

7. International arms transfers

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I. Introduction

Although the volume of deliveries of major conventional weapons dropped in 2007 compared to 2006, the long-term upward trend in transfers that began in 2003–2004 continues—transfers over the period 2003–2007 were 7 per cent higher than in 2002–2006. The five largest suppliers for the period 2003–2007—the USA, Russia, Germany, France and the UK—accounted for approximately 80 per cent of all deliveries. Among the major recipients during this period were regional powers in Asia, such as India, China and South Korea; North Atlantic Treaty Organization (NATO) member states Greece and Turkey; and US allies in the ‘global war on terrorism’ and beneficiaries of US military aid in Asia and the Middle East. Both supplier and recipient states cited a number of political, financial and security related objectives to justify the transfers that support the upward trend. For a number of states in Africa, the Middle East and South America, resource revenues fuelled rising military budgets, which in turn financed significant increases in the volume of orders for, and deliveries of, arms.¹

Section II of this chapter presents the major trends in global arms transfers for the period 2003–2007 and an estimate of the financial value of the global arms trade in 2006. Section III details significant developments in the transfers of the five largest suppliers of arms in 2007. Section IV examines the increasing volume of arms transferred to South America in the period 2003–2007, with a particular focus on Chile, Venezuela and Brazil. Section V outlines international transfers to the conflict zones of Afghanistan and Darfur, Sudan. Section VI presents a summary of the chapter’s conclusions.

Appendix 7A presents data on the recipients and suppliers of major conventional weapons in 2003–2007. Appendix 7B presents official data on the financial value of the arms trade in 1998–2006. Appendix 7C outlines the methodology of the data collection, the calculation of the SIPRI trend-indicator value (TIV) and the coverage of the SIPRI Arms Transfers Database. Information on deliveries and contracts for major conventional weapons referred to in this chapter are taken from the SIPRI Arms Transfers Database.²

¹ See chapter 5 in this volume, section V. On military budgets in South America see also Stålenheim, P., Perdomo, C. and Sköns, E., ‘Military expenditure’, *SIPRI Yearbook 2007: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2007), pp. 285–88.

² The SIPRI Arms Transfers Database is available at <<http://armstrade.sipri.org/>>. The data on which this chapter is based are given in the ‘Register of major conventional weapon transfers, 2007’, which can be accessed via this URL. Data in the register are valid as of 13 Feb. 2008.

Table 7.1. The five largest suppliers of major conventional weapons and their main recipients, 2003–2007

Supplier	Share of global arms transfers (%)	No. of recipients	Main recipients (share of supplier's transfers, %)
USA	31	71	South Korea (12), Israel (12), UAE (9), Greece (8)
Russia	25	45	China (45), India (22), Venezuela (5), Algeria (4)
Germany	10	49	Turkey (15), Greece (14), South Africa (12), Australia (9)
France	9	43	UAE (41), Greece (12), Saudi Arabia (9), Singapore (7)
UK	4	38	USA (17), Romania (9), Chile (9), India (8)

UAE = United Arab Emirates.

Source: SIPRI Arms Transfers Database, <<http://armstrade.sipri.org/>>.

II. Major trends in international arms transfers

The SIPRI Arms Transfers Project maintains the SIPRI Arms Transfers Database, which contains information on deliveries of major conventional weapons to states, international organizations and non-state armed groups since 1950.³ SIPRI ascribes a trend-indicator value to each weapon or subsystem included in the database. SIPRI then calculates the volume of transfers to, from and between all of the above-listed entities using the TIV and the number of weapon systems or subsystems delivered in a given year.⁴ TIV figures do not represent financial values for weapon transfers; they are an indicator of the volume of transfers. Therefore, TIV figures should not be cited directly. They are best used as the raw data for calculating trends in international arms transfers over periods of time, global percentages for suppliers and recipients, and percentages for the volume of transfers to or from particular states.

The trends in international arms transfers, 2003–2007

For the period 2003–2007 the five largest suppliers of major conventional weapons were the USA, Russia, Germany, France and the UK (see table 7.1). The main recipients were China (which received 12 per cent of all international transfers), India (8 per cent), the United Arab Emirates (UAE; 7 per cent), Greece (6 per cent) and South Korea (5 per cent). The main recipient regions were Asia (37 per cent), Europe (23 per cent) and the Middle East (22 per cent). (On recipients and suppliers, see appendix 7A.) While the volume of international transfers of major conventional weapons for the

³ The SIPRI Arms Transfers Database does not document international transfers of nuclear, biological and chemical weapons or of small arms, although some light weapons are included.

⁴ The method used to calculate the TIV is described in appendix 7C and a more detailed description is available on the SIPRI Arms Transfers Project website at <<http://www.sipri.org/contents/armstrad/atmethods.html>>. The figures in this chapter may differ from those in previous editions of the SIPRI Yearbook because the Arms Transfers Database is constantly updated.

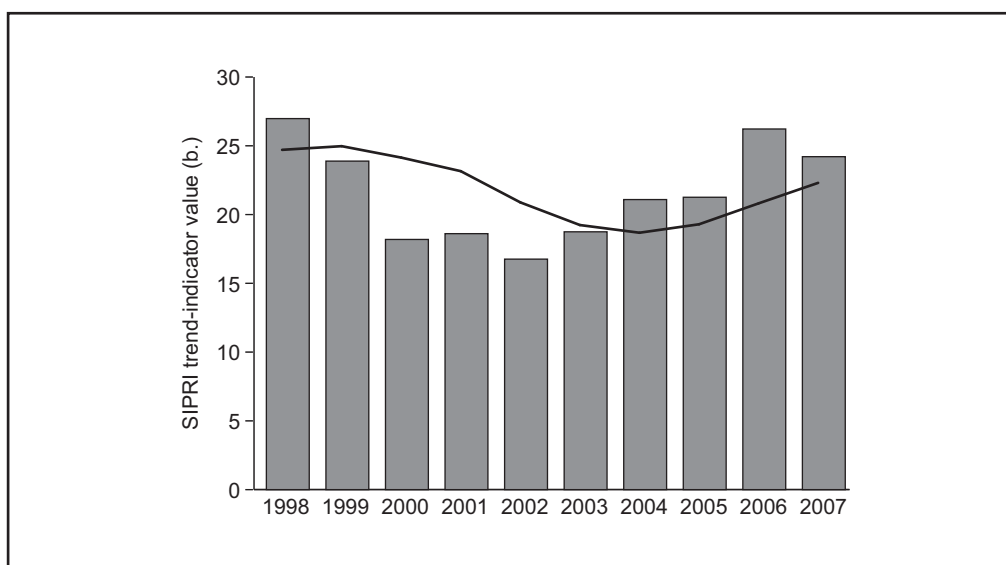


Figure 7.1. The trend in transfers of major conventional weapons, 1998–2007

Notes: See appendix 7C for an explanation of the SIPRI trend-indicator value. The bar graph shows annual totals and the line graph shows the five-year moving average. Five-year averages are plotted at the last year of each five-year period.

Source: SIPRI Arms Transfers Database, <<http://armstrade.sipri.org/>>.

period 2003–2007 has continued the increase since 2000–2004, the volume transferred in 2007 alone was 8 per cent lower than in 2006 (see figure 7.1). This is largely because deliveries to two of the three largest recipients decreased significantly in 2007 in comparison with 2006: deliveries to China were 62 per cent lower and deliveries to the UAE were 50 per cent lower.⁵

Despite decreased deliveries to and orders by China, Asia will continue to remain a major recipient region, with India, Indonesia, South Korea, Taiwan and a number of other Asian states embarking on ambitious arms acquisition programmes that will require imported weapon systems and subsystems. The major suppliers will continue to engage in intense competition for export orders to Asia and the Middle East. Libya and Saudi Arabia are likely to become major recipients once again.

The financial value of the international arms trade in 2006

It is not possible to ascribe a precise financial value to the international arms trade. However, by aggregating financial data on the value of their arms exports released by the main suppliers, it is possible to make an indicative estimate. The estimated financial value of the international arms trade in 2006 is \$45.6 billion, which represents 0.4 per cent of world trade.⁶ In financial

⁵ Because year-on-year deliveries can fluctuate significantly, a 5-year moving average is used to provide a more stable measure for trends in international transfers of major conventional weapons.

⁶ This figure is likely to be below the true figure since a number of significant exporters, including China, do not release data on the financial value of their arms exports. Total world trade in 2006

terms, the USA was the largest arms exporter in 2006, with exports worth \$14 billion; Russia is in second place, with \$6.5 billion of exports; France is in third place, with \$5.1 billion of exports; the UK is in fourth place, with \$3.8 billion of exports; and Israel is in fifth place, with \$3 billion of exports.⁷

SIPRI bases the estimated financial value of the international arms trade on official government data published in either national reports on arms exports or public statements by government officials.⁸ There are significant limitations on using official national data for assessing the financial value of the international arms trade. First, there is no internationally agreed definition of what constitutes 'arms' and so governments use different lists when collecting and reporting data on the financial value of their arms exports. Second, there is no standardized methodology concerning how to collect and report such data, with some states reporting on licences issued or used and other states using data collected from customs agencies. Third, a number of states produce more than one data set based on different lists of goods or different methodologies.

III. Major supplier developments, 2007

There were noteworthy changes in a number of significant major supplier–recipient relationships in 2007 due to a range of domestic and international political concerns over transfers to particular recipients, changing procurement plans, and competition for orders between the major five suppliers in Asia, the Middle East and North Africa.

The United States

In the period 2003–2007 three regions received the bulk of US arms transfers: the Middle East (32 per cent), Asia (31 per cent) and Europe (27 per cent). Concerns were expressed in the US Congress about proposed arms sales and military aid to states in both Asia and the Middle East.⁹ Additionally, as of January 2008 the USA had imposed arms export restrictions—including partial and blanket arms embargoes—on 25 countries.¹⁰ Despite these circum-

amounted to \$12 029 billion. International Monetary Fund, International Financial Statistics online, <<http://www.imfstatistics.org/imf/>>.

⁷ See appendix 7B.

⁸ As of Jan. 2008, 31 states had published a national report on arms exports, compared with 6 states as of Jan. 1998. See appendix 7B for available national data on the financial value of their arms exports. In addition to financial data, certain of these reports contain information on the type of arms exported, the number of items involved and, in some cases, the type of end-user. In 2007 national reports on arms exports were published for the first time by Bulgaria, Montenegro and Serbia. All available official reports on arms exports are available at <http://www.sipri.org/contents/armstrad/atlinks_gov.html>.

