Taliban soldiers with FIM-92 'Stinger' MANPADS encircle a hijacked Indian Airlines plane as negotiators discuss hijacker demands. Kandahar, Afghanistan, December 1999.
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Locking onto Target:
LIGHT WEAPONS CONTROL MEASURES

5

INTRODUCTION

Throughout 2004, man-portable air defence systems (MANPADS) remained high on the list of international arms control priorities. The sustained threat MANPADS posed to civilian aircraft, coupled with their evident utility to insurgents in such places as Chechnya and Iraq, continued to drive multilateral efforts to bring them under stricter control—often under the rubric of the broader 'war on terror'.

MANPADS are a particular type of light weapon. While this chapter has something to say about light weapons as a whole, it focuses on international efforts to control the transfer of MANPADS. Among its major conclusions are the following:

- Small arms measures of a general nature tend to cover all or most light weapons.
- The Wassenaar Arrangement and the Organization for Security and Co-operation in Europe (OSCE) have led international efforts to curb MANPADS proliferation through the development of especially stringent control measures.
- The transfer control systems needed to support implementation of the Wassenaar–OSCE MANPADS principles are in place in key exporting states.
- These same systems can be used strictly to control the transfer of a broader range of small arms and light weapons.

This chapter begins with a review of international measures: first, those that apply to a broad range of small arms and light weapons, then those that specifically target the transfer of MANPADS. The last part of the chapter shifts the focus to the national level and enquires whether important exporting countries have in place the laws and regulations necessary for the effective implementation of the new MANPADS measures. As the normative framework needed to address the MANPADS problem takes shape at the international level, the key challenges increasingly reside at the national level—with the national implementation of the new international standards.

GENERAL SMALL ARMS INSTRUMENTS

International efforts to control small arms and light weapons often appear preoccupied with firearms—basically the 'small arms' side of the broader 'small arms and light weapons' classification. Yet, as this section demonstrates, existing small arms instruments of a general nature tend, by and large, to cover light weapons as well as small arms.

This section examines several important international instruments to see whether they cover light weapons—including ammunition for light weapons—as well as small arms. These instruments are all general in nature in the sense that they cover no specific type of small arm or light weapon, but rather apply to several categories of small arms and light weapons at once. This assessment is conducted with reference to the definition of 'small arms and light weapons' contained in the 1997 *Report of the Panel of Governmental Experts on Small Arms* (UNGA, 1997).

In the words of the 1997 UN Panel, 'Broadly speaking … light weapons are those [weapons] designed for use by several persons serving as a crew' (para. 25).[1] They include:

- heavy machine-guns;
- hand-held under-barrel and mounted grenade launchers;
- portable anti-aircraft guns;
- portable anti-tank guns and recoilless rifles;
- portable launchers of anti-tank missile and rocket systems;
- portable launchers of anti-aircraft missile systems; and
- mortars of calibres of less than 100 mm (para. 26(b)).

The 1997 Panel also included light weapons-related ammunition and explosives in its definition:

- shells and missiles for light weapons;
- mobile containers with missiles or shells for single-action anti-aircraft and anti-tank systems; and
- anti-personnel and anti-tank hand grenades (para. 26(c)).

We will see that even those instruments that ostensibly focus on 'firearms', such as the *SADC Firearms Protocol* (SADC, 2001), apply to a much broader range of small arms and light weapons than their titles would suggest. This section is limited to determining the kinds of small arms and light weapons these general instruments cover. As, in most cases, the contents of these instruments have been analysed in previous editions of the *Survey*, this question is not addressed here.[2]

Regional instruments

Two instruments adopted by the Organization of American States (OAS)[3] in 1997–98 led international efforts to come to grips with the small arms problem. The first of these, the *Inter-American Convention against the Illicit Manufacturing of and Trafficking in Firearms, Ammunition, Explosives, and Other Related Materials,* covers the full range of small arms and light weapons, including their ammunition (OAS, 1997, art. I, paras. 3–4).

Even the so-called 'firearms instruments' tend to apply to a broad range of small arms and light weapons.

The same cannot be said, however, for the *Convention's* companion instrument, the *Model Regulations for the Control of the International Movement of Firearms, Their Parts and Components and Ammunition* (OAS, 1998). The definition the *Model Regulations* use for 'firearm' in paragraph 1.3 ('any barreled weapon which will … expel a bullet or projectile by the action of an explosive') encompasses all small arms, but limits coverage of light weapons in two ways. First, the weapon must have a barrel. This excludes those 'light weapons', such as MANPADS, that meet the terms of the 1997 UN definition, but employ a tube or rail as opposed to a barrel.[4] Second, the weapon must 'expel' the projectile. This excludes those light weapons that use self-propelled projectiles, such as rockets or missiles. In these cases, the weapon does not 'expel' (drive out) the projectile as required by the definition. In essence, only those light weapons that use cartridge-based ammunition qualify as 'firearms' under the *Model Regulations* definition. These include: heavy machine-guns, hand-held under-barrel and mounted grenade launchers that fire spin-stabilized grenades, portable anti-aircraft guns, portable anti-tank guns, and mortars of calibres of less than 100 mm.

Table 5.1 General small arms instruments: substantive scope

	Weapons / ammunition coverage		
Regional instruments	**small arms**	**light weapons**	**ammunition**
OAS Convention (OAS, 1997)	All small arms	All light weapons	For all small arms and light weapons
OAS Model Regulations (OAS, 1998)	All small arms	Light weapons that use cartridge-based ammunition	For all small arms; for light weapons that use cartridge-based ammunition
EU Code of Conduct (EU, 1998; 2003)	Most small arms	All light weapons	For most small arms; for all light weapons
West African Moratorium (ECOWAS, 1998; 1999)	All small arms	All light weapons except portable anti-aircraft missile systems	For all small arms; for all light weapons except portable anti-aircraft missile systems
OSCE Document (OSCE, 2000)	Small arms 'made or modified to military specifications for use as lethal instruments of war'	Light weapons that can be carried by one or more persons	Does not cover ammunition
OAU Bamako Declaration (OAU, 2000)	All small arms	All light weapons	For all small arms and light weapons
SADC Firearms Protocol (SADC, 2001)	All small arms	All light weapons	For all small arms and light weapons
Pacific Islands Forum model legislation (Pacific Islands Forum, 2003)	All small arms	Light weapons that use cartridge-based ammunition	For all small arms; for light weapons that use cartridge-based ammunition
Nairobi Protocol (Nairobi Protocol, 2004)	All small arms	All light weapons	For all small arms; unclear whether light weapons ammunition is covered
Global instruments			
UN Firearms Protocol (UNGA, 2001b)	All small arms	Light weapons using cartridge-based ammunition that can be moved or carried by a single person	For all small arms; for light weapons using cartridge-based ammunition that can be moved or carried by a single person
UN Programme of Action (UNGA, 2001c)	All small arms	All light weapons	Unclear whether ammunition is covered
Wassenaar Arrangement Initial Elements (WA, 2004; 2003b)	Most small arms	All light weapons	For most small arms; for all light weapons
Wassenaar Arrangement Best Practice Guidelines (WA, 2002)	Most small arms	All light weapons	Do not appear to cover ammunition

Notes: This table indicates whether, in principle, the instruments it lists cover small arms, light weapons, and their ammunition. It does not consider to what extent these instruments, through their operative provisions, actually regulate these weapons/ammunition. For additional information on the scope of multilateral instruments with respect to small arms ammunition, see Chapter 1 (AMMUNITION).

