

The militarization of Sudan

A preliminary review of arms flows and holdings

Sudan is at the epicentre of one of the world's most dynamic arms markets. Protracted armed conflicts throughout the Horn of Africa have generated chronic armed violence and rates of internal displacement and refugee flows that are among the highest on record.¹ There appears to be a robust association between arms availability and persistent insecurity in the region that has contributed to the militarization of its communities and the prolongation of many ongoing cross-border and internal conflicts.

The importance attached to reducing all manner of weapons transfers to and from Sudan is emphasized in recent peace agreements, UN Security Council resolutions, and embargoes (see Box 1).²

The Comprehensive Peace Agreement (CPA),³ Darfur Peace Agreement (DPA),⁴ and Eastern Sudan Peace Agreement (ESPA)⁵ all advocate disarmament, demobilization and reintegration (DDR) programmes for armed groups. It is imperative that the design and implementation of effective DDR and civilian disarmament interventions be based on evidence of the dynamics of small arms supply and demand.

Legal and illegal arms flows to and from Sudan are often narrowly described in terms of state-to-state transfers and regional arms markets, but the reality is more complex. A comprehensive analysis of the highly stratified weapons procurement patterns of government, paramilitary and

rebel forces, and civilians demands a broader perspective. To this end, this *Issue Brief* provides a preliminary conceptual overview of the regional and local dynamics of arms trade and trafficking in Sudan, while clarifying the scale of Sudanese small arms stockpiles. It finds that:

- Based on UN Comtrade data, at least 34 countries have exported small arms, light weapons and ammunition valued at almost USD 70 million to Sudan between 1992–2005.⁶ Ninety-six per cent of these reported transfers were from China and Iran. Even so, the real value of the legal trade is likely to be much higher—and the source states more diverse—than public reporting suggests.

Box 1 The UN arms embargo on Darfur

UN Security Council Resolution 1556 (2004) calls on states to:

'Take the necessary measures to prevent the sale or supply to all non-governmental entities and individuals, including the Janjaweed,⁷ operating in the states of North Darfur, South Darfur, and West Darfur, by their nationals or from their territories or using their flag vessels or aircraft, of arms and related materiel of all types, including weapons and ammunition, military vehicles and equipment, paramilitary equipment, and spare parts for the aforementioned, whether or not originating in their territories.'⁸

The existing UN embargo was expanded by UNSC 1591 (2005), which 'reaffirms the measures imposed by paragraphs seven and eight of resolution 1556 (2004),' and declares that:

'These measures shall immediately, upon adoption of this resolution, also apply to all the parties to the N'Djamena Ceasefire Agreement and any other belligerents in the states of North Darfur, South Darfur, and West Darfur'.⁹

The UN Panel of Experts on Sudan¹⁰ has interpreted the embargo as applying only to units operating in Darfur and therefore has not examined overall weapons supplies to the Sudanese government. The Panel has reported repeated violations, noting in 2006 that:

'Sudan continues to violate the arms embargo by transferring equipment and related weapons into Darfur, supplying the Janjaweed with arms and ammunition, and receiving support from the Janjaweed and Chadian rebels for attacks by the Sudanese armed forces against rebel groups. The Government of Sudan remains adamant that it has the right to transfer troops and equipment into Darfur without reference to Sanctions Committee.'¹¹

In a subsequent report leaked to the press in April 2007, the Panel described steps taken by the Government of Sudan to disguise aircraft to deliberately mislead people about their origin and in some cases to bomb Darfur.¹²

The Panel further received reports that unknown elements in Chad, Libya, and Eritrea were transporting weapons and ammunition into Darfur,¹³ and indicated that border controls between Chad¹⁴ and Darfur were virtually non-existent due to continued conflict, despite agreements to improve them.¹⁵ The Panel has called for an extension of the arms embargo to all of Sudan, with an exemption for the Government of South Sudan, rather than an exclusive focus on Darfur.¹⁶ It has also recommended that states exporting to Sudan adopt self-imposed requirements for end-use certification, stating the destination of the goods and services.¹⁷ This is in recognition of the fact that without transparency concerning the final destination of arms transferred to Khartoum, an embargo on arms flows to Darfur is inadequate.

- Multiple entry-points, sources, and actors contribute to arms flows into Sudan, with sponsoring states, foreign and domestic armed groups, and brokers involved throughout the procurement chain.
- Sudan is a major conduit and source of small arms and light weapons to other countries in the Horn of Africa. It has long provided weapons, munitions, and logistics support to armed groups in neighbouring countries, such as Chad, Eritrea, Ethiopia, Somalia, and Uganda. Owing to chronic warfare, communal armed violence manipulated from above, weak governance, and unmonitored borders, local demand for small arms flourishes.

Box 2 The EU arms embargo

The European Union (EU) and its member states first imposed an arms embargo on Sudan in 1994.¹⁸ It prohibited the sale or transfer of arms, ammunition, and related material by member states or citizens, and the use of EU territory to facilitate such transfers. The EU modified the embargo in January 2004 to include a prohibition on technical assistance.¹⁹ In June 2004 it amended it again to allow for certain exemptions for the African Union, UN, and EU missions.²⁰ After the adoption of UN Security Council resolution 1591 (2005), the EU expanded the embargo to apply to all parties to the N'Djamena Ceasefire Agreement.²¹ Since these sanctions were put in place, there have been reported violations.²²

One issue is that the EU did not issue a definition for 'arms', leaving some latitude for interpretation. For example, many EU states do not consider hunting/sporting weapons or their parts to be prohibited, and so have allowed their transfer. Exports of military equipment require arms export licenses, but in most cases exports of sporting equipment do not or, at most, they require a non-military permit. In 2000, the EU created a common military list that excluded sporting shotguns, but not other sporting weapons.²³

Countries that have declared exports to Sudan may not have violated the EU embargo (see page 7). According to the EU's TARIC (Integrated Tariff of the European Communities) database, exports of sporting rifles, sporting shotguns and their components to Sudan are not prohibited. However, TARIC also states that exports of pistols and revolvers, small arms ammunition, shotgun cartridges, parts of shotgun cartridges, and parts of military weapons from the EU are prohibited.

Source: NISAT (2007)



Unidentified Sudanese rebels in Adre, Chad, less than 4 km from the Darfur border. Pictured with a mounted 12.7 mm heavy machine gun and numerous RPGs. March 2007. © Les Neuhaus

- An estimated 1.9–3.2 million small arms are in circulation in Sudan. Two-thirds are held by civilians, 20 per cent by the Government of Sudan (GoS), and the remainder divided between the Government of South Sudan (GoSS) and current and former armed groups.
- Although domestic production of small arms ammunition has been confirmed for some time, reports documenting Sudanese manufacture of small arms and light weapons have yet to be independently verified. Nevertheless, there is evidence that Khartoum is improving its manufacturing infrastructure and capacity.