⁹ E.g. US Congress, Senate Resolution 372 expressing the concerns of the Senate on the declaration of a state of emergency in Pakistan, 8 Nov. 2007, <<http://www.govtrack.us/congress/bill.xpd?tab=main&bill=sr110-372>>.

¹⁰ US Department of State, Directorate of Defense Trade Controls, 'Embargoed countries', Dec. 2007, <<http://pmdtc.state.gov/country.htm>>. Of the 26 US embargoes, 11 were imposed by the United Nations. On the impact of UN arms embargoes see Fruchart, D. et al., *United Nations Arms Embargoes: Their Impact on Arms Flows and Target Behaviour* (SIPRI/Uppsala University: Stockholm, 2007).

stances, the USA was the largest supplier of major conventional weapons in 2007.

In Asia, transfers to Taiwan and Pakistan were under particular scrutiny. Taiwan—the seventh largest recipient (5 per cent) of US transfers during 2003–2007—announced in 2007 that it was allocating initial funding for 30 AH-64D combat helicopters, 12 P-3CUP maritime patrol aircraft, 4 Patriot Advanced Capability-3 (PAC-3) surface-to-air missile (SAM) systems and 66 F-16C combat aircraft.¹¹ The helicopters, patrol aircraft and SAMs were offered to Taiwan by the USA, but the US Government appeared reluctant to supply Taiwan with additional F-16 aircraft for fear of provoking China.¹² Over the period 2003–2007, the USA accounted for about 97 per cent of transfers to Taiwan, with France accounting for the remaining 3 per cent.

Pakistan was the 13th largest recipient (2 per cent) of US transfers in the period 2003–2007. Pakistan's share of US transfers is likely to increase significantly in the future, as the USA agreed in 2006 to provide 26 F-16 combat aircraft (second-hand, but modernized to F-16C standards) and 20 AH-1F combat helicopters as military aid. The USA has also authorized the sale of 18 new F-16C combat aircraft (with an option on 18 more). However, these transfers are contingent on political developments in Pakistan. In response to Pakistani President Pervez Musharraf's declaration of emergency rule in November 2007, several members of the US Congress called for a careful review of Pakistan's US military aid package and the suspension of transfers that were not directly related to the fight against al-Qaeda and the Taliban.¹³ Over the period 2003–2007, China and France accounted for about 27 per cent and 16 per cent, respectively, of transfers to Pakistan, compared to a US share of 36 per cent.

In the Middle East, Israel, the UAE and Egypt were the largest recipients of US transfers for the period 2003–2007.¹⁴ For the same period, Iraq was the seventh largest recipient of US transfers in the region. Supplies to Israel and Egypt were primarily funded by US military aid. In July 2007 the US Secretary of State, Condoleezza Rice, announced that the US Government plans to increase military aid for Israel and Egypt: to \$30 billion to Israel for the 10-year period 2009–2018 (an increase of 25 per cent) and to \$13 billion to Egypt over the decade.¹⁵ Rice also announced plans to negotiate the sale of an

¹¹ Minnick, W., 'Taiwan to purchase Patriots, Apaches', *Defense News*, 7 Jan. 2008, p. 4; and Griffin, C., 'Boom and bust: the strengths and weaknesses of Taiwan's defense strategy emerge', *Armed Forces Journal*, Jan. 2008.

¹² Although the USA continues to supply arms to Taiwan, it does not report these transfers to the UN Register of Conventional Arms (UNROCA). UNROCA submission rules changed in 2006, requesting only submissions between UN member states. As a consequence of these rule changes, in 2007 China made its first submission to UNROCA since 1997.

¹³ US Congress (note 9).

¹⁴ Egypt received 7% of US transfers. For Israel and the UAE see table 7.1.

¹⁵ US military aid for Israel was \$2.2 billion in 2005 and \$2.26 billion in 2006. The requested levels of funding were \$2.34 billion for 2007 and \$2.4 billion for 2008. US military aid for Egypt was approximately \$1.3 billion in 2005 and 2006, with the same sum requested for 2007 and 2008. US Department of State, 'Foreign military financing account summaries', <<http://www.state.gov/t/pm/ppa/sat/c14560>>.

estimated \$20 billion worth of foreign military assets to member states of the Gulf Cooperation Council (GCC) to 'help bolster forces of moderation and support a broader strategy to counter the negative influences of al-Qaeda, Hizballah, Syria and Iran'.¹⁶ The proposed arms sales to the GCC states include PAC-3 SAM systems to Kuwait and the UAE, improved airborne early warning capabilities to Saudi Arabia and the UAE, and advanced air-to-surface weapons to Saudi Arabia and the UAE, for use with previously supplied combat aircraft from the USA.¹⁷ While not strongly objecting to most of the proposed deals, Democratic and Republican members of the US Congress expressed concern at plans to sell 900 JDAM guided bombs to Saudi Arabia for an estimated \$123 million. They demanded that the sale should only take place if US President George W. Bush could guarantee that the bombs would not be used against the USA or Israel.¹⁸ Deliveries of these systems would maintain future US transfers to the Middle East at the current high volume. In addition to the USA, the other four largest suppliers are also targeting the Middle East for transfers (see below).¹⁹

Despite generally large US military aid programmes in the Middle East, Iraq accounted for less than 1 per cent of total US transfers during 2003–2007. The USA accounted for 25 per cent of Iraqi imports of major conventional weapons during this period, supplying an estimated 398 Badger armoured personnel carriers (APCs) and 16 UH-1H transport helicopters. The USA also funded transfers of military equipment to Iraq from Central and Eastern Europe. For example, in September 2007 the US Government announced plans to purchase 336 new BTR-3E1 infantry fighting vehicles (IFVs) from Ukraine for the Iraqi armed forces.²⁰ However, US-funded transfers of surplus military equipment from Central and Eastern Europe to Iraqi forces have been delivered late and have been of poor quality. The transfers have also been poorly controlled; for example, it was announced in 2007 that an estimated 110 000 Kalashnikov rifles and 80 000 pistols purchased by the USA and supplied to the Iraqi security forces were unaccounted for.²¹ US-funded transfers

htm>; and AFX News Limited, 'Israeli PM announces 30 billion US dollar US defence aid', *Forbes.com*, 29 July 2007, <<http://www.forbes.com/markets/feeds/afx/2007/07/29/afx3963706.html>>.

¹⁶ US Department of State, 'Assistance agreements with Gulf states, Israel and Egypt', 30 July 2007, <<http://www.state.gov/secretary/rm/2007/89600.htm>>; and Miles, D., 'Arms sale to help bolster long-term Gulf security', US Department of Defense, American Forces Press Service, 30 July 2007, <<http://www.defenselink.mil/news/newsarticle.aspx?id=46882>>. For a list of members and a brief description of the GCC see annex B in this volume.

¹⁷ Blanchard, C. M. and Grimmett, R. F., *The Gulf Security Dialogue and Related Arms Sale Proposals*, Congressional Research Service (CRS) Report for Congress RL34322 (US Congress, CRS: Washington, DC, 14 Jan. 2008).

¹⁸ Matthews, W., 'Lawmakers caution White House on proposed JDAM sale to Saudi Arabia', *Defense News*, 19 Nov. 2007.

¹⁹ On arms procurement by the GCC states and Iran see Wezeman, S. T. et al., 'International arms transfers', *SIPRI Yearbook 2007* (note 1), pp. 396–402.

²⁰ US Department of Defense, Defense Security Cooperation Agency, 'Iraq: various vehicles, small arms ammunition, explosives and communications equipment', News release, 25 Sep. 2007.

²¹ US Government Accountability Office (GAO), *Stabilizing Iraq: DOD Cannot Ensure that US-Funded Equipment Has Reached Iraqi Security Forces*, GAO-07-711 (GAO: Washington, DC, 31 July 2007), p. 11.

to Afghan security forces have suffered from similar problems (see section V below).

Russia

Russia transferred its largest volume of major conventional weapons to Asia: 74 per cent of total deliveries for the period 2003–2007. With its abilities to offer a broad range of weapon systems at lower prices than other suppliers and to sell to countries that are subject to arms export control restrictions by the USA and European Union (EU) member states,²² Russia has marketed itself as a reliable supplier for established and new markets in Asia, the Middle East, North Africa and South America. Concerns that have been expressed by Russian officials with regard to the Russian arms industry's poor quality controls and defective products are now also being voiced by major recipients of Russian arms: China, India and Algeria.²³ For example, Algeria, which concluded a \$8 billion arms deal with Russia in March 2006, halted deliveries of MiG-29SMT combat aircraft and discussed the possibility of returning the first deliveries to Russia because of its dissatisfaction with the quality.²⁴

EU and US restrictions on exports of arms and related technologies and the USA's willingness to impose sanctions against countries that supply arms and related technologies to China have limited China's range of suppliers.²⁵ Although Russia continues to meet this need—with China receiving 94 per cent of its major conventional weapons from Russia for the period 2003–2007—no new contracts for aircraft or ships were signed in 2007. Explanations for the lack of new orders from China include its efforts to further develop its domestic arms industry and its dissatisfaction with delays in outstanding orders and the poor quality of the equipment delivered.²⁶ Despite these factors, it was reported in late 2006 that China was planning to buy up to 50 Su-33 combat aircraft and more ships.²⁷ There are divisions among Russian officials regarding such transfers, for reasons relating to future security scenarios and concerns that China will buy limited numbers of advanced systems

²² Wezeman et al. (note 19), pp. 394–96.

²³ Russian Defence Minister Ivan Ivanov, the Russian Ministry of Defence's Armaments Directorate and Rosoboronzakaz have all highlighted these problems in recent years. See Cooper, J., 'Development in the Russian arms industry', *SIPRI Yearbook 2006: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2006), p. 444; and '“Russians need to improve the quality of their weapons”, says expert', *Jane's Defence Industry*, Apr. 2005, p. 4. The formation of Rostekhnologii is intended to help remedy quality problems in the Russian arms industry, as well as strengthen supply chains and boost research and development. See chapter 6 in this volume, section III.

²⁴ Gritskova, A., Kiseleva, E. and Lantratov, K., 'Algeria lays down Russian arms', *Kommersant*, 18 Feb. 2008.