Additional source: McDonald (2005)

The scope of the *European Union Code of Conduct on Arms Exports* is broad, covering a wide range of conventional arms, including most small arms, all light weapons, and their ammunition (EU, 1998; 2003).[5] By contrast, portable anti-aircraft missile systems seem to be excluded from the West African Moratorium as they are not mentioned in the follow-up instrument (*Code of Conduct*) that defines the Moratorium's scope of application. No reason for this exclusion is apparent. The Moratorium covers all other light weapons, as well as the full range of small arms, including their ammunition (ECOWAS, 1998; 1999, arts. 2–3, Annex I).[6]

The *OSCE Document on Small Arms and Light Weapons,* adopted by the OSCE[7] in November 2000, applies to military-style small arms as well as light weapons that are 'man-portable'. This appears to mean that the *Document*

covers only those light weapons that can be carried by one or more persons—excluding those that are 'portable', pursuant to the 1997 UN Panel definition, in the sense that they can be carried only by a pack animal or light vehicle (see UNGA, 1997, para. 27(a)). The *OSCE Document* does not cover ammunition (OSCE, 2000, pream. para. 3).

As the *Bamako Declaration,* adopted by the Organization of African Unity (now African Union)[8] in December 2000, contains no definition of small arms or light weapons, one would assume that the 1997 UN definition applies. The *Bamako Declaration* was designed, in part, to consolidate an African common position for the July 2001 UN Small Arms Conference. In addition, the *Bamako Declaration* applies to ammunition as and where it so indicates (OAU, 2000).

One should read the UN Programme of Action as covering small arms and light weapons as these are defined in the 1997 UN Panel report.

The period following the July 2001 UN Small Arms Conference saw the adoption of several additional regional instruments. In most cases, however, their roots lay in processes initiated before the 2001 Conference.[9] The legally binding *SADC Firearms Protocol,* adopted in August 2001 and in force since November 2004, is broad in scope. It defines the term 'firearm' to include all the light weapons (as well as small arms) enumerated in the 1997 UN Panel report. The *SADC Protocol* also covers ammunition for both light weapons and small arms (SADC, 2001, art. 1.2).[10]

The model weapons control legislation, endorsed by Pacific Islands Forum[11] leaders at their August 2003 Summit, focuses on firearms and other weapons that can be imported, held, or used by civilians. Its definitions of 'firearm', 'weapon', and 'ammunition' are quite broad, however, and encompass those light weapons, such as heavy machine-guns, that use cartridge-based ammunition. The model legislation also covers ammunition for these light weapons and all small arms (Pacific Islands Forum, 2003, sec. 1.4).[12]

The *Nairobi Protocol,* adopted in April 2004, covers all small arms and light weapons, along with ammunition for small arms (Nairobi Protocol, 2004, art. 1; McDonald, 2005). As is the case with many small arms instruments, the mention of ammunition in the definitions section does not yield much substance in the operational section; none of the *Protocol's* operative provisions mentions ammunition (AMMUNITION).

Global instruments

In April 2005 the *UN Firearms Protocol* remained the only legally binding small arms measure to be negotiated at the global level. After a slow start, the pace of ratifications picked up considerably and, by late April, the *Protocol* had secured the 40 ratifications needed for its entry into force.[13] The *Protocol* covers all small arms, but applies to only a narrow range of light weapons—specifically, those using cartridge-based ammunition that can be moved or carried by one person. Light weapons satisfying these conditions include hand-held under-barrel grenade launchers that fire spin-stabilized grenades and light mortars with a calibre of well under 100 mm. The *Protocol* applies to ammunition as and where it so indicates.[14]

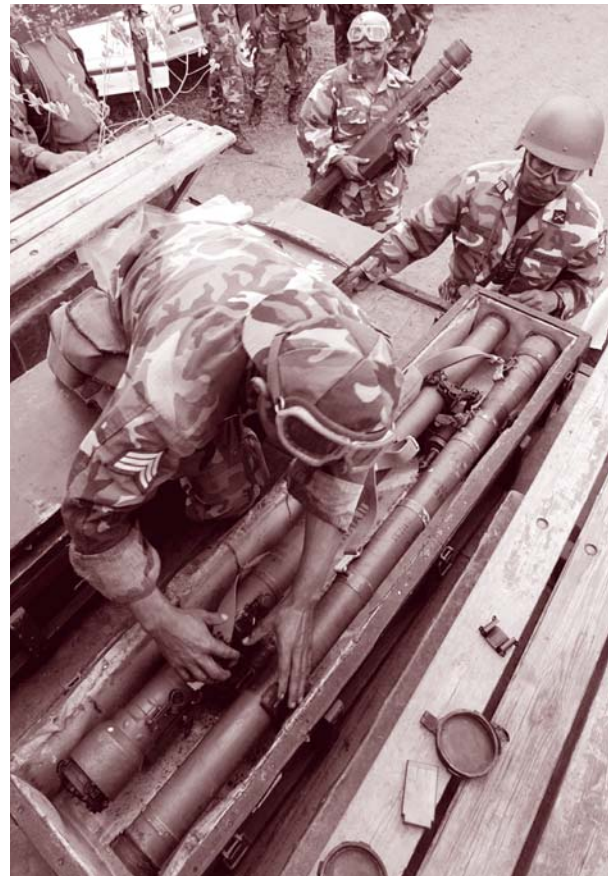
Despite attempts to include a definition in earlier drafts, the final *UN Programme of Action,* agreed in July 2001, contains no definition of the 'small arms and light weapons' that appear in its title (UNGA, 2001c). Yet, in the absence of any intention expressed to the contrary, one should read the *Programme* as covering light weapons (as well as small arms) as these are defined in the 1997 UN Panel report. The *Programme of Action* is a UN initiative. The 1997 Panel definition has been followed by other UN expert bodies. Moreover, the *UN Programme* refers to the 1997 Panel report, though not to its section on definitions (UNGA, 2001c, note to para. I.22(c)). While the word 'ammunition' does not feature in any of the commitments states undertook in the *Programme of Action,* in some areas it may be relevant (for example, para. II.19 on surplus destruction). Several states have, in fact, provided information on ammunition in reporting on their implementation of the *Programme* (see Kytömäki and Yankey-Wayne, 2004).

As of February 2005 negotiations were continuing, under UN auspices, on an international instrument to trace illicit small arms and light weapons. While the draft text under consideration at that time covered light weapons, it contained no substantive commitments on ammunition.

