative List<sup>7</sup>

The following is a non-binding list of end-use assurances to be used by Participating States at their discretion.

Note: This Indicative List covers both the military pillar and the dual-use pillar

Essential elements	Optional elements
<b>1. Parties involved in the transaction</b>	<b>1. Parties involved in the transaction</b>
1.1 Exporter's details <sup>8</sup> ;	
	1.2 Intermediate consignee's details;
	1.3 Final consignee's details;
1.4 End-user's details. In the case of an export to a firm which resells the goods on the local market, the firm will be regarded as the end-user.	
<b>2. Goods</b>	<b>2. Goods</b>
2.1 A description of the goods being exported (type, characteristics) and/or reference to the contract number or order number concluded with the authorities of the final destination country;	
2.2 Quantity and/or value of the exported goods.	
<b>3. End-use</b>	<b>3. End-use</b>
3.1 Indication of the end-use of the goods;	
3.2 An undertaking, where appropriate, that the goods being exported will not be used for purposes other than the declared use; and/or	
	3.3 Provide an undertaking that the goods will be use for civil-end use;
3.4 An undertaking, where appropriate, that the goods will not be used in the development, production or use of the chemical, biological or nuclear weapons or for missiles capable of delivering such weapons.	

<sup>7</sup> Agreed at the 1999 Plenary; amended at the 2005 Plenary.

<sup>8</sup> Details of exporter/intermediate consignee/final consignee/end-user means: name, business name, address, phone, fax, e-mail, website (if available).

Essential elements	Optional elements
<b>4. Location</b>	<b>4. Location</b>
	4.1 Provide certification that the goods will be installed at the premises of the end-user or will be used only by the end-user;
	4.2 The final consignee/end-user agrees to allow on-site verification.
<b>5. Re-export / Diversion</b>	<b>5. Re-export / Diversion</b>
	5.1 The final consignee's/end-user's undertaking not to tranship or re-export the goods covered by the End-use Certificate/Statement; and/or
	5.2 No re-exports without approval from the government of the original exporting country; and/or
	5.3 The final consignee's/end-user's assurance that any re-exports will be done under the authority of the final consignee's/end-user's export licensing authorities;
	5.4 The final consignee's/end-user's undertaking not to divert or relocate the goods covered by the End-use Certificate/Statement to another destination or location in the importing country.
<b>6. Delivery Verification</b>	<b>6. Delivery Verification</b>
	6.1 Provide a commitment by the final consignee to provide the exporter or the exporting government with proof of importation, upon request (e.g., provide a Delivery Verification Certificate (DVC)).
<b>7. Documentation</b>	<b>7. Documentation</b>
7.1 Signature, name and title of final consignee's/end-user's representative;	
	7.2 Signature and end-use certification by the final consignee's/end-user's government or other authority as to the authenticity of the primary details provided in the document;
	7.3 If issued by the government authority, a unique identifying Certificate/Statement number;
7.4 Original End-user Certificate/ Statement or legally certified copies;	
	7.5 Validity terms and date of issue.

## ANNEX III

# MANPADS transfers: questionnaire

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### 1. Production

- a) Where relevant, please give details of the types of MANPADS or MANPADS components that are, or have been, produced in your country. Please include any that are, or have been, produced under licence and give details of the licensing state.

### 2. National Legislation/Regulations

- a) Under which part of your national legislation or regulations is the transfer (export/brokerage/transit/transshipment) of MANPADS controlled?
- b) Do your transfer control regulations deal with MANPADS as an individual category of weapons or are they subsumed within a broader category e.g. including small arms and light weapons?
- c) Are there any special provisions relating to controls on transfers (export/brokerage/transit/transshipment) of MANPADS in, for example, your national legislation and/or national policy guidelines?
- d) How do you regulate the transfer of MANPADS components? Are they subject to the same licensing rules and procedures as complete systems?

### 3. Licensing Process

- a) Are you required to undertake any particular pre-licensing and/or post-export checks when considering or granting licence applications for the transfer of MANPADS?
- b) Do your transfer control regulations require a full risk assessment to be undertaken prior to licensing the transfer (export/brokerage/transit/transshipment) of MANPADS? If, yes, please give details of what this risk assessment involves e.g. background checks on potential end-users?
- c) How do you assess the legitimacy of the need for MANPADS and/or components on the part of a recipient?
- d) What provisions do you make for assessing the stockpile management procedures of the recipient countries?
- e) What steps do you take to authenticate documentation during MANPADS transfer licensing?

### 4. Transfer Process

- a) How do you ensure adequate security during transit?
- b) What procedures you follow for checking on the security of intermediate storage facilities during the transfer process?

### 5. Post-export Checks

- a) Do your authorities undertake any form of follow-up checks in relation to the ultimate disposition or use of MANPADS that are licensed for transfer?

## 6. Reporting Procedures

- a) What, if any, reporting procedures do you invoke should an unauthorised entities procure/attempt to procure MANPADS?

## 7. Re-export controls

- a) Do your authorities impose any re-export controls as a condition of the transfer of MANPADS? If so, what form does this take e.g. no re-export without prior written confirmation from your authorities?

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An electronic version of this Handbook can be found on the Wassenaar Arrangement website [www.wassenaar.org](http://www.wassenaar.org)

A fully referenced version of this publication can be found online at [www.saferworld.org.uk/manpads](http://www.saferworld.org.uk/manpads)

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Of the photographs in Section 2, those in sub sections 2 (second photograph), 3, 4 and 7 are © Robin Ballantyne/Omega Research Foundation, sourced through Misp.org