²⁵ SIPRI Arms Transfers Project, 'EU and other multilateral arms embargoes', <<http://www.sipri.org/contents/armstrad/embargoes.html>>; and US Department of State (note 10). E.g. in 2005 the USA imposed sanctions on Israel's arms industry following Israeli sales of Harpy unmanned aerial vehicles and spare parts to China in 2000 and 2002. Hagelin, B., Bromley, M. and Wezeman, S. T., 'International arms transfers', *SIPRI Yearbook 2006* (note 23), p. 457.

²⁶ Petrov, N., 'Problems in Russian–Chinese military–technical cooperation', RIA Novosti, 25 Sep. 2007, <<http://en.rian.ru/analysis/20070925/80780903.html>>.

²⁷ Wezeman et al. (note 19), p. 393.

with the intention of copying them.²⁸ However, this concern has not yet been borne out in several arms industry sectors, as China relies on Russian licensed production and components for combat aircraft and missiles, such as AL-31FN engines for the J-10 combat aircraft. China has also formally sought and received permission from Russia to re-export the Russian-produced RD-93 engines, which are integral to China's JF-17 combat aircraft, to several African and Asian states.²⁹

India is an example of a country for which, despite competition from Western suppliers, Russia remains the dominant supplier. Russia accounted for 70 per cent of transfers to India for 2003–2007, compared with 14 per cent from EU member states, 6 per cent from Israel and 2 per cent from the USA. In 2007 India echoed Algerian and Chinese complaints regarding Russian transfers. Russia announced delays in the delivery of the *Admiral Gorshkov* aircraft carrier and three Talwar Class frigates, while India suspended payment for the modernization of Il-38 maritime patrol aircraft due to 'substandard' work and refused to accept delivery of a Kilo Class submarine due to technical problems with the Klub land-attack missiles carried on this submarine.³⁰ Despite these setbacks, new deals were announced in 2007 for the transfer or licensed production of 40 Su-30MKI combat aircraft, 24 Smerch multiple rocket launchers, 347 T-90S tanks and 80 Mi-17 helicopters, as well as upgrades for 172 Mi-8/Mi-17 helicopters and 67 MiG-29 combat aircraft. An agreement to exchange 18 Su-30s for Su-30MKIs was also concluded. These arrangements, in particular those for combat aircraft, have buoyed Russian hopes that the MiG-35 combat aircraft will win the \$10 billion Indian tender for 126 multi-role combat aircraft.³¹ The MiG-35 faces competition from the Swedish JAS-39 Gripen, the French Rafale, the pan-European (British, German, Italian and Spanish) Eurofighter Typhoon and the US F-16 and F/A-18.³² The delivery of the first BrahMos cruise missiles to the Indian Army in 2007 represents one of the most prominent examples of Russian willingness to transfer technology and engage in joint production with India.³³ India expects the first Indian export contracts for BrahMos missiles to be signed in 2008, with Malaysia cited as one of the most interested states.³⁴ The Indian–Russian intergovernmental military-technical cooperation (MTC) agreements

²⁸ Litovkin, V., 'Voенно-экспортный тупик' [Military exports dead end], *Nezavisimaya gazeta*, 29 Jan. 2008.

²⁹ 'China to re-export Russian jet engine', *Kommersant*, 20 Nov. 2007. At the beginning of 2008, Pakistan was the only state to have ordered the JF-17.

³⁰ Unnithan, S., 'Dud missile', *India Today*, 10 Jan. 2008.

³¹ 'Korporatsiya "MiG" uverena v pobede v indiiskom tendere na postavku 126 srednikh mnogotselevykh istrebitelei' [MiG corporation believes in victory in Indian tender for 126 medium multi-role combat aircraft], ARMS-TASS, 11 Nov. 2007, <<http://arms-tass.su/?page=article&aid=47669&cid=43>>.

³² Government of India Press Information Bureau, 'Request for proposal for 126 medium multi-role combat aircraft issued', 28 Aug. 2007, <<http://pib.nic.in/release/release.asp?relid=30522&kwd=>>>.

³³ 'Address of the President of India, H. E. Dr. A. P. J. Abdul Kalam, during the commencement of the delivery of BRAHMOS missile systems to the Indian army', Embassy of the Russian Federation in India, New Delhi, 21 June 2007, <http://www.india.mid.ru/sp_84_e.html>.

³⁴ 'Indiya gotova postavit' rakety "BrahMos" Malaizii' [India ready to sell BrahMos missiles to Malaysia], ARMS-TASS, 8 Oct. 2007, <<http://arms-tass.su/?page=article&aid=46024&cid=25>>.

on the joint design and development of a fifth-generation combat aircraft and a multi-role transport aircraft were signed in October and November 2007, respectively, signalling further cooperation in the arms sphere.³⁵

Another significant agreement on transfers to Asia was concluded with the granting of a \$1 billion credit arrangement with Indonesia for arms purchases.³⁶ The proposed transfers to Indonesia—as with those for Algeria, Iran, Malaysia and Venezuela—are one element of intergovernmental trade relationships that include agreements on joint resource exploration and energy development projects. The most controversial of these relationships is with Iran, as United Nations Security Council Resolution 1747 calls for ‘vigilance and restraint’ with regard to major conventional weapons transfers, associated services and manufacturing assistance to Iran.³⁷ Following a Iranian–Russian intergovernmental MTC committee meeting in December 2007, the Iranian Defence Minister, Mustapha Mohammed Najjar, announced that Russia would deliver an undisclosed number of S-300PMU-1 (SA-10) SAM systems to Iran in 2008.³⁸ However, Russia immediately denied the reports, stating that the issue was ‘not on the agenda, is not being considered and is not being discussed with Iran at the moment’.³⁹ Despite media rumours throughout 2007 that Iran planned to acquire combat aircraft and other weapons systems from Russia, Iran and Russia did not reveal new contracts for major conventional weapons in 2007.⁴⁰

Germany, France and the United Kingdom

After the dominant arms exporters—the USA and Russia—EU member states Germany, France and the UK represent the next tier of suppliers. As a group, their largest recipient regions for the period 2003–2007 were Europe (39 per cent), the Middle East (22 per cent) and Asia (17 per cent). There are two EU

³⁵ Government of India Press Information Bureau, ‘India and Russia sign landmark agreement for joint development and production of fifth generation fighter aircraft’, 18 Oct. 2007, <http://pib.nic.in/release/rel_print_page.asp?relid=32016>; and ‘List of agreements signed between India and Russia during Prime Minister’s visit to Moscow’, Government of India Press Information Bureau, 12 Nov. 2007, <http://pib.nic.in/release/rel_print_page.asp?relid=32746>.

³⁶ This credit arrangement is reportedly to be used for the acquisition of 10 Mi-17 and 5 Mi-35 helicopters, 20 BMP-3 IFVs and 2 submarines. In Aug. 2007, Indonesia signed a contract for 3 Su-27SKM and 3 Su-30MK2 aircraft, which will not be paid for by the \$1 billion credit. ‘Atom, turizm, oruzhie’ [Atom, tourism, weapons], *Nezavisimaya gazeta*, 5 Sep. 2007.

³⁷ UN Security Council Resolution 1747, 24 Mar. 2007. UN documents on the Iran embargo are available at <<http://www.un.org/sc/committees/1737/>>. See also chapter 8 in this volume, section II.

³⁸ ‘Rossiya postavit Iranu kompleksy S-300’ [Russia to deliver S-300s to Iran], *Kommersant*, 26 Dec. 2007.

³⁹ Russian Federal Service on Military-Technical Cooperation, ‘O postavkakh iranu ZRS S-300: po povodu soobshchenii v presse o VTC Rossii i Irana’ [Regarding deliveries of S300 air defence systems to Iran: In connection with media reports on MTC of Russia and Iran], 27 Dec. 2007, <<http://www.fsvts.gov.ru/db/kvts-portal/CDA393755C69C872C32573BE004E3240/ddb/heap/doc.html>>. It has been suggested that Belarus is negotiating the sale of 2 surplus S-300PT (SA-10A) SAM systems to Iran. Harrington, M., ‘Iran set to acquire S-300PTs from Belarus’, *Jane’s International Defence Review*, Feb. 2008, p. 6.

⁴⁰ Hughes, R., ‘Iran set to obtain Pantsyr via Syria’, *Jane’s Defence Weekly*, 23 May 2007, p. 5; and Lantratov, K. et al., ‘MiGs will defend Syria and Iran’, *Kommersant*, 19 June 2007.

mechanisms that can influence transfers by EU member states. First, the Council of the EU can call for the imposition of arms embargoes. As of January 2008, 14 countries were subject to EU arms embargoes, with Iran the latest addition to the list.⁴¹ Second, the EU Code of Conduct on Arms Exports can inform member state decisions to license applications.⁴² However, national governments continue to make the final decisions on transfers and promote their domestic arms companies' exports.⁴³ There are differences in the restrictiveness of the export policies of the governments and EU member states compete for orders.

For the period 2003–2007 Germany was the third largest supplier of major conventional weapons. Sixty-two per cent of its transfers went to EU or NATO recipient states. Germany also competes for export orders against other EU member states in other regions of the world—for example, against France for a contract to supply Pakistan with three submarines worth around \$1.5 billion.⁴⁴ However, in November 2007 the German Foreign Minister, Frank-Walter Steinmeier, announced that the German Government was to reconsider ongoing arms deliveries to Pakistan in response to President Musharraf's decision to impose a state of emergency.⁴⁵ As a result, deliveries of M-113 APCs and Luna unmanned aerial vehicles (UAVs) to Pakistan were temporarily halted.⁴⁶ Steinmeier has also expressed a negative opinion of the proposed US arms packages to the Middle East announced in July 2007, stating that 'a military buildup is hardly the best solution to the unstable situation in the Middle East'.⁴⁷ Additionally, members of the German Government coalition opposed the French arms deals with Libya. However, German companies are part of the Eurofighter consortium that will provide 72 Eurofighter Typhoon combat aircraft to Saudi Arabia via the UK and will also co-produce the Milan missiles to be supplied to Libya via France (see below).⁴⁸

France—the fourth largest supplier of major conventional weapons for the period 2003–2007—took significant steps in 2007 to promote its arms exports. The French Defence Minister, Hervé Morin, identified the strengthening of French arms export efforts as a top priority after taking office in June 2007;

⁴¹ Council Common Position 2007/246/CFSP of 23 April 2007 amending Common Position 2007/140/CFSP concerning restrictive measures against Iran, *Official Journal of the European Union*, L106 (24 Apr. 2007). Developments in EU arms embargoes can be found on the SIPRI Arms Transfers Project website (note 25).