Regional and domestic dynamics of the arms trade

The trade and trafficking of small arms and light weapons (SALW) in the Horn of Africa are conditioned by a host of structural factors. For example, political tension and environmental scarcity

at the regional level frequently give rise to the diffusion of arms, while longstanding migratory patterns facilitate their transfer across borders. The presence of poorly paid and trained security forces ensures a steady supply of weapons to civilians, while domestic transformations within countries can exacerbate arms availability.

There is an enduring political tradition in the Horn of outsourcing armed conflict to non-state armed groups. Arms are often legally procured by states ostensibly for national security, and then are (covertly) distributed to paramilitaries, local defence forces and militia who wage war in lieu of standing armies (see Table 1). At the same time, increased resource scarcity contributes to intra- and inter-communal conflicts that spill across borders, as in Sudan's Darfur region or border areas of Uganda and Kenya. A combination of political manipulation with extreme poverty, deteriorating livelihoods, and environmental degradation contributes to people's willingness to take up arms.²⁴

Table 1 **Selected Proxy Wars in the Horn of Africa, 1960s to today**

State sponsor	Armed group	Target	Time frame
Somalia	'Shifta' – Somali Kenyans of northern Kenya	Kenya	Mid-1960s
	Eritrean People's Liberation Front	Ethiopia	1970s-1980s
	Western Somali Liberation Front	Ethiopia	1960s-1980s
	Somali Abo Liberation Front	Ethiopia	1970s-present
Uganda	Sudan Peoples Liberation Movement/Army	Sudan	1983-present
Eritrea	Ogaden National Liberation Front	Ethiopia	1998-present
	Oromo Liberation Front	Ethiopia	1998-present
	Ethiopian People's Patriotic Front	Ethiopia	2000-present
	Somali Council of Islamic Courts	Ethiopia	2005-07
	Gambella People's Liberation Front	Ethiopia	2003-present
	Beja National Congress	Sudan	1990s
	Eastern Front	Sudan	2000-06
	National Democratic Alliance	Sudan	1994-present
	Justice and Equality Movement	Sudan	2003-present
Ethiopia	Somali National Movement	Somalia	1981-88
	Somali Salvation Democratic Front	Somalia	1979-90
	Somali Reconciliation and Reconstruction Council	Somalia	2000-03
	Eritrean Liberation Front	Eritrea	1998-present
	Eritrean National Alliance	Eritrea	1998-present
	Afar Revolutionary Democratic United Front	Eritrea	1998-present
	Anyanya	Sudan	1960s
	Sudan Peoples Liberation Movement/Army	Sudan	1983-2002
	Sudan Alliance Forces	Sudan	1990s
Sudan	Lord's Resistance Army	Uganda	1990s-present
	West Nile Bank Front	Uganda	1990s
	Eritrean Liberation Front	Ethiopia	1960s-83
	Eritrean People's Liberation Front	Ethiopia	1983-91
	Eritrean Jihad	Eritrea	1990s-present
	Al-Ittihad al-Islamiyya	Ethiopia	1991-96
	Rally for Democracy and Liberty/tribal militias	Chad	2005-present
	Benishangul People's Liberation Front	Ethiopia	1980s
Chad	SLA/tribal militias	Sudan	2005-present
Libya	Somali Salvation Democratic Front	Somalia	1980s
Ethiopia, Sudan, Yemen ('Sana'a Pact')	Miscellaneous armed groups	Eritrea	1998-present

Note: This table does not include proxy wars sponsored by states outside the region or non-state actors. In some cases, interest groups within a state have provided aid to rebel movements without direct state sponsorship or official approval.

Source: Menkhaus (2007)

Owing to the porous nature of international borders, nomadic and semi-pastoral populations and armed groups easily facilitate arms flows. The commercial trade is diffuse and persists largely as a consequence of the region's ungarded frontiers where most informal arms markets are located. Arms are similarly trafficked by plane, motor vehicle, and camel to and from a variety of countries. As such, traffickers range from internationally-known dealers to pastoralist or traders smuggling modest numbers of weapons.

Irregularly paid and undisciplined police and armed forces personnel also

contribute to the availability of arms through the dumping of equipment and material onto local markets. In the absence of functioning police, civilians turn to arms to protect themselves, their communities, and assets.

Sudan's domestic economic and political environment has changed dramatically in the last ten years. Substantial revenues accruing from growing oil exports since the late 1990s have helped to boost arms imports for the defence sector—and possibly its arms production capacities as well (see Box 3). This contributed to Sudan's capacity to wage war on two fronts: in the

south and Darfur. The formal cessation of hostilities between the Sudan People's Liberation Army (SPLA) and Sudan Armed Forces (SAF)²⁵ altered the dynamics of arms flows, but weapons acquisitions are ongoing. Meanwhile, the war in Darfur²⁶ has increased arms flows into Sudan's western region, with the GoS deploying heavy weapons to garrisons across the region, and arming paramilitary and militia groups. The conflict also generates significant weapons demand among rebel groups and civilians from neighbouring states, other armed factions, and private arms markets.²⁷

