INTRODUCTION

This chapter provides an annual update of the authorized trade in small arms and light weapons. It examines trends in the trade, and provides information on major exporters and importers, whom they trade with, and in what types of weapons. The lack of transparency on the part of many important suppliers and recipients in this global trade makes this effort an uphill battle. In fact, although the issue of small arms and light weapons has been on the international agenda for over a decade, few, if any, states provide full information on their small arms and light weapons exports and imports. So clearly, the Small Arms Trade Transparency Barometer, introduced in *Small Arms Survey 2004*, remains an important tool.

Following up on the analysis of the illicit trade in Europe in *Small Arms Survey 2005*, this chapter provides more systematic information on the illicit trade in South America. The analysis is based on two sources of internationally comparable data partially available for the illicit trade, namely customs and police seizure data.

The main findings of the chapter include the following.

- According to available data and estimates, the top exporters of small arms and light weapons by value (exporting
 at least USD 100 million of small arms and light weapons, including parts and ammunition, annually) in 2003—the
 latest year for which data is available—were the Russian Federation, the United States, Italy, Germany, Brazil, and
 China. Compared to 2002 and 2001, the only change is that Belgium was no longer among the top exporters in 2003.
- The top importers (importing to the value of at least USD 100 million) for 2003, according to customs data, were
 the United States, Cyprus, and Germany. Top importers tend to vary more than top exporters, but the United States
 and Cyprus were both on the list for 2001, 2002, and 2003.
- Among the major exporters of small arms and light weapons, the most transparent are the United States and Germany. The least transparent are Bulgaria, Iran, Israel, and North Korea, all scoring zero on the Small Arms Trade Transparency Barometer.
- Customs data in South America has strong limitations in terms of systematization, organization, and comparability.
 Police data indicates that in this region diversion from military stockpiles from neighbouring countries is as serious a problem as international arms trafficking.

THE AUTHORIZED GLOBAL SMALL ARMS AND LIGHT WEAPONS TRADE: ANNUAL UPDATE

This section provides an update on the authorized global small arms and light weapons trade. It focuses on the major exporters and importers, their top trading partners, and the main products exchanged. It includes information on

small arms and light weapons, their parts and accessories, and small arms (as opposed to light weapons) ammunition. Light weapons ammunition is excluded because of reporting limitations. In customs data, light weapons ammunition exports/imports are reported in the same category as ammunition for large conventional weapons. There is no way to single out the former from the latter, hence mixed ammunition categories were excluded from the calculations.² However, the trade in military small arms and light weapons is most likely underestimated because of limited transparency on the part of many countries and the lack of reporting for certain types of military weapons.

As in previous years, calculations are provided by the Norwegian Initiative on Small Arms Transfers (NISAT) based on customs data from UN Comtrade. Today, UN Comtrade is the most comprehensive source of comparable information on the trade in small arms and light weapons.³ Although customs data is compared with national arms export report figures whenever possible, calculations are nevertheless based only on customs data. The main reasons for this are to ensure comparability across countries and to avoid double counting. Figures represent financial values rather than quantities. Another limitation of the data is the time lag in reporting. A number of states do not report promptly to UN Comtrade on their imports and exports, and states can correct their information for more than a year after submission. The following analysis therefore uses 2003 data unless explicitly stated otherwise.

Also as in previous years, 'mirror statistics' are used to get a more complete picture of the trade. Mirror data relies on importers' declarations of their imports to calculate exporters' exports and vice versa. Whoever uses mirror statistics is regularly faced with the necessity of choosing between an importer's declaration of an import and the exporter's reporting on the same transaction when there are discrepancies between the two figures. In such cases, NISAT, following a model developed by the International Trade Centre, has used a reliability measure to select whose reporting to rely on.⁴

Using UN Comtrade has its advantages and disadvantages. While steps have been taken to strengthen its utility, the current approach—analyzing UN Comtrade data in the light of additional information supplied by national reports—has its limitations. Regional reporting mechanisms such as those used in West Africa and in Europe could be more fully mined for data. Lack of transparency, selective and incomplete reporting, and, in the case of the EU Code of Conduct, a focus on *licences granted* and not *actual deliveries* all explain why these sources of information are not currently incorporated into the global assessments presented here. The inescapable element of human error (see Box 3.1) can affect any reporting instrument and is not limited to UN Comtrade.

The documented value of all small arms and light weapons exports in 2003 (as reported to UN Comtrade) is around USD 2 billion. In 2002 the figure was similar (around USD 2.1 billion) (Small Arms Survey, 2005, p. 98). Levels of transparency, in particular by important exporters and on the main categories of small arms and light weapons, have remained roughly the same as in previous years. Little, for example, is still known about Russian and Chinese exports from customs data sources. Moreover, information on certain types of small arms and light weapons (such as light weapons ammunition and certain types of military small arms and light weapons, including the very high-value man-portable air defence systems—MANPADS) is aggregated with information from other weapons types and thus

Box 3.1 A Chaotic tale: why export and import data does not always match

UN Comtrade, like any database, suffers from occasional human error. For example, Sudan reported that it had accidentally—and possibly routinely—entered 'CH' to record its imports of weapons from China.⁵ CH, however, is not the code for China in UN Comtrade reporting. CN is. CH is the code for Switzerland, and stands for Confoederatio Helvetica.

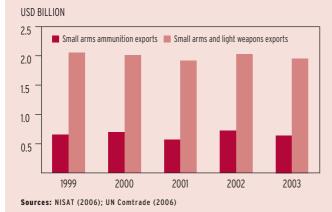
Box 3.2 Authorized global transfers of small arms ammunition

An examination of authorized small arms ammunition transfers over the period 1999-2003 (the last five years for which data is available from UN Comtrade) shows that the trade in ammunition makes up a large portion of the overall small arms trade. During this period, the share of small arms ammunition exports as part of total small arms and light weapons exports was about one-third (see Figure 3.1).

Ammunition, in contrast to the arms themselves, is a consumable good. This means that users must regularly procure fresh supplies. Trade patterns for ammunition of individual countries could therefore be quite different from those of small arms. Sudden and consistent trends in imports of ammunition and parts of ammunition for military firearms can be detected in countries that are involved in either internal or international conflicts, such as Colombia and the United States.

The period 1999–2003 shows relatively stable trading patterns in small arms ammunition. The top ammunition exporters (defined as those states whose export value was equal to or above USD 150 million for the period as a whole) were the United States, Italy, Belgium, the UK, the Russian Federation, and Germany. For 2003, the top exporters (defined as those states whose export value was equal to or above USD 30 million) were the United States, Italy, Germany, Switzerland, and Spain.⁶ The top

Figure 3.1 Worldwide small arms ammunition exports as a share of total small arms and light weapons exports as reported to UN Comtrade, 1999-2003



ammunition importers for the five-year period are the United States, Saudi Arabia, and Germany, and the top importers for 2003 are the United States, Germany, and the United Kingdom.

Data sources on authorized ammunition transfers are more limited than those on small arms transfers as a whole. National arms export reports are as a rule less informative on ammunition than on arms; hence the trends mentioned above are solely based on UN Comtrade data. Customs data, such as that of UN Comtrade, is also far from perfect. The calculations made here only include categories 930621 (shotgun cartridges and parts) and 930630 (small arms ammunition), and mixed categories were excluded.7 Thus the trade in small arms and light weapons ammunition is most likely underestimated.

Sources: Glatz (2006): NISAT (2006): UN Comtrade (2006)

impossible to quantify. Analysis of UN Comtrade data for 2003 and field research on countries not reporting to UN Comtrade combined suggests there is insufficient reason to challenge the previous estimate for the total global legal trade in small arms and light weapons of USD 4 billion. It is assumed that mirror data captures only a small percentage of actual legal trade from major suppliers of small arms and light weapons that do not report exports to UN Comtrade, or that report only partial information. This list includes Bulgaria, China, Iran, Israel, North Korea, Pakistan, the Russian Federation, and Singapore.

As in previous years, trade in small arms ammunition is an important component of the overall trade in small arms and light weapons (see Box 3.2). Another major component of the trade is military small arms and light weapons, although it is notoriously difficult to estimate its exact share of the trade, as the shotgun and rifle categories may also contain misclassified information about some military weapons that are not necessarily small arms and light weapons, such as heavy artillery systems (Dreyfus, Lessing, and Purcena, 2005, pp. 117–19). Both the ammunition and military weapons components of the total small arms trade are even more important than the figures in Tables 3.1 and 3.2 suggest, given the problem of under- and unclear reporting.

Small arms and light weapons exports

The top small arms and light weapons exporters (exporting at least USD 100 million of small arms and light weapons, including parts and ammunition, annually) according to available data and estimates in 2003 were the Russian Federation, the United States, Italy, Germany, Brazil, and China. In Table 3.1, a complete listing of top and major exporters (major exporters are defined as countries with yearly sales of more than USD 10 million) is presented. Compared to 2002, there are some changes. Belgium was no longer among the top exporters in 2003 after several years in this category. This might be due to a reporting problem: for 2003, there was a very large difference between Belgian and Saudi Arabian declarations of small arms ammunition transfers (Belgium declared an export of USD 37,018, while Saudi Arabia declared an import of USD 47,153,180). The reliability calculator favoured Belgium, and its declaration is included below. This explains, in no small part, the apparent drop in Belgium's exports (and Saudi imports) compared with 2002. Some other countries appear on the list of major exporters for the first time, namely Croatia and Iran, and others, such as Australia and Mexico, reappear after being absent from the 2002 listing. Croatia's main small arms trading partners in 2003 were the United States, Macedonia, Serbia and Montenegro, Afghanistan, and Dominica. For Iran, they were Sudan and Italy. North Korea was newly included as a medium producer. Apart from this, there were no large shifts in major small arms exporters in the period 2001-03.

As in previous years, there are some exporters, presumed to be important in the authorized small arms and light weapons trade, about which relatively little is known. These include Bulgaria, China, Iran, Israel, North Korea, Pakistan, the Russian Federation, and Singapore. Finding information on the small arms and light weapons exports of these countries is often very difficult. Bulgarian policy, for example, is to keep this information classified.⁹

	Table 3.1 Annual authorized small arms and light weapons exports for major exporters (yearly sales of more than USD 10 million), 2003						
Country	USD value (unless otherwise stated)	Main recipients (top five by value)*	Main types of small arms and light weapons exported (top five). NB: types refer to customs codes (see notes)	Remarks			
Australia	10 million**	US, Japan, New Zealand, Belgium, UK**	Ammunition, pistols/revolvers, sporting/hunting shotguns, sporting/hunting rifles**	Department of Defence did not report on arms exports in 2003.			
Austria	At least 97 million**	US, Germany, Switzerland, Russian Federation, Italy**	Pistols/revolvers, sporting/ hunting rifles, parts/accessories sporting/hunting weapons, ammunition, parts/accessories pistols/revolvers**	Reports its exports neither of military weapons nor of pistols/revolvers to UN Comtrade. Hence the value of these categories (based on importers' reports) is likely to be underestimated.			
Belgium	At least 75 million**	US, Portugal, France, UK, Italy**	Parts/accessories sporting/ hunting weapons, sporting/ hunting shotguns, sporting/ hunting rifles, ammunition**	Reports its exports neither of military weapons nor of pistols/revolvers to UN Comtrade. Hence the value for these categories (based on importers' reports) is likely to be underestimated. Belgium no longer publishes a national arms export report.			

				The Region of Brussels presented arms export reports for the period 1 September 2003–31 December 2004. Although information on licences is disaggregated among 'light',' semilight', and 'heavy weapons', the report only gives information on granted export licences and not actual deliveries. Values are not broken down by weapons category. The Wallonian Region released a report on arms exports for the period 1 September–31 December 2003. This report, however, does not distinguish between heavy conventional weapons and small arms and light weapons and only gives very aggregated information concerning export licences and not actual exports. The report from Flanders covers the period 30 August 2003–31 August 2004. It provides information on actual deliveries disaggregated by weapon category, but values for small arms and light weapons are not provided separately from those for other conventional weapons.
Brazil	At least 101 million**	US, Colombia, Saudi Arabia, Germany, Zimbabwe ^{l**}	Ammunition, pistols/revolvers, sporting/hunting rifles, sporting/hunting shotguns**	Does not report exports of pistols/ revolvers to UN Comtrade. However, handguns are the main product and export good of the Brazilian small arms industry. The value for this product is based on importers' reports. ²
Bulgaria	Medium producer,	but little is reported a	about its exports.	
Canada	57 million** Canadian export report for 2003 had not yet been released in January 2006.	US, Belgium, Denmark, UK, Australia**	Ammunition, sporting/hunting rifles, parts/accessories sporting/hunting weapons, pistols/revolvers, military firearms**	Customs data and the national report diverge largely because the latter does not take into account exports to the United States, which, according to the export report, are 'estimated to account for over half of Canada's exports of military goods and technology' (Canada, 2003, p. 7).
China	At least 14 million** Small Arms Survey estimate: USD 100 million (Small Arms Survey, 2004, Annexe 4.1)	US, Bangladesh, Germany, Canada, Malta**	Sporting/hunting rifles, sporting/hunting shotguns, parts/accessories sporting/ hunting weapons, parts/ accessories pistols/revolvers, pistols/revolvers**	Customs data is likely to underestimate actual exports, as China does not report on many of its exports, and hence figures are based on importers' reporting.