⁴² Council of the European Union, 'European Union Code of Conduct on Arms Exports', document 8675/2/98, Rev. 2, Brussels, 5 June 1998. See chapter 11 in this volume, section III.

⁴³ Bromley, M., *The Impact on Domestic Policy of the EU Code of Conduct on Arms Export: The Czech Republic, the Netherlands and Spain*, SIPRI Policy Paper no. 21 (SIPRI: Stockholm, 2008).

⁴⁴ Grevast, J. and Lewis A. C., 'Pakistan delays sub design selection, says source', *Jane's Defence Industry*, July 2007, p. 4.

⁴⁵ Steinmeier, F.-W., German Minister of Foreign Affairs, Speech concerning recent developments in Pakistan, German Bundestag, Berlin, 8 Nov. 2007, *Die Bundesregierung*, Bulletin no. 123-3 <http://www.bundesregierung.de/nn_1514/Content/DE/Bulletin/2007/11/123-3-bmaa-bt-pakistan.html>.

⁴⁶ Lurz, A., 'Gefährliche militärhilfe? Deutsche Rüstungsexporte nach Pakistan' [Dangerous military assistance? German arms exports to Pakistan], *Streitkräfte und Strategien*, 12 Jan. 2008.

⁴⁷ Reuters, 'German FM criticizes proposed U.S. arms sale to Middle East', *Haaretz*, 1 Aug. 2007.

⁴⁸ 'Germany knew of Libya arms deal, says spokesman', *Deutsche Welle*, 7 Aug. 2007; and Lewis, J. A. C., 'Dassault holds talks with Libya over Rafale sale', *Jane's Defence Weekly*, 5 Sep. 2007, p. 9.

and in September 2007 a special task force was established within the presidential office to promote arms exports.⁴⁹ On the assumption that arms export efforts were underperforming, the French Government announced its intention to increase arms exports to a value similar to that of domestic arms procurement—€8–10 billion (\$11–14 billion).⁵⁰ This was followed in December 2007 by a government announcement that France's arms export licensing system would be simplified and modernized to support the arms industry's export efforts.⁵¹

French President Nicolas Sarkozy has played a prominent role in promoting the country's arms exports in the Middle East and North Africa since entering office. He met Libyan leader Muammar Qadhafi twice during 2007 to discuss potential sales of 14 Rafale combat aircraft, eight Tiger combat helicopters, two Gowind corvettes and Milan anti-tank missiles.⁵² In January 2008 Sarkozy visited Saudi Arabia to support efforts to secure contracts to supply naval vessels and border security systems.⁵³ Saudi Arabia accounted for 9 per cent of French arms exports during 2003–2007, and France obtained Saudi orders for artillery, SAMs and tanker aircraft during 2006 and 2007. Traditionally, France faces tough competition from the USA and other EU member states for Saudi arms orders, with Russia also emerging as a potential competitor for Saudi orders in 2007.⁵⁴ Although at the end of 2007 there were fairly significant orders for frigates, helicopters, missiles and submarines, the French arms export portfolio did not include any orders for new combat aircraft. While France delivered 87 combat aircraft during the period 2003–2007, Morocco selected the US F-16 combat aircraft rather than the French Rafale, and Saudi Arabia opted for the UK-assembled Eurofighter Typhoon in 2007.

The UK—the fifth largest supplier of major conventional weapons for the period 2003–2007—also reformed its export promotion department in 2007. In December 2007 the British Secretary of State for Business, Enterprise and Regulatory Reform, John Hutton, revealed that the national arms export promotion agency, the Defence Export Services Organization, would, as of 1 April 2008, become the Defence and Security Group within the British Department of Enterprise, Trade and Investment.⁵⁵ Another similarity with

⁴⁹ Tran, P., 'France works to revive flagging arms exports', *Defense News*, 17 Dec. 2007, p. 9; and Agence France-Presse, 'France sets up special arms sales task force', ABCmoney.co.uk, 24 Oct. 2007, <<http://www.abcmoney.co.uk/news/242007151151.htm>>.

⁵⁰ Cabirol, M., 'La Défense vise 8 à 10 milliards d'euros d'exportations' [Defence aims at 8 to 10 billion euros' worth of exports], *La Tribune*, 3 Sep. 2007.

⁵¹ French Ministry of Defence, 'La stratégie de relance des exportations du Ministère de la Défense' [The strategy for the relaunch of exports of Ministry of Defense], Press Dossier, 13 Dec. 2007, <http://www.defense.gouv.fr/ministre/prises_de_parole/dossier_de_presse/la_strategie_de_relance_des_exportations_du_ministere_de_la_defense>.

⁵² Hall, B., 'Gadaffi's visit to France sparks protests', *Financial Times*, 10 Dec. 2007.

⁵³ Pirot, L., 'French offer Saudi nuclear energy help', Associated Press, 13 Jan 2008, <<http://abcnews.go.com/print?id=4128864>>.

⁵⁴ E.g. France reportedly lost a deal to supply Saudi Arabia with 150 helicopters, worth \$2.2 billion, to Russia. Kahwaji, R., 'Saudis to buy 150 Russian Helos', *Defense News*, 5 Nov. 2007.

⁵⁵ Hutton, J., Secretary of State for Business, Enterprise and Regulatory Reform, 'Defence exports', Statement to the British House of Commons, *Commons Hansard*, Column 16WS–17WS, 11 Dec. 2007, <<http://www.publications.parliament.uk/pa/cm200708/cmhansrd/cm071211/wmsindx/71211-x.htm>>.

France has been the way in which British leaders have also played an active role in promoting arms exports to Libya and Saudi Arabia—two countries that have previously been lucrative markets for arms exports.⁵⁶ In May 2007 the British Prime Minister, Tony Blair, also met with Qadhafi to discuss the possible sale of SAM systems and the conclusion of a \$900 million exploration deal between energy company BP and Libya.⁵⁷ In September 2007 the UK announced an agreement to supply 72 Eurofighter Typhoon combat aircraft to Saudi Arabia in a deal called ‘Project Al Salam’. The agreement could be worth up to £20 billion (\$40 billion) if all options are exercised over a 25-year period.⁵⁸

IV. Arms transfers to South America

Over the period 2003–2007 South America accounted for only 5 per cent of the volume of international arms transfers; however, the volume transferred to this region during this period was 47 per cent higher than in 1998–2002. This section gives a brief overview of recent and upcoming arms transfers to Chile and Venezuela (two countries that have seen a significant increase in arms imports in recent years) and Brazil (which made a number of major arms procurement related announcements during 2007) and assesses speculation of an arms race in the region.

In September 2006 Óscar Arias, President of Costa Rica, citing recent purchases by Chile, Venezuela and others, declared that the region ‘has begun a new arms race’.⁵⁹ While there is some evidence of competitive behaviour—for example, in Brazil’s apparent desire to keep pace with Venezuela’s modernizations—and of potential increases in tension—particularly in Colombia’s response to Venezuela’s acquisitions—it is doubtful that events in the region can be accurately described as an ‘arms race’ in classical terms.⁶⁰ Acquisitions have been primarily motivated by efforts to replace or upgrade military inventories in order to maintain existing capabilities; respond to predominantly domestic security threats; strengthen ties with supplier governments; boost domestic arms industries; participate in peacekeeping missions; or bolster each country’s regional or international profile. Meanwhile, formal and informal

⁵⁶ SIPRI Arms Transfers Project (note 25), ‘International arms embargoes’.

⁵⁷ Chuter, A., ‘Libya buys U.K. firm’s communication system’, *Defense News*, 4 June 2007.

⁵⁸ Ripley, T., ‘Typhoon: deal of the decade’, *Jane’s Defence Weekly*, 26 Sep. 2007, p. 23.

⁵⁹ Oppenheimer, A., ‘Just what Latin America needed—a new arms race’, *Miami Herald*, 17 Sep. 2007, p. 16A. These concerns have been echoed elsewhere. E.g. see Malamud, C. and García Encina, C., ‘Rearmament or renovation of military equipment in Latin America’, Working Paper 31/2006, Real Instituto Elcano, 1 Feb. 2007, <<http://www.realinstitutoelcano.org/documentos/283.asp>>; and Downie, A., ‘A South American arms race?’, *Time*, 21 Dec. 2007.

⁶⁰ The classic arms race model defines an arms race as a situation in which a state’s build-up of weaponry is positively related to the amount of weaponry its rival has and to the grievance felt towards the rival and negatively related to the amount of arms it has already. Richardson, L. F., *Arms and Insecurity: A Mathematical Study of Causes and Origins of War* (Boxwood Press: Pittsburgh, Pa., 1960). However, this model is designed for situations in which 20–30 years of time series data are available. For situations that are developing as the analysis is undertaken, the only approach is to analyse the motivations behind specific arms acquisitions and look for evidence of competitive behaviour.

confidence-building measures (CBMs) have played a positive role in offsetting the negative impact of arms acquisitions. However, levels of adoption and application are uneven, with participation in CBMs stronger in the Southern Cone than the Andean region.⁶¹

Recent purchases by Chile

Chile's military budget has increased in recent years, largely due to a continued rise in the value of copper.⁶² Increased arms transfers have seen Chile rise from the 38th largest recipient of military equipment for the period 1998–2002 to the 12th largest recipient for the period 2003–2007 and the largest in South America.⁶³ During this period, 82 per cent of transfers of major conventional weapons to Chile came from EU member states, 15 per cent came from the USA and 3 per cent came from Israel. During 2006 and 2007, Chile took delivery of 10 new F-16C combat aircraft from the USA; 18 second-hand F-16AM combat aircraft, 2 second-hand Doorman frigates and 2 second-hand Van Heemskerck frigates from the Netherlands; 3 second-hand Type-23 frigates from the UK; 24 second-hand M-109 155-mm self-propelled guns from Switzerland; the first 5 of 136 second-hand Leopard-2 tanks from Germany; the second of 2 Scorpene submarines built by France and Spain; and a number of Derby and Python-4 air-to-air missiles from Israel.