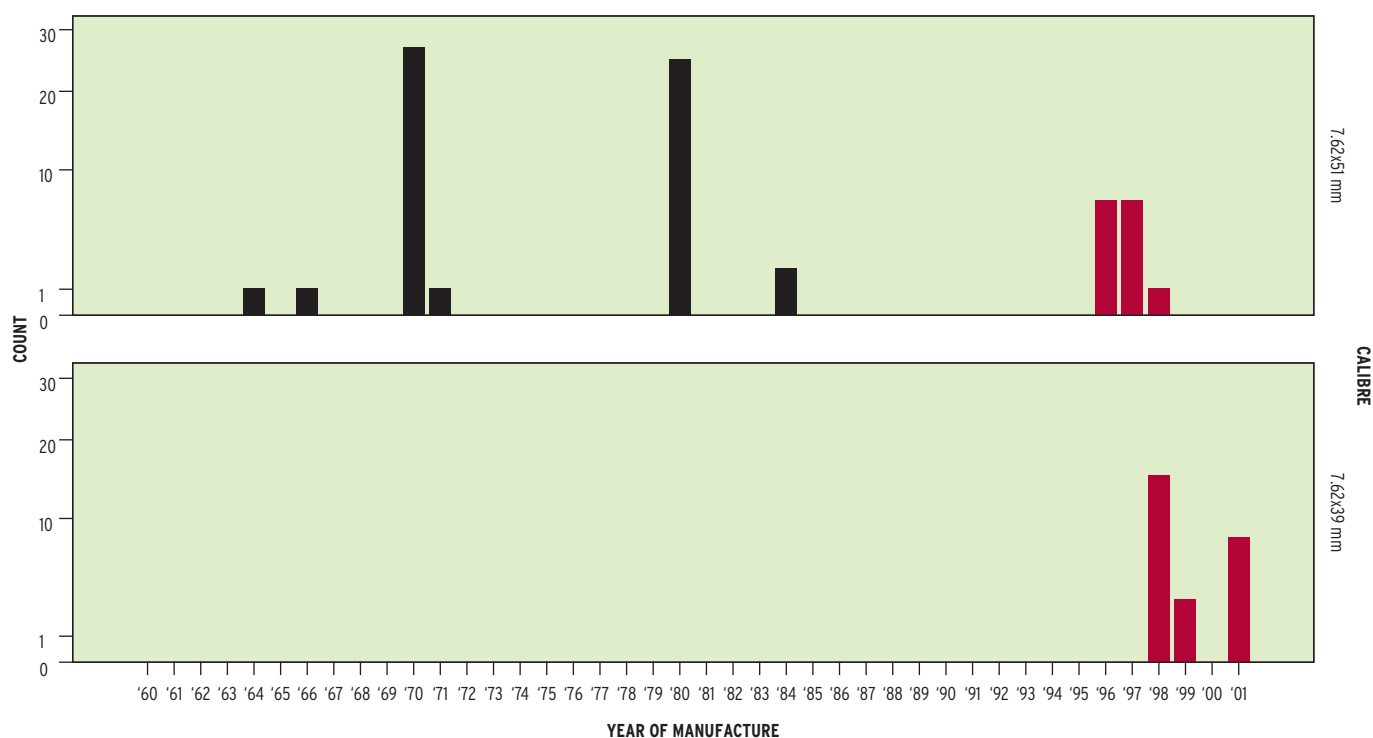
Box 3 Sudan's small arms production: Further verification needed

A number of media and investigative reports have documented Sudan's manufacture of small arms ammunition.²⁸ There is some evidence that munitions are produced in the Al-Shajara/Yarmuk Industrial Complex on the outskirts of Khartoum.²⁹ This facility was upgraded and modernized in the mid- to late 1990s, possibly with the involvement of Bulgaria and China.³⁰ The Small Arms Survey has recovered Sudanese-manufactured ammunition in both South Sudan and Kenya. Markings on recovered bullet casings show a clear break between ammunition manufactured in the 1960s, 1970s, and 1980s and the period after Al-Shajara was renovated. Pre-1996 Sudanese ammunition is marked in Arabic (bars in black in the figure below); subsequent cartridges are stamped with Western characters (bars in red in the figure below), a strong indication of a change in production equipment. Another indication of increased capacity is the introduction of 7.62 x 39 mm ammunition after 1996.

Verifying Sudan's domestic small arms and light weapons production is more difficult. Attention has focused on the GIAD Industrial Group facility which, according to a Christian Aid report, began manufacturing 'rocket-propelled grenades, machine guns, and mortars' in 1999.³¹ An Amnesty International report suggests that representatives of the Pakistan Ordnance Factories (POF) may have helped to re-commission an ordnance facility in the same year.³² Despite preliminary reviews of existing caches and recovered arms, the Small Arms Survey has yet to identify Sudanese-manufactured weapons in the field. If Sudan is manufacturing Pakistani small arms under license, it may have retained POF's marking practices: POF-marked G3 rifles were identified in Eastern Equatoria in December 2006. While this in itself does not prove Sudanese production, it is common practice for recipients of production equipment to retain the marks of the supplying party. Expert comparison and metallurgical testing of the rifles may be required to ascertain their true point of production.

Source: Bevan (2007)

Figure 1 Sudan-manufactured ammunition recovered in South Sudan, December 2006 (n=129)



Source: Bevan (2007)

Categorising arms flows

The introduction of a broad typology of arms flows is instructive in order to identify trends that are easily overlooked when transfers are considered in the aggregate. The following categorical scheme is organized according to procurement by Sudanese actors³³ and by source.

GoS procurement from other states.

The sources of official weapons imports have changed substantially over time. Until 1990, the GoS acquired the bulk of its arsenal via formal military aid packages from the United States and former USSR. Sudan received hundreds of millions of dollars worth of military aid during the early 1980s and was a leading beneficiary of military and economic aid to the African continent. When it fell out of favour with its former patrons, the GoS substituted weapons and munitions from China, Egypt, Iran, Saudi Arabia, Turkey, and the United Arab Emirates, as well as European countries, using its oil revenue to increase its spending. By 2004 military expenditure ranked seventh in Africa³⁴ and in 2006 Sudan spent an estimated USD 535 million on weapons and ammunition.³⁵

Procurement by SPLA and Sudanese armed groups from other states.

Neighbouring states contribute significant quantities of arms and ammunition to Sudan's armed groups. Although the GoS and its neighbours periodically negotiate bilateral arrangements to end the hosting and equipping of armed insurgents in one another's countries, they seldom endure. For example, bilateral agreements between Sudan and Uganda in 1999 and 2001 to limit support for the Lord's Resistance Army (LRA) and SPLA, respectively, were only adhered to sporadically.³⁶ Recent meetings between Sudan, Chad, and the Central Africa Republic in Libya produced commitments to end support for neighbouring groups, but they too collapsed almost immediately.³⁷ At the same time, Sudanese armed groups have been accessing the global market in small arms. Modern telecommunications, inexpensive, chartered

Box 4 The weapons of the Lord's Resistance Army

Patterns of arms acquisition by the LRA exemplify the contagion effects of armed groups, proxy wars, and weapons transfers in Sudan and elsewhere in the Horn. Originally based in northern Uganda but later migrating to South Sudan and DRC,³⁸ the LRA managed to source, retain, and stockpile a considerable arsenal, stimulated by and stimulating, an arms race among its enemies and host populations.

The LRA has been known to possess and use a range of small arms and light weapons, including AK-47s, Type 81/RPK light machine guns, PKM light machine guns, rocket-propelled grenades (RPGs), B10s, and anti-aircraft weapons,³⁹ and has many weapons and ammunition stockpiles buried across northern Uganda and South Sudan. In Sudan, they are primarily located in Western and Eastern Equatoria states. Although the contents are impossible to establish, the Ugandan People's Defence Force (UPDF) refers to 'sizeable' LRA weapons and ammunitions stocks.

The LRA rarely needed to turn to the market for weapons. Many LRA fighters were former members of the Uganda National Liberation Army, the military wing of exiled Ugandans opposed to Idi Amin, or had close connections to former members of the military fighting President Yoweri Museveni and his National Resistance Army (NRA). After Museveni overthrew President Tito Okello in 1986, weapons flowed quickly to northern Uganda and South Sudan. When Khartoum engaged the LRA to fight the SPLA in 1994 (in response to the Ugandan government's support for the SPLA), the LRA began to receive significant stocks of modern weapons—and access to South Sudanese territory for their operations. The LRA also captured sophisticated weaponry from engagements with the UPDF and the SPLA. On a few occasions it even recovered weapons from UN forces.

