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How Many Weapons Are There in Cambodia?

By Christina Wille



The Small Arms Survey

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Acronyms and abbreviations

ANKI	National Army of Independent Kampuchea (formerly ANS)
ANS	Armée Nationale Sihanoukiste
CPAF	Cambodian People's Armed Forces
CPP	Cambodia People's Party
EU ASAC	European Union's Assistance on Curbing Small Arms and Light Weapons in the Kingdom of Cambodia
EUR	euro
FUNCINPEC	Front uni national pour un Cambodge indépendant, neutre, pacifique et coopératif
JSAC	Japan Assistance Team for Small Arms Management in Cambodia
KPNLAF	Khmer People's National Liberation Armed Forces
KPNLF	Khmer People's National Liberation Front
KPRAF	Khmer People's Revolutionary Armed Forces
LTTE	Liberation Tigers of Tamil Eelam
NADK	National Army of Democratic Kampuchea
RCAF	Royal Cambodian Armed Forces
USD	United States dollar

About the author

Christina Wille has been a staff member of the Small Arms Survey since February 2003. She has managed and coordinated several research projects and has carried out fieldwork in Southeast and Central Asia and sub-Saharan Africa on human security issues related to small arms and migration. A particular focus of her work has been identification of indicators to measure human security. Prior to joining the Small Arms Survey, she served as junior expert to the European Commission in Slovenia and worked as researcher for the Asian Research Center for Migration in Bangkok and the Migration Policy Group in Brussels. She holds degrees from the Universities of Cambridge and Durham in the United Kingdom. 📖

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Introduction

This background paper explains the evidence and logic for the small arms and light weapons stockpile estimates for Cambodia that are presented in the 2006 Small Arms Survey yearbook chapter (Small Arms Survey, 2006) and other Small Arms Survey publications on Cambodia. These state that there are 107,000–188,000 small arms and light weapons presently in government stockpiles, and 22,000–85,000 weapons outside of government control.

The estimate of legal and illegal stockpiles was carried out during 2005. It is based on interviews in Cambodia and a thorough review of available sources on weapons stockpiles over the last 20 years. The revised estimate was made in order to update previous estimates and to provide evidence on the impact of the concerted small arms programmes started in 1998. Previously published numbers dated from the period prior to the commencement of these programmes. They were associated with great uncertainties and their reliability had been questioned by those working most closely on the issue in Cambodia (Tieng, Long, and Hicks, 2004, pp. 11–12).

Anecdotal evidence suggested that the small arms programmes had had a significant impact on the small arms situation in Cambodia. Estimates of the proportion of illegal and legal small arms touched by the weapons collection and destruction programmes are an important indicator of the impact of these programmes.

This paper begins with a short overview of available methods of estimating government and privately owned firearms stockpiles and their applicability to Cambodia. The work on Cambodia's stockpile estimates starts by outlining conclusions about private ownership patterns prior to the Khmer Rouge coming to power and attitudes to civilian firearms ownership during the civil war. This section is followed by estimates derived from historical reconstruction methods of the civil war weapons pool and movements following the Paris Agreements in 1991, including an overview of import and export patterns. The paper concludes with triangulation of the derived estimates with estimates from other sources as a means to assess the former's reliability. ■

I. Approaches to estimating the size of small arms and light weapons stockpiles

In the absence of reliable registration data, stockpile figures are always estimates. Small arms research usually makes a distinction between government stockpiles and privately owned firearms. The first category is somewhat easier to estimate than the latter. Some governments provide public information on their small arms and light weapon stockpiles. This information can be used to derive typical multipliers of the number of small arms per soldier (Small Arms Survey, 2005, p. 77). Such multipliers can then be applied to other countries whose governments do not provide information on small arms stockpiles, but where estimates of the number of soldiers are known (Small Arms Survey, 2005, p. 88).