Croatia	13 million**	US, Macedonia, Serbia and Montenegro, Afghanistan, Dominica**	Pistols/revolvers, ammunition, military firearms, rocket/ grenade launchers, parts/ accessories pistols/ revolvers**	
Czech Republic	At least 51 million** EUR 25.5 million (USD 30.8 million)*	US, Germany, France, Colombia, Slovakia**	Sporting/hunting rifles, pistols/revolvers, ammunition, parts/accessories pistols/ revolvers**	Does not report exports of military weapons to UN Comtrade. Hence the value (based on importers' reports) is likely to be underestimated. Customs and export report data diverge probably largely because small arms ammunition cannot be distinguished from other types of ammunition in the arms export report. The report does not rank recipients for all types of small arms.
Finland	32 million** EUR 2.3 million (USD 2.8 million)*	US, Sweden, Norway, UK, Italy** Italy, US, Germany, UK, Czech Republic*	Sporting/hunting rifles, ammunition, parts/accessories sporting/hunting weapons, military firearms, sporting/hunting shotguns**	Customs and export report data diverge probably largely because civilian weapons are excluded from the export report. Moreover, in the export report, small arms ammunition cannot be distinguished from other types of ammunition.
France	At least 42 million** EUR 47.2 million ³ (USD 57.1 million)*	Côte d'Ivoire, ⁴ Turkey, US, Portugal, Canada** Oman, Norway, Tunisia, South Korea, Spain**	Military firearms, ammunition, military weapons, ammunition, parts/accessories sporting/ hunting weapons**	Does not report exports of military weapons and pistols/revolvers to UN Comtrade. Hence the value (based on importers' reports) is likely to be underestimated. Customs and export report data capture different parts of the small arms and light weapons trade: customs data better captures small arms and civilian weapons, while the arms export report encompasses more high-end light weapons.
Germany	At least 201 million**	US, France, Austria, Switzerland, Japan**	Pistols/revolvers, ammunition, sporting/hunting rifles, parts/accessories sporting/hunting weapons, parts/accessories pistols/revolvers**	Does not report exports of military weapons to UN Comtrade. Hence the value (based on importers' reports) is likely to be underestimated. Publishes an export report, but it includes information on granted export licences, not actual deliveries of small arms and light weapons, which may be lower.
Iran	At least 16 million**	Sudan, Italy**	Military weapons, parts/ accessories sporting/hunting weapons, ammunition, pistols/ revolvers, parts/accessories pistols/revolvers**	Does not report on its small arms and light weapons exports at all to UN Comtrade. Figures are based on importers' reports. Hence the value is likely to be underestimated.

lawad	A4 14 15	UC Contains	Distanta la la constitución de l	Does not report on its small arms and	
Israel	At least 15 million**	US, Guatemala, Mexico, Germany, Austria**	Pistols/revolvers, ammunition, parts/accessories pistols/ revolvers, military firearms, parts/accessories sporting/ hunting weapons**	light weapons exports at all to UN Comtrade. Figures are based on importers' reports. Hence the value is likely to be underestimated.	
Italy	At least 347 million** 529,615*5	US, France, UK, Spain, Germany**	Sporting/hunting shotguns, ammunition, sporting/hunting rifles, pistols/revolvers, parts/ accessories sporting/hunting weapons**	Does not report exports of military weapons to UN Comtrade. Hence the value (based on importers' reports) is likely to be underestimated. Publishes an export report, but it includes information provided by the Ministry of Foreign Affairs on granted licences of military weapons, not actual deliveries of small arms and light weapons, which may be lower. The report includes an annexe with some information from the Customs Agency (Agenzia delle Dogane) on actual exports of military small arms. Information is provided in this annexe by company, product, and value. It is not possible, however, to identify the countries of destination of small arms and light weapons exports (Italy, 2004, pp. 169–96)	
Japan	72 million**	US, Belgium, Canada, Germany**	Sporting/hunting rifles, parts/ accessories sporting/hunting weapons, sporting/hunting shotguns, shotgun barrels, rocket/grenade launchers**		
Mexico	11 million**	US, Honduras, Peru, Guatemala, Panama**	Shotgun barrels, ammunition, parts/accessories sporting/ hunting weapons, military firearms**	Exports of military firearms might actually be returns for repairs or devolution of material to the licensing company, Heckler & Koch. Germany ranks as the sixth importer from Mexico and is the only country that received military firearms from that country.	
North Korea	Medium producer,	but little is reported a	bout its exports.		
Norway	73 million** ⁷	Spain, Sweden, Italy, Switzerland, UK**	Military firearms, ammunition, rocket/grenade launchers, sporting/hunting shotguns, sporting/hunting rifles**	Publishes national arms export report, but in the edition covering 2003, it is difficult to distinguish the small arms and light weapons share of arms exports.	
Pakistan			out its exports. According to the Sto ir missiles to Malaysia between 2002	ckholm Peace Research Institute (SIPRI), 2 and 2003 (SIPRI, 2006).	
Portugal	17 million**	Belgium, US, Spain, Guinea Bissau, Germany**	Sporting/hunting rifles, sporting/hunting shotguns, parts/accessories sporting/ hunting weapons, pistols/ revolvers, ammunition**	Publishes an export report, but it does not detail the share of small arms and light weapons in total arms exports.	

Romania	Medium producer, but little is reported about its exports.						
Russian Federation	At least 43 million** At least 431.8 million (410.3 million for small arms and light weapons and 21.5 million for small arms and light weapons ammunition) (Pyadushkin, 2005, pp. 1–2)*	US, Cyprus, France, Algeria, Kazakhstan** Jordan, Kyrgyzstan, Kenya (Pyadushkin, 2005, p. 3)♠ India, Indonesia (SIPRI, 2006)♠	Sporting/hunting shotguns, ammunition, sporting/hunting rifles, military firearms, pistols/revolvers** Rocket-propelled grenade launchers, assault rifles (Pyadushkin, 2005, p. 3)8 MANPADS (SIPRI, 2006) *	Customs data is likely to underestimate actual exports, as the Russian Federation does not report on many of its exports, and hence figures are based on importers' reporting.			
Singapore	Medium producer,	but little is reported al	oout its exports.				
South Africa	At least 18 million**	Namibia, Colombia, US, UK, Brasil**	Military firearms, ammunition, pistols/revolvers, rocket/ grenade launchers, sporting/ hunting rifles**	Does not report on its small arms and light weapons exports at all to UN Comtrade. Figures are based on importers' reports. Hence the value is likely to be underestimated. South Africa no longer makes its arms export report public (Honey, 2005).			
South Korea	23 million**	US, Venezuela, Indonesia, Australia, Thailand**	Ammunition, parts/accessories pistols/revolvers, parts/ accessories sporting/hunting weapons, military firearms**	osport report pools (tions), 2000,			
Spain	At least 55 million** EUR 5.9 million (USD 7.1 million)**	US, UK, Portugal, Ghana, France**	Ammunition, sporting/hunting shotguns, parts/accessories sporting/hunting weapons, sporting/hunting rifles**	Does not report exports of military weapons to UN Comtrade. Hence the value (based on importers' reports) is likely to be underestimated. The discrepancy between the arms export report figure and the UN Comtrade figure is most likely due to the fact that civilian weapons are excluded from the export report. Export report does not detail recipients of small arms.			
Sweden	At least 29 million** SEK 19 million (USD 2.5 million)**	US, Norway, Denmark, Germany, Mexico** Pakistan, Thailand, Australia (SIPRI, 2006)	Ammunition, parts/ accessories sporting/hunting weapons, sporting/hunting rifles, sporting/hunting shotguns** MANPADS (SIPRI, 2006) *	Does not report exports of military weapons to UN Comtrade. Hence the value (based on importers' reports) is likely to be underestimated. Customs and export report data diverge probably largely because small arms ammunition cannot be distinguished from other types of ammunition in the arms export report. In the export report, it is also difficult to fully distinguish small arms and light weapons from other items. The export report does not detail recipients of small arms.			

Switzerland	65 million** CHF 14.1 million (USD 11 million)*	Germany, US, Austria, Finland, United Arab Emirates** Germany, US, Poland, Italy, Macau (China)*	Ammunition, pistols/revolvers, military firearms, sporting/ hunting rifles, parts/accessories sporting/hunting weapons**	Customs and export report data diverge probably largely because small arms ammunition cannot be distinguished from other types of ammunition in the arms export report. In the export report, it is also difficult to fully distinguish small arms and light weapons from other items. Civilian weapons are excluded from the export report.	
Turkey	56 million**	Germany, US, Italy, Austria, Egypt**	Sporting/hunting shotguns, ammunition, parts/accessories sporting/hunting weapons, sporting/hunting rifles, shotgun barrels**		
UK	42 million**	US, Japan, Denmark, Germany, Switzerland**	Sporting/hunting shotguns, ammunition, parts/accessories sporting/hunting weapons, sporting/hunting rifles**	Publishes export report, but does not detail the value of small arms and light weapons exports. Instead it provides numbers of certain types of small arms and light weapons exported and certain destinations.	
US	370 million**	Japan, Canada, South Korea, United Arab Emirates, Australia** Germany, Greece, Italy, Egypt (SIPRI, 2006) ◆	Ammunition, military firearms, parts/accessories sporting/hunting weapons, rocket/grenade launchers, sporting/hunting rifles** MANPADS (SIPRI, 2006) *	Publishes export report, but it includes mostly information on granted export licences, not actual deliveries of small arms and light weapons, which may be lower.	

^{*} Excluding those contributing less than 1% of the total.

- * Export report.
- A Report by field researcher.
- Other academic/research sources such as SIPRI.

Note 1: Customs data and national arms export reports diverge for a number of reasons. Two important causes for discrepancies are: (a) unlike customs data, national arms export reports mostly do not include exports of whatever is categorized as 'civilian' weapons; and (b) many countries use the Wassenaar Arrangement Munitions List (ML) in their arms export reports. The categories of the ML list, with one exception (ML1), do not distinguish small arms and light weapons from other types of weapons. The Small Arms Survey records the ML1 value in the table; hence many types of small arms and light weapons, and all types of small arms ammunition, are excluded. For further details, see Small Arms Survey (2005, pp. 101-02).

Note 2: Some top producers of small arms, e.g. China and the Russian Federation, do not publish any arms export reports and only limited customs information. In order to properly reflect their presumed importance in the small arms trade, the Small Arms Survey goes beyond mirror data. China is still estimated to export USD 100 million worth of small arms and light weapons. For details, see Small Arms Survey (2004, ch. 4, Annexe 4.1). For the Russian Federation, figures were developed on the basis of field research.

Note 3: In this table, 'transfer' can also mean the movement of small arms for repair, and devolution of parts and weapons to licensing companies.

NB 1: 'Ammunition' in the table refers to shotgun cartridges and small arms ammunition combined.

NB 2: Category 9301 (military weapons) is a mixed category, containing both small arms and light weapons and other weapons. It was replaced by four new categories in the newest revision of the UN Comtrade Harmonized System (HS 2002), facilitating differentiation between small arms and light weapons and other weapons, among them the small arms and light weapons categories 930120 and 930190. Some countries still use HS 1996, however, and their reported value for 93010 may therefore include military weapons other than small arms and light weapons. The calculations on which this table is based include data from HS 2002, HS 1996, and HS 1992 to account for all transfers of military small arms and light weapons reported to UN Comtrade. For the older HS codes, the UN Register of Conventional Arms (UN Register) or the SIPRI Yearbook were consulted to see whether any of the transfers were likely to concern large-calibre artillery. This was not the case for any transfers during 2003 (otherwise the respective 9301 value would have been taken out of the calculation). For more information on revisions of the UN Comtrade HS, see Marsh (2005).