LRA and UPDF actions contributed to the arming of local communities. During the course of the LRA-UPDF/NRA conflict (1986-present) both groups paid local civilian informants with guns and ammunition. Meanwhile, the constantly shifting allegiances of group members kept arms moving back and forth between the various armed actors. Also, underpaid army soldiers routinely sold arms to supplement their incomes. Indeed, the UPDF's presence in South Sudan was a motivating factor for civilians to arm themselves. Added to this are weapons in the hands of pastoralists along the Kenya, Uganda, and Sudan borders. When these groups are periodically disarmed, some of their arms trickle back into local conflicts.

For many years the arms trade routes between Ethiopia, Somalia, and Sudan supplied a range of actors. GoS-held Torit, in Eastern Equatoria, was the source of weapons for the LRA and other Khartoum-backed militia. Nimule, though held by the SPLA, was a major black market trading centre for weapons from Uganda, many of which were acquired by civilians. The routes passed just east of Nimule, but they have become increasingly difficult to use as supply roads because of the UPDF's presence. Locals and SPLA sources in Eastern Equatoria recently reported increased arms traffic from Kenya and Somalia to Uganda.

While the LRA is currently engaged in a peace process with Uganda, mediated by the government of South Sudan (GoSS), an initial ceasefire signed in 2006 lapsed on 28 February 2007 without further commitments and amid allegations of violations. The parties resumed talks in Juba on 25 April.

Source: Schomerus (2007)

aircraft and international contacts have facilitated arms trafficking for those with adequate resources.

Procurement by Sudanese armed groups and militias from the GoS.

Sustained reliance by the GoS on paramilitary units, militias, and armed groups as local proxies has contributed to the widespread diffusion of arms and ammunition. The practice has not been matched either by the ability or willingness to monitor or regulate the resale of government-issued weapons. Covert channelling of arms to government-backed armed elements has continued since the signing of the CPA and the DPA. The case of the LRA is but one such example (see Box 4).

Seizures by Sudanese armed groups from the GoS. The SPLA and numerous other armed groups opposed to the GoS captured considerable quantities of heavy weapons and artillery, as well as small arms, light weapons, ammunition, and ordinance, from the Sudanese Armed Forces (SAF) over the past decades. The upgrade of military capacity among armed rebel groups in Darfur, for example, is strongly correlated with SAF's losses.

Procurement by Sudanese armed groups from the SPLM/A. The SPLA has made a practice of providing quantities of weapons to local clients—including Darfur rebel groups⁴⁰—as a means of rewarding supporters and

Reported transfers of small arms, light weapons, and their ammunition to Sudan

The data presented here is derived from UN Comtrade and Eurostat databases and was processed by the Norwegian Initiative on Small Arms Transfers (NISAT).

UN Comtrade remains the most comprehensive, publicly accessible source of comparable data on global transfers of small arms, light weapons, and their ammunition. It collects the customs data on exports and imports of small arms reported by governments. There are a number of caveats, however, that should be kept in mind when dealing with this data.⁴¹

First, most countries report value data only.⁴² Data on quantities (i.e. numbers of items transferred), which may provide more insight into the potential impact of arms transfers, is only reported by some countries. This is a significant limitation to the explanatory power of the data.

Second, exporters' and importers' reports rarely match. In addition, countries tend to under-report both exports and imports of small arms. For example, some countries do not report on all weapon types: France and Germany do not report on exports of military small arms to UN Comtrade.⁴³ For cases in which both exporter and importer report on the same transfer (of the same weapon type, in the same year), but where these two values differ, NISAT applies a reliability index based on the methodology used by the International Trade Centre to determine whether the exporter's or importer's report is more reliable. In the case of Sudan, the majority of trade data comes from import reports from the GoS, as few countries report small arms exports to Sudan.

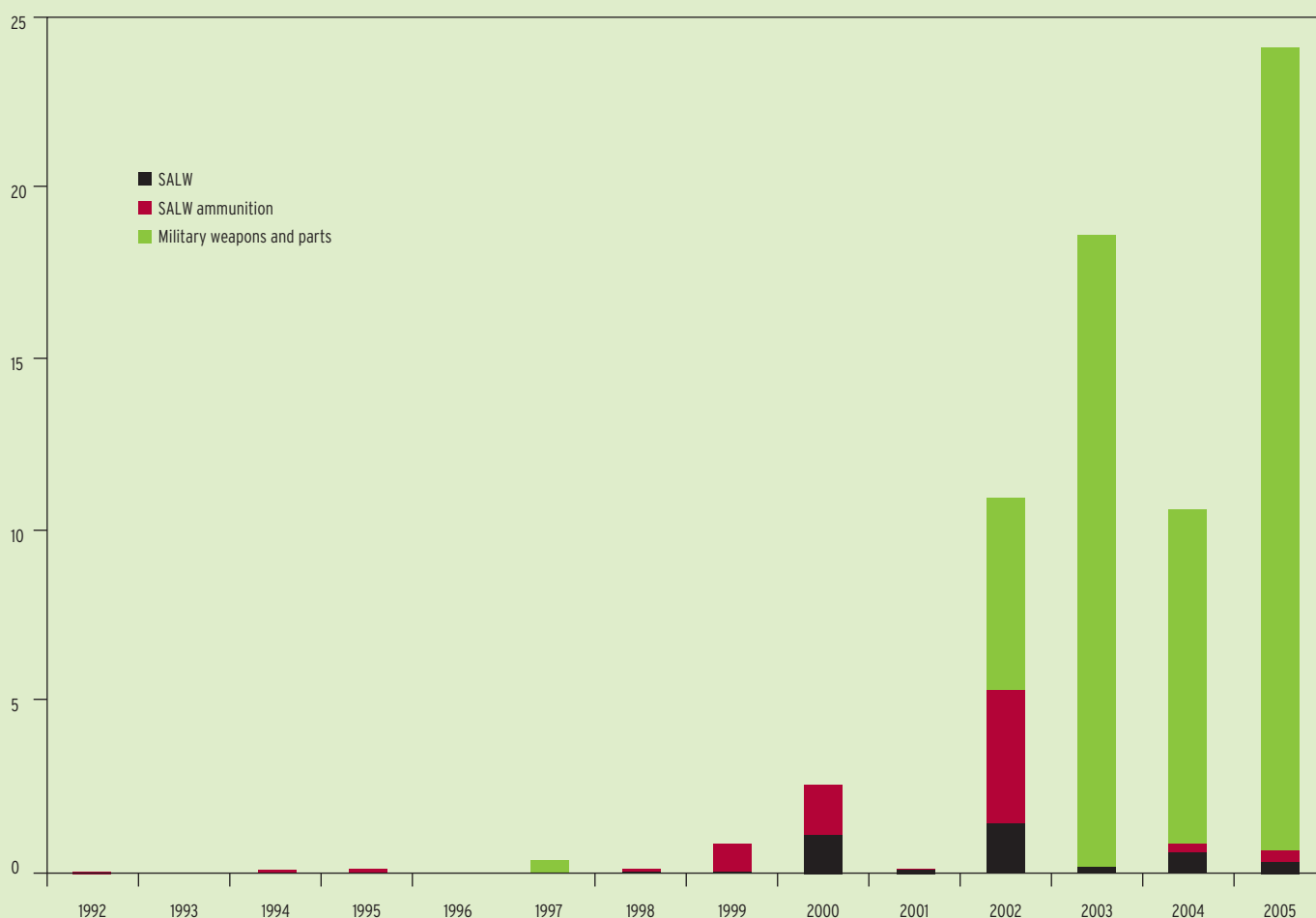
Third, some customs categories are mixed, i.e. they contain not only small arms and their ammunition but larger weapons and their ammunition. Mixed