In addition to its recent initiatives on MANPADS, reviewed in the next section, the Wassenaar Arrangement[15] has measures in place that apply to the broader spectrum of small arms and light weapons. Most of the world's important arms exporting countries are Wassenaar members. Under the Wassenaar Arrangement *Initial Elements,* Participating States agree to control all items set forth in the Wassenaar Arrangement *Munitions List* 'with the objective of preventing unauthorised transfers or re-transfers of those items.' The *Munitions List* covers most small arms, all light weapons, and their ammunition (WA, 2004, *Initial Elements,* sec. III; 2003b). In December 2002, Wassenaar Participating States agreed to a more detailed set of *Best Practice Guidelines for Exports of Small Arms and Light Weapons (SALW).* As the *Guidelines* mention ammunition only in relation to tracing, it appears they do not otherwise apply to ammunition (WA, 2002, para. II.2.d).

MANPADS INSTRUMENTS

In the past few years, often as part of the broader 'war on terror', states around the word have increasingly shifted their attention to a specific type of light weapon: MANPADS. The 2004 edition of the *Small Arms Survey* reported on initial international efforts to curb MANPADS proliferation (Small Arms Survey, 2004, pp. 90–94). This chapter updates that analysis, focusing in particular on the new standards developed by the Wassenaar Arrangement and the OSCE.



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Nicaraguan soldiers with SA-7 MANPADS in July 2004.

The Wassenaar–OSCE MANPADS principles

At US prompting, the Wassenaar Arrangement took up the MANPADS issue in the late 1990s. Initial agreement was reached in December 2000 on *Elements for Export Controls of Man-Portable Air Defense Systems (MANPADS).* These set limits on and prescribed criteria for government licensing of MANPADS exports (WA, 2000).

The 2000 *Elements* were revised and expanded at the December 2003 Wassenaar Plenary Meeting. The 2003 *Elements* are broad in scope, covering not only complete weapons systems but also components and spare parts, ammunition (i.e. missiles), licensed production, and MANPADS-related training and assistance (WA, 2003a, sec. 1). Under the 2003 *Elements,* MANPADS transfers must be individually licensed (sec. 2.2). States must take a range of criteria into account before authorizing their export, with particular emphasis on stockpile security and accountability in recipient countries (secs.

2.6–2.9). MANPADS may not be exported to non-state actors that are not acting on behalf of their government (sec. 2.1). Nor may they be re-exported without the prior consent of the exporting government (sec. 2.8).

In addition, the 2003 *MANPADS Elements* oblige Wassenaar Participating States to report their MANPADS transfers to other Wassenaar members (sec. 2.5). They are also required to share information about potential recipient governments that fail to meet the Wassenaar MANPADS standards and 'non-state entities that are or may be attempting to acquire MANPADS' (secs. 2.11–2.12).

The Wassenaar MANPADS standards define the high-water mark of current international efforts to curb MANPADS proliferation.

Many of these provisions are presented in greater detail in the section below dealing with national transfer controls. For the moment, it is sufficient to note that the Wassenaar MANPADS standards define the high-water mark of current international efforts to curb MANPADS proliferation.

The OSCE has followed the lead of the Wassenaar Arrangement, adopting, in May 2004, the *OSCE Principles for Export Controls of Man-Portable Air Defence Systems (MANPADS)* (OSCE, 2004). These apply, almost word for word, the 2003 *Wassenaar MANPADS Elements* to the OSCE Region. Approximately one-half of all OSCE participating states, including all Western European countries, Canada, the Russian Federation, and the US, are also part of the Wassenaar Arrangement. The OSCE, however, encompasses many states from Eastern Europe and Central Asia that are not part of Wassenaar.

The *OSCE Document on Small Arms and Light Weapons* (OSCE, 2000) already covers MANPADS, but, as noted above, the Wassenaar–OSCE MANPADS principles impose exceptionally strict controls over their export and retransfer. In May 2004, OSCE states also undertook 'to incorporate these principles into their national practices, policies and/or regulations' and to report MANPADS transfers using the information exchange provisions of the *OSCE Document* (OSCE, 2004, secs. 4–5).

Other MANPADS initiatives

Many other regional organizations besides the OSCE have given MANPADS priority attention. Russian pressure led the Commonwealth of Independent States (CIS)[16] to agree to exchange information on MANPADS purchases and sales in September 2003 (CIS, 2003). Among the Asian-Pacific organizations, Asia-Pacific Economic Cooperation (APEC)[17] has been most active on the MANPADS issue to date. In Bangkok in October 2003, APEC leaders committed themselves to:

- adopt strict domestic export controls on MANPADS;
- secure stockpiles;
- take domestic action to regulate production, transfer, and brokering;
- ban transfers to non-state end-users; and
- exchange information in support of these efforts (APEC, 2003).

Both the Association of Southeast Asian Nations (ASEAN) and the ASEAN Regional Forum have acknowledged the importance of the MANPADS issue in various statements and declarations, but they have not gone as far as APEC in committing to specific, concrete measures. APEC's membership is broad, comprising many of the countries of the Pacific Rim, including China, Japan, the Russian Federation, and the United States; it does not, however, include all ASEAN countries. Cambodia, Laos, and Myanmar are all members of ASEAN but not of APEC.

At the international level, in late 2003 the United Nations General Assembly[18] decided to include MANPADS in the United Nations Register of Conventional Arms, along with artillery systems of 75 mm calibre and above (UNGA, 2003a;

2003b). The General Assembly again took up the MANPADS issue in late 2004, adopting Resolution 59/90, which calls upon states 'to combat and prevent the illicit transfer of man-portable air defence systems and unauthorized access to and use of such weapons' (UNGA, 2004, para. 2). The General Assembly also 'encourages Member States … to ensure that such weapons are exported only to Governments or agents authorized by a Government' (para. 5). The Resolution notes 'the importance of information exchange and transparency' in the legal MANPADS trade (last pream. para.) and stresses the need for 'effective and comprehensive national controls on the production, stockpiling, transfer and brokering' of these weapons (para. 3). While important, General Assembly Resolution 59/90 falls short of the much more constraining and specific language found in the Wassenaar–OSCE MANPADS principles.

The International Civil Aviation Organization (ICAO)[19] has stepped up its efforts to strengthen civil aviation security worldwide in the post-September 11 period, identifying MANPADS as a major threat (ICAO, 2004a, para. 2.1). An earlier ICAO resolution on MANPADS, adopted in the autumn of 1998 (ICAO, 1998), was revised and expanded in 2004. In Resolution A35-11, adopted at the ICAO Assembly's 35th session in the autumn of 2004, the Assembly urges Contracting States 'to exercise strict and effective controls on the import, export, transfer or retransfer, as well as storage of MANPADS' (ICAO, 2004c, para. 1). The Assembly also urges Contracting States that are not members of the Wassenaar Arrangement to implement nonetheless the *Wassenaar MANPADS Elements* (para. 5). In addition, the ICAO Assembly calls upon Contracting States 'to ensure the destruction of non-authorized MANPADS in their territory, as soon as possible' (para. 3) and cooperate in international efforts aimed at implementing cost-effective MANPADS countermeasures (para. 2). In Resolution A35-9 concerning 'acts of unlawful interference' against international civil aviation, the Assembly directs the ICAO Council to collaborate with the G8 'and other relevant groups of States' for these purposes (ICAO, 2004b, Appendix H, para. 2).