^{**} NISAT (2006); UN Comtrade (2006). Customs codes: 9301 (military weapons), 930120 (rocket and grenade launchers, etc.), 930190 (military firearms), 9302 (revolvers and pistols), 930320 (sporting and hunting shotguns), 930330 (sporting and hunting rifles), 930510 (parts and accessories of revolvers and pistols), 930521 (shotgun barrels), 930529 (parts and accessories of shotguns or rifles), 930621 (shotgun cartridges), 930630 (small arms ammunition).

- 1 Brazil declares exports to Zimbabwe.
- 2 Research by Dreyfus, Lessing, and Purcena (2005, p. 116) suggests that Brazil records its firearm exports in a somewhat unorthodox way, filing its pistols and revolvers exports under customs category 930330 (sporting and hunting rifles). The imports declared in category 9302 (revolvers and pistols) by the United States may thus correspond to inflated figures in the category 930330 on the Brazilian side.
- 3 Calculated from France (2005, Annexe 15).
- 4 In a phone conversation with the Small Arms Survey on 1 December 2005, an official from the French Mission in Geneva suggested that the small arms and light weapons declared by Côte d'Ivoire may be related to the transfer of French equipment to France's 'Operation Licorne', which was supporting the Economic Community of West Africa States peacekeeping mission in that country at the time.
- 5 This figure only includes military small arms and light weapons (including parts and ammunition) as reported by the Customs Agency in the national arms export report.
- 6 On small arms production under Heckler & Koch licence in Mexico, see Small Arms Survey (2004, p. 25).
- 7 The majority of Norwegian exports to Spain were destined for ships being built in Spain for the Norwegian Navy (e-mail communication with Nicholas Marsh, Peace Research Institute, Oslo, 27 February 2006).
- 8 Types of small arms and light weapons exported to the top three recipients.

Sources: Brussels (2005); Canada (2003); Czech Republic (2004); Finland (2004); Flanders (n.d.); France (2005); Germany (2004); Italy (2004); NISAT (2006) (UN Comtrade calculations); Norway (2004); Pyadushkin (2005); South Africa (2003); Spain (2004); Sweden (2004); Switzerland (2004); Wallonia (2004); UK (2004)

Small arms and light weapons imports

The top importers (i.e. countries importing more than USD 100 million worth of small arms and light weapons in a given year) for 2003 were the United States, Cyprus, and Germany. In 2002 the list was somewhat different, comprising the United States, Cyprus, Saudi Arabia, and South Korea. Similarly, there are a number of changes in the listing of major importers (i.e. those states that import more than USD 10 million of small arms and light weapons) from 2002 to 2003. Bahrain, Jordan, Kenya, and the Philippines are no longer among the major importers. Newcomers here are Côte d'Ivoire, Egypt, Namibia, New Zealand, Sudan, Thailand, and Venezuela.

For 2003, the top importers were the United States, Cyprus, and Germany. Listings of top and major small arms and light weapons importers are normally more volatile than a similar list of exporters. Only the United States and Cyprus regularly rate as top importers. While civilian demand (and hence international purchases of civilian weapons) more rarely undergoes drastic changes from one year to the next, procurement decisions of police and the military are more prone to fluctuations, especially in smaller states. For some countries, explanations for sudden drops in imports have to be sought elsewhere, however. Saudi Arabia no longer reports on its imports of military weapons and pistols/revolvers, which probably explains the apparent drastic fall of imports of that country (from USD 132 million in 2002 to only USD 25 million in 2003).

Just as with exporters, information on some countries that are presumed to be major importers remains scarce. This is particularly true for countries in conflict, be it internal or international (although Colombia, Côte d'Ivoire, Israel, the Russian Federation, and Sudan are among the major importers listed in Table 3.2). In some cases, imports to such countries (and especially to insurgents) are illicit and thus do not fit into Table 3.2. Transfers to some war zones are discussed in more detail in the case study chapters of this volume.¹¹

Other presumed major importers that are not found in Table 3.2 are post-war states such as Iraq and Afghanistan. Under UN arms embargo until 2004, Iraq's imports gathered pace in that year and 2005. Suppliers of small arms to Iraq include Central and Eastern European countries, e.g. Estonia and Romania, as well as Western countries such as Denmark and the United States (Associated Press, 2005; NATO, 2005; US Central Command, 2004). Afghanistan has also relied on Central and Eastern European suppliers (Croatia, Bulgaria, Hungary, Romania) and the United States in the post-conflict period (Smith & Wesson Holding Corporation, 2005; Ramon, 2004; Associated Press, 2002). Most of the supplies to both countries consist of donations, and hence are not captured by information based on values such as those in Tables 3.1 and 3.2.

Table 3.2 Annual authorized small arms and light weapons imports for major importers (yearly imports of more than USD 10 million), 2003

more flight 021				
Country	USD value Main suppliers customs (top five)* data (UN Comtrade)		Main types of small arms and light weapons imported (top five). NB: types refer to customs codes (see notes)	Remarks
Australia	42 million	US, unspecified countries, Italy, Austria, Finland	Ammunition, military firearms, sporting/hunting rifles, pistols/revolvers, sporting/hunting shotguns	
Austria	At least 27 million	Germany, Switzerland, Turkey, Italy, Belgium	Ammunition, parts/accessories sporting/hunting weapons, sporting/hunting rifles, sporting/hunting shotguns, parts/accessories pistols/revolvers	Does not report on its imports of military weapons and pistols/ revolvers to UN Comtrade. Hence the value is possibly underestimated.
Belgium	At least 37 million	Japan, Portugal, US, Italy, Canada	Sporting/hunting shotguns, ammunition, sporting/hunting rifles, pistols/revolvers	Does not report on its imports of military weapons and pistols/ revolvers to UN Comtrade. Hence the value (based on exporters' reports) is possibly underestimated. Some imports might actually be returns for repairs.
Canada	58 million	US, Italy, Japan, Germany, UK	Ammunition, parts/accessories sporting/hunting weapons, sporting/hunting rifles, sporting/hunting shotguns	
Colombia	34 million	Brazil, US, South Africa, Czech Republic, Germany	Ammunition, military firearms, pistols/revolvers, rocket/grenade launchers	
Côte d'Ivoire	11 million	France ¹	Military weapons, ammunition, sporting/hunting rifles	Does not report on many of its imports. Hence the value is possibly underestimated.
Cyprus	185 million	Unspecified countries, Russian Federation	Military firearms, sporting/ hunting shotguns, ammunition, sporting/hunting rifles	
Czech Republic	11 million	Italy, Germany, US, Turkey, Austria	Pistols/revolvers, parts/ accessories pistols/revolvers, ammunition, parts/accessories sporting/hunting weapons, sporting/hunting shotguns	Does not report on its imports of military weapons to UN Comtrade. Hence the value is possibly underestimated.
Denmark	22 million	Germany, Italy, Canada, Sweden, UK	Ammunition, sporting/ hunting rifles, sporting/hunting shotguns, parts/accessories sporting/hunting weapons	
Egypt	17 million	US, Turkey, Czech Republic	Parts/accessories sporting/ hunting weapons, ammunition, sporting/hunting shotguns, pistols/revolvers, rocket/ grenade launchers	

Finland	17 million	Italy, Switzerland, Germany, US, Austria	Ammunition, sporting/hunting shotguns, sporting/ hunting rifles, military firearms	
France	At least 83 million	Italy, Germany, Belgium, US, Spain	Sporting/hunting shotguns, sporting/hunting rifles, ammunition, parts/accessories sporting/hunting weapons	Does not report on its imports of military weapons and pistols/ revolvers to UN Comtrade. Hence the value is possibly underestimated.
Germany	At least 109 million	Switzerland, Turkey, Italy, US, Austria	Ammunition, parts/accessories sporting/hunting weapons, sporting/hunting shotguns, sporting/hunting rifles	Does not report on its imports of military weapons to UN Comtrade. Hence the value is possibly underestimated.
Greece	At least 13 million	Italy, US, Germany, Spain, Russian Federation	Sporting/hunting shotguns, ammunition, parts/accessories sporting/hunting weapons, rocket/grenade launchers, shotgun barrels	Does not report on its imports of military weapons and pistols/ revolvers to UN Comtrade. Hence the value (based on exporters' reports) is possibly underestimated.
Israel	At least 16 million	US, Austria,² South Korea, Czech Republic	Ammunition, military firearms, parts/accessories sporting/ hunting weapons, parts/ accessories pistols/revolvers, pistols/revolvers	Does not report any imports to UN Comtrade. Hence the value (based on exporters' reports) is probably underestimated.
Italy	At least 48 million	US, Germany, Belgium, Turkey, Norway	Ammunition, sporting/hunting rifles, parts/accessories sporting/hunting weapons, pistols/revolvers, sporting/hunting shotguns	Does not report on its imports of military weapons to UN Comtrade. Hence the value is possibly underestimated.
Japan	64 million	US, Germany, Italy, UK, Australia	Military firearms, ammunition, pistols/revolvers, sporting/hunting shotguns	
Kuwait	At least 14 million	US, Italy, Germany, France, Portugal	Ammunition, sporting/hunting shotguns, military firearms, sporting/hunting rifles	Does not report any imports to UN Comtrade. Hence the value (based on exporters' reports) is probably underestimated.
Malaysia	10 million	US, Switzerland, Italy, Norway, Netherlands	Ammunition, sporting/hunting rifles, rocket/grenade launchers, parts/accessories sporting/hunting weapons	
Mexico	15 million	Italy, US, Israel, Austria, Sweden	Ammunition, pistols/revolvers, military firearms, rocket/ grenade launchers, sporting/ hunting shotguns	
Namibia	10 million	South Africa, Germany, Czech Republic, Spain, US	Military firearms, pistols/ revolvers, sporting/hunting rifles, sporting/hunting shotguns, ammunition	
Netherlands	At least 23 million	US, Germany, Belgium, Switzerland, Canada	Ammunition, pistols/revolvers, parts/accessories sporting/ hunting weapons, sporting/ hunting shotguns	Does not report on its imports of military weapons and pistols/ revolvers to UN Comtrade. Hence the value (based on exporters' reports) is possibly underestimated.

New Zealand	14 million	US, Italy, Australia, Switzerland, Canada	Ammunition, sporting/hunting rifles, sporting/hunting shotguns, parts/accessories sporting/hunting weapons	
Norway	30 million	Germany, US, Italy, Sweden, Finland	Ammunition, sporting/hunting shotguns, sporting/hunting rifles, military firearms	
Poland	13 million	Germany, Italy, Czech Republic, Russian Federation, Switzerland	Ammunition, pistols/revolvers, parts/accessories pistols/ revolvers, military firearms, sporting/hunting rifles	
Portugal	40 million	Belgium, Italy, US, Spain, France	Parts/accessories sporting/ hunting weapons, sporting/ hunting shotguns, parts/ accessories pistols/revolvers, shotgun barrels, ammunition	
Russian Federation	At least 15 million	Germany, Italy, Austria, Belgium, France	Sporting/hunting shotguns, sporting/hunting rifles, parts/ accessories sporting/hunting weapons, ammunition	Does not report on its imports of mili- tary weapons, revolvers/pistols, and ammunition to UN Comtrade. Hence the value (based on exporters' reports) is possibly underestimated.
Saudi Arabia	At least 25 million	Brazil, US, Germany, Switzerland, UK	Ammunition, parts/accessories sporting/hunting weapons, rocket/grenade launchers, sporting/hunting rifles	Does not report on its imports of military weapons and pistols/ revolvers to UN Comtrade. Hence the value (based on exporters' reports) is possibly underestimated.
South Korea	42 million	US, Italy, UK, Germany	Ammunition, rocket/grenade launchers, pistols/revolvers, parts/accessories sporting/ hunting weapons	
Spain	At least 99 million	Norway, Italy, Germany, US, Portugal	Military firearms, sporting/ hunting shotguns, sporting/ hunting rifles, ammunition, pistols/revolvers	Does not report on its imports of mili- tary weapons to UN Comtrade. Hence the value (based on exporters' reports) is possibly underestimated.
Sudan	18 million	Iran, China	Military weapons, parts/ accessories sporting/hunting weapons, pistols/revolvers, sporting/hunting shotguns, sporting/hunting rifles	
Sweden	At least 24 million	Norway, Germany, Finland, US, Italy	Ammunition, sporting/hunting rifles, sporting/hunting shotguns, pistols/revolvers, parts/accessories sporting/hunting weapons	Does not report on its imports of military weapons to UN Comtrade. Hence the value is possibly underestimated.
Switzerland	24 million	Germany, Austria, Norway, Italy, UK	Ammunition, pistols/revolvers, sporting/hunting rifles, sporting/hunting shotguns, parts/accessories sporting/hunting weapons	

Thailand	At least 10 million	US, Austria, Czech Republic, Germany, Italy	Pistols/revolvers, ammunition, sporting/hunting rifles, sporting/hunting shotguns	Does not report on its imports of mili- tary weapons to UN Comtrade. Hence the value is possibly underestimated.
Turkey	32 million	France, US, Italy, Spain, Germany	Military firearms, ammunition, rocket/grenade launchers, pistols/revolvers	
United Arab Emirates	At least 42 million	US, Switzerland, Germany, Brazil, Finland	Military firearms, ammunition, pistols/revolvers, sporting/ hunting rifles	Does not report any imports to UN Comtrade. Hence the value (based on exporters' reports) is probably underestimated.
UK	77 million	Italy, US, Germany, Belgium, Spain	Sporting/hunting shotguns, ammunition, sporting/hunting rifles, parts/accessories hunting/ sporting weapons	
US	623 million	Italy, Germany, Austria, Japan Brazil	Sporting/hunting shotguns, pistols/revolvers, ammunition, sporting/hunting rifles, parts/ accessories hunting/sporting weapons	
Venezuela	10 million	South Korea, Brazil, Italy, Spain, Austria	Ammunition, pistols/revolvers, parts/accessories pistols/ revolvers, sporting/hunting shotguns	

^{*} Excluding those contributing less than 1% of the total.