ammunition categories are therefore excluded from the data used by the Small Arms Survey.⁴⁴ The latest revision of the so-called Harmonized System in 2002 replaced the mixed category 'military weapons' (930100) with four finer categories, two of which cover military small arms (930120: rocket and grenade launchers; and 930190: military firearms).⁴⁵ For the years preceding this revision, the Small Arms Survey included the mixed 'military weapons' category in its calculations in order to avoid exclusion of military small arms transfers from its global data.

In Figures 2 and 3, data on 'military weapons' is presented separately from other categories that contain only SALW and their ammunition. It is not known how much of the 'military weapons' category consists of larger weapons. One further consequence of including the 'military weapons' category here is that it dwarfs SALW and their ammunition in value, making it easy to miss the fact that for seven of the 14 years under examination, the value of SALW ammunition transferred to Sudan outstripped the value of reported SALW transfers.⁴⁶

This *Issue Brief* provides UN Comtrade data by total value from 1992-2005. (At the time of writing, 2005 was the most recent year for which UN Comtrade data on Sudan was available.) Over the period, at least 34 countries exported SALW and ammunition to Sudan, valued at almost USD 70 million. The overwhelming majority (96 per cent) of reported transfers were from China and Iran. Given the under-reporting associated with customs data, however, the real value of the legal trade is likely to be much higher, and the source states more diverse.

Figure 2 Imports of SALW, SALW ammunition, and military weapons and parts to Sudan, by year (1992-2005, millions of USD)



Weapon types included:

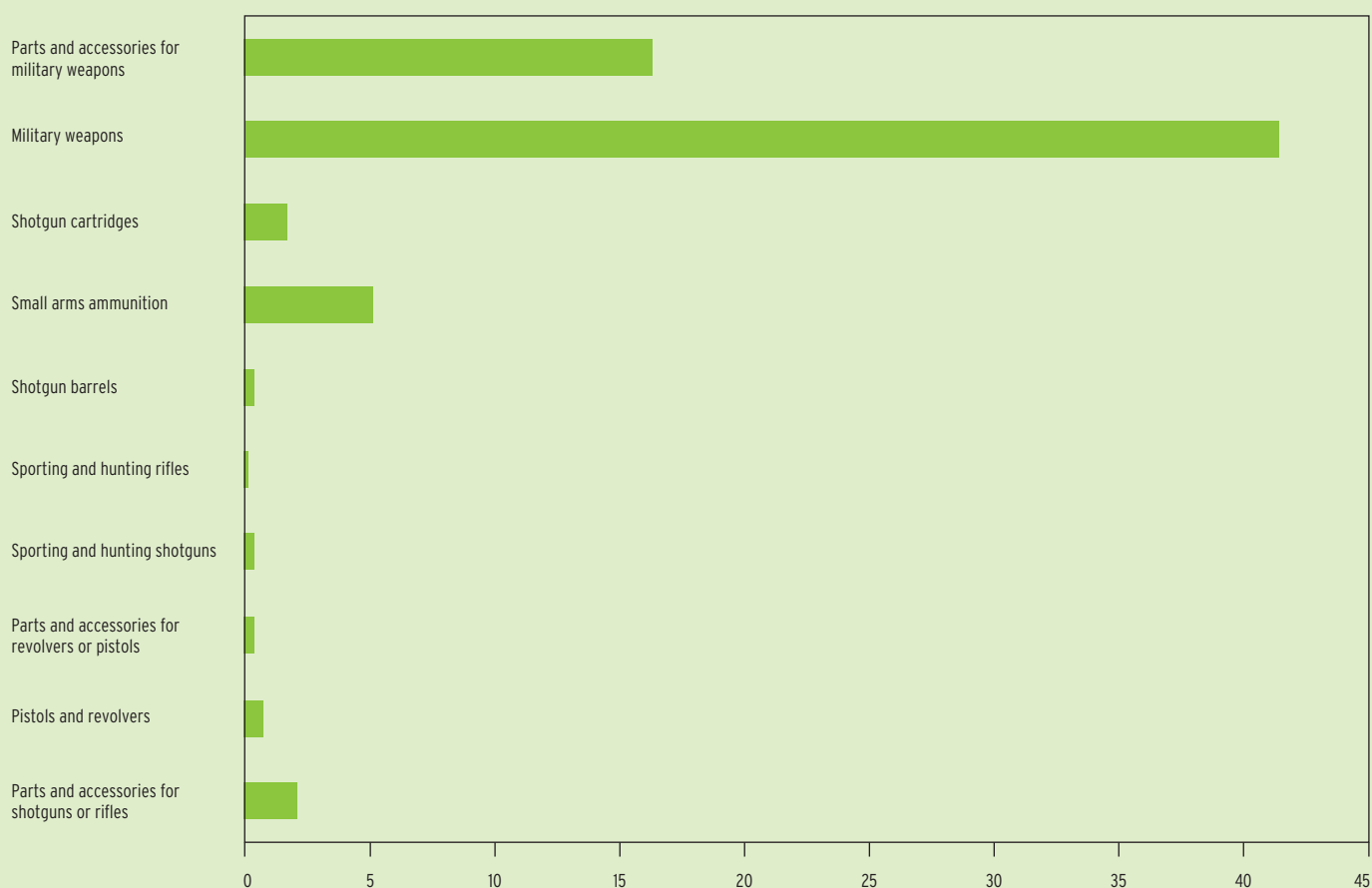
SALW: revolvers/pistols (930200), sporting/hunting shotguns (930320), sporting/hunting rifles (930330), parts/accessories revolvers/pistols (930510), shotgun barrels (930521), and parts/accessories shotguns/rifles (930529).