The numbers of civilian firearms in the private possession of citizens mainly for the purpose of hunting, sport shooting, self-defence, or criminal activities are considerably more difficult to estimate. Few countries maintain reliable registration systems for legally owned firearms. Unregistered or illegal firearms are even more difficult to quantify. In addition, unlike with government stockpiles, there is little uniformity around the world with respect to private firearms ownership patterns. No standard multipliers of firearms per households or per head can convincingly be used. In some societies, private firearms ownership far outnumbers government stockpiles, whereas in others it appears for cultural and legal reasons to be a relatively rare phenomenon. Moreover, there is also no clear pattern with respect to urban and rural firearms ownership. In some societies, it is predominantly a rural phenomenon (as in the United States, for example), whereas in others, firearms ownership is associated with membership of the urban governing elite (e.g. Kyrgyzstan) (Small Arms Survey, 2003, pp. 66–72; 2004, p. 313).

Stockpile estimates for warring factions in civil wars are based on the same methods as estimates for undisclosed government stocks. A multiplier indicating the likely number of weapons per soldier can be used to obtain approximate

information regarding the total weapons pool (as, for example, in Torjesen, Wille, and MacFarlane, 2005, p. 11). If there are no new imports of weapons at the end of the civil war or large-scale sales abroad, the total pool of civil war weapons in a post-conflict society can be estimated on the basis of the number of civil war weapons. This is likely to be the case in Cambodia, where we assume that the post-conflict weapons pool originated entirely from stockpiles held by the warring factions during the civil war.

Mapping the distribution of civil war weapons in post-civil war societies is particularly challenging. A particular difficulty is the distinction between privately owned and army-owned weapons in a post-conflict society. Upheavals caused by conflict usually mean that the categories of military and civilian ownership are blurred. In some civil war scenarios, opposition forces armed local households as part of their civil war strategy (see Khakee and Florquin, 2003, p. 11, for an example from the Balkans). In other cases, civilians remain unarmed and highly vulnerable during the conflict, but obtain weapons after the conflict when demobilized soldiers sell their war weapons or take them with them when they return to their communities (Florquin and Pézard, 2005, p. 48). Estimates of the way civil war weapons have dispersed within a society require information on the various factions' strategies vis-à-vis civilians during the conflict and the nature of the disarmament process.

In Cambodia, the government does not make the size of its official stockpile public, and there is no reliable information on privately owned, legal or illegally held firearms. Estimates for Cambodia's stockpiles will therefore be derived by estimating the total pool of civil war weapons at the end of the conflict and a description of likely weapons movements following the Paris Agreements. This will be used to determine the proportion of weapons that ended up in the government stockpile and private hands, or were exported.

The stockpile estimates for Cambodia are based on a thorough assessment of available information on the nature of weapons ownership patterns in Cambodia. The conclusions of this analysis allow the following assumptions to be made about small arms and light weapons stockpiles in the country:

- The total pool of civil war weapons can be determined on the basis of two separate sources: 1) from information provided by the factions to the UN

on their weapons arsenals in 1991 as part of the peace process; and 2) by applying different multipliers to the reported strength of the factions in the late 1980s.

- The weapons available in Cambodia after the end of the civil war originated entirely from the civil war pool, and there were no separate civilian stockpiles. Civilian firearms ownership prior to the conflict in Cambodia was primarily the prerogative of the urban elite associated with government positions. Efficient confiscation of private firearms and brutal extermination of the urban elite by the Khmer Rouge upon their takeover of power in 1975 ensured that private firearms were integrated into the Khmer Rouge government stockpile. None of the factions systematically armed civilians as part of its civil war effort.
- Following the peace accords, three of the four Cambodian factions integrated an estimated 70 per cent of their weapons holdings into the government stockpile as part of the creation of the Royal Cambodian Armed Forces (RCAF) and the police during the 1990s. An estimated 30 per cent of the total pool leaked into civilian hands and/or remained in hidden caches.
- Khmer Rouge insurgents retained over 80 per cent of their significant stockpile until their surrender to the government in 1998, when these weapons were integrated into government stockpiles.
- A review of the available small arms import and export data suggests that foreign trade in weapons did not have a significant impact on the total number of weapons in the country.

The next section of the paper presents further evidence to support these assumptions. 