Note 1: Includes customs codes 9301 (military weapons), 930120 (rocket and grenade launchers, etc.), 930190 (military firearms), 9302 (revolvers and pistols), 930320 (sporting and hunting shotguns), 930330 (sporting and hunting rifles), 930510 (parts and accessories of revolvers and pistols), 930521 (shotgun barrels), 930529 (parts and accessories of shotguns or rifles), 930621 (shotgun cartridges), 930630 (small arms ammunition).

Note 2: For the scope of this table, 'transfer' can also mean the movement of small arms for repair, and the devolution of parts and weapons to

NB 1: 'Ammunition' in the table refers to shotgun cartridges and small arms ammunition combined.

NB 2: Category 9301 (military weapons) is a mixed category, containing small arms and light weapons as well as other weapons. It was replaced by four new categories in the newest revision of the UN Comtrade Harmonized System (HS 2002), facilitating differentiation between small arms and light weapons and other weapons, among them the small arms and light weapons categories 930120 and 930190. Some countries still use HS 1996. however, and their reported value for 93010 may therefore include military weapons other than small arms and light weapons. The calculations on which this table is based include data from HS 2002, HS 1996, and HS 1992, to account for all transfers of military small arms and light weapons reported to UN Comtrade. For the older HSs, it was checked whether corresponding conventional arms transfers were reported in the UN Register or the SIPRI Yearbook. This was not the case for any country for 2003 (otherwise the respective 93010 value would have been taken out of the calculation). For more information on revisions of the UN Comtrade Harmonized System, see Small Arms Survey (2005, pp. 99-100, Box 4.1) and Marsh (2005).

1 For Côte d'Ivoire's imports from France, which may have been transfers to 'Operation Licorne', see Table 3.1, n. 4.

2 It is registered in UN Comtrade as Austrian exports of category 930510 (parts and accessories of revolvers and pistols). This information is not, however, mirrored by Israel.

Sources: NISAT (2006): UN Comtrade (2006)

DEVELOPMENTS IN TRANSPARENCY: ANNUAL UPDATE

General trends in international transparency

The small arms and light weapons transparency device that received great attention by governments, NGOs, and other actors during 2005—and will probably continue to do so in 2006—is states' reporting on their implementation of the UN Programme of Action (Programme). These reports can be very useful for understanding legislative developments

and practices regarding stockpile security, marking and tracing, collection and destruction of surplus small arms, and other issues. 12 However, they rarely contain any information on small arms imports and exports, as this is outside the scope of the information exchange. The transparency mechanisms on small arms transfers thus remain basically the same as in previous years.13

The UN Register (UN, 2006a) is now in its second year of reporting on certain types of light weapons (artillery pieces between 75 and 100 mm, including MANPADS) (Small Arms Survey, 2005, p. 109). The voluntary sharing of information on all types of military small arms and light weapons is also continuing, and that information is now available on the Web site of the UN Department for Disarmament Affairs (UN, 2006b). The Small Arms Survey 2005 examined mainly the number and geographical spread of countries reporting to the UN Register during the first year (2003). But how useful is the format of the reporting for better understanding light weapons transfers? So far, for export and import figures, few states have provided the kind of detail necessary to single out mortars falling into the category of light weapons from other types of artillery, and MANPADS from other types of missiles. So although some light weapons are now part of the reporting of a number of countries, it is difficult to gain a good understanding of the trade in mortars and MANPADS from the UN Register. As there is no agreed-upon format for the voluntary sharing of information on military small arms and light weapons, the reporting varies widely among different states, and between this reporting and other types of reporting. The case of France is very illustrative here. The French national arms export report is very informative and detailed concerning exports of grenade launchers, light anti-tank weapons, and MANPADS (France, 2005, p. 67 and Annexe 15). However, France does not report these exports to the UN Register.

The annual reports on the implementation of the EU Code of Conduct on Arms Exports—which contain data on arms exports from European Union (EU) countries—have become more substantive in recent years. The first report, published in 1999, was of little utility in understanding small arms transfers from EU member states. By the sixth report, published in December 2004, the reporting format had evolved considerably (EU, 2004). It now contains data disaggregated by country and weapon type (using the EU Common Military List categories, very similar to the Wassenaar ML). A major weakness of the reporting (apart from the fact that those countries that do not publish national arms export reports also for the most part do not provide detailed information to the annual EU report) is that the weapons categorization used makes it difficult to fully distinguish small arms and light weapons from other types of weapons (see Table 3.1, Note 1). Furthermore, it only provides data on licences granted, not actual deliveries. Nevertheless,

Box 3.3 Ups and downs in transparency: Belgium and South Africa

In previous years, the Small Arms Survey has noted some positive developments in state transparency, such as new countries starting to publish annual arms export reports. This trend continues (e.g. in February 2005, Bosnia and Herzegovina issued a first report on its arms exports (Bosnia and Herzegovina, 2005)). There are also states moving in the opposite direction, however.

One of the more peculiar cases is Belgium, which regionalized and decentralized its export controls, including reporting on arms exports, in 2003. So far, reporting from the three Belgian regions has been sketchy, at best. Furthermore, there is no federal-level effort to coordinate or assemble the information on arms exports from the regions. All this means that Belgium has effectively discontinued its annual arms export reporting, and the only national governmental source of information on Belgian small arms exports is now customs data.

In South Africa, a number of arms transactions (most of which did not include small arms) have come under intense public scrutiny and debate in the last years. In 2005 the South African government decided to stop the practice of making the national arms export report public (Honey, 2005).

the EU report is very important, as any impetus for improvement in reporting formats, in particular on small arms and light weapons, in this forum would have an impact on many exporting states. This is also one reason why the NGO community carefully scrutinizes the report every year.¹⁴

Update on the Small Arms Trade Transparency Barometer

One means to encourage states to provide more data on their small arms and light weapons exports is the Small Arms Trade Transparency Barometer. The Barometer assesses information that states provide in two formats: national arms export reports and customs data (as reported to UN Comtrade). The information is analysed from a number of angles, taking into account how accessible, clear, and comprehensive it is. The details states provide on licences and deliveries of small arms and light weapons are also assessed.

This year, the Barometer has been slightly revised to include four new or extended parameters: (a) the timeliness of reporting; (b) whether detailed weapon descriptions are provided (i.e. if there is a differentiation among subcategories of small arms and light weapons such as pistols/revolvers, sniper rifles, shotguns, machine guns, etc.); (c) whether information on small arms and light weapons ammunition is included; and (d) whether reporting covers both civilian and military small arms (maximum 2 points instead of 1 point previously). The new maximum score is 25.

Details on the scoring system are provided beneath Table 3.3. States are awarded points for information on granted and denied licences only if the *value of the licence* and/or the *quantity of weapons* included in the licence are/is specified. This means that statistics on mere *numbers of licences* are not awarded points. The reason is that such information says little about the scale of the proposed transaction—are a couple of guns or several thousands of them involved? The same is true for deliveries, where, again, information on numbers of shipments (rather than numbers of weapons delivered or their value) does not improve states' scores.

The Barometer evaluates the quantity and level of detail of the data made public, but does not assess the accuracy of the information states provide. This is simply beyond the means (in terms of access and resources) of independent, internationally based researchers. It is well known, however, that there are problems of inconsistencies among various reporting formats. Table 3.1 illustrates this extensively and gives some explanations as to why inconsistencies can occur (see Table 3.1, Note 1). Regular revelations in the press of contested and at times secretive arms transfers are also indications that national arms export reports are not always exhaustive.

The Barometer focuses on small arms and light weapons only, and uniquely on those states that are important in the small arms and light weapons trade. It cannot therefore be used as a measure of how transparent states are on their arms exports as a whole (i.e. of all conventional weapons, dual use goods, etc.).

What conclusions can be drawn from the Barometer? At the top of the list are the United States and Germany, and at the bottom, Bulgaria, Iran, Israel, and North Korea (all with zero scores). This state of affairs remains relatively similar to previous years. States are generally better at providing information in certain categories, such as availability on the Internet, availability in a UN language, source information, summaries of export laws and international commitments, and information on values of deliveries. States seem particularly unwilling to provide any data on the intended end-users of small arms, government-sourced transactions (which often, although not always, concern older weapons from state stockpiles), licence denials, and, albeit to a lesser extent, licence approvals. Timeliness of reporting also remains a serious problem in many cases.

The most transparent states in the 2006 Barometer are the United States and Germany.

Table 3.3 Small A	rms Trac	le Transpare	ncy Baro	meter, co	vering major	exporters		
Country and source(s) available	Total points (25 points max.)	Timeliness (2 points max.)	Access (2 points max.)	Clarity (5 points max.)	Comprehen- siveness (6 points max.)	Information on deliveries (4 points max.)	Information on licences granted (4 points max.)	Information on licences refused (2 points max.)
Australia¹ E (01-02) C	14.5	0.5	2	2.5	5.5	4	0	0
Austria C	9.5	0	1.5	2.5	3.5	2	0	0
Belgium ² C	9	0	1.5	2.5	3	2	0	0
Brazil C	10	0	1.5	2.5	4	2	0	0
Bulgaria	0	0	0	0	0	0	0	0
Canada ¹ E (02) C	16.5	0.5	2	4	6	4	0	0
China ³ C	10.5	0	1.5	2.5	2.5	4	0	0
Czech Republic E (04) C	16	1	2	3	5	3	2	0
Croatia C	10	0	1.5	2.5	4	2	0	0
Finland E (03) C	16	1	2	3	6	2	2	0
France ⁴ E (04) C	16.5	1	2	3.5	6	4	0	0
Germany ⁵ E (04) C	19	1	2	3.5	6	2	4	0.5
Iran	0	0	0	0	0	0	0	0
Israel	0	0	0	0	0	0	0	0
Italy E (04) C	17	2	2	3	5	3	2	0
Japan C	11	0	1.5	2.5	5	2	0	0
Mexico C	9	0	1.5	2.5	3	2	0	0
North Korea	0	0	0	0	0	0	0	0
Norway E (04) C	15	2	2	3	6	2	0	0
Pakistan³ C	11	0	1.5	2.5	3	4	0	0
Portugal E (03) C	11	0.5	2	2.5	4	2	0	0
Romania E (02)	4.5	0.5	0.5	1.5	1	1	0	0
Russian Federation C	7.5	0	1.5	2.5	1.5	2	0	0
Singapore ³ C	9.5	0	1.5	2.5	1.5	4	0	0
South Africa E (00-02)	1.5	0.5	1	0	0	0	0	0
South Korea C	10	0	1.5	2.5	4	2	0	0
Spain ⁶ E (04) C	16	1	2	3.5	6	2.5	1	0
Sweden E (04) C	15	2	2	3	6	2	0	0
Switzerland E (04) C	14	1.5	2	3	5	2	0	0.5
Turkey C	10.5	0	1.5	2.5	4.5	2	0	0
UK ⁷ E (04) C	15	2	2	3	6	2	0	0
US ⁸ E (04) C	20.5	2	2	3.5	5	4	4	0

- E = Export report with year of reporting.
- C = Customs data.