SALW ammunition: shotgun cartridges (930621) and small arms ammunition (930630).

Military weapons and parts: military firearms (930190), military weapons (930100), and parts/accessories military weapons (930590 and 930591).

Sources: NISAT (2007); UN Comtrade (2007)

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SALW ammunition: shotgun cartridges (930621) and small arms ammunition (930630).

Military weapons and parts: military firearms (930190), military weapons (930100), and parts/accessories military weapons (930590 and 930591).

Sources: NISAT (2007); UN Comtrade (2007)

Table 2 Reported EU small arms transfers to Sudan, 1994-2005

EU member	Total USD value (rounded)	Weapon type
Italy	286,000	Sporting/hunting shotguns, sporting/hunting rifles, parts/accessories revolvers/pistols, shotgun barrels.
Greece	72,000	Sporting/hunting shotguns, shotgun cartridges, small arms ammunition.
Germany	50,000 ⁴⁷	Air gun pellets/lead shot/parts of shotgun cartridges, parts/accessories of shotguns/rifles, shotgun cartridges, small arms ammunition, sporting/hunting shotguns, sporting/hunting rifles, pistols/revolvers.
Austria	26,000	Small arms ammunition, sporting/hunting shotguns, parts/accessories pistols/revolvers.

Weapon types included: military weapons (930100), cannon/mortars/others (930119), military firearms (930190), revolvers/pistols (930200), sporting/hunting shotguns (930320), sporting/hunting rifles (930330), parts/accessories revolvers/pistols (930510), shotgun barrels (930521), parts/accessories shotguns/rifles (930529), parts/accessories military weapons (930590), shotgun cartridges (930621), air gun pellets/lead shot/parts of shotgun cartridges (930629), and small arms ammunition (930630). 930100, 930119, 930590, and 930629 are mixed categories, i.e. they contain SALW/SALW ammunition, but also larger conventional weapons and their ammunition.

Sources: NISAT (2007); UN Comtrade (2007)

Notes:

1 This table only includes values above USD 10,000 per country over the period 1994-2005. Reported exports to Sudan from Spain, Sweden, France, and the Netherlands for the period fell below the USD 10,000 threshold.

2 Sudan declared imports of USD 269,592 of pistols/revolvers, pistols/revolvers parts/accessories, sporting/hunting shotguns and rifles, shotguns/rifles parts/accessories, and small arms ammunition during 1997-2004 from the UK to UN Comtrade, but the UK declared no such exports. In 2004 the UK government told a parliamentary committee that the veracity of Sudan's reporting in that case was doubtful (UK Parliament Quadripartite Committee, 2006).

3 Cyprus and the Czech Republic joined the EU on 1 May 2004. Cyprus's exports to Sudan during 2004-05 amounted to USD 35,856 (sporting/hunting shotguns and shotgun cartridges), according to UN Comtrade; and Czech exports to USD 16,125 (pistols/revolvers). Some of these transfers may have been made before EU accession.

outflanking rivals. The distribution of arms and ammunition is a principal form of control and patronage by the SPLA.

Procurement by Sudanese armed groups and civilians from domestic commercial markets. Small arms are widely available to armed groups, local defence forces,⁴⁸ and civilians through private transactions in informal arms markets. Typically these markets are situated in remote areas and frequently move location. As a result of widespread acquisition from commercial markets, arms and ammunition are increasingly central to commercial transactions: they can substitute for dowry, currency, and salaries.

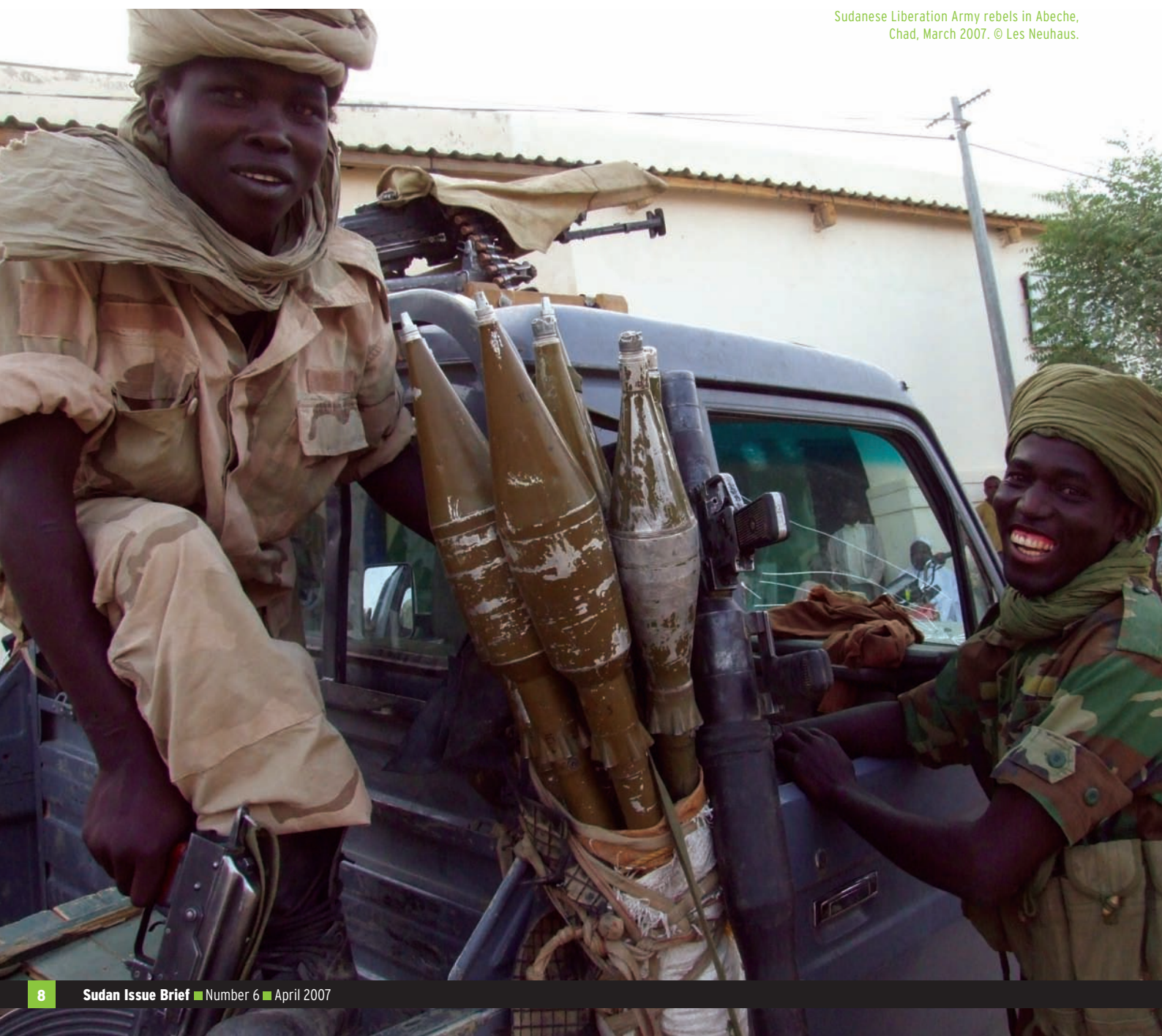
Estimated firearm holdings in Sudan

As in most other countries around the world, the majority of Sudan's firearms belong to civilians, not the state.⁴⁹ Approximately two-thirds of an estimated 1.9–3.2 million weapons are outside the remit of either the formal state security services or the country's many armed groups. As far as the actors involved in conflict are concerned, armed factions hold approximately four per cent of all firearms in Sudan, while the GoS controls about 20 per cent (see Table 2).⁵⁰