II. Traditions and cultural patterns of civilian gun ownership in Cambodia prior to the civil war and factional attitudes to civilian firearms access during the civil war

This section reviews the available evidence on private firearms ownership patterns in Cambodia, with a view to determining the proportion of private stockpiles in the total firearms pool in Cambodia at the end of the civil war in 1991. It concludes that private stockpiles constituted a negligible proportion of the total stockpile at the end of the civil war.

The role of firearms in rural life prior to the war

Firearms ownership rates in rural rice farming communities practising subsistence agriculture have been very low in Cambodia, and firearms have not been part of traditional livelihood strategies. Cambodia is not rich in large game, and game meat is not part of the typical rural diet, which is largely based on the consumption of rice, with fish as a source of protein. Nutrition surveys have demonstrated that only a minority of the rural population eat any meat at all (27–34 per cent of children aged 24–59 months were found to have eaten some meat [Helmers and Kenefick, 1999, pp. 72–73]), and most of this is derived from livestock, such as chicken, pork, and to a lesser extent cattle.

Low firearms ownership rates in rural society are also the outcome of government policies and low rural incomes. To counter communist and anti-colonial insurgencies, the French colonial rulers (1863–1953) passed several laws to prevent Cambodian peasants from arming themselves (Kopel, Gallant, and Eisen, 2005, p. 6; page no. from e-publication). The laws passed between 1920 and 1938 imposed a strict licensing system and only allowed hunters to own a single gun (Simkin and Rice, 1994, p. 305, *supra* note 2; referred to in Kopel, 1995). Rural incomes from subsistence agriculture and the prices of imported

guns also meant that few people could afford guns (Simkin and Rice, 1994, p. 306; referred to in Kopel, 1995).

Today there is evidence of some hunting of larger game, such as tigers and elephants, as well as wild boar. However, this is an illegal activity and not part of the ordinary pursuit of law-abiding rural people. Today's hunting activity seems to be the lingering result of the civil war, as most hunters appear to be linked to one of the former factions or the armed forces. Tigers and elephants are today protected species, and available information on poaching suggests that they are hunted by 'professionals' mainly for sale and use in traditional Asian medicine (WWF, 2004, p. 3), or by soldiers who shoot, for example, wild boars 'by accident'.¹ Many poachers have learned their trade while serving with one of the armed factions rather than from their rice farming fathers, who have 'no cultural history of firearm ownership' (Simkin and Rice, 1994, p. 306; referred to in Kopel, 1995). Hunting as encountered today is the consequence of the civil war, and nothing indicates that rural hunting was an important phenomenon prior to the conflict. Consequently we should not expect large hunting stockpiles to have been available in Cambodia when conflict broke out.

Firearms ownership among Cambodia's elite

Available evidence suggests that unlike in many Western societies, private firearms ownership during the early period of Cambodia's independence before the Khmer Rouge took over (1953–75) was predominantly a characteristic of the urban male elite, who were mainly in government employment. This conclusion is supported by evidence including memoirs and articles on the economic, administrative, and social development of Cambodia prior to the Khmer Rouge coming to power. None of these addresses the issue of private gun ownership directly, but each provides pieces of information that together support this conclusion.

Private weapons ownership remained strictly regulated (Simkin and Rice, 1994; referred to in Kopel, 1995). Yet children of well-connected government officials of ethnic Khmer origin mention their father's private gun in their memoirs. For example, Chanrithy Him (2000) recalls that her father, a government

employee overseeing import and export (p. 34), had been provided with pistols for his work (p. 64). This appears to have been a privilege associated with the status of his position. As Cambodia was not substantially integrated into the global economy at that time, the demand for wealth by the elites was generally limited to what could be consumed and spent within the country (Vickery, 1984, p. 16). This meant that the relatively high cost of foreign-made firearms in relation to Cambodia's purchasing power on the global market ensured that private firearms acquisition was beyond the means of most Cambodians. Access to private firearms thus depended on access to government.