ICAO has identified MANPADS as a major threat to civil aviation in the post-September 11 period.

The G8[20] took up the MANPADS issue at its 2003 Summit in Evian, France. G8 leaders called upon all countries 'to strengthen control of their Manpads stockpiles' (G8, 2003, sec. 1.4), while committing themselves to a series of measures in the areas of production, transfer controls, brokering, and stockpile management designed 'to prevent the acquisition of Manpads by terrorists' (sec. 1.6). They undertook, in particular, '[t]o ban transfers of Manpads to non-state end-users' (sec. 1.6).

At their 2004 Summit, G8 Leaders adopted a 'Secure and Facilitated International Travel Initiative' (SAFTI) (G8, 2004), which set out some additional steps to counter the MANPADS threat, among them:

- accelerating efforts to destroy excess and/or obsolete MANPADS and providing assistance for this where needed (para. 8);
- further strengthening controls on the transfer of MANPADS production technology (para. 10); and
- developing a methodology for assessing airport vulnerability to the MANPADS threat, along with effective countermeasures, while taking into account an ICAO study on this issue (para. 12).

G8 Leaders also agreed to '[w]ork toward expedited adoption of the updated 2003 Wassenaar "Elements for Export Controls on MANPADS" as an international standard' (para. 9). This strong statement of support was bracketed by the OSCE's adoption of these same principles in May 2004 and their endorsement by ICAO in the autumn of 2004. The Wassenaar–OSCE MANPADS principles were not, however, mentioned by the UN General Assembly in the MANPADS Resolution that it adopted at the end of 2004.[21]

NATIONAL CONTROL OF MANPADS TRANSFERS

International measures invariably rely for their effectiveness on national implementation. International organizations do not mark weapons, license exports, or manage stockpiles. National measures to control MANPADS proliferation are wide-ranging and include efforts to improve stockpile management and retrieve older weapons that could be misused. This section is devoted to a specific but crucial part of this broader picture, namely, controlling the transfer of MANPADS. We begin by considering the extent to which the transfer control systems of five key states—all members of the Wassenaar Arrangement and OSCE—meet the requirements of the Wassenaar–OSCE MANPADS principles. We then consider the situation in two important arms-exporting countries that are not members of these organizations.

MANPADS controls in five key states[22]

The five states selected for this study are Bulgaria, Germany, the Russian Federation, the United Kingdom, and the United States. All these countries are significant arms exporters. All of them produce, or have very recently produced,[23] MANPADS. The Russian Federation, the UK, and the US have also authorized MANPADS transfers in recent years (Small Arms Survey, 2004, p. 87). All five states are members of the Wassenaar Arrangement and the OSCE.

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Officials confer prior to the opening of the 9th Wassenaar Arrangement Plenary in Vienna, December 2003. The meeting resulted in the adoption of important new standards for the control of MANPADS exports.

In reviewing the transfer control systems of these five states, we take the various Wassenaar–OSCE MANPADS principles in turn. First, however, it is worth noting that the systems we examine do not single out MANPADS for special treatment. Nor do they normally differentiate between light weapons and military-style small arms (Anders, 2004).

Among the five states, Germany is the exception in this respect. It distinguishes between weapons, including military small arms and light weapons, it classifies as 'defence material' (*Rüstungsgüter*) and other arms it terms 'weapons of war' (*Kriegswaffen*). 'War weapons' are in fact a subcategory of 'defence material'. They include automatic and semi-automatic rifles, automatic pistols, machine guns, and portable missile or grenade launchers (Germany, 1998, part B, secs. I, V–VI). Small arms falling under the rubric of (other) 'defence material' are hand-held smooth-bore firearms with a calibre of less than 20 mm and other handheld firearms with a calibre of 12.7 mm or less that are not covered by the list of war weapons. For example, semi-automatic pistols and shotguns are considered 'defence material', not 'war weapons' (Germany, 2004a, part I, sec. A.0001).

German controls over the transfer of 'war weapons' are stricter than those that apply to (other) 'defence material'. These differences are described in more detail below in the sections dealing with retransfer and restrictions regarding certain destinations. One should note, however, that, although the other four countries do not distinguish among different small arms or light weapons categories in their transfer controls legislation, they may need to make such distinctions in their transfer licensing procedures. Where they are bound by the Wassenaar–OSCE principles, states that have previously

applied certain controls only 'as required' now have to apply these to all MANPADS transfer applications. For example, the British system provides for restrictions on arms retransfers, but does not require them in every case. Under the Wassenaar–OSCE principles, it must now automatically impose these on any export of UK-origin MANPADS (see below).

Scope of controls

The Wassenaar–OSCE MANPADS principles cover surface-to-air missile systems that can be carried, operated, and fired by one or more individuals. Their scope is broad and includes not only the complete systems but also 'components, spare parts, models, training systems, and simulators' (WA, 2003a, secs. 1.1–1.2; OSCE, 2004, secs. 1.1–1.2). The term 'component' encompasses ammunition (missiles) for MANPADS.[24]

The range of controlled small arms, light weapons, and related services is broad in the five countries under review.

The Wassenaar–OSCE principles apply to licensed production. They also govern a wide range of activities associated with the acquisition and use of MANPADS, including transfers of know-how and training (sec. 1.2). As indicated in the *Small Arms Survey 2004,* MANPADS are not easy to operate. Proper training can make the difference between a near miss and a successful strike (Small Arms Survey, 2004, p. 85).

Although the Wassenaar–OSCE MANPADS standards have a much wider scope than most other multilateral small arms instruments, the range of controlled small arms, light weapons, and related services is in fact broad in the five countries under review. Transfer controls in all five states cover, in addition to small arms and light weapons, their ammunition, spare parts, and components. These countries also control the provision of technical assistance related to the development, production, and use of controlled goods, as well as the transfer of technology (Anders, 2004).

Export criteria

In authorizing MANPADS exports, Wassenaar and OSCE states must take into account:

- the potential for diversion or misuse in the recipient country;
- the recipient government's ability and willingness to protect against unauthorized retransfers, loss, theft, and diversion; and
- the adequacy and effectiveness of the recipient government's physical security arrangements (WA, 2003a, sec. 2.7; OSCE, 2004, sec. 2.5)

These criteria for the export of MANPADS are consistent with criteria for licensing exports of all types of small arms and light weapons found in other multilateral instruments, including the *UN Programme of Action* (UNGA, 2001c, para. II.11), the *OSCE Document on Small Arms and Light Weapons* (OSCE, 2000, para. III.A.2.), and the *European Union Code of Conduct on Arms Exports* (EU, 1998, criterion 7).