A number of caveats apply to these figures, however. First, because armed forces are not transparent and often

exaggerate troop strengths, the estimates presented here must be considered provisional. Field research has greatly enhanced the overall picture of the relative sizes of armed groups and state forces in the south and west, but gaps remain. For some groupings no information is available at all. Second, the statistics supplied here do not distinguish between regions: assessing the spatial distribution of civilian firearm ownership in Sudan will require continued survey work and investigation. Third, they do not differentiate between weapon type or calibre. Finally, the estimate excludes potentially collective village caches of weapons that may have passed into the shadow arsenals of former members of armed

Sudanese Liberation Army rebels in Abeche, Chad, March 2007. © Les Neuhaus.



groups, whether Sudanese or external. These reservations notwithstanding, the estimate provides an indicative range of the scale and distribution of the country's state-owned stockpiles and civilian inventories. The HSBA will improve and strengthen estimates throughout 2007.

Closing reflections

There are diverse trade routes for arms and ammunition into and out of Sudan. Acquisition by Sudanese actors—whether GoS, armed groups or civilians—is not limited to formal and illegal state-to-state transfers, but

involves a range of entry-points and suppliers. The complexity of the arms trade in Sudan must be understood in the context of the political and environmental dynamics of the Horn of Africa, and the country's domestic, political, and macro-economic context. These factors call for a multi-dimen-

Table 3 Estimated firearms inventories in Sudan, April 2007 (estimated data rounded to the second significant digit)

Category		Number of people	Small arms rate	Estimated small arms	Confidence range (+/- 25%)	Percentage of all Sudanese small arms
Civilians		35,000,000				
	Licensed gun owners			6,724*	6,724*	0.3
	Unlicensed gun owners		5/100 residents	1,750,000	1.3-2,200,000	67.0
Government of Sudan (GoS)						
	Sudan Armed Forces (SAF)**	104,000	2.5/personnel	260,000	200-330,000	10.0
	Popular Defence Force (PDF)***	80,000	1.2/personnel	100,000	75-125,000	4.0
	People's Popular Police	30,000	1.2/sworn officer	40,000	30-50,000	1.5
	Sudan Police Force	30,000	1.2/sworn officer	40,000	30-50,000	1.5
	Intelligence and Security Services	35,000	1.6/sworn officer	60,000	45-75,000	2.5
	'Oil police'	3,000	1.2/sworn officer	4,000	3-4,000	0.2
	Prison Service	7,500	1.2/sworn officer	9,000	7-11,000	0.5
	Wildlife Service	1,000	0.5/employee	500	380-630	0.02
Government of South Sudan (GoSS)						
	SPLA**	110,000	1.6/combatant	180,000	135-225,000	7.0
	Intelligence and security services	5,000	1.6/sworn officer	8,000	6-10,000	0.5
	SPLA Police	5,000	1.2/sworn officer	6,000	4,500-7,500	0.5
	Prison Service	800	1.2/sworn officer	1,000	750-1,250	0.03
Other armed entities						
	SPLA-aligned groups	42,000	1.6/combatant	67,000	50-84,000	2.5
	SAF-aligned southern groups	8,000	1.6/combatant	13,000	10-16,000	0.5
	SAF-aligned 'Janjaweed'	10,000	1.6/combatant	16,000	12-20,000	0.5
	Darfur rebel groups	12,000	0.8/combatant	10,000	7,500-13,000	0.5
	Eastern Front + allied eastern groups	4,000	1.2/combatant	5,000	3,800-6,000	0.2
	Lord's Resistance Army	500	1.6/combatant	800	600-1,000	0.03
Total (rounded)				2.6 million	1.9-3.2 million	100%

Notes:

* Provided by the GoS.

** SAF and SPLA troop totals will include a total of 39,000 Joint Integrated Units (JIUs), of which 75-90 per cent have been deployed according to verifiable sources. For the purposes of this table, JIU contributions of the SAF and SPLA are included in each force's numbers. The SPLA claims to have 331,261 armed combatants as of this writing, although independent experts believe their rolls to be closer to 30-200,000.

*** At the peak of its operations the PDF claimed to have registered up to 3,000,000 volunteers, though this claim has not been independently verified. A forthcoming HSBA Working Paper will provide a detailed account of the PDF's history and activities (see Tower, 2007).

Source: Karp (2007)

sional approach to arms control and disarmament.

First, multilateral and bilateral commitments to curb arms transfers are essential to preventing new supplies becoming available. It is also crucial that the international community adopts regional approaches to arms control that account for the wide range of states and armed groups involved in the trade. Countries of manufacture, transit, and end-use must enhance their transparency, monitoring, verification, and enforcement regimes.

Second, targeted embargoes on state transfers and brokers are likely to have a positive—but uneven—impact on arms flows to and from Sudan. Their effects will be most potent on the GoS and some larger, state-sponsored armed groups, but limited among the more numerous, smaller, non-state armed groups. To be sure, embargoes are instrumental in creating norms and rules to limit new supplies. Yet they continue to be violated. Enhanced border management and enforcement, security sector reform, increased stockpile security, and domestic regulation are all indispensable elements of a comprehensive arms control strategy in Sudan.

Third, unregulated civilian arms ownership provides a monumental challenge to human security in Sudan. While the three main Sudanese peace agreements focus on the DDR of armed groups and ex-combatants, there are no clear guidelines for voluntary civilian disarmament.⁵¹ There is an urgent need to generate robust and credible mechanisms to promote domestic arms control, including legitimate safeguards and protection for those who choose to disarm.

Fourth, enhanced transparency by the GoS with regard to domestic arms production, domestic transfers, imports and exports, as well as a legitimate arms control regime with civilian oversight, is essential to improving human security. ■

Notes

This Issue Brief was authored by the HSBA with contributions from Small Arms Survey researchers.