The Khmer Rouge regime eliminated the previous elite, and in the process effectively ended private gun ownership. Memoirs of the time provide accounts of how Khmer Rouge cadres confiscated firearms along with watches, motor-bikes, and foreign currencies during the first days of the takeover of power in Phnom Penh (Simkin and Rice, 1994, *supra* note 2, p. 306; referred to in Kopel, 1995).²

During the rule of the Khmer Rouge, all private firearms were moved from private ownership into the stockpiles of the regime. People without access to the higher levels of the political cadre of the Khmer Rouge, whether previously part of the urban elite or rural population, had no access to private firearms during this time (Simkin and Rice, 1994, pp. 314–15; referred to in Kopel, 1995). Interviews with Khmer Rouge cadres in Pailin confirm that this practice was maintained in the enclaves that remained under Khmer Rouge control during the 1990s.³

Civil war, factional fighting, and civilian gun ownership

After the end of the Khmer Rouge regime in 1979 as a result of the Vietnamese invasion, civilian gun ownership remained strictly controlled, in line with the communist ideology of the Phnom Penh-based government. Access to weapons was limited to soldiers, provincial defence units, and militia organizations, and was controlled within the institutional frameworks of the national defence structures.

The non-communist factions opposed to the Vietnamese-installed government during the civil war also controlled their stockpiles tightly, and did not

distribute weapons to civilians under their control.⁴ The anti-communist factions had their power base in refugee camps along the Thai border, from where they recruited new members (Kiljunen, 1984, p. 55). However, the factional ammunition and weapons warehouses were all on Thai soil and were largely controlled by the Thai government, which was concerned with limiting conflict spill-overs and banditry on its own territory. Weapons proliferation among the civilian refugee population remained limited to the Thai border areas.⁵

Following the signing of the Paris Agreements in 1991, and the participation by the political wing of the armed factions in the election process, the organizational structures and control within the armed factions weakened. Increasing numbers of weapons from the factional stockpiles found their way into Khmer society. Former soldiers used them for private purposes, such as banditry and poaching, or sold them on the black market for private profit.⁶

The importance of these developments for weapons estimates, however, is that the total pool of weapons at the end of the civil war can be estimated on the basis of the factional strength, and it can be assumed that there was no previous civilian possession. At a later stage, an effort will be made to estimate how much of this pool leaked into civilian hands at the end of the conflict. ■

III. Factions and their weapons: estimating the number of civil war weapons in Cambodia

Two distinct sources are available to estimate the number of civil war weapons at the end of the conflict. Firstly, as part of the peace process in 1991, the factions involved in the Cambodian conflict were required to provide the UN with information on their stockpiles. According to this information, civil war weapons amounted to 350,000 at this time. These weapons were held by over 200,000 armed men in 650 separate locations. In addition, armed militias totaling 250,000 combatants operated in almost all villages (UNDPKO, 2003).

The reliability of this figure of 350,000 weapons has been questioned, in particular as overseers doubted the factions' truthfulness in providing figures on their weapons holdings during the peace negotiations.⁷ However, available information on the factional strength and weapons multipliers suggests that this figure is well within a plausible range (see Table 1). Table 1 presents information on individual faction sizes and derived estimates of numbers of conflict weapons, whose total lies in the range of 319,500–462,500. Further information on the individual estimates for each faction is provided in the following sub-sections.

Cambodian People's Armed Forces (CPAF) and the Cambodia People's Party (CPP)

The armed forces of the Phnom Penh-based government consisted of three distinct elements. Firstly, the regular army, the Khmer People's Revolutionary Armed Forces (KPRAF), had some 55,000–75,000 troops (Troung, 24 July 2003, 5:29 p.m.),⁸ divided into seven light infantry divisions, four tank battalions, and two engineer battalions; a few air defence fighters and transport helicopters; and some patrol ships (Troung, 27 July 2003, 2:00 a.m.). In addition to the regular army, the government maintained provincial units that were not directly under army command. These were some 6,000–12,000 troops of mainly light