National regulatory frameworks tend not to specify in any detail the counter-proliferation concerns states should take into account when authorizing the export of MANPADS or other small arms or light weapons. Among the five countries under review, only the UK explicitly stipulates, in national policy guidelines derived from the *EU Code of Conduct,* that licensing decisions must take into account any risk that exported equipment 'will be diverted within the buyer country or re-exported under undesirable conditions' (UK, 2000, criterion 7). Other EU states, including Germany, make a general reference to the export licensing criteria of the *EU Code of Conduct* (Germany, 2000, sec. I, para. 1). In all these cases, the *Code* criteria are politically—not legally—binding. Only exceptionally, as in the case

of Belgium, have EU states incorporated one or more *EU Code* provisions in legally binding national legislation. Bulgaria, an EU candidate country, has also politically committed itself to the *Code* criteria (EU, 2004, p. 2).

In any case, as a matter of practice, all five states assess the risk for potential diversion prior to authorizing the export of small arms and light weapons. An assessment of the potential risk of diversion may also be seen as implicit in national requirements for end-use documentation (see below).

License types

The Wassenaar–OSCE principles also prohibit 'general' or 'open' licences for MANPADS exports (WA, 2003a, sec. 2.2; OSCE, 2004, sec. 2.2). This is exceptional among multilateral small arms instruments. The five states under review broadly adhere to this requirement. Legislation in the Russian Federation (Pyadushkin, 2003, p. 21) and Bulgaria (Bulgaria, 2002a, art. 5.2) specifies that any export of small arms or light weapons, including MANPADS, must be made on the basis of an individual licence. In contrast, British, German, and US legislation allows global or general licences, as well as individual licences, for small arms and light weapons exports. For example, in the US the Directorate of Defense Trade Controls may in certain cases issue comprehensive export authorizations that allow multiple shipments and re-exports to approved end-users (US, 2004, paras. 123.1, 126.14). Nevertheless, since general licences in Germany, the UK, and the US are granted only in exceptional circumstances, such as government-to-government co-production agreements, it appears that, at least in practice, they broadly meet the Wassenaar–OSCE standard.

Controls on retransfers

The Wassenaar–OSCE MANPADS principles also stipulate that recipients of MANPADS exports must guarantee in advance not to re-export these weapons except with the prior consent of the exporting government (WA, 2003a, sec. 2.8; OSCE, 2004, sec. 2.6). Again, this requirement breaks new ground at the multilateral level. Both the *OSCE Document on Small Arms and Light Weapons* and the *UN Programme of Action* merely urge prior notification before retransfer (OSCE, 2000, para. III.B.5; UNGA, 2001c, para. II.13).

The Wassenaar–OSCE controls on the retransfer of MANPADS break new ground at the multilateral level.

In general, the five states under review require prior authorization of MANPADS retransfers. Moreover, this requirement usually applies to other small arms or light weapons exports. Any retransfer of US-origin small arms or light weapons is subject to the prior written approval of US authorities (US, 2004, para. 123.9.a–b). Bulgaria and the Russian Federation, at the licensing stage, require prospective recipients of small arms and light weapons or their governments to sign an agreement stipulating that the imported weapons will not be retransferred without the prior consent (usually written) of the exporting state (Bulgaria, 2002a, para. 15.1; Russian Federation, 2000, paras. 5–6).[25]

German retransfer controls vary as a function of weapon type. German law stipulates that the country approve any retransfer of German 'war weapons' (which include MANPADS), technology for 'war weapons', and goods derived from this technology. Although the relevant regulations do not spell this out, in practice such approval means the prior written authorization of the German government, in conformity with the Wassenaar–OSCE MANPADS principles.[26] Germany waives this requirement only if 'defence material' (not included in the category of 'war weapons') or goods derived from technology for such 'defence material' are retransferred to most EU member states,[27] Australia, Canada, Japan, New Zealand, Norway, Switzerland, or the United States (Germany, 2000, sec. 4.3; 2002, appendices 2 and 4). France would therefore need to obtain prior German authorization if it wanted to retransfer German sub-machine guns to Japan, but would not need such authorization if it wished to retransfer German revolvers or shotguns to Japan.

The UK system also differs from the others reviewed here. British end-use undertakings do not normally stipulate that prior consent must be obtained for any retransfer. The UK instead assesses the risk of diversion at the licensing stage. If it decides there is an unacceptable risk that the intended recipient will not comply with end-user-undertakings, it will not authorize the export (UK, 2003a, p. 12).[28] Under the new Wassenaar–OSCE rules, however, the UK must automatically restrict the retransfer of any MANPADS it authorizes for export.

Restrictions on non-governmental end-users

The Wassenaar–OSCE MANPADS principles also stipulate that MANPADS are to be exported 'only to foreign governments or to agents specifically authorised to act on behalf of a government after presentation of an official EUC [end-user certificate] certified by the Government of the receiving country' (WA, 2003a, sec. 2.1; see OSCE, 2004, sec. 2.1). As noted earlier, this restriction of permissible MANPADS recipients is found in other multilateral instruments dealing with these weapons, such as the 2003 *G8 Action Plan* (G8, 2003, sec. 1.6).

Somewhat surprisingly, this principle was rarely spelled out in the national arms export laws or regulations reviewed for this study. One exception is the United Kingdom, which in November 2003 issued an official statement indicating that any future 'license application for the export of MANPADS to any non-governmental body will be considered in the light of the G8 Action Plan' (UK, 2003b, p. 495).

Though explicit bans are few and far between, licensing authorities generally request prior identification of end-users, making it possible, on a case-by-case basis, to prohibit transfers to particular non-state actors. In Bulgaria, for example, prospective exporters must provide, as part of their licence application, the importing country's written confirmation that the importer has the right to import the weapons it is requesting (Bulgaria, 2002b, art. 22.1.5). The Russian Federation also requires the country of import to issue an end-user undertaking before authorizing weapons exports (Russian Federation, 2000, para. 5). Such declarations—implying that the government of the recipient country is aware of and has authorized the requested transfer—may also be required, on a case-by-case basis, in Germany (2004b, para. 17.2), the UK (2004), and the US (2004, para. 123.1).[29]

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Pakistani tribesmen hold rocket-propelled grenade launchers in Dera Bugti, 650 kilometers south-west of Islamabad, following lethal clashes between local tribesmen and Pakistani security forces. March 2005.

Restrictions on certain destinations

Although they are not included in the Wassenaar–OSCE MANPADS principles, states normally impose restrictions on the export of arms to certain destinations. The transfer control systems of the five countries reviewed here all incorporate the principle that arms exports that are inconsistent with their international obligations will not be authorized. Typical applications of this principle include end-users or destinations under embargo by regional or international organizations.