Chile's acquisitions replace mostly ageing or decommissioned systems. For example, the F-16 aircraft replaced Mirage-series combat aircraft, while the Scorpene submarines replaced two Oberon submarines commissioned in 1976. However, the purchases of F-16 aircraft, Scorpene submarines and Leopard-2 tanks indicate a significant qualitative advance, particularly in comparison with the armed forces of other countries in the region. Chile may become the first country in South America to possess 'NATO-standard' military forces.⁶⁴

Chile's arms purchases have sparked some concern in the region, particularly in Bolivia and Peru, both of which have long-standing border disputes with Chile.⁶⁵ In response to regional tensions, Chile, together with its neighbours, has developed a range of CBMs relating to defence and security issues. Defence and foreign ministers from Argentina, Chile and Peru meet for bilateral exchanges of information.⁶⁶ Relations between Bolivia and Chile,

⁶¹ See Bromley, M. and Perdomo, C., 'CBMs in Latin America and the effect of arms acquisitions by Venezuela', Working Paper 41/2005, Real Instituto Elcano, 22 Sep. 2005, <<http://www.realinstitutoelcano.org/documentos/216.asp>>.

⁶² According to the Restricted law on copper, Law no. 13 196 of 29 Oct. 1958 (most recently modified in 1987), 10% of total revenue from copper exports is set aside to finance military acquisitions.

⁶³ Nonetheless, Chile accounted for just 2% of global transfers of major conventional weapons for the period 2003–2007.

⁶⁴ Gonzalez Cabrera, P., 'Chilean military plans to be NATO-standard force by 2010', *El Mercurio*, 18 July 2005.

⁶⁵ Higuera, J., 'Chile confirms plans to buy second-hand F-16s', *Jane's Defence Weekly*, 6 July 2005, p. 8.

⁶⁶ 'Thawing relations with Peru', *Latin American Security & Strategic Review*, Sep. 2007, p. 9; and 'Defence agreements with Argentina and China', *Latin American Security & Strategic Review*, Sep. 2006, p. 8.

frozen for several years, also improved during 2007.⁶⁷ Cooperation between Chile and Argentina is particularly strong, encompassing cooperation on the procurement of new frigates and the development of a joint battalion for deployment in UN peacekeeping operations.⁶⁸ Argentina, Bolivia and Peru have recently announced their own force modernization programmes. Their programmes are mainly aimed at restoring the operational condition of their military equipment, rather than seeking to match Chilean acquisitions.⁶⁹

Recent purchases by Venezuela

Venezuela's military budget was \$2.57 billion in 2007, an increase of 78 per cent over 2003, the largest rise in South America.⁷⁰ Venezuela has also moved from being the 56th largest recipient of major conventional weapons for the period 1998–2002 to 24th place for 2003–2007. For the latter period, 92 per cent of transfers of major conventional weapons to Venezuela came from Russia, 3 per cent from China and 2 per cent from Israel.

The budget increase, made possible by rising international oil prices, supported significant arms purchases by Venezuela between 2005 and 2007, including \$4 billion worth of agreements with Russia.⁷¹ These include deals for 10 Mi-35 combat helicopters, 3 Mi-26 heavy transport helicopters, 40 Mi-17 multi-role helicopters, 100 000 AK-103 rifles, 24 Su-30MK combat aircraft and, possibly, a number of TOR-M1 SAM systems. Venezuela is also acquiring four patrol boats and four corvettes from Spain and three JY-1 radars from China. Weapon systems delivered by the end of the 2007 included all of the Mi-35 and Mi-26 helicopters, half of the Mi-17 helicopters and 18 of the 24 Su-30MK aircraft. Throughout 2007 there were persistent rumours of a raft of new purchases from Russia, including Su-35 and Su-39 combat aircraft, An-74 and Il-76 transport aircraft, Mi-28 combat helicopters and Kilo Class submarines. However, no new contracts were signed, leading some to question Venezuela's ability to fund further large acquisitions.⁷²

Venezuela's arms purchases are geared towards a number of different goals. As in Chile, many of the items purchased are replacements for outdated or obsolete weapon systems. Venezuelan President Hugo Chávez has also spoken repeatedly of the supposed threat posed by the USA and its plans to overthrow

⁶⁷ 'Rapprochement with Bolivia', *Latin American Security & Strategic Review*, Sep. 2007, p. 9.

⁶⁸ Cavas, C. P., 'Leading Latin nations share budget data, costs', *Defense News*, 25 Apr. 2005, p. 1; and Higuera, J., 'Turning up the heat', *Jane's Defence Weekly*, 9 Jan. 2008, p. 26.

⁶⁹ Baranauskas, T., 'Bolivian air force to get various aircraft', Forecast International Government & Industry Group, 26 Feb. 2007; Cruz Tantalean, C., 'Peru's upgrade plan shifts focus', *Jane's Defence Weekly*, 10 Oct. 2007, p. 31; Barragán, J. M. and Higuera, J., 'Buenos Aires announces forces funding boost', *Jane's Defence Weekly*, 31 Oct. 2007, p. 32; and Baranauskas, T., 'New Peruvian government will not try to match Chilean arms upgrades', Forecast International Government & Industry Group, 13 Sep. 2006.

⁷⁰ See chapter 5 and appendix 5A in this volume.

⁷¹ 'Russia plans to double the volume of arms deliveries to Venezuela', ARMS-TASS, 30 Oct. 2007, <<http://arms-tass.su/?page=article&aid=47060&cid=43>>.

⁷² Abdullaev, N. and Cavas, C. P., 'Russia, Venezuela hint at submarine deal', *Defence News*, 16 July 2007.

his government. This motivated Venezuela's announcement of the creation of a large reserve force armed with AK-103 rifles for conducting guerrilla-style operations in case of invasion.⁷³ The threat of a US invasion has also been used to justify purchases of combat aircraft and SAMs.⁷⁴ Meanwhile, the helicopter acquisitions are aimed at extending the military's presence along Venezuela's 2000 kilometre-long border with Colombia.⁷⁵ Other Venezuelan goals cited by commentators include the consolidation of the government's standing with the military; intimidating or impressing its neighbours; and strengthening ties with Russia.⁷⁶ Venezuelan's purchasing and supply options have been strongly shaped by a US embargo on arms transfers in place since August 2006.⁷⁷

Particular attention has been paid to Venezuela's purchase of Su-30MK combat aircraft, especially by Colombia. Colombia and Venezuela have frequently been at odds over a number of issues, including a long-running dispute over territorial waters and Colombia's armed conflict with the FARC guerrilla movement. Relations between Colombian President Álvaro Uribe and President Chávez have been frosty for several years and took a sharp turn for the worse in 2007.⁷⁸ In August 2007 the Colombian Government announced plans to raise military expenditure to its highest level in 30 years.⁷⁹ Colombian officials have denied that the move is a response to Venezuela's acquisitions, consistently emphasizing that tackling the guerrilla-led insurgency is the sole motivation.⁸⁰ Informal exchanges of information and other CBMs have taken place between Colombia and Venezuela, helping to allay suspicions, although these mechanisms are less developed than those put in place by Chile and its neighbours.⁸¹

⁷³ 'Russian rifles for snipers', *Latin American Security & Strategic Review*, Sep. 2007, p. 17.

⁷⁴ 'Defending Venezuela', *Jane's Intelligence Review*, Jan. 2007, p. 66.

⁷⁵ 'Venezuela reportedly finalizes \$1B deal for helicopters, SU-30s', *Defense Industry Daily*, 27 July 2006.

⁷⁶ De Franceschi, J., 'Russia arms Latin America', *VOA News Now*, Voice of America, 27 Apr. 2007, Transcript <<http://www.voanews.com/english/archive/2007-04/2007-05-02-voa4.cfm>>; and 'Venezuela reportedly finalizes \$1B deal for helicopters, SU-30s' (note 75).

⁷⁷ Murphy, J., 'US extends arms embargo on Venezuela', *Jane's Defence Weekly*, 30 Aug. 2006, p. 19. US export restrictions and political pressure have also blocked Venezuelan attempts to purchase military equipment from other suppliers, including Brazil, Israel, Spain and Sweden.

⁷⁸ Mander, B. and Lapper, R., 'Chávez puts Colombia relations in "freezer"', *Financial Times*, 26 Nov. 2007.

⁷⁹ Bedoya, J., 'Movilidad de las tropas sera prioridad en gasto de \$8,2 billiones recogidos por impuesto de guerra' [Troop mobility will be the priority in the allocation of \$8.2 billion collected under war tax], *El Tiempo* (Bogota), 6 Aug. 2007.

⁸⁰ 'Colombia aprueba plan de 3.370 mln dlr para gasto militar' [Colombia approves request of \$3370 million for military spending], *Reuters América Latina*, 27 Feb. 2007.

⁸¹ 'Caracas to deploy troops & new radar on the border', *Latin American Security & Strategic Review*, June 2006, p. 9; and 'US intelligence chiefs see no major security threat from Latin America', *Latin American Security & Strategic Review*, Mar. 2007, p. 1.

Recent purchases by Brazil

Brazil fell from being the 21st largest recipient of military equipment for the period 1998–2002 to 32nd place for 2003–2007. During the period 2003–2007, 64 per cent of transfers of major conventional weapons to Brazil came from EU member states, 17 per cent from the USA and 7 per cent from Canada. Deliveries of major conventional weapons systems to Brazil during 2006 and 2007 were far more limited than transfers to Chile or Venezuela. Transfers included 8 of a planned 12 second-hand Mirage-2000C combat aircraft from France; 7 of 12 C-295M transport aircraft from Spain; and 6 S-70 Blackhawk helicopters from the USA. Brazil is also modernizing its fleet of F-5E combat aircraft, equipping them with Derby air-to-air missiles from Israel. By the end of 2007, the Brazilian Air Force had also received 50 of the 99 EMB-314 Super Tucano trainer and combat aircraft procured from the Brazilian company Embraer.⁸²

Two announcements in 2007 have the potential to have a significant impact on both Brazil's military capabilities and its global ranking as a recipient of military goods. First, in July the government revived a long-standing project to build a nuclear-powered submarine. Brazil plans to invest 1 billion reais (\$560 million) over eight years to purchase French or German technology to build the submarine and to develop a nuclear reactor to power the boat.⁸³ Second, in November the government announced the relaunch of the 'F-X' combat aircraft programme, giving the green light for a selection process beginning in January 2008 and providing \$2.2 billion for the procurement of up to 36 aircraft.⁸⁴ These purchases will be backed up by an increase in Brazil's military budget, set to rise from 6.5 billion reais (\$3.64 billion) in 2007 to 10 billion reais (\$5.6 billion) in 2008.⁸⁵

In justifying the new acquisitions, officials have cited the needs to: reverse a series of defence budget cuts that have sharply reduced the capabilities of

⁸² Embraer, 'Embraer delivers 50th A-29 Super Tucano to Brazilian air force', Press release, 19 Sep. 2007, <http://www.embraer.com/english/content/imprensa/press_releases_detalhe.asp?id=1670>; and 'Brazil confirms Derby BVR AAM procurement', *Jane's Missiles and Rockets*, Jan. 2007, p. 16.