Table 1
Estimates of the conflict weapons stockpile in Cambodia, 1991

	Reported numbers of soldiers		Estimated multiplier	Estimated number of guns	
	Lower estimate	Higher estimate		Lower estimate	Higher estimate
Outside government control					
ANKI (formerly ANS) ¹	7,000	11,000	2	14,000	22,000
KPNLAF ¹	8,000	14,000	2	16,000	28,000
Khmer Rouge (NADK) ¹	40,000	50,000	2.5	100,000	125,000
<i>Total outside government control</i>	<i>55,000</i>	<i>75,000</i>		<i>130,000</i>	<i>175,000</i>
Under government control (CPAF)					
KPRAF ²	55,000	75,000	2.5	137,500	187,500
Provincial units ³	6,000	12,000	2	12,000	24,000
Militia forces ³	20,000	38,000	2	40,000	76,000
<i>Total under government control</i>	<i>81,000</i>	<i>125,000</i>		<i>189,500</i>	<i>287,500</i>
Total	136,000	200,000		319,500	462,500

¹ Coutsoukis (1987).

² Troung (24 July 2003, 5:29 p.m.).

³ Troung (27 July 2003, 2:00 a.m.).

infantry assigned to patrol the border and hunt the insurgents (Troung, 27 July 2003, 2:00 a.m.) and some 20,000–38,000 militia forces tasked with the protection of villages, towns, and factories (Troung, 27 July 2003, 2:00 a.m.). The total number of men and women under arms was therefore at least 81,000, and possibly as many as 125,000. In the run-up to the Paris Agreements, the KPRAF were renamed the Cambodian People's Armed Forces (CPAF), a name that they retained from 1990 to 1993. The CPAF was controlled by the sole ruling party in Phnom Penh, which had adopted the name Cambodia People's Party during the UN-sponsored peace and reconciliation process.

At the time of the Vietnamese withdrawal, the government was reportedly provided with 'plenty of new weapons' (Grandolini, Cooper, and Troung, 2004).

Table 2
Small arms and light weapons available to the CPAF, 1991

Mortars	82 mm, 81 mm, 60 mm
Recoilless rifles	107 mm, 82 mm, 73 mm
Assault rifles	AK-47, Type 56, AKM, M16A1
Battle rifles	M1 Garand, SKS
Carbines	M1 Carbine
Light machine guns	PRK, RPD
General purpose machine guns	M-60, PK/PKM
Grenade launchers	M-79
Anti-tank weapons	RPG-7, RPG-2

Source: Troung (27 July 2003, 2:00 a.m.)

Overall, however, the total stockpile included many old weapons, which reflected the history of outside military support to the various Khmer governments. The arsenal included Soviet-made weapons (AK-47, AKM, SKS, RPK, RPD, PK/PKM, RPG-7, and RPG-2), US-made weapons (M16A1, M1 Garand, M1 Carbine, M-60, and M-79), and Chinese-made versions of the AK (Type 56) (Troung, 27 July 2003, 2:00 a.m.).

It can be assumed, therefore, that the KPRAF and its successor, the CPAF, did not suffer a shortage of weapons per member, and a ratio of 2.5 firearms per soldier seems realistic.

Both the provincial units and the militia were not as well armed as the regular army. Many units were armed with surplus American guns (supplied by Vietnam or from old Cambodian stocks) (Troung, 27 July 2003, 2:00 a.m.). A ratio of two firearms per member of the provincial units and militias is therefore assumed.

The anti-communist opposition forces: Khmer People's National Liberation Armed Forces (KPNLAF) and National Army of Independent Kampuchea (ANKI)

The Khmer People's National Liberation Front (KPNLF) began as the largest and politically most important faction of the rightist movement. The military

wing, the KPNLAF, is estimated to have numbered 8,000–14,000 in 1987 (Coutsoukis, 1987, KPNLAF), and there are no reports of significant changes to its strength until 1991. Its members operated from the protection of refugee camps along the Cambodian–Thai border, and occasionally conducted forays into the Cambodian heartland. However, observers noted that many became essentially 'warlord bands, engaging more in trade and in internecine fighting than in combat operations' (Coutsoukis, 1987, KPNLAF).