Scoring system

- (a) Timeliness (2 points total, score based on national arms export reports data only): A report has been published within the last 24 months (up to 31 January 2006) (0.5 points); information is available in a timely fashion (1 point if within 6 months of the end of the year in question, 0.5 if within a year).
- (b) Access (2 points total): Information is: available on Internet through UN Comtrade (1 point); available in a UN language (0.5 points); free of charge (0.5 points).
- (c) Clarity (5 points total): The reporting includes source information (1 point); small arms and light weapons distinguishable from other types of weapons (1 point); small arms and light weapons ammunition distinguishable from other types of ammunition (1 point); detailed weapons description included (1 point); reporting includes information on types of end-users (military, police, other security forces, civilians, civilian retailers) (1 point).
- (d) Comprehensiveness (6 points total): The reporting covers: government-sourced as well as industry-sourced transactions (1 point); civilian and military small arms and light weapons (2 points); information on small arms and light weapons parts (1 point); information on small arms and light weapons ammunition (1 point); summaries of export laws and regulations, and international commitments (1 point).
- (e) Information on deliveries (4 points total): Data disaggregated by weapons type (value of weapons shipped [1 point], quantity of weapons shipped [1 point]), and by country and weapons type (value of weapons shipped [1 point]).
- (f) Information on licences granted (4 points total): Data disaggregated by weapons type (value of weapons licensed [1 point], quantity of weapons licensed [1 point]), and by country and weapons type (value of weapons licensed [1 point]), and by country and weapons type (value of weapons licensed [1 point]).
- (g) Information on licences refused (2 points total): Data disaggregated by weapons type (value of licence refused [0.5 points], quantity of weapons under refused licence [0.5 points]), and by country and weapons type (value of licence refused [0.5 points]), quantity of weapons under refused licence [0.5 points]).
- Note 1: The Barometer is based on each country's most recent arms exports that were publicly available as of March 2006 and/or on 2003 customs data from UN Comtrade.
- Note 2: Under (d), (e), and (f), no points are granted for number of shipments or number of licences granted or denied, as such figures give little information about the magnitude of the trade. The data is disaggregated by weapons type if the share of small arms and light weapons in the country's total arms trade is delineated (x per cent of the total value of the arms exports consisted of small arms and light weapons; x number of small arms and light weapons were exported in total). The data is disaggregated both by country and by weapons type if there is information on the types of weapons that are transferred to individual recipient states (x numbers/x USD worth of small arms was delivered to country y).
- **Note 3:** Under (d), (e), and (f), 'weapons type' means broader weapons categories (that is, 'small arms' as opposed to 'armoured vehicles' or 'airto-air missiles'), not specific weapons descriptions ('assault rifles' as opposed to 'hunting rifles').
- **Note 4:** The fact that the Barometer is based on two sources-customs data (as reported to UN Comtrade) and national arms export reports—works to the advantage of states that publish data in both forms, since what they do not provide in one form of reporting they might provide in the other. Points achieved from each source of the two sources are added up. However, points are obviously not counted twice (e.g. if a country provides both customs data and export reports in a UN language, it gets 1 point for this under access, not more).
- Note 5: The scores of the 2005 and 2006 Barometers are not comparable, due to changes in the scoring system between the two years.
- 1 Australia and Canada receive full score on deliveries, as they are among the few countries that provide information to UN Comtrade on numbers of small arms transferred in most categories (Australia: except parts/accessories of revolvers/pistols, shotgun barrels, and parts/accessories of sporting/hunting weapons; Canada: except parts/accessories of revolvers/pistols, shotgun barrels, parts/accessories of sporting/hunting weapons, and ammunition).
- 2 Belgium has not published any national arms export report since 2002 because export control was regionalized in September 2003 (for details, see Wallonia, 2004, pp. 3–12). This means that each Belgian region in principle reports separately on its arms exports, but so far practice in this respect has been sketchy at best (for further details, see Box 3.3). The score is therefore based on customs data submissions only.
- 3 China, Pakistan, and Singapore all receive full score on deliveries, as they are among the few countries that provide information to UN Comtrade on numbers of small arms transferred. This makes their total scores larger than would otherwise be warranted.
- 4 France receives full score on deliveries, although it should be stressed that deliveries of quantities (as opposed to values) are provided for a four-year period, rather than yearly (France, 2005, p. 67). France gives details of orders ('prises de commande'), which are defined as 'contracts signed and entered into force through a first down-payment during the year under consideration' (France, 2005, p. 54, authors' translation). Orders are not equivalent to licences, and therefore no points are given in the columns pertaining to licences granted and denied.
- 5 Germany provides more detailed information on licences granted and denied for main trading partners and so-called 'third countries', i.e. countries outside the circle of the EU, the North Atlantic Treaty Organization (NATO), and NATO-equivalent countries (Australia, Japan, New Zealand, and Switzerland). It has been awarded full points on the relevant criteria nevertheless.
- 6 Spain makes public its report on small arms and light weapons exports to the Organization for Security and Co-operation in Europe (OSCE) as an annex to its arms export report. The report contains information both on licences granted (volumes by country and weapons type) and on actual deliveries (also volumes by country and weapons type). It covers only the OSCE states, and hence a very limited number of transactions. Spain is hence granted only part of the points on licences and deliveries. Other states make their OSCE reports public, but separately from the arms export reports. These are therefore not taken into account in the Barometer.
- 7 The score takes into account the UK practice of reporting on export licences on a quarterly basis.
- 8 The United States receives full score on deliveries, as it is among the few countries that provide information to UN Comtrade on numbers of small arms transferred in all categories except parts/accessories of revolvers/pistols, parts/accessories of sporting/hunting weapons, and sometimes small arms ammunition.
- Sources: Australia (2003); Canada (2003); Czech Republic (2005); Finland (2004); France (2005); Germany (2005); Italy (2005); NISAT (2006); Norway (2005); Portugal (2005); Romania (2004); South Africa (2003); Spain (2005); Sweden (2005); Switzerland (2005); UK (2005); UN (20

UNDERSTANDING THE INTERNATIONAL ILLICIT TRADE IN SMALL ARMS: SOUTH AMERICA

How many weapons are trafficked across the globe every year?¹⁵ What types of small arms are most commonly trafficked? Which routes are used, and by which actors are they used?

To answer questions such as these, the Small Arms Survey has started asking governments for information about customs and police seizures of small arms and light weapons. The Small Arms Survey 2005 concluded that information of this type has been hard to come by, which might seem surprising, given the centrality of the illicit trade to intergovernmental discussions on small arms. Preliminary conclusions for Europe presented last year were that handguns were the type of small arm most commonly smuggled, and that trafficking in the European context has been mostly small-scale (a handful of weapons at most per seizure) (Small Arms Survey, 2005, p. 116). This year, this chapter asks to what extent these findings hold true in another, quite different region of the world: South America. 16

Unlike most of the European and Western industrialized countries analyzed in the Small Arms Survey 2005, South America is composed of weak states whose governments have to cope (to different extents and at various levels) with organized crime; urban violence; institutional corruption; and long, porous, and poorly patrolled borders and/or coastlines.¹⁷ One country in the region is experiencing an ongoing internal armed conflict: Colombia. South America is also the core of the illicit cocaine industry. Cocaine trafficking directly affects three Andean countries (Bolivia, Colombia, and Peru) and indirectly causes violent crime problems in the rest of the region, such as the presence of armed criminal groups in the slums (favelas) of Rio de Janeiro that are able to challenge police forces, for example (Drevfus, 2002). These are all conditions that either provoke or facilitate illicit arms transfers to or across South American countries. South America hosts important small arms producers and exporters, namely Brazil (a major world exporter), Argentina (a relevant exporter at the regional level), and Chile and Colombia (significant producers at the regional level). This contributes to a regional dynamic of licit and illicit small arms transfers, particularly between countries in the south of the region (Drevfus et al., 2003; Small Arms Survey, 2003, pp. 87–88).

Argentina, Brazil, Chile, and Colombia are the largest small arms producers in South America.

Concerning small arms-related problems in general and illicit small arms transfers in particular, the region is not uniform, however. Brazil and Colombia, for example, have had serious problems with armed groups that exert effective territorial control (criminals in the case of Brazil and insurgent, paramilitary, and criminal groups in the case of Colombia) in either rural (Colombia) or urban (Colombia and Brazil) areas. Both countries at the same time rank among the top five countries globally in terms of firearms-related deaths (Phebo, 2005, p. 16). Bolivia and Peru face the challenge of organized crime in remote coca- and cocaine-producing regions of the country. Countries such as Suriname and Paraguay are used as transhipment routes for the rest of the region (Dreyfus et al., 2003; Cirino, Elizondo, and Wawro, 2004). Venezuela, Ecuador, and Argentina have reported recent cases of diversion of small arms from military and police stockpiles to insurgent or criminal groups in neighbouring countries. 18 On the other hand, countries such as Chile and Uruguay do not register serious small arms-related crime problems (Dreyfus et al., 2003).

The Small Arms Survey sent questionnaires to the National Points of Contact (established according to the Programme) and/or small arms control agencies of the 12 countries of the region with questions relating to the type, destination, origin, and place of seizure of small arms seized by either customs or police agencies between 2000 and 2004. Four countries (Argentina, Brazil, Chile, and Peru) replied. Colombian authorities did not directly reply to the questionnaire, so for the case of Colombia, statistics reported by the Colombian Ministry of Foreign Affairs on the implementation of the *Programme* and statistics on arms seizures provided by the Directorate of Judiciary Police (DIJIN) of the Colombian National Police were used. 19

In the case of Argentina, it was not possible to distinguish among seized, registered, and voluntarily handed over firearms. None of the data reported by these countries actually differentiates between seizures by customs officials and those by police agencies. In the cases of Chile and Peru, the data aggregates seizures made by all law enforcement agencies. Analysis of the cases of Brazil and Colombia, however, is based on disaggregated information regarding seizures made by various government agencies at the local (in the case of Brazil) and national levels. This provided a clearer picture of the places and situations in which these weapons were seized.

As Table 3.5 shows, handguns (revolvers and pistols) dominate among the weapons seized. A closer look at the information provided by specialized agencies such as the Brazilian Federal Police (specialized in the enforcement of federal laws and the repression of interstate crimes) or the Colombian Armed Forces (focusing on counterinsurgency operations), however, reveals a higher proportion of assault weapons. This is true for both statistical information and police reports. This is not surprising: in both countries, assault weapons cannot legally be sold to civilians, with the exception of collectors in Brazil (Brazil, 2000, arts. 9–11) and in very limited, specific, and highly controlled cases in Colombia (COLOMBIA).

Brazil²⁰

The Brazilian Federal Police provided a detailed description of the weapons most commonly seized at Brazilian airports, ports, and border controls. Since 1997, Brazil's federal legislation on firearms control has required local police to enter data on seizures into the Federal Police arms database, Sistema Nacional de Armas (Brazil, 1997a, art. 1; 1997b, art. 38). This increased transparency was reinforced by a new firearms control law passed in December 2003 (Brazil, 2003, art. 2; 2004, art. 1). Although the Brazilian government has been implementing the new law, there remains a lack of centralized and systematized data available at the national level (Dreyfus and de Sousa Nascimento, 2005, pp. 126–36). Based on the analysis of information provided by local police, the NGO Viva Rio and its associated research institute Instituto de Estudos da Religião (ISER) have provided additional information on the case of Rio de Janeiro, where there is a serious problem of territorial control by criminal organizations.

in South America are handguns: revolvers and pistols.

Most weapons seized

In the case of Rio de Janeiro, more than 80 per cent of small arms are Brazilian made. This is not surprising: Brazil is a large producer of small arms and recent research has demonstrated that many weapons that are legally exported by Brazil to neighbouring countries are later smuggled back into Brazil (Dreyfus et al., 2003, p. 34; Delegacia Legal, 2005, pp. 17–18).

Assault weapons are procured in Brazil by illegal non-state armed groups through theft, by diversion from official stockpiles, or via transfers from illicit international markets. According to Brazilian Federal Police sources, assault weapons are trafficked into Brazil primarily via either the ant trade or through a 'pipette' method, involving the disassembly of weapons prior to their shipment in individual part lots. Main identified points of entry for these weapons are the Triple Border Area between Paraguay, Argentina, and Brazil; Santa Ana do Livramento on the border with Uruguay; and Uruguaiana on the Argentinian border. Law enforcement sources from Rio de Janeiro state, however, that in the specific case of that city, the illicit market for assault weapons has essentially been saturated during the 1990s. This is confirmed by the fact that the local police are no longer seizing new weapons, be they of Brazilian or of foreign origin. The illicit market in Rio de Janeiro has been concentrated more recently on the procurement of ammunition for those weapons already acquired (Dreyfus, 2006). Tougher legislation and stricter law enforcement controls and the dismantling of criminal rings specializing in arms trafficking during the mid- to late 1990s also contributed to a decrease in illicit arms flows towards Rio de Janeiro (Dreyfus, 2006).