In addition, states often restrict weapons transfers to destinations they identify as being of particular concern. The United States, for example, does not normally authorize the export of small arms or light

weapons to countries such as Cuba, Iran, North Korea, and Syria (US, 2004, para. 126.1.a). Exports to sub-Saharan Africa are also subject to special restrictions (US, 2003a, sec. 2773). Countries may also ease transfer controls with respect to certain destinations. The governments of Germany, the UK, and the US may grant open export licences in relation to countries with which they cooperate in military production projects.[30] Bulgarian law exempts certain states from the requirement for end-use certificates (Bulgaria, 2002a, art. 4.3).

Where restrictions or exceptions apply to specific destinations, these typically cover the export of all arms. As noted earlier, national transfer control systems do not normally differentiate among small arms and light weapons categories for transfer licensing purposes. Germany is the exception. Here, too, it distinguishes between 'war weapons' and (other) 'defence material'. Though exceptions are possible, 'war weapons', such as assault rifles and sub-machine guns, are normally exported only to NATO, EU, and 'NATO-equated' states.[31] In contrast, the export of small arms classified as (other) 'defence material', such as revolvers and shotguns, may be authorized to any destination (Germany, 2000, sec. III).

Delivery verification

The Wassenaar–OSCE MANPADS principles also require exporting governments to satisfy themselves that recipient states are willing and able to provide for the secure storage, handling, transportation, and use of MANPADS material, including the disposal or destruction of excess stocks. National practices offering evidence of this include the '[w]ritten verification of receipt of MANPADS shipments' (WA, 2003a, sec. 2.9; OSCE, 2004, sec. 2.7). While not actually obliging recipient governments to submit written delivery verifications,[32] the Wassenaar–OSCE principles are among the only multilateral small arms instruments that explicitly refer to and underline the importance of this control measure.[33]

The Wassenaar–OSCE principles are among the only multilateral small arms instruments that explicitly underline the importance of delivery verification.

Only two of the five states reviewed here require delivery verification for MANPADS exports. Bulgaria requires delivery verification for any export of small arms or light weapons (Bulgaria, 2002b, arts. 22.1.6 and 24). It may also oblige exporters, in their foreign trade contracts, to allow Bulgarian authorities or their agents to confirm delivery through physical inspections (Bulgaria, 2002a, art. 17.7).

The United States requires mandatory delivery checks for all transfers of MANPADS under government-to-government agreements. These are arranged by Security Assistance Organizations based at US embassies in recipient countries (US, 2003b, point C8.3.3.4, p. 276). The US Directorate of Defense Trade Controls can also require, if considered necessary, an import certificate or delivery verification document for the transfer of other arms. Such a certificate has to be issued by the competent authorities in the importing country and serves to confirm that the importer complied with relevant rules in the recipient state (US, 2004, para. 123.14.b).

In the three other states there is no systematic requirement for written delivery verification. Nevertheless, licensing authorities can seek such documentation if they consider it necessary for a particular export of small arms or light weapons.

Post-delivery controls by recipient governments

Other security measures recipient governments are encouraged to adopt under the Wassenaar–OSCE MANPADS principles include:

- maintenance of written records of inventories;
- storage conditions satisfying 'the highest standards of security and access control';
- separation of principal MANPADS components, subject to certain exceptions; and

- limiting access to hardware and related classified information to those with 'an established need to know' (WA, 2003a, sec. 2.9; OSCE, 2004, sec. 2.7).

The Wassenaar–OSCE principles also require recipient states to guarantee 'to inform promptly the exporting government of any instance of compromise, unauthorised use, loss, or theft of any MANPADS material' (WA, 2003a, sec. 2.8; see OSCE, 2004, sec. 2.6).

Other multilateral small arms instruments address this issue in general terms when they do so at all. For example, under the *Nairobi Protocol,* 'States Parties undertake to … establish and maintain complete national inventories of small arms and light weapons held by security forces and other state bodies' (Nairobi Protocol, 2004, art. 6.a).

At the national level, transfer control regulations do not normally make small arms or light weapons exports conditional on the existence, in the recipient state, of specific physical security measures. Among the countries reviewed here, the only exception to this rule is the United States. Under the Golden Sentry programme, governments that import US defence articles of particular concern must agree to certain US-stipulated control measures. For example, recipients of US-origin MANPADS must conduct monthly checks of their MANPADS stocks and submit these records to Security Assistance Organizations based at US embassies in the recipient country.[34]

End-use monitoring by exporting governments

Although the Wassenaar–OSCE MANPADS principles lay down a series of end-user undertakings, as with other multilateral small arms instruments they make no provision for monitoring by the exporting government of compliance with these undertakings.

The United States has more stringent provisions for end-use monitoring than any other country reviewed here, although these apply only to weapons of prime concern. Specifically, US export legislation requires 'end-use verification of … defense articles and defense services that are particularly vulnerable to diversion or other misuse, or … whose diversion or other misuse could have significant consequences' (US, 2003a, sec. 2785). For example, under the Blue Lantern programme, applying to commercial exports of US defence articles, US authorities undertook some 400 checks in 2003, many of which concerned firearms recipients in the western hemisphere suspected of involvement in criminal activities. Several of these checks resulted in the launching of investigations into possible violations of end-user undertakings (US, 2003c, pp. 1–2, 4). This programme is complemented by the Golden Sentry programme, mentioned above, which applies to defence articles of particular concern that are exported under US security assistance programmes with foreign governments. Controls under Golden Sentry include annual cross-checks by Security Assistance Organizations of inventories listing weapons' serial numbers, based on information transferred to them by US export authorities, with inventories submitted to them by the end-user (US, 2003b, point C8.3.3.5, p. 276).

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A US Marine fires a Javelin anti-tank missile at a building near Umm Qasr, Iraq, during military operations aimed at toppling Saddam Hussein's regime. March 2003.

The four other countries that were part of the study do not conduct systematic post-export monitoring—whether in relation to MANPADS or other small arms and light weapons. Government authorities in those states may nevertheless request access to weapons they have licensed for export to verify that end-user undertakings have been complied with. The United Kingdom undertakes post-export monitoring on a case by case basis 'where considered to be of added benefit' (UK, 2003a, p. 12).

MANPADS controls in Brazil and South Africa[35]

Neither Brazil nor South Africa produces MANPADS, but both countries produce light weapons and both host defence industries that produce high-tech weaponry (Jones and Cutshaw, 2004). As the *Small Arms Survey 2005* indicates, Brazil and South Africa each have the capacity to produce sophisticated, guided light weapons, such as MANPADS (PRODUCERS). Both countries, in other words, could soon join the ranks of MANPADS producers.[36]

Applicable norms

As of February 2005, neither Brazil nor South Africa was a member of the Wassenaar Arrangement or the OSCE. Neither country, therefore, was bound by the Wassenaar–OSCE MANPADS principles, although it appeared this would soon change in the case of South Africa. In December 2004 the Government of South Africa decided to apply for Wassenaar membership (South Africa, 2004). The country had been aligning its arms transfer polices with those of the Wassenaar Arrangement for several years prior to this.