The ANKI (formerly the Armée Nationale Sihanoukiste—ANS), the military arm of the royalist Front uni national pour un Cambodge indépendant, neutre, pacifique et coopératif (FUNCINPEC) party, rose to become the principal non-communist insurgent force in the late 1980s, primarily because the KPNLAF was weakened by internal leadership disputes. Estimates put ANKI strength at between 7,000 and 11,000 combatants for the late 1980s. 'The former figure was quoted by Sihanouk, the latter by Sihanouk's son, Prince Nordodom Ranariddh' (Coutsoukis, 1987, ANS). The faction had also been hard hit by the campaign against the insurgents in 1984–85, but a change of tactics helped it to survive. During the second half of the 1980s the faction avoided unnecessary confrontation and concentrated on penetrating into Cambodia from its positions across the Thai border, in order to increase its influence.

The two anti-communist factions received Western, Association of South-East Asian Nations, and Chinese support and were also quite well armed, principally with Chinese weapons (Coutsoukis, 1987, KPNLAF and ANS). A ratio of two firearms per soldier is therefore assumed.

Khmer Rouge

Commentators agree that the National Army of Democratic Kampuchea (NADK), the fighting force of the Khmer Rouge, was militarily the strongest of the three factions opposed to the Phnom Penh-based government. NADK did not make public figures on the number of its personnel, but military observers have estimated that there were 40,000–50,000 soldiers (Coutsoukis, 1987, NADK).

The Khmer Rouge were well armed, because they were able to retain a substantial proportion of the arms they had controlled during the Pol Pot regime,

and continued to receive Chinese support. The Vietnamese invasion had failed to destroy the Khmer Rouge combat capabilities and many units retreated to their traditional strongholds in the Cardamom Mountains (Grandolini, Cooper, and Troung, 2004). Over the years the numbers of Khmer Rouge members declined. This will have increased the proportion of guns per soldier, as defectors are unlikely to have taken more than one firearm with them. A ratio of 2.5 guns per Khmer Rouge soldier who remained with the insurgency in 1991 may be assumed. 📌

IV. How many weapons were brought under government control during the 1990s?

Estimating the number of weapons that were brought under government control between the time of the signing of the Paris Agreements (1991) and the beginning of the weapons collection programme (1998) is associated with some uncertainties, as no official information is available. However, it is estimated that around half of the total civil war weapons pool was brought under government control, while the other half leaked into the general population or stayed with Khmer Rouge insurgents. It is estimated that 70 per cent of the KPRAF and associated structures and the KPNALF and ANKI were brought under government control, while just over 10 per cent of Khmer Rouge stockpiles were integrated into the government stockpile during the early 1990s.

Reasoning for these estimates is provided in the following paragraphs, and is supported by the triangulation presented at the end of the paper.

Creation of the RCAF and police

There were two main mechanisms by which factional stockpiles were brought under government control: firstly, the creation of the RCAF and the national police, and secondly, the encouragement of the Khmer Rouge insurgents to defect to the government side. All the civil war factions except the Khmer Rouge joined forces to form the RCAF in 1993. There appears to have been a strong incentive for commanders to bring as many of their men and weapons as possible into the newly formed system, because formal integration of the army did not occur in practice. Observers have noted that the FUNCINPEC and CPP retained separate command structures within the RCAF (Ashley, 1998). The extent to which Ranariddh and Hun Sen, respectively leaders of the FUNCINPEC and CPP, controlled their own military wings, despite the official joint commander-in-chief position, became clear during the violent confrontations in July 1997, when FUNCINPEC commanders operating from FUNCINPEC military bases

clashed with CPP forces (Ledgerwood, n.d.). Even after this military confrontation between Ranariddh and Hun Sen, Ranariddh continued to be able to control much of the military loyal to FUNCINPEC in the integrated government forces (Roberts, 2002, p. 533). The ability of factional leaders to retain control of their fighters was one of the main incentives which encouraged them to join the RCAF.