Colombia

In the case of Colombia, evidence suggests that large shipments of small arms arrived in the country through transnational illicit channels, with deliveries to either the Auto Defensas Unidas de Colombia (AUC) or the Fuerzas Armadas Revolucionarias de Colombia (FARC) insurgents. These shipments were part of the trafficking of 10,000 AK-47 assault rifles through Jordan and Peru that took place in 1999, with FARC as the final recipient [COLOMBIA]. Additional AK-47s were sent to the AUC in 2001 via Nicaragua and Panama (Small Arms Survey, 2003, p. 87). In addition, ammunition and weapons are diverted from armed groups and security forces of neighbouring countries, particularly Ecuador and Venezuela [COLOMBIA]. As Table 3.5 shows, the share of military firearms (assault rifles, machine guns, and sub-machine guns) is higher in the case of seizures made by the Colombian Army and Navy, whose focus is on counterinsurgency operations in rural areas. This is also the case for the Colombian DAS, which specifically targets criminal organizations and illegal armed groups. In the case of the Colombian National Police, who carry out regular policing in urban and rural areas, the number of seized handguns (revolvers and pistols, which are generally used by common criminals or illegally carried by civilians) is overwhelmingly higher than the quantity of seized military firearms.

Chile

When compared to the rest of the region, Chile does not have significant problems related to small arms. The arms market for civilian use is very limited and depends largely on imports. Chile does not share borders with countries that report heavy arms trafficking, such as Paraguay, and its borders are hard to reach and generally well-patrolled. Furthermore, the security forces, especially the Carabineros, have a good reputation in terms of low levels of institutional corruption, which helps to restrain cross-border trafficking (Dreyfus et al., 2003, pp. 39-43). Where it is possible to see a growing increase in the use of small arms is in crime related to the trafficking and sale of illicit drugs. In the last decade, Chile has increasingly been used as a cocaine trafficking route from the Andean countries (primarily Peru and Bolivia), and there has also been a recorded increase in the use of and trafficking in coca paste in large cities. Coca paste distribution occurs mainly in the poor neighbourhoods of the southern metropolitan area (Santiago and Greater Santiago) and in other cities. It is precisely in police operations aimed at suppressing this type of crime in urban areas where more and more firearms are being confiscated (Dreyfus et al., 2003, pp. 39-43).

Compared to its neighbours, Chile does not have significant small armsrelated problems.

According to Chilean small arms control authorities, most weapons seized were manufactured in Argentina, Brazil, the United States, Spain, and Italy. The majority are older models, 24 Combined with the fact that 30 per cent of weapons seized in Chile have had previous legal registration, this suggests that in Chile, theft and illicit domestic sales are a greater source for illicit weapons acquisition than international illicit transfers. 25 Furthermore, the production of craft weapons (bechizas) remains an important source for robbers and urban youth gang members (Small Arms Survey, 2003, pp. 28-29.)

An incident that received particular media attention in recent years was the diverting of confiscated weapons and small arms to drug trafficking bands. In late 2002 retired members of the military diverted AK-47 rifles captured in the 1980s during an operation against the Manuel Rodríguez Patriotic Front (whose armed branch was active until the mid-1990s) from the storage facilities of state security forces. Those concerned were later tried and removed from their positions (Dreyfus et al., 2003, p. 43). In Valparaíso in late September 2005, Carabineros dismantled a ring of non-commissioned officers and civilian personnel of the Chilean Army who were diverting small arms from military stockpiles to criminal groups (Ramírez, 2005, p. 3). It remains to be seen whether this was an isolated occurrence or whether such cases will come up again in Chile.

Peru

With its insurgent movements defeated and demobilized in the second half of the 1990s, Peru's main small arms problems are related to drug trafficking activities in jungle areas in the eastern and north-eastern parts of the country and common criminality in its big cities. Like Chile, Peru does not have any significant production of commercially traded small arms. Both its licit and illicit markets depend on imports. According to reports by the Peruvian government, small arms trafficking (in small quantities) is concentrated in the northern borders of the country (Peru, 2005, p. 16).

Table 3.4 Reported seizures of small arms in selected South American countries, 2000-04								
Country/Agency concerned	2000	2001	2002	2003	2004	Total		
Brazil (Civilian Police of the State of Rio de Janeiro)	10,789	10,973	18,232	20,052	5,315	65,361		
Colombia (DIJIN-National Police)	42,355	44,656	47,353	47,837	63,037	245,238		
Colombian Army	n/a	n/a	n/a	5,924	8,214	14,138		
Colombian Navy	n/a	n/a	n/a	680	673	1,353		
Colombia (DAS)	n/a	n/a	n/a	315	521	836		
Chile	4,909	n/a	2,192	2,537	2,592	12,230		
Peru	n/a	c. 2,500	c. 1,500	c. 3,500	c. 2,500	c. 10,000		

Table 3.5 Reported seizures of small arms in selected South American countries by weapons type, 2000-04									
Country/ Agency concerned	Revolvers	Pistols	Rifles and carbines	Shot- guns	Military and assault rifles	Sub- machine guns	Machine guns	Other	Total
Brazil (Civilian Police of the State of Rio de Janeiro)	38,174	13,153	986	8,237	1,300	392	16	3,103	65,361
Colombia (DIJIN- National Police)	118,132	46,302	467	30,268	1,507	n/a	1,209	n/a	197,885
Colombian Army	3,067	2,670	373	2,088	5,263	n/a	308	369	14,138
Colombian Navy	241	266	5	342	484	n/a	15	n/a	1,353
Colombia (DAS)	143	151	11	124	92	n/a	16	299	836
Chile	Handguns: 8,405; long-barrel firearms: 3,389; craft firearms: 1,349. Data on handguns and long-barrel firearms includes 922 small arms that were voluntarily handed over.								
Peru	The information was not digitalized or presented in table format, so it was interpreted from graphs. Most of the seized small arms were revolvers and pistols, followed by craft firearms and shotguns.								

Notes on Brazil (Civilian Police of the State of Rio de Janeiro):

The total quantity of small arms seized in the State of Rio de Janeiro between 2000 and 2004 was actually 66,057; however, 5770 small arms were excluded because their records were not accurate enough to allow them to be classified by type, make, and country. Of the weapons seized within the period, 82% were made in Brazil, predominantly Taurus (43%) and Rossi (24%) revolvers and pistols. Among the foreign-made weapons, 41%

were made in the United States; 13% in Spain; 11% in Argentina; 11% in Belgium; 6% in Germany; 6% in Italy; 4% in Austria; and 8% in other countries. Among the 1,209 seized assault and military rifles, 46% were manufactured in the United States; 21% in Brazil; 11% in Belgium; 10% in Germany; 5% in China; 4% in the Russian Federation; 2% in Argentina; and 1% in other countries. Percentages were calculated by Viva Rio/ISER from a sample of 59,596 weapons that had completed information concerning make, manufacturer and caliber.

Notes on Colombia (DIJIN-National Police):

Information for 2002 is not disaggregated by weapons type, and thus it was not included for the calculation of quantities of seizures by weapons type.

Notes on Colombian Army, Colombian Navy, and Colombia (DAS):

Information was provided only for 2003 and 2004.

Note on all Colombia figures:

The category 'machine guns' includes 'sub-machine guns'.

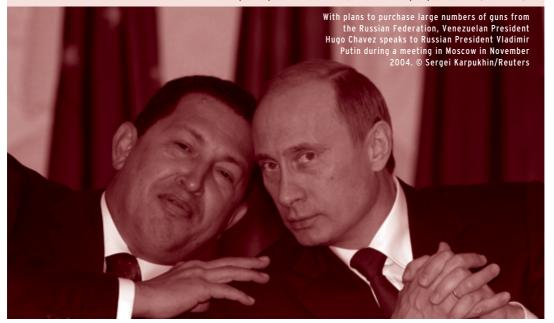
Sources: Brazil: Civilian Police of Rio de Janeiro, processed and analyzed by Viva Rio/ISER; Colombia: Colombia (2005); data from the National Colombian Police, processed by CERAC; Organization of American States, Inter-American Drug Abuse Control Commission (CICAD), 2003-2004 report of the Government of Colombia to the Multilateral Evaluation Mechanism of CICAD; Chile: National Directorate of General Mobilization; Peru: Peru

Box 3.4 AKs for Venezuela: reasons for concern

On 18 May 2005 the Venezuelan Ministry of Defence signed a contract with the Russian Federation company Rosoboronexport for the delivery of 100,000 7.62 mm AK-103 assault rifles at a reported price of USD 386 per rifle and the compatible 7.62 x 39 mm ammunition for them. The delivery of the first batch of 28,000 rifles produced by Izhmash, which has to export combat small arms and light weapons through Rosoboronexport, was scheduled for October 2005, while a second batch of 35,000 AK-103s was to be delivered in December 2005. The contract will be completed after the last 37,000 rifles are shipped in March 2006. After that Venezuela will become the first country in the world to launch the licensed manufacturing of AK-103s and ammunition. The deal provoked negative reactions from the United States and Venezuela's neighbour Colombia. Both expressed concerns that these small arms could be diverted into the hands of local insurgents or terrorist organizations (Pyadushkin, 2005).

There is, however, a more worrisome aspect to this purchase and subsequent licensing that is not directly related to the new rifles, but to the old FALs they are going to replace. As mentioned above, there is evidence of the diversion of small arms from the Venezuelan armed forces to insurgent groups in Colombia (Schroeder, 2004, pp. 22-23; Cragin and Hoffman, 2003, pp. 26–32). With the purchase of new rifles to completely equip and train its armed forces and reserves, Venezuela will have a huge surplus of its previous standard assault rifle, the FAL [PRODUCERS].

Another disquieting issue is that CAVIM, the state's arms factory, will start producing 7.62 x 39 mm ammunition, which is exactly the kind of ammunition the FARC in Colombia is currently in desperate need of for 10,000 AK-47s they acquired in 1999 [COLOMBIA].



CONCLUSION

This chapter, together with those of previous editions of the Small Arms Survey, shows that the scale and patterns of the authorized trade in small arms and light weapons and their ammunition, parts, and accessories have been rather stable over the past few years. The trade has been estimated at around USD 4 billion for the last half-decade; the top exporters and—albeit to a lesser degree—the top importers of small arms have largely remained the same. Trading patterns have been stable: e.g. the share of ammunition in the overall small arms trade has remained more or less constant.

It would be wrong, however, to conclude that everything is known about the trade in small arms and light weapons that there is to know. The Small Arms Survey estimates that roughly half of the small arms trade remains unaccounted for. This figure includes exports and imports widely regarded as among the most problematic: trade in certain types of light weapons such as MANPADS and mortars, and (to a lesser degree) other military small arms; trade in light weapons ammunition; the exports of countries such as China, Iran, North Korea, and Pakistan; and other issues.

Although the Small Arms Trade Transparency Barometer is meant to encourage greater transparency, there are generally strong reasons why many non-Western states choose to keep their exports (and imports) classified. Their goods are generally not competitive on Western markets and on some of the markets where Western-made guns are readily available. The incentives for such countries to turn to other markets, some of which would earn them strong and sustained criticism if publicly known, are therefore greater than for many Western states.

Every year, international intergovernmental organizations publish estimates of the scope of the illicit trade in drugs, for example. So far, no such collective intergovernmental effort has been made for guns. The difficulty that a non-governmental research body such as the Small Arms Survey has had to date in obtaining detailed high-quality information in this area may be an indication that a public-private partnership would be needed in this regard.

Lastly, findings for South America indicate that the harmonization of domestic small arms control laws is as important as intelligence, tracing, and other international control measures, as legal flaws in neighbouring countries are used by criminals in order to purchase and smuggle small arms across national borders. This is particularly important in the case of small-calibre handguns, which constitute the predominant group of weapons seized by the police, and are weapons that can be purchased by civilians in gun shops. Although there is evidence of illicit transfers of military firearms (assault rifles and sub-machine guns) from different parts of the world to crime settings and conflict areas in the region, the importance of the diversion of this kind of weapon from police and military stockpiles should not be neglected. Improving surplus disposal practices and stockpile security measures are important steps to prevent the illicit transfers of military firearms.