Both Brazil and South Africa could soon join the ranks of MANPADS producers.

Both countries are legally or politically bound by a range of other regional and global measures relating to small arms and light weapons in general and MANPADS more specifically. In terms of general small arms and light weapons measures, South Africa is bound by the Africa-wide *Bamako Declaration* and the *SADC Firearms Protocol,* now in force. Brazil is a party to the 1997 OAS Convention. It has also signed, but not ratified, the *UN Firearms Protocol*. South Africa has signed *and* ratified the *UN Protocol,* so will be legally bound by this instrument as soon as it enters into force. Both Brazil and South Africa have also committed themselves to the range of measures found in the *UN Programme of Action*.

Concerning MANPADS, both ICAO Resolution A35-11 and UN General Assembly Resolution 59/90 apply to Brazil and South Africa. While neither set of standards is anywhere near as stringent as those adopted by the Wassenaar Arrangement and OSCE, ICAO Resolution A35-11 specifically urges those ICAO Contracting States that are not Wassenaar members to implement the 2003 *Wassenaar MANPADS Elements* (ICAO, 2004c, para. 5).

Brazil

Research conducted for the Small Arms Survey in the autumn of 2004 was unable to confirm that Brazil's transfer controls system fulfills key Wassenaar–OSCE MANPADS standards (Anders, 2005).[37] On the positive side of the ledger, Brazilian controls on light weapons, their ammunition and components, and related services are comprehensive, in line with the Wassenaar–OSCE MANPADS standards (Brazil, 1995, art. 1, paras. 1.I, 2; 2001, Annex I; 2000, art. 16). Moreover, in support of their licence applications Brazilian exporters are usually asked to submit documentation that identifies end-users and end-uses, and confirms that the transfer, if not expressly authorized by recipient country authorities, is at least permitted under their laws (Brazil, 1995, art. 3, paras. 1–2; Brazil, 2000, art. 178).

This research was, however, unable to confirm that the Brazilian transfer controls system satisfies several other Wassenaar–OSCE requirements. For example, it is unclear whether recipients of Brazilian light weapons are barred from

retransferring them without prior Brazilian government consent. Moreover, the legislation examined for this study makes no reference to post-export controls, including delivery verification certificates and other counter-proliferation mechanisms (Anders, 2005). These gaps may simply derive from a failure to make key information public—as opposed to insufficiencies in Brazilian legislation or practice. This 'information gap', however, is such that the extent to which Brazil's transfer controls system meets the Wassenaar–OSCE MANPADS standards is very much an open question.

South Africa

South African legislation appears to meet the requirements of the Wassenaar–OSCE MANPADS principles (Anders, 2005). Moreover, in at least one respect it exceeds them. The scope of South African export controls is quite broad, covering, in addition to light weapons, their ammunition and components, related technology, and services (South Africa, 2002, art. 1.vi, xxix).[38] Licensing decisions must take into account the conventional arms control system of the recipient country and its record of compliance with end-user undertakings (art. 15(i)).

South African legislation appears to meet the requirements of the Wassenaar–OSCE MANPADS principles.

The government of the importing country must undertake not to retransfer South African arms to any other country without the prior approval of the South African government (art. 16(a)). A person authorized by the importing state must also issue an end-user certificate identifying the end-user, undertaking not to retransfer the weapons without South African approval, and promising to furnish a delivery verification certificate as proof of import (art. 17). The obligation to provide a delivery verification certificate, applicable to all light weapons transfers, in fact exceeds the Wassenaar–OSCE standards, which only recommend this measure.

CONCLUSION

In its first sections, the chapter reviewed a broad range of multilateral instruments that apply to light weapons. Existing small arms measures targeting no specific type of small arm or light weapon tend to cover all or most light weapons as this term was defined by the 1997 UN Small Arms Panel (UNGA, 1997, paras. 26–27). Coverage of ammunition for light weapons is, however, much less extensive.

This relatively broad coverage of light weapons (the weapons themselves) is somewhat surprising as several of the instruments reviewed in this chapter—as reflected in their titles and use of terms—focus on 'firearms', an expression not normally associated with light weapons. Except for the *UN Firearms Protocol,* these 'firearms instruments' nevertheless apply to a wide range of light weapons. At the same time, two instruments that one would assume cover all light weapons—again on the basis of their titles and use of terms—in fact do not, although these omissions are partial.

It is beyond the scope of this study to analyse the content of these various measures. Previous editions of the *Small Arms Survey* provide much of this information. It is sufficient to note here that, taken as a whole, these instruments yield a relatively broad, and in some cases dense, web of regulation that applies to light weapons as well as small arms.

More recent measures aim at MANPADS, a particular type of light weapon. MANPADS control measures have been high on the agenda of regional and international organizations in recent years, especially since 2003. The Wassenaar Arrangement and OSCE have led the way in developing and adopting stringent new standards, although these are not yet universally accepted. While important normative work remains unfinished, especially at the global level, the principal challenge is now shifting from the development of these norms to their concrete implementation at the national level.

As ever, the key to implementation lies with states. International instruments are effective only where translated into law and practice at the national level. This chapter took an initial step towards evaluating national-level implementation with an in-depth review of the transfer control systems of five key exporting countries, all members of the Wassenaar Arrangement and OSCE. In all five countries, the chapter found that those systems provide the basis for full implementation of the Wassenaar–OSCE MANPADS principles. In at least one instance, they appear to exceed these standards—specifically, the US in the area of end-use monitoring.

The chapter did not, however, examine actual implementation. Although the five states have the systems in place that would allow them to meet the Wassenaar–OSCE requirements, further research is needed to ascertain whether they do so in practice. It is also worth noting that these same systems also allow for strict control over the broader range of light weapons (and most small arms). The basic elements of national transfer control systems are the same for all these weapons. At their heart lie licensing procedures that assess and minimize risk, including risk of diversion, in advance of any export.

Although many of the most important arms exporting states in the Wassenaar Arrangement and OSCE have systems in place that allow them to meet the Wassenaar–OSCE MANPADS requirements, the same cannot be assumed of the broader Wassenaar and OSCE memberships, let alone the non-Wassenaar/OSCE world. The last section of the chapter made a brief foray into this wider world.

The transfer control systems of the two non-Wassenaar/OSCE states reviewed in the previous section do not give us a broad picture of the extent to which states around the world, including non-Wassenaar/OSCE members, meet the Wassenaar–OSCE MANPADS requirements. Yet at least two findings probably resonate beyond the two cases. A lack of transparency precluded an evaluation of critical aspects of one country's transfer control system, while a second state—now moving towards Wassenaar membership—satisfied all of the Wassenaar–OSCE MANPADS standards.