For the purpose of this analysis, it is important to estimate the percentage of the factional stockpiles that were brought into the combined armed forces. The Paris Agreements stipulated that 70 per cent of the respective militaries were to be cantoned, and that the weapons and ammunition would be made available to the new Cambodian military to be formed by the factions participating in the election. The cantonment process was abandoned in mid-1992 after only a quarter of the participating factions had entered the cantonment sites and handed over their weapons (UNDPKO, 2003). However, it may be assumed that if the factional leaders were able to make a commitment to the UN to send 70 per cent of their men and weapons into the cantonment process, they must have been reasonably confident that they had at least this proportion of the factional stockpiles under their control and were able to integrate it as part of their personal power base into the new official security structures.

Because the Khmer Rouge continued to fight the government, most of their weapons initially remained outside of government control. However, individual and groups of Khmer Rouge fighters began to defect, and took their weapons with them. It is estimated that 7,000–10,000 of the 40,000–50,000 Khmer Rouge defected to the government between 1991 and 1998.⁹ It is assumed that these defectors were also able to take some 70 per cent of their weapons with them into the new government forces. Some 12,500–17,500 of the total 100,000–125,000 Khmer Rouge weapons were thus brought into government stockpiles.

In total, therefore, some 155,000–236,000 civil war weapons were brought under the control of the RCAF and the police. About the same number, 154,000–216,000, remained outside of government control. These weapons circulated in the general population and were held in the Khmer Rouge enclaves.

Weapons collection, confiscation, and destruction

Following the election victory of Hun Sen in 1998 and the surrender of the last Khmer Rouge insurgents, the Cambodian government embarked on an

extensive weapons collection and confiscation programme. According to government figures, 120,000 weapons have been collected since then and have been integrated into government stockpiles (Ratha, Long, and Vijghen, 2003, p. viii). The Japan Assistance Team for Small Arms Management in Cambodia (JSAC) reports having collected over 10,000 weapons (JSAC, 2006).¹⁰ Since then, 180,000 weapons from the official stockpiles have been destroyed (EU ASAC, 2006b).

Imports and exports

A review of the available data shows that while imports and exports of military weapons, including small arms, occurred, they were relatively small in scale, largely cancelled each other out, and did not significantly impact on the size of the weapons stockpile in Cambodia.

The UN Commodity Trade Statistics (UN Comtrade) database indicates that there have been only minor instances of direct military assistance and transfers to the RCAF (see Table 3). It is difficult to know what lies behind the reported exports from Canada in 1993 and Poland in 1997. However, the total value of USD 80,236 makes it clear that these were not significant transfers. There has also been one report of an additional delivery of 20,000 AK-47 rifles from

Table 3
Reported exports of military weapons to Cambodia, 1992–2003

Year of export	Country of origin/ Transport hub	Value in USD
Military weapons (category 930100)		
1993	Canada	6,136
1997	Poland	74,100
<i>Total</i>		80,236
Parts and accessories of military weapons (category 930590)		
1996	Hong Kong	14,998
1997	China	100,429
<i>Total</i>		115,427

Source: UN Comtrade (2006)

Table 4
Reported exports of bombs, grenades, ammunition, mines, and others to Cambodia, 1992–2003

Year of export	Country of origin/ Transport hub	Units	Value in USD
Bombs, grenades, ammunition, mines, and others (category 930690)			
1994	France		3,976
1994	Poland		2,301,000
1995	Slovakia		452,136
1996	Poland		740,000
1996	Portugal		102,185
1997	Poland		88,768
1997	UK		22,136
2003	China		17,864
<i>Total</i>			<i>3,728,065</i>
Small arms ammunition (category 930630)			
1995	USA	64,000	14,780
1999	Czech Republic		2,111
1999	UK		1,823
<i>Total</i>			<i>18,714</i>
Shotgun cartridges (category 930621)			
1999	Hong Kong	80,000	7,218
Air gun pellets, lead shot, parts of shotgun cartridges (category 930629)			
1992	Malaysia	109,560	25,374
Ammunition			
2002/03	USA ¹		170,000

¹ USA (2004).

Source: UN Comtrade (2006) (unless otherwise noted