- 1 Sudan and Somalia are among the top ten refugee-producing countries in the world, according to the UN Refugee Agency. As of 1 January 2006 the top five recipients of Sudanese refugees were the Central African Republic, Chad, Ethiopia, Kenya, and Uganda. See <<http://www.unhcr.org/basics/BASICS/3bo28097c.html#Numbers>>.
- 2 These include the restrictions established by UNSC resolutions 1556 (2004), 1591 (2005), and 1672 (2006); and the EU embargo, described in Boxes 1 and 2.
- 3 Available at <<http://www.unmis.org/English/cpa.htm>>.
- 4 Available at <<http://www.unmis.org/English/dpa.htm>>.
- 5 Available at <http://www.sudantribune.com/IMG/pdf/Eastern_Sudan_Peace_Agreement.pdf>.
- 6 This figure includes 'military weapons' (UN Comtrade category 930100), which includes military small arms and light weapons, as well as larger military weapons. See pages 6–7.
- 7 The term *janjaweed* has historically been used in Darfur to refer to gunmen, bandits, or outlaws. Since the 2003 crisis, the term refers to Khartoum-backed, nomadic Arab militia with significant recruitment from the Abbada Rezeigat group.
- 8 UNSC (2004), paragraph 7.
- 9 UNSC (2005), paragraph 7. A separate resolution applied UNSC 1591 to four individuals implicated in armed violence in Darfur. See UNSC (2006b).
- 10 Established to monitor the implementation of UN Security Council resolution 1591. See paragraph 3(b).
- 11 UNSC (2006c), paragraph 88.
- 12 UNSC (2007a), paragraphs 79, 93, and 95.
- 13 UNSC (2006c), paragraph 93.
- 14 Amnesty International reported in 2006 that relatively new arms made by the Chinese company, Norinco, had been seen in the hands of Chadian fighters from the United Front for Democratic Change (Front uni pour le changement démocratique au Tchad, FUC) outside El Geneina in West Darfur, Sudan. The GoS is reportedly providing support to Chadian armed rebel groups based in Darfur. See AI (2006).
- 15 UNSC (2007b), paragraphs 47 and 49.
- 16 UNSC (2006a), paragraph 60.
- 17 UNSC (2006c), paragraph 91.
- 18 See EU Council (1994), including Article 1.1.
- 19 See EU Council (2004a) and EU Council (2004b).
- 20 See EU Council (2004c).
- 21 See EU Council (2005a) and EU Council (2005b).
- 22 See, for example, Swain and Johnson-Thomas (2007). Allegations reported here concern the supply of Land Rover Defenders to the GoS, and transfers within Sudan of ammunition by UK-owned cargo planes.
- 23 EU Council (2000).
- 24 See, for example, Small Arms Survey (2006a).
- 25 The most serious violations of the CPA to date were heavy clashes between the SPLA, SAF, and a GoS-affiliated militia led by Gabriel Tang-Ginya in late November 2006. There are fears of similar incidents in the future.
- 26 By November 2006 approximately four million people—two-thirds of the population of Darfur—needed humanitarian assistance. See, for example, ICID (2005) for details on widespread abuses of human rights and humanitarian law committed by GoS-aligned and rebel forces in Darfur. UN Security Council Resolution 1593 (31 March 2005) permitted the International Criminal Court to examine and act on alleged violations.
- 27 For example, two arms bazaars in N'Djamena offer handguns (many sourced from Libya), Russian-made AK-47s, and anti-tank weapons at prices accessible to local patrons (Neuhaus, 2007). The use of Chadian-sourced weapons in Darfur has been widely documented.
- 28 Production of ammunition is widespread in the region, including in Egypt, Ethiopia, Kenya, and Uganda.
- 29 See, for example, Christian Aid (2001).
- 30 AI (2004); Africa Research Bulletin (2000).
- 31 Christian Aid (2001).
- 32 AI (2002). It is unclear whether these two reports refer to the same facility.
- 33 It should be noted that many of Sudan's armed elements were and continue to be irregular forces, and that the dividing line between civilians and combatants is frequently blurred.
- 34 AI (2004).
- 35 The Center for Arms Control and Non-Proliferation publishes estimated military

- defence spending tables annually. See <<http://www.armscontrolcenter.org/archives/002279.php>>.
- 36 In 1999, Sudan and Uganda signed a security agreement according to which they would stop supporting each others' armed opposition groups. Diplomatic exchanges began according to the agreement in 2001. At a 2002 IGAD Summit, the two countries agreed to promote bilateral relations.
- 37 See, for example, AlertNet (2007).
- 38 The Ugandan army has claimed that the main LRA group crossed over the border into CAR in February 2007 (Allio 2007), but this has yet to be confirmed either by the LRA or independent observers.
- 39 See Bevan (2007).
- 40 Tanner and Tubiana (2007).
- 41 For a further discussion of the limitations of UN Comtrade data, see Small Arms Survey (2005), pp. 99–100, Box 4.1.
- 42 NISAT (2007).
- 43 NISAT (2007).
- 44 Glatz (2006), p. 72.
- 45 Marsh (2005).
- 46 The years were 1992, 1994, 1995, 1999, 2000, 2002, and 2005.
- 47 One export of sporting/hunting shotguns worth USD 2,000 (included in the total figure given for Germany) was reported in 1994. It may have been delivered before the embargo.
- 48 An upcoming HSBA Working Paper will focus on the White Army.
- 49 Small Arms Survey (2004), pp. 50–54.
- 50 These estimates refer exclusively to Sudanese firearms: handguns, rifles, shotguns, submachine guns, and light and medium machine guns. Although other small arms and light weapons are widely reported in Sudan—including grenade launchers, mortars, heavy machine guns, and Man-portable air defence systems (MANPADS)—systematic estimation of their numbers is currently not possible.
- 51 For a discussion of recent civilian disarmament efforts in South Sudan, see Small Arms Survey (2006b).
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HSBA project summary

The Sudan Human Security Baseline Assessment (HSBA) is a two-year research programme (2005–07) administered by the Small Arms Survey, an independent research project of the Graduate Institute of International Studies in Geneva.

It has been developed in cooperation with the Canadian Ministry of Foreign Affairs, UNMIS, the UN Development Programme, and a wide array of international and Sudanese NGO partners. Through the active generation and dissemination of timely empirical research, the HSBA project works to support disarmament, demobilization, and reintegration (DDR) programmes, security sector reform (SSR), and arms control interventions to promote security. The assessment is being carried out by a multi-disciplinary team of regional, security, and public health specialists. It will review the distribution of armed violence throughout Sudan and offer policy-relevant advice to redress insecurity.

Sudan Issue Briefs are designed to provide periodic snapshots of baseline information. Future issues will focus on a variety of issues, including armed groups and victimization rates. The HSBA also generates a series of timely and user-friendly working papers in English and Arabic, available at www.smallarmssurvey.org (click on Sudan).

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