Work continues on determining whether states around the world have the control systems that will enable them to fulfil the many commitments they have made in relation to light weapons in recent years. We know that the regulatory framework needed to implement the Wassenaar–OSCE MANPADS principles—among the most stringent of all light weapons measures—is in place in key exporting states. Yet the broader legislative picture is unclear, and—most crucially—it remains to be seen whether law is being matched with practice.

LIST OF ABBREVIATIONS

APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
CIS	Commonwealth of Independent States
ECOWAS	Economic Community of West African States
EU	European Union
ICAO	International Civil Aviation Organization
MANPADS	Man-portable air defence system
NATO	North Atlantic Treaty Organisation
OAS	Organization of American States
OSCE	Organization for Security and Co-operation in Europe
SADC	Southern African Development Community
WA	Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies

ENDNOTES

[1] Although most light weapons are indeed designed for use by more than one person, many are in fact designed for use by a single person. The product of political compromise, the 1997 UN Panel Report did not provide an exact definition of light weapons (or small arms). It served, rather, to map out in general terms a range of weapons that, until the mid-1990s, had been largely ignored by the international community.

[2] For a more detailed analysis of the scope of these instruments, see McDonald (2005). For more information on their contents, see Small Arms Survey (2001, ch. 7; 2002, ch. 6; 2003, ch. 7).

[3] For current OAS membership, see <http://www.oas.org/>

[4] In containing the expansion of gases on combustion, a barrel helps impart kinetic energy to a projectile. This results in the phenomenon of recoil transmitted to both weapon and shooter when a barrelled weapon is fired. For this reason, barrels are composed of hard steel alloys. By contrast, launch tubes, such as those used in MANPADS, may guide the projectile's initial direction but do not help drive it forward. The actual thrust comes from the projectile itself. Because a launch tube is open at both ends, little energy is imparted to the tube and consequently to the shooter. Launch tubes are usually made of fibreglass or plastic composites.

[5] For current EU membership, see <http://europa.eu.int/abc/governments/index_en.htm>

[6] For current ECOWAS membership, see <http://www.ecowas.int/>

[7] For current OSCE membership, see <http://www.osce.org/>

[8] For current African Union membership, see <http://www.africa-union.org/>

[9] See Small Arms Survey (2001, ch. 7).

[10] For current SADC membership, see <http://www.sadc.int/index.php>

[11] For current Pacific Islands Forum membership, see <http://www.forumsec.org.fj/>

[12] Correspondence with Pacific Islands Forum Secretariat, 15 November 2004.

[13] The UN Firearms Protocol will enter into force in July 2005, 90 days after the deposit of the 40th instrument of ratification (UNGA, 2001b, art. 18(1)). For the latest information on Protocol signatures and ratifications, see <http://www.unodc.org/unodc/crime_cicp_signatures_firearms.html>

[14] The *Protocol's* use of the word 'portable' in defining the term 'firearm' is meant to restrict its scope to 'firearms that could be moved or carried by one person without mechanical or other assistance' (UNGA, 2001b, art. 3(a); 2001a, para. 3). This excludes those light weapons that fit the 1997 UN Panel definition, but can be carried only by two or more persons, a pack animal, or a light vehicle. A further limitation on the *Protocol's* scope arises from its use of the words 'barrelled' and 'expel' in defining 'firearm'. As in the case of the *OAS Model Regulations,* discussed above, these two criteria effectively restrict the *Protocol's* coverage of light weapons to those using cartridge-based ammunition.

[15] For current Wassenaar Arrangement membership, see <http://www.wassenaar.org/welcomepage.html>

[16] For current CIS membership, see <http://www.cisstat.com/eng/cis.htm>

[17] For current APEC membership, see <http://www.apec.org/apec.html>

[18] For current UN membership, see <http://www.un.org/members/index.html>

[19] For current ICAO membership, see <http://www.icao.int/>

[20] For current G8 membership, see <http://www.g7.utoronto.ca/>

[21] General Assembly Resolution 59/90 merely 'Urges Member States to support current international, regional and national efforts to combat and prevent the illicit transfer of man-portable air defence systems and unauthorized access to and use of such weapons' (UNGA, 2004, para. 2).

[22] This section is based on Anders (2004).

[23] Germany ended its (US-licensed) production of Stinger MANPADS systems in late 2004 (EADS, 2004).

[24] The intention to include missiles in the *Elements* emerges quite clearly in a later section, which, in referring to the 'principal components' of MANPADS, lists 'the gripstock and the missile in a launch tube' (WA, 2003a, sec. 2.9; OSCE, 2004, sec. 2.7).

[25] Bulgarian law also regulates the retransfer of foreign weapons from Bulgarian territory. When submitting their permit application, prospective re-exporters must include the authorization of the state from which the weapons were imported; Bulgaria (2002b, art. 22.3.1).

[26] Telephone interview with German arms export official, 16 February 2005.

[27] As of 1 March 2005, Germany did not extend this waiver in relation to the following EU states: Cyprus, Estonia, Latvia, Lithuania, Malta, Slovakia, and Slovenia. E-mail correspondence with German arms export official, 2 March 2005.

[28] Although these do not normally include retransfer restrictions, UK licensing authorities do require end-user undertakings. These may stipulate that, for example, weapons may not be used to violate human rights or be employed in particular regions and areas. Telephone interview with British arms export official, 8 October 2004.

[29] In the case of the US, these documents must, at a minimum, identify the recipient and end-user of US-exported defence articles.

[30] Germany and the UK, for example, operate a global project licensing scheme under the *Framework Agreement* (France et al., 2000), while US rules permit 'global project authorizations' for government-to-government cooperative projects with Australia, Japan, Sweden, or NATO member countries. US (2004, para. 126.14.3.i).

[31] Australia, Japan, New Zealand, and Switzerland.

[32] If a recipient government has measures in place 'that will achieve comparable levels of protection and accountability', no delivery verification would be necessary (WA, 2003a, sec. 2.9; OSCE, 2004, sec. 2.7).

[33] For another example, see Nairobi Protocol (2004, art. 10.d).

[34] See US (2003b, point C8.3.3.5, p. 276).

[35] This section is based on Anders (2005).

[36] Brazil has yet to produce any type of guided light weapon, but the country's well-developed defence industry and continuing interest in purchasing high-tech infantry weaponry suggests it may not be long before it seeks self-sufficiency in MANPADS (Campbell, 2003). South Africa already manufactures guided anti-tank missile systems, in addition to various larger guided-weapon systems. Moreover, it has entered the market for integrated or 'networked' air defence, involving very short-range air defence systems (VSHORAD), making MANPADS production a logical next step (Denel, 2005a; 2005b).

[37] This research could not confirm compliance (or non-compliance) with these standards on the basis of publicly available information. Follow-up enquiries with Brazilian government officials were unsuccessful in resolving these questions.

[38] Note that, while South Africa distinguishes among different categories of weapons in order to facilitate the processing of and reporting on export licences, all weapons categories are subject to the same transfer control standards and procedures.

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