⁸³ Reuters, 'Brazil to build \$500m nuclear sub', 11 July 2007, <<http://www.news.com.au/story/0,23599,22054761-23109,00.html>>. Brazil first raised the prospect of building a nuclear powered submarine in 1979 and the plan has since been subject to frequent policy reversals. E.g. in Nov. 2006 it was announced that the plan was being postponed indefinitely in favour of the licensed construction of a Type-214 submarine from Germany and the modernization of 5 existing Type-209 submarines for a total cost of 2.71 billion reais (\$1.24 billion). How these plans will be affected by the Brazilian Government's July 2007 announcement remains unclear. Squassoni, S. and Fite, D., 'Brazil as litmus test: resende and restrictions on uranium enrichment', *Arms Control Today*, Oct. 2005; 'Brazilian navy postpones indefinitely its nuclear submarine construction program', *O Estado de S. Paulo*, 15 Nov. 2006, Translation from Portuguese, Forecast International Market Alert News Center; and 'Brazil's navy wants to buy at least 33 ships', *O Estado de S. Paulo*, 13 May 2007, Translation from Portuguese, Forecast International Market Alert News Center.

⁸⁴ 'Fighter deal green light to update Brazilian air force', *Flight International*, 12 Nov. 2007. The original F-X programme was cancelled in 2005 to redirect funds to the 'Fome Zero' (zero hunger) plan. Stålenheim et al. (note 1), p. 286.

⁸⁵ 'Brazil denies "arms race" with Venezuela', Xinhua, 31 Oct. 2007, <http://news.xinhuanet.com/english/2007-11/01/content_6988196.htm>.

Brazil's armed forces; reinvigorate the domestic defence industry; and boost arms exports. In September 2007 Brazilian President Lula da Silva announced the creation of a working party to draft a National Defence Strategy to hasten the recovery of the 'capability of our armed forces and the technological edge we once had in certain fields'. The working party was given 12 months to devise a 10–15 year defence development plan.⁸⁶ In reversing previous cuts Brazilian officials have focused on the need to improve capabilities in order to better police the country's vast coastline and remote border areas, particularly the Amazon region.⁸⁷ As of November 2007, only 267 of the Brazilian Air Force's 719 aircraft were deemed airworthy.⁸⁸

To strengthen Brazil's defence industry, the government has stated that the arms procurement deals announced in 2007 will include production in Brazil and significant levels of technology transfer.⁸⁹ Brazil was a significant arms exporter in the 1980s and the government is keen to increase the value of its arms exports.⁹⁰ The attempt to reinvigorate a domestic arms industry via purchases of advanced military technology from abroad is a policy that Brazil and other countries in the developing world have tried in the past, with mixed levels of success.⁹¹

The 2007 procurement announcements came in the wake of a string of commentaries by Brazilian analysts and former government officials raising questions about Venezuela's arms purchases.⁹² Relations between Brazil's President da Silva and Venezuela's President Chávez have been warm, but tensions have increased following Venezuela's support for Bolivia's nationalization of its hydrocarbon industry in May 2006.⁹³ In announcing the new procurement plans, Brazilian officials have been at pains to stress that they were not motivated by the Venezuelan purchases.⁹⁴

⁸⁶ 'Brazil to boost defense industry and acquire 36 fighter jets', *Mercopress*, 6 Nov. 2007; and Guevara, I., 'Brazil eyes new defence doctrine', *Jane's Defence Weekly*, 26 Sep. 2007, p. 7.

⁸⁷ 'Brazil to boost defense industry and acquire 36 fighter jets' (note 86).

⁸⁸ 'Fighter deal green light to update Brazilian air force' (note 84).

⁸⁹ 'Brazil to boost defense industry and acquire 36 fighter jets' (note 86).

⁹⁰ Lehman, S., 'Brazil plans comeback of its once-lucrative defense industry', Associated Press, 7 Mar. 2005; and 'Brazil looks for weapons export gains', *Jane's Defence Weekly*, 4 May 2005, p. 10. During the period 1984–88, Brazil was the 11th largest arms exporter with 41% of its transfers going to Iraq. Following the end of the 1980–88 Iran–Iraq War Brazil's arms exports declined significantly and, despite retaining significant market shares in sections of the aerospace and small arms markets, it has never regained the level of exports it had in the mid-1980s.

⁹¹ Brauer J. and Dunne, J. P. (eds), *Arms Trade and Economic Development: Theory, Policy, and Cases in Arms Trade Offsets* (Routledge: London, 2004).

⁹² Former Brazilian Foreign Minister Celso Lafer and former Brazilian President José Sarney both voiced concerns over Venezuela's arms purchases in 2006 and the need for Brazil to respond in kind. 'Latin America: press sees Chavez's arms deals as potential threat', *World News Connection*, 18 Aug. 2006; and 'No arms race, no response to Venezuela', *Latin American Security & Strategic Review*, Nov. 2007, p. 11.

⁹³ 'How gas is realigning South America', *Latin American Security & Strategic Review*, Aug. 2006, p. 12. Also see 'Lula and Chávez compete for alliances across the region', *Latin American Security & Strategic Review*, Aug. 2007, pp. 1–2; and 'Brazil and Chile lead strategies to contain Chávez without isolating him', *Latin American Security & Strategic Review*, Sep. 2007, pp. 1–2.

⁹⁴ 'Brazil rules out Venezuelan arms race', *El Universal*, 4 July 2007.

V. International arms transfers to conflict zones: Afghanistan and Sudan

The first edition of the SIPRI Yearbook gave three reasons for arms suppliers to meet the demand for weapons created by conflict: (a) to gain political influence; (b) as a substitute for an interested external party's direct military presence; (c) and powerful economic pressures to sell arms.⁹⁵ Arms, other military equipment and 'training' can also be supplied to gain or secure access to, or transit for, natural resources.⁹⁶ Meanwhile, for a variety of economic or ideological reasons, governments continue to overtly and covertly supply arms to warring parties, while international peacekeepers often struggle to obtain sufficient arms and military equipment.⁹⁷ This section addresses the questions 'Who supplies the arms, how and why?', with reference to arms transfers to Afghanistan and Sudan.

Afghanistan

Following the Soviet invasion of 1979, Afghanistan became an international 'arms warehouse', as large quantities of major conventional weapons and small arms and light weapons (SALW) flowed to the various forces fighting there throughout the 1980s and 1990s. While Afghanistan was the 79th largest recipient of transfers of major conventional weapons for the period 2003–2007, for the period 1988–1992 Afghanistan was the fifth largest recipient. This section considers significant developments in 2007 with regard to international arms transfers to armed non-state actors, the Afghan National Army (ANA) and the national armed forces participating in the multinational International Security Assistance Force (ISAF) in Afghanistan.⁹⁸

Armed non-state actors

Since 2005 there has been a dramatic increase in armed violence by non-state actors in Afghanistan.⁹⁹ The Afghan Government's Disbandment of Illegal Armed Groups programme estimates that there are more than 1800 illegal armed groups operating in Afghanistan, including insurgents, such as the Tali-

⁹⁵ 'The third world: military expenditure and the trade in major weapons', *SIPRI Yearbook of World Armaments and Disarmament 1968/69* (Almqvist and Wiksell: Stockholm, 1969), pp. 53–55.

⁹⁶ Klare, M. T., *Blood and Oil: The Dangers and Consequences of America's Growing Petroleum Dependency* (Penguin: London, 2005); and Stokes, D., "'Blood for oil?" global capital, counter-insurgency and the dual logic of American energy security', *Review of International Studies*, vol. 22, no. 2 (2007), pp. 245–64.

⁹⁷ See chapter 3 in this volume.

⁹⁸ The section on armed non-state actors discusses allegations regarding international SALW transfers, which are not contained in the SIPRI Arms Transfers Database. The international transfers of major conventional weapons discussed in the sections on the ANA and ISAF can be found in the SIPRI Arms Transfers Database (note 2).

⁹⁹ Lindberg, S. and Melvin, N. J., 'Major armed conflicts', *SIPRI Yearbook 2007* (note 1), pp. 61–66.

ban and Gulbuddin Hekmatyar's Hizb i-Islami forces, local militias and narco-criminal groups.¹⁰⁰ However, the Taliban is the only group operating in Afghanistan that is currently the target of a mandatory UN arms embargo.¹⁰¹ Despite the embargo and the efforts of the Afghan Government, access to weapons does not appear to have diminished in 2007.

In February 2007 Mullah Dadullah, a senior Taliban commander, announced that the upward trend in armed violence would continue as 'extra weapons' had been supplied to the Taliban, including arms that would be able to bring down helicopters.¹⁰² Although Dadullah's threat implicitly referred to man-portable air defence systems (MANPADS), the main weapons used by insurgent forces in 2007 appear to be small arms, mortars, rocket-propelled grenades and improvised explosive devices.¹⁰³ It is assumed that the territory of the Federally Administered Tribal Areas of Pakistan has served as the main conduit, stockpile and supplier of arms to the Taliban.¹⁰⁴ Reports in 2007 suggested that the Afghan–Iranian border had grown in significance. The British and US governments highlighted Iran as a source and transit state for arms seized by the ANA and ISAF and accused Iran of covertly supplying arms to the Taliban.¹⁰⁵ The British Government also approached China regarding suspected trafficking to the Taliban of Chinese-made arms via Iran.¹⁰⁶ In response, Iran denied involvement in arming the Taliban,¹⁰⁷ and China officially stated that it had not exported arms to Afghanistan.¹⁰⁸ This difficulty in identifying the origins of many of the arms found in, or trafficked into,

¹⁰⁰ Government of Afghanistan, Disbandment of Illegal Armed Groups, <<http://www.diag.gov.af/>>.