LIST OF ABBREVIATIONS

AUC	Auto Defensas Unidas de Colombia	FARC	Fuerzas Armadas Revolucionarias de	
Barometer	Small Arms Trade Transparency Barometer		Colombia	
CERAC	Centro de Recursos para el Análisis de	HS	Harmonized System	
	Conflictos (Conflict Analysis Resource	ISER	Instituto de Estudos da Religião (Brazil)	
	Centre)	MANPADS	man-portable air defence system(s)	

CHF	Swiss franc	ML	Munitions List (of the Wassenaar
DARM	Division of Repression of Small Arms		Arrangement if not otherwise stated)
	Illicit Trafficking (Brazil)	NISAT	Norwegian Initiative on Small Arms
DAS	Departamento Administrativo de		Transfers
	Seguridad (Administrative Security Bureau,	Programme	UN Programme of Action
	Colombia)	SEK	Swedish krona
DIJIN	Directorate of Judiciary Police (Colombia)	SIPRI	Stockholm International Peace Research
EU	European Union		Institute
EUR	euro	UN Register	UN Register of Conventional Arms
		USD	United States dollar

ENDNOTES

- Data is presented on actual deliveries of small arms rather than licences granted.
- For details on the issue of mixed ammunition categories, see Glatz (2006).
- For detailed information on UN Comtrade customs data, see Small Arms Survey (2005, Box 4.1, pp. 99-100). Further information is provided on the UN Comtrade and International Trade Centre Web sites: http://www.intracen.org/index.htm
- For more information on this reliability measure, which essentially is based on comparing how well each country's records correspond to the mirror reporting of its trading partners, see Marsh (2005) and ITC (2005).
- 5 Correspondence from the Republic of Sudan to the Embassy of Switzerland in Khartoum, 5 March 2006.
- In UN Comtrade, China does not rank among the top exporters for either 1999-2003 or 2003 alone, but in 1998 it reported a total export value of USD 36,244,000 in category 930630 (UN Comtrade, 2006). Likely, China changed its reporting to UN Comtrade rather than its actual exports. It can thus be assumed that it ranks close to or among the top exporters of small arms ammunition also for the period 1999-2003.
- For details on the issue of mixed ammunition categories in UN Comtrade, see Glatz (2006).
- Dreyfus, Lessing, and Purcena (2005, pp. 117-19) present examples of rocket-propelled artillery saturation systems exported by Brazil to Malaysia, 8 Qatar, and Saudi Arabia being declared as 'sporting and hunting shotguns'.
- E-mail correspondence with Stefan Raykov, Ministry of Economy, Bulgaria, 26 September 2005. 0
- 10 See Small Arms Survey (2003, p. 105; 2004, pp. 109-11, Table 4.3; 2005, pp. 106-09, Table 4.2). Cyprus presents something of an enigma. The value of its imports has been too large to be explained by either local demand or the needs of a relatively small international peacekeeping force. Therefore it seems that Cyprus is the hub of a transit trade about which little is known. However, Cyprus publishes very little information about its exports of military small arms and light weapons, which actually account for the bulk of its imports. Unlike many of the other European Union (EU) member states, it does not publish a national arms export report. Moreover, unlike all other EU member states except Lithuania and Luxemburg, it submitted no information on any arms exports to the 2004 EU report on the implementation of the EU Code of Conduct on Arms Exports (EU, 2004, p. 5, fn. 1).

To date, Cyprus has not submitted any report on its implementation of the UN Programme of Action (Programme); neither has it established a point of contact, which is usually considered a first step in implementing the Programme.

- See also Small Arms Survey (2005, CONFLICT SOURCING). 11
- For an evaluation of the reporting in 2003, see Kytömäki and Yankey-Wayne (2004). For an overview of information provided in national reports in 2002-2005, see Kytömäki and Yankey-Wayne (2006). For electronic copies of the reports themselves, see http://disarmament2.un.org/cab/ salw-nationalreports.html>.
- 13 See Small Arms Survey (2005, pp. 109-10) for further details.
- For a detailed commentary on the reports, see Bauer and Bromley (2004).
- For the scope of this section, the terms 'illicit international transfers', 'illicit trafficking', and 'trafficking' are used synonymously.
- South America includes the following countries: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, 16 and Venezuela
- The countries analysed last year were Australia, Canada, Germany, Poland, Romania, Sweden, and the United Kingdom. With the exception of 17 Poland and Romania, which are countries in transition, these countries can be defined as 'strong states' in terms of their socio-political cohesion,

- territorial centrality, policy capacity, and socio-economic development. This definition of 'strong' versus 'weak states' is based on Buzan (1991, pp. 96–107, 113–14).
- See Small Arms Survey (2003, pp. 87–88; 2004, pp. 51–54), Cragin and Hoffman (2003), Cirino, Elizondo, and Wawro (2004), Schroeder (2004), Dreyfus et al. (2003), and Fleitas (2005, p. 15).
- These statistics were provided directly to the Small Arms Survey and the Centro de Recursos para el Análisis de Conflictos (Conflict Analysis Resource Centre—CERAC).
- 20 Brazil is a federal state divided into 26 states plus the Federal District.
- 21 E-mail information sent by an official of the Division of Repression of Small Arms Illicit Trafficking (DARM) of the Brazilian Federal Police Department, January 2006.
- 22 E-mail information sent by an official of DARM of the Brazilian Federal Police Department, January, 2006.
- 23 Interview with Delegate Carlos Oliveira, chief of the Firearms Enforcement Division of the Civilian Police of Rio de Janeiro, Rio de Janeiro, August 2005.
- 24 E-mail communication with Coronel Marcelo Rebolledo, chief of arms and explosives of the National Directorate of General Mobilization of the Chilean Ministry of Defence, October 2005.
- 25 Percentage calculated from data sent by the National Directorate of General Mobilization.

BIBLIOGRAPHY

Associated Press. 2002. 'Bulgaria Donates Arms, Equipment to Aid Afghan Army.' 21 August.

- ----. 2005. 'NATO Organizing Shipment of Arms to Iraq.' 12 January.
- Australia. 2003. Annual Report: Exports of Defence and Strategic Goods from Australia 2001/2002. Canberra: Department of Defence, Defence Trade Control and Compliance, Industry Division. February. http://www.sipri.org/contents/armstrad/AUS_01-02.pdf/download
- Bauer, Sibylle and Mark Bromley. 2004. The European Union Code of Conduct on Arms Exports: Improving the Annual Report. SIPRI Policy Paper No. 8. Stockholm: SIPRI. November. http://editors.sipri.se/pubs/EUCodeOfConduct.pdf
- Bosnia and Herzegovina. 2005. Report on Arms Export Control 2005. Sarajevo: Foreign Trade and Investment Division, Ministry of Foreign Trade and Economic Relations. February. http://www.seesac.org/export/export_reports.htm
- Brazil. 1997a. Lei Nº 9.437, de 20 de Fevereiro de 1997. Institui o Sistema Nacional de Armas—SINARM, estabelece condições para o registro e para o porte de arma de fogo, define crimes e dá outras providências. Brasília: Casa Civil, Subchefia para Assuntos Jurídicos. February. http://www.mariz.eti.br/Lei%209437.htm
- 1997b. Decreto Nº 2.222, de 8 de Maio de 1997. Regulamenta a Lei nº 9.437, de 20 de fevereiro de 1997, que institui o Sistema Nacional de Armas—SINARM, estabelece condições para o registro e para o porte de arma de fogo, define crimes e dá outras providências. Brasília: Casa Civil, Subchefia para Assuntos Jurídicos. May. http://www.mariz.eti.br/Dec_2222.htm
- 2000. Portaria No. 024–DMB, de 25 de outubro 2000. Aprova as Normas que regulam as Atividades dos Colecionadores de Armas, Munição, Armamento Pesado e Viaturas Militares. Brasilia: Defense Ministry, Brazilian Armed Forces, Departamento de Material Bélico (Dir G de MB/1952). October.
- 2003. Lei Nº 10.826, de 22 de Dezembro de 2003. Dispõe sobre registro, posse e comercialização de armas de fogo e munição, sobre o Sistema Nacional de Armas—SINARM, define crimes e dá outras providências. Brasília: Casa Civil, Subchefia para Assuntos Jurídicos. December.
 http://www.dfpc.eb.mil.br/docs_pdf/lei_10.826_de_22_Dez_2003(Alteradas_pelas_Leis_n%BA_10.826_de_12MAI2004_e_n%BA10884_de_17JUN2000.pdf
- 2004. Decreto Nº 5.123, de 1º de Julho de 2004. Regulamenta a Lei no 10.826, de 22 de dezembro de 2003, que dispõe sobre registro, posse e comercialização de armas de fogo e munição, sobre o Sistema Nacional de Armas—SINARM e define crimes. Brasília: Casa Civil, Subchefia para Assuntos Jurídicos. July.
- Brussels (Belgium). 2005. 'Rapport du Gouvernement au Parlement concernant la loi de 1991 relative à l'importation, à l'exportation, au transit et à la lutte contre le trafic d'armes, de munitions (...), période du 01.09.03 au 31.12.04.' Brussels: Secretariat des commissions. 12 July.
- Buzan, Barry. 1991. People, States, and Fear: An Agenda for International Security Studies in the Post-Cold War Era. New York/London: Harvester Wheatsheaf, 2nd edn.
- Canada. 2003. Exports of Military Goods from Canada: Annual Report 2002. Ottawa: Department of Foreign Affairs and International Trade/Export Controls Division of the Export and Import Controls Bureau. December.

- Cirino, Julio, Silvana Elizondo, and Geoffrey Wawro. 2004. 'Latin America's Lawless Areas and Failed States.' In Paul Taylor, ed. Latin American Security Challenges: A Collaborative Inquiry from North and South. Naval War College Newport Papers No. 21. Newport: Naval War College, pp. 7-48.
- Colombia. 2005. Informe aplicación en Colombia del Programa de Acción de las Naciones Unidas para Prevenir, Combatir y Eliminar el Tráfico Ilícito de Armas Pequeñas y Ligeras en Todos sus Aspectos. Reporte nacional 2004-2005. Bogotá: Ministerio de Relaciones Exteriores/Dirección de Asuntos Políticos Multilaterales/Coordinación de Desarme. 30 April. http://disarmament2.un.org/cab/nationalreports/2005/Colombia.pdf>
- Cragin, Kim and Bruce Hoffman. 2003. Arms Trafficking and Colombia. Santa Monica: Rand Corporation.
- Czech Republic. 2004. Export Controls in the Czech Republic in 2003: Controls of Transfers of Military Equipment; Production, Export and Import of Small Arms and Light Weapons. Prague: Ministry of Foreign Affairs.
- —. 2005. Annual Report on Export Control of Military Equipment and Small Arms for Civilian Use in the Czech Republic in 2004. Prague: Ministry of Foreign Affairs.
- Delegacia Legal. 2005. Fontes de abastecimento do mercado criminal de armas. Rio de Janeiro: Governo do Estado do Rio de Janeiro/Secretaria de Segurança Pública/Polícia Civil do Estado do Rio de Janeiro. September.
- Dreyfus, Pablo. 2002. Border Spillover: Drug Trafficking and National Security in South America. Doctoral dissertation, Graduate Institute of International Studies (IHUEI), University of Geneva.
- ---. 2006. 'Crime and Ammunition Procurement: The Case of Brazil.' In Stéphanie Pézard and Holger Anders, eds. Targeting Ammunition: A Primer. Geneva: Small Arms Survey.
- -, Carolina Iootty de Paiva Dias, Benjamin Lessing, and William Godnick. 2003. Control de armas pequeñas en el MERCOSUR. Serie América Latina No. 3. Rio de Janeiro/London: Viva Rio/International Alert. June. http://desarme.org/publique/media/mercosur_Spanish_24_10_03.pdf; Small Arms Control in MERCOSUR. Latin America Series No. 3. Rio de Janeiro/London: Viva Rio/International Alert. June. http://www.iansa.org/regions/samerica/mercosur_english_241003.pdf
- -, Benjamin Lessing, and Júlio César Purcena. 2005. 'A Indústria Brasileira de armas leves e de pequeno porte: Produção Legal e Comércio.' In Rubem César Fernandes, ed. Brasil: as armas e as vítimas. Rio de Janeiro: 7 Letras/ISER, pp. 126-96. http://www.desarme.org/publique/media/ vitimas_armas_producao_comercio.pdf>; 'The Brazilian Small Arms Industry: Legal Production and Trade.' In Rubem César Fernandes, ed. Brazil: The Arms and the Victims. Rio de Janeiro: 7 Letras/ISER, pp. 50-93. http://www.vivario.org.br/publique/media/The_Brazilian_Small_Arms_ Industry_Legal_production_and_Trade_By_Pablo_Dreyfus_Benjamin_Lessing_e_Julio_Cezar_Purcena.pdf>
- and Marcelo de Sousa Nascimento. 2005. 'Posse de Armas de Fogo no Brasil: Mapeamento das armas e seus propietários.' In Rubem César Fernandes, ed. Brasil: as armas e as vítimas. Rio de Janeiro: 7 Letras/ISER, pp. 94-145. http://www.desarme.org/publique/media/vitimas_armas_ posse.pdf>; 'Small Arms Holdings in Brazil: Toward a Comprehensive Mapping of Guns and Their Owners.' In Rubem César Fernandes, ed. Brazil: The Arms and the Victims. Rio de Janeiro: 7 Letras/ISER, pp. 94-145. http://www.vivario.org.br/publique/media/Small_Arms_Holding_ in_Brazil_Toward_a_comprehensive_mapping_of_guns_and_their_owners_By_Pablo_Dreyfus_e_Marcelo_de_Souza_Nascimento.pdf>
- EU (European Union). 2004. Sixth Annual Report according to Operative Provision 8 of the European Union Code of Conduct on Arms Exports. Official Journal of the European Union. Notice No. 2004/C 316/01. 21 December.
 - http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2004/c_316/c_31620041221en00010215.pdf
- -. 2005. Seventh Annual Report according to Operative Provision 8 of the European Union Code of Conduct on Arms Exports. Official Journal of the European Union. Notice No. 2005/C 328/01. 23 December.
 - http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2005/c_328/c_32820051223en00010288.pdf
- Finland. 2004. Annual Report According to the EU Code of Conduct on Arms Exports: National Report of Finland for 2003. Helsinki: Ministry of Defence. Flanders, Government of. n.d. Rapport van de Vlaamse Regering: Vergunningen in-, uit- en doorvoer van wapens. Brussels-Hoofdstad: Government of
 - %20Aug%202004.pdf>
- Fleitas, Diego. 2005. Las políticas de control de armas de fuego en la Argentina durante los años 2004 y 2005. Buenos Aires: Asociación para Políticas Públicas. November. http://www.app.org.ar/media/LasPoliticasdeControldeArmas.pdf>
- France. 2005. Rapport au Parlement sur les exportations d'armement de la France en 2002 et 2003. Paris: Ministry of Defence.
- Germany. 2004. Bericht der Bundesregierung über ihre Exportpolitik für konventionelle Rüstungsgüter im Jahre 2003 (Rüstungsexportbericht 2003). Berlin: Bundestag. December.
- —. 2005. Bericht der Bundesregierung über ihre Exportpolitik für konventionelle Rüstungsgüter im Jahre 2004 (Rüstungsexportbericht 2004). Berlin: Bundestag. January
- Glatz, Anne-Kathrin. 2006. 'Buying the Bullet: Authorized Small Arms Ammunition Transfers.' In Stéphanie Pézard and Holger Anders, eds. Targeting Ammunition: A Primer. Geneva: Small Arms Survey.