¹⁰¹ An UN arms embargo was imposed on Taliban-controlled Afghanistan on 19 Dec. 2000. On 16 Jan. 2002, a mandatory UN arms embargo was imposed on the Taliban, wherever located. UN Security Council resolutions 1333, 19 Dec. 2000, and 1367, 16 Jan. 2002. See also Fruchart et al. (note 10); and Holtom, P., 'United Nations arms embargoes: their impact on arms flows and target behaviour—Case study: The Taliban', SIPRI, Stockholm, 2007, <http://books.sipri.org/product_info?c_product_id=356>.

¹⁰² Achakzai, S. A., 'Afghan Taliban say rearmed, ready for war', Reuters, 23 Feb. 2007, <<http://www.reuters.com/article/featuredCrisis/idUSSP100413>>.

¹⁰³ This statement is based on reports of engagements with insurgents from the website of the Combined Joint Task Force 82, Operation Enduring Freedom, <<http://www.cjtf82.com/>>; and United Nations, Sixth Report of the Analytical Support and Sanctions Monitoring Team appointed pursuant to Security Council resolution 1526 (2004) and 1617 (2005) concerning Al-Qaida and the Taliban and associated individuals and entities, UN Document S/2007/132, 8 Mar. 2007, p. 32.

¹⁰⁴ Norell, M., *The Taliban and the Muttahida Majlis-e-Amal (MMA)*, Memo 2021 (Swedish Defence Agency: Stockholm, Mar. 2007), p. 37; Rashid, A., 'Dangerous neighbours', *Far Eastern Economic Review*, 9 Jan. 2003, p. 19; and United Nations, Second report of the Analytical Support and Sanctions Monitoring Team appointed pursuant to resolution 1526 (2004) concerning Al-Qaida and the Taliban and associated individuals and entities, UN Document S/2005/83, 15 Feb. 2003, p. 32.

¹⁰⁵ 'Audio: Des Browne on Afghanistan and Iraq', Podcast, *The Guardian*, 16 Aug. 2007, <http://blogs.guardian.co.uk/podcasts/2007/08/des_browne_on_afghanistan_and.html>; and Miles, D., 'Gates, Karzai share optimism about Afghanistan's course', US Department of Defense, American Forces Press Service, 4 June 2007, <<http://www.defenselink.mil/news/newsarticle.aspx?id=46276>>.

¹⁰⁶ Danahar, P., 'Taleban "getting Chinese weapons"', BBC News, 3 Sep. 2007, <<http://news.bbc.co.uk/2/6975934.stm>>.

¹⁰⁷ Khilwatgar, N., 'No evidence of arms supply from other countries: ISAF', *Pajhwok Afghan News*, 18 July 2007.

¹⁰⁸ Chinese Ministry of Foreign Affairs, 'Foreign Ministry spokesman Qin Gang's regular press conference on 10 July 2007', 11 July 2007, <<http://www.fmprc.gov.cn/eng/xwfw/s2510/2511/t339160.htm>>.

Afghanistan today is further complicated by the difficulty in identifying the intended recipients of the arms—a point raised by a number of commentators in response to the British and US governments' allegations that arms seized were intended for the Taliban.¹⁰⁹

The Afghan National Army

The US Department of Defense (DOD), which has been responsible for overseeing the training and equipping of the ANA, initially decided that the ANA should be equipped with Soviet-designed arms from Afghanistan's Disarmament, Demobilization and Reintegration and Heavy Weapons Cantonment projects, as well as Soviet-designed surplus from coalition allies.¹¹⁰ The DOD adopted this approach because (a) this equipment was familiar to recruits and (b) several coalition allies were willing to provide such surplus.¹¹¹ As in Iraq, official US reports have highlighted that deliveries of military equipment were late and that supplies were often old, faulty and overpriced.¹¹² In an effort to help modernize the ANA, DOD deliveries of \$2 billion worth of US military surplus equipment, arms and infrastructure—including 2500 high mobility multipurpose military vehicles and 'tens of thousands' of M-16 rifles—began in 2007.¹¹³ The US budget for 2008 provides a further \$2.7 billion to train and equip the ANA and Afghan National Police.¹¹⁴

In November 2006 the Afghan Defence Minister, Abdul Rahim Wardak, announced his desire for the ANA 'to have equipment which can be interoperable with the [ISAF] units and also NATO'.¹¹⁵ Turkey provided the ANA's first batch of NATO standard-calibre artillery with a donation of 24 155-mm howitzers in 2007. Greece announced in 2007 that it would supply the ANA with 13 Leopard-1 tanks; Australia, Canada and Norway are potential candidates for providing additional second-hand Leopard tanks in the future.¹¹⁶ The

¹⁰⁹ Wright, J., 'Outside assistance: is Iran supporting the Afghan insurgency', *Jane's Intelligence Review*, Sep. 2007, pp. 38–43.

¹¹⁰ US Government Accountability Office (GAO), *Afghanistan Security: Efforts to Establish Army and Police Have Made Progress, But Future Plans Need to be Better Defined*, GAO-05-575 (GAO: Washington, DC, June 2005), pp. 15–16.

¹¹¹ US Government Accountability Office (note 110), p. 16.

¹¹² Garamone, J., 'Justice, defense agencies examine contracting problems', US Department of Defense, American Forces Press Service, 28 Aug. 2007, <<http://www.defenselink.mil/news/newsarticle.aspx?id=47209>>; and McCaffrey, B. R., 'Academic report—trip to Afghanistan and Pakistan', 3 June 2006, <http://www.washingtonspeakers.com/prod_images/pdfs/McCaffreyBary.VisitToAfghanistan.05.06.pdf>, pp. 6–7.

¹¹³ Tran, T., 'Afghanistan to get \$2 billion in US gear', Associated Press, 4 July 2006, <<http://www.afghannews.net/index.php?action=show&type=news&id=844.com>>.

¹¹⁴ US Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2008*, Appendix, *Detailed Budget Estimates* (Government Printing Office: Washington, DC, 2007), <<http://www.whitehouse.gov/omb/budget/fy2008/appendix.html>>, pp. 247–48.

¹¹⁵ US Department of Defense, 'DoD news briefing with LTG Eikenberry and Minister of Defense Wardak at the Pentagon', 21 Nov. 2006, <<http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=3816>>.

¹¹⁶ 'Afghanistan may get Norwegian tanks', *Norway Post*, 25 Oct. 2006; NATO, 'Fact sheet: NATO support to Afghan national army (ANA)', Oct. 2007, <<http://www.nato.int/isaf/topics/factsheets/nato>>.

USA will also arrange for the transfer of reconnaissance and transport planes, transport and combat helicopters and light combat aircraft, enabling the Afghan Air Force to have 112 operational aircraft by 2015.¹¹⁷ It is envisaged that Soviet-designed helicopters will continue to form the bulk of helicopter transfers, with three Mi-17 helicopters transferred from the Czech Republic in 2007. In 2008 the USA is funding the transfer of a further three Mi-17 and six Mi-35 helicopters from the Czech Republic, one Mi-17 from Slovakia, nine Mi-17 via the UAE and four modernized An-32 transport aircraft from Ukraine. The USA is also expected to supply the Afghan Air Force with 20 C-27 transport aircraft purchased from Italy, with deliveries scheduled to begin in 2009.¹¹⁸

The International Security Assistance Force

Experiences on the ground have influenced procurement plans for the national armed forces that contribute to ISAF in Afghanistan, with significant acquisitions shifting toward strategic airlift capabilities, helicopters, armoured vehicles and UAVs. This is in line with the NATO 2006 Riga Summit Declaration's recognition of the need to increase strategic airlift capabilities 'to conduct and support multinational joint expeditionary operations far from home territory'.¹¹⁹ As a result, orders for C-17 transport aircraft from the USA by NATO member states increased in 2006–2007.¹²⁰ Heavy transport helicopters were also in demand: the Netherlands announced in February 2007 plans to acquire six US-produced CH-47F helicopters and upgrade a further 11 Dutch CH-47D helicopters to CH-47F standard, and the UK announced the upgrade of eight CH-47 helicopters in December 2007. The situation is so desperate regarding tactical air transport capacities that NATO has awarded a \$37 million contract to a privately owned US company to provide fixed- and rotary-wing aircraft for airlift duties in Afghanistan.¹²¹

National forces operating in Afghanistan were also seeking heavier armoured vehicles, with Canada shelving its plans to acquire 66 Stryker/LAV-III 105-mm mobile gun systems and opting instead to replace 114 old Leopard-C2 tanks with 20 leased Leopard-2A6M tanks from Germany and 100 second-hand Leopard-2A4/6 tanks from the Netherlands. Conditions in

support-to-ana-factsheet.pdf>; and Pugliese, D., 'Canada may supply Afghan military with Leopard tanks', CanWest News Service, 21 May 2007.

¹¹⁷ US Department of Defense, 'DoD Press Briefing with Brig. Gen. Lindell at the Pentagon, Arlington, Va.', 24 Jan. 2008, <<http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4126>>.

¹¹⁸ Khilwatgar, N., 'AAF to get 26 aircraft this year', *Pajhwok Afghan News*, 17 Jan. 2008, <<http://www.pajhwok.com/viewstory.asp?lng=eng&id=48767>>; and US Department of Defense (note 117).

¹¹⁹ NATO, 'Riga Summit Declaration', Press Release (2006)150, 29 Nov. 2006, <<http://www.nato.int/docu/pr/2006/p06-150e.htm>>.

¹²⁰ In 2007 the UK ordered and received its fifth and sixth C-17s and Canada received the first 2 of 4 C-17s. A consortium of 15 NATO members plus Finland and Sweden sought to acquire 3 or 4 C-17s. NATO, 'Allies agree on Strategic Airlift Capability initiative', Press Release (2007)075, 20 June 2007, <<http://www.nato.int/docu/pr/2007/p07-075e.html>>.

¹²¹ Fiorenza, N., 'NATO outsources additional airlift for Afghanistan', *Jane's Defence Weekly*, 2 Jan. 2008, p. 6.

Afghanistan have also seen increased use of, and demand for, a range of UAV systems, with Israel emerging alongside the USA as one of the main suppliers to ISAF forces. In 2007 Israel supplied large Hermes-450 UAVs to British forces in Afghanistan. The UK also deployed its first US-supplied armed M-Q9 UAV to Afghanistan in October 2007, while Denmark acquired the US-built Raven-B mini-UAV in 2007. The deployment of new generations of UAVs, of varying sizes, in Afghanistan is perhaps one of the most striking examples of the theatre's use as a test ground for new weapons.

Sudan

Since the beginning of the conflict in Darfur, armed non-state actors have relied primarily on SALW, while the Sudanese armed forces have used major conventional weapons in the region. For the period 1998–2002 Sudan was ranked the 66th largest recipient of transfers of major conventional weapons and was 44th for the period 2003–2007. This section considers significant developments in 2007 with regard to international arms transfers to armed non-state actors, the Sudanese Government's armed forces and the African Union/United Nations Hybrid Operation in Darfur (UNAMID).¹²²

Armed non-state actors

In reaction to the conflict in the Darfur region of Sudan, on 30 July 2004 UN Security Council Resolution 1556 imposed an embargo on supplies of arms and military equipment to armed non-state actors operating in Darfur.¹²³ In 2007 a UN panel of experts concluded that the Government of Eritrea directly supplied arms and military equipment to armed non-state actors in Darfur.¹²⁴ It also suspected that high-level government officials from Chad and Libya arranged for military support to armed non-state actors in Darfur. Armed non-state actors in Darfur have also equipped themselves with arms and military equipment stolen from Sudanese Government armed forces and small arms trafficked into Darfur from neighbouring countries.¹²⁵ There is also strong evidence that the Sudanese Government used Arab tribesmen in Darfur, known as the Janjaweed, as a militia—organizing, financing and arming them.¹²⁶

¹²² The international transfers of SALW to non-state actors and the Sudanese Government discussed here are not contained in the SIPRI Arms Transfers Database. The international transfers of major conventional weapons discussed in the section on the Sudanese Government's armed forces can be found in the SIPRI Arms Transfers Database.

¹²³ UN Security Council Resolution 1556, 30 July 2004. For an analysis of the conflict in Darfur see chapter 2 in this volume, section IV. For a more in-depth study of arms transfers to Sudan before and during the UN arms embargoes see Wezeman, P., 'United Nations arms embargoes: their impact on arms flows and target behaviour—Case study: Darfur (Sudan)', SIPRI, Stockholm, 2007, <http://books.sipri.org/product_info?c_product_id=356>.

¹²⁴ United Nations, Final report of the panel of experts as requested by the Security Council in paragraph 2 of resolution 1665 (2006), UN Document S/2007/584, 3 Oct. 2007, pp. 27–28.

¹²⁵ Amnesty International, 'Sudan: arming the perpetrators of grave abuses in Darfur', 16 Nov. 2004, <<http://www.amnesty.org/en/library/info/AFR54/139/2004>>, p. 26.

¹²⁶ United Nations (note 124), p. 56.

Sudanese Government armed forces

In 2005 UN Security Council Resolution 1591 expanded the coverage of the arms embargo on Darfur, prohibiting the movement of military equipment to all belligerents in Darfur, including Sudanese Government forces based in Darfur.¹²⁷ In the period 2003–2007 the Government of Sudan accounted for a negligible share of the global volume of transfers. The Sudanese Government's main supplier of major conventional weapons in this period was Russia, which accounted for an estimated 87 per cent of the transfers, while China accounted for 8 per cent. During this period, Russia supplied 20 combat helicopters and 12 MiG-29S combat aircraft, while China supplied at least six K-8 and three A-5 light combat aircraft. Since the 1990s, Chinese, Iranian and Russian companies have also supported the expansion of Sudan's own capabilities to assemble and produce small arms, artillery and armoured vehicles.¹²⁸ Available data suggest that China and Iran accounted for over 95 per cent of all small arms and related ammunition supplied to Sudan in the period 1992–2005.¹²⁹ Other arms suppliers are likely to include India and Turkey, as Sudan signed military agreements with these countries in 2003 and 2006, respectively.¹³⁰

The Sudanese Government has ignored the UN arms embargo imposed by Resolution 1591, deploying Chinese and Russian arms and military equipment to government forces in Darfur without the prior consent of the UN Sanctions Committee appointed to monitor the resolution.¹³¹ Despite the Sudanese Government's contravention of the resolution, China and Russia have opposed calls to impose a blanket UN arms embargo on Sudan.¹³² There are several possible motives for the Chinese and Russian positions. First, China and Russia have opposed the imposition of UN arms embargoes on governments condemned for violence against their civilians—most recently Myanmar (Burma)—by citing the importance of the principle of non-interference in the internal affairs of sovereign states.¹³³ Second, transfers strengthen ties between the Sudanese Government and the Chinese and Russian governments. They are therefore considered one of the ways in which China in particular has sought to gain access to Sudanese oil reserves and other economic opportunities. Access to the Sudanese oil industry is a significant element of China's

¹²⁷ UN Security Council Resolution 1591, 29 Mar. 2005.

¹²⁸ A list of Chinese-, Iranian- and Russian-designed weapons produced in Sudan can be found at the website of the Sudanese Military Industry Corporation, <<http://mic.sd/english/abouten.htm>>.

¹²⁹ Small Arms Survey, 'The militarization of Sudan', Sudan Issue Brief: Human Security Baseline Assessment no. 6 (Apr. 2007).

¹³⁰ 'Sudan, Turkey ink military cooperation accord', *Sudan Tribune*, 1 Aug. 2006; and 'India offers defence help to Sudan', *The Hindu*, 15 Dec. 2003.

¹³¹ United Nations (note 124), pp. 28–42, 60–64.

¹³² E.g. China and Russia abstained from the vote on UN Security Council Resolution 1591. China also abstained from the vote on Resolution 1556. For UN Security Council voting records see the UN Bibliographic Information System (UBISNET), <<http://unbisnet.un.org/>>.

¹³³ China and Russia have repeatedly announced their shared view on this principle in joint statements since 1997. A recent example is see Joint statement of the Russian Federation and People's Republic of China on international order in the 21st century, 1 July 2005, available from the Russian Ministry of Foreign Affairs website, <<http://www.mid.ru/>>.

energy policy and China has made major investments in oil exploration in Sudan.¹³⁴ Third, an embargo would mean the loss of revenues from arms sales, although this is likely to be a minor consideration as arms transfers to Sudan represented only about 2 per cent of Chinese and Russian major conventional weapons transfers in the period 2003–2007.

African Union/United Nations Hybrid Operation in Darfur

In contrast to the continuing flow of arms to the belligerents in Darfur, African armed forces deployed as part of international peacekeeping operations in the region report significant shortages in essential military equipment. In November 2007 UNAMID lacked two medium transport aircraft, three medium utility helicopter units and a light tactical helicopter unit. The UN Secretary-General, Ban Ki-Moon, appealed to ‘Member States which are in a position to provide these capabilities to do so’.¹³⁵ UNAMID illustrates the problem of the international community encouraging African countries to provide a significant proportion of the peacekeeping forces deployed in Africa, while most sub-Saharan countries are poorly equipped for such missions.¹³⁶ The EU, its member states and Canada have provided some military aid—including training, helicopters for non-combat transport roles and some armoured vehicles to help improve African peacekeeping capabilities.¹³⁷ US military aid, aimed primarily at strengthening African military forces as part of the US ‘global war on terrorism’, also contributes to African peacekeeping capabilities.¹³⁸ However, sub-Saharan African countries remain dependent on limited financial means to procure most of their weapons, which continue to be supplied mainly by China and East European states.

VI. Conclusions

For the past 15 years (1993–2007) the five largest suppliers of major conventional weapons have remained the same: the USA, Russia, Germany, France and the UK. Although these suppliers are likely to continue to account for the largest shares of the volume of international arms transfers, concerns were

¹³⁴ Small Arms Survey, ‘Arms, oil and Darfur’, Sudan Issue Brief: Human Security Baseline Assessment no. 7 (July 2007); and Taylor, I., ‘China’s oil diplomacy in Africa’, *International Affairs*, vol. 82, no. 5 (2006), pp. 937–59.

¹³⁵ United Nations, Report of the Secretary-General on the deployment of the African Union–United Nations Hybrid operation in Darfur, UN Document S/2007/653, 5 Nov. 2007, p. 3. The UNAMID commander stated that UNAMID forces required at least 12 combat helicopters, 18 military transport helicopters and a considerable number of armoured vehicles, with developed countries targeted as potential donors. ‘Darfur peacekeeper warns of high expectations’, allAfrica.com, 6 Nov. 2007, <<http://allAfrica.com/stories/200711060094.html>>.

¹³⁶ See chapter 3 in this volume.

¹³⁷ Canadian Ministry of National Defence, ‘Operation AUGURAL’, 16 Apr. 2007, <http://www.mdn.ca/site/Operations/augural/index_e.asp>; and EU Council Secretariat, ‘EU support to the African Union Mission in Darfur-AMIS’, Fact sheet, May 2007, <http://www.consilium.europa.eu/cms3_fo/showPage.asp?id=1087&lang=en>.

¹³⁸ ‘The doves of war’, *The Economist*, 24 Nov. 2007, pp. 52–53.

expressed in 2007 regarding the export prospects for French and Russian weapons. Nevertheless, orders for major conventional arms announced in 2007 indicate that the volume of international arms transfers will continue to grow. Developments in 2007 suggest that there could be a change in the composition of the largest recipients in the next 5–15 years, with Saudi Arabia, Libya and Taiwan significantly increasing their ranking.

Despite attention-grabbing headlines, it seems unlikely that South America is in the midst of a classically defined arms race. There is some evidence that the arms acquisition programmes of Brazil, Chile and Venezuela have been influenced by the actions of their neighbours and have themselves had an impact on the procurement decisions of other states in the region. Nonetheless, other domestic factors, such as the need to replace and modernize inventories for new missions, peacekeeping and traditional national defence, appear to be the main explanation for increasing arms transfers. In addition, improved systems of information exchange and other CBMs have helped to limit the negative fallout created by arms acquisitions. Finally, few countries have either the desire or ability to compete with the resource-fuelled acquisitions of Chile or Venezuela, or with the economically powerful Brazil.

The international transfer of arms to conflict zones in Afghanistan and Sudan illustrates a number of tendencies. First, UN arms embargoes imposed on armed non-state actors in Afghanistan and Sudan have thus far failed to stop their arms acquisitions. Second, major arms suppliers have been willing to show their support for the Afghan and Sudanese governments by directly supplying them with arms. In the Afghan case, the shift from Soviet to US and other Western equipment is a significant change in US arms supplies to the ANA. China and Russia continue to support Sudan with arms supplies and to block a blanket UN arms embargo on Sudan. Third, although both ISAF and UNAMID forces lament shortages of suitable combat and transport helicopters, UNAMID's equipment concerns are of a different order of magnitude to those of ISAF.