- Honey, Peter. 2005. 'Arms Sales Kept "Secret".' Financial Mail (Johannesburg). 11 August. http://www.suntimes.co.za/zones/sundaytimesNEW/business/business1123753234.aspx
- Isbister, Roy and Elizabeth Kirkham. 2005. An Independent Audit of the UK Government Reports on Strategic Export Controls for 2003 and the First Half of 2004. London: Saferworld. January. http://www.smallarmsnet.org/issues/themes/ukaudit.pdf
- Italy. 2004. Relazione sulle operazioni autorizzate e svolte per il controllo dell'esportazione, importazione e transito dei materiali di armamento nonché dell'esportazione e del transito dei prodotti ad alta tecnologia (Anno 2003). Rome: Camera dei Deputati. 29 March.
- –. 2005. Relazione sulle operazioni autorizzate e svolte per il controllo dell'esportazione, importazione e transito dei materiali di armamento nonché dell'esportazione e del transito dei prodotti ad alta tecnologia (Anno 2004). Rome: Camera dei Deputati. 30 March.
- ITC (International Trade Centre). 2005. 'Reliability of Trade Statistics: Indicators of Consistency between Trade Figures Reported by Countries and Their Corresponding Mirror Estimates, Explanatory Notes, 2003 Data.' Geneva: UNCTAD/WTO/ITC Market Analysis Section. January. http://www.intracen.org/countries/structural05/reliability03.pdf
- Kytömäki, Elli and Valerie Yankey-Wayne. 2004. Implementing the United Nations Programme of Action on Small Arms and Light Weapons: Analysis of the Reports Submitted by States in 2003. Geneva: United Nations. October.
- –. 2006 (forthcoming). Five Years of Implementing the United Nations Programme of Action on Small Arms and Light Weapons: Regional Analysis of National Reports. Geneva: United Nations.
- Marsh, Nicholas. 2005. Accounting Guns: The Methodology Used in Developing Data Tables for the Small Arms Survey. Background paper. PRIO/NISAT. 14 November.
- NATO (North Atlantic Treaty Organization). 2005. 'Donated Arms and Equipment from the Government of Romania to Support Iraqi Security Efforts.' NATO Training Mission—Iraq. 26 January. http://www.afsouth.nato.int/JFCN_Missions/NTM-I/Articles/NTMI_A_02_05.htm
- Netherlands. 2004. The Netherlands Arms Export Policy in 2003. The Hague: Ministry of Economic Affairs and Ministry of Foreign Affairs. http://www.antenna.nl/amokmar/pdf/ArmsExports2003.pdf
- NISAT (Norwegian Initiative on Small Arms Transfers). 2006. Calculations from the NISAT Database on Authorized Small Arms Transfers. Unpublished background paper. Geneva: Small Arms Survey.
- Norway. 2004. Eksport av forsvarsmateriell fra Norge i 2003, eksportkontrol og internasjonalt ikke-spredningssamarbeid. Oslo: Ministry of Foreign Affairs.
- -----. 2005. Eksport av forsvarsmateriell fra Norge i 2004, eksportkontrol og internasjonalt ikke-spredningssamarbeid. Oslo: Ministry of Foreign Affairs.
- OAS (Organization of American States). 2004. Colombia: Evaluation of Progress in Drug Control 2003–2004. DocumentOEA/Ser.L/XIV.6.1MEM/ INF.2004.Add9. Washington, DC: Inter-American Drug Abuse Control Commission (CICAD).
- Peru. 2005. Informe Nacional sobre la Implementación del Programa de Acción 2001 de las Naciones Unidas para Prevenir, Combatir y Eliminar el Tráfico Ilícito de Armas Pequeñas y Ligeras en Todos sus Aspectos del periodo 2001-2004. Lima: Ministerio de Relaciones Exteriores. http://disarmament2.un.org/cab/nationalreports/2005/Peru%20informe.pdf
- Pézard, Stéphanie. 2006. 'Sustaining the Conflict: Ammunition for Attack.' In Stéphanie Pézard and Holger Anders, eds. Targeting Ammunition: A Primer. Geneva: Small Arms Survey.
- Phebo, Luciana. 2005. 'Impacto da arma de fogo na saúde da população no Brasil.' In Rubem César Fernandes, ed. Brasil: as armas e as vítimas. Rio de Janeiro: 7 Letras/ISER, pp. 9-36. http://www.desarme.org/publique/media/vitimas_armas_impacto_saude.pdf; 'The Impact of Firearms on Public Health in Brazil.' In Rubem César Fernandes, ed. Brazil: The Arms and the Victims. Rio de Janeiro: 7 Letras/ISER, pp. 4–25. http://www.nuber.ncbi.nlm. vivario.org.br/publique/media/The_Impact_of_Firearms_on_Public_Health_in_Brazil_By_Luciana_Phebo.pdf>
- Portugal. 2005. Anuário estatístico da defesa nacional 2003. Lisbon: Ministry of Defence.
 - http://www.mdn.gov.pt/Publicacoes/anuario_estatistico_2003/anuario_2003.htm
- Pyadushkin, Maxim. 2005. Research Report on Small Arms Exports from Russia in 2003–2004. Unpublished background paper. Geneva: Small Arms Survey.
- Ramírez, Juan Fernando. 2005. 'Armas, seguridad pública y responsabilidades.' Carta de opinion No. 5. Centro de Estudios Estratégicos. Santiago: Universidad Arcis. 17 October.
- Ramon, Robert. 2004. 'Romanians Send Supplies to Equip Growing Afghan Army.' American Forces Information Service, US Department of Defense. 19 March. http://www.defenselink.mil/news/Mar2004/n03192004 200403195.html>
- Romania. 2004. Raport privind controllexporturilor de arme în anul 2002. Bucharest: National Agency for Export Control.
- Schroeder, Matthew. 2004. Small Arms, Terrorism and the OAS Firearms Convention. Occasional Paper No. 1. Washington, DC: Federation of American Scientists. March. http://fas.org/asmp/library/OAS/FullReport.pdf
- SIPRI (Stockholm International Peace Research Institute). 2006. Data generated by the SIPRI Arms Transfers Database. January. http://www.sipri.org

Small Arms Survey. 2003. Small Arms Survey 2003: Development Denied. Oxford: Oxford University Press.

- ----. 2004. Small Arms Survey 2004: Rights at Risk. Oxford: Oxford University Press.
- ----. 2005. Small Arms Survey 2005: Weapons at War. Oxford: Oxford University Press.
- Smith & Wesson Holding Corporation. 2005. 'Smith & Wesson Holding Corporation Receives Military Pistol Order: Company Secures \$3.4 Million Order from U.S. Army for Afghanistan Border Patrol.' Press release. 21 September.
 - http://www.forrelease.com/D20050921/law091.P1.09212005165510.15092.html
- South Africa. 2003. South African Export Statistics for Conventional Arms 2000-2002. Pretoria: Directorate of Conventional Arms Control.
- Spain. 2004. Estadísticas españolas de exportación de material de defensa y de doble uso en 2003. Boletín económico de ICE nº 2827 del 13 al 19 de Diciembre de 2004. Madrid: Subdirección General de Comercio Exterior de Material de Defensa y de Doble Uso.
- —. 2005. Estadísticas españolas de exportación de material de defensa, de otro material y de productos y tecnologías de doble uso en 2004. Boletín económico de ICE nº 2849 del 11 al 31 de Julio de 2004. Madrid: Subdirección General de Comercio Exterior de Material de Defensa y de Doble

Sweden. 2004. Strategic Export Controls in 2003: Military Equipment and Dual-Use Goods. Stockholm: Ministry of Foreign Affairs. March.

-, 2005. Sweden's Export Control Policy in 2004: Military Equipment and Dual-Use Goods. Stockholm: Ministry of Foreign Affairs. March. http://www.isp.se/documents/public/se/pdf/skr0405eng.pdf

Switzerland. 2004. Ausfuhr von Kriegsmaterial im Jahr 2003. Berne: Staatssekretariat für Wirtschaft (SECO).

2005. Ausfuhr von Kriegsmaterial im Jahr 2004. Berne: Staatssekretariat f

ür Wirtschaft (SECO).

UK (United Kingdom). 2004. United Kingdom Strategic Export Controls: Annual Report 2003. London: Foreign and Commonwealth Office.

----. 2005. Strategic Export Controls: Quarterly Report, July-September 2004. London: Foreign and Commonwealth Office. http://www.fco.gov.uk/Files/kfile/strategicexportcontrolsjulsep2004.pdf

UN (United Nations). 2006a. United Nations Register of Conventional Arms. Web site. http://disarmament.un.org/UN_REGISTER.nsf

- -----. 2006b. Transparency in Armaments: United Nations Instrument for Reporting Military Expenditures. Web site. http://disarmament.un.org/cab/milex.html
- UN Comtrade. Department of Economic and Social Affairs/Statistics Division. 2006. United Nations Commodity Trade Statistics database. Accessed 4 January 2006. http://unstats.un.org/unsd/comtrade/">
- US (United States). 2004. Fiscal Year 2003 'Section 655' Report. Washington, DC: US Department of State/US Department of Defense.
- US Central Command. 2004. 'MNSTC-1 Continues Iraqi Equipment and Armament Efforts.' CENTCOM News. The Frontline. 4 November. http://www.stewart.army.mil/frontlineonline/archivedpages/FrontlineOnline11-04-04News.pdf
- Wallonia (Belgium). 2004. Rapport au parlement wallon sur l'application de la loi du 05 août 1991, modifiée par les lois du 25 et du 26 mars 2003 relatives à l'importation, à l'exportation et au transit d'armes, de munitions et de materiel devant servir spécialement à un usage militaire, et de la technologie y afferente, du 1er septembre 2003 au 31 décembre 2003.

Wassenaar Arrangement. 2004. Munitions List. http://www.wassenaar.org/list/WA-LIST%20(04)%201%20ML.doc

Wezeman, Siemon and Mark Bromley. 2005. 'International Arms Transfers.' In SIPRI, SIPRI Yearbook 2005: Armaments, Disarmament and International Security. Oxford: Oxford University Press, pp. 417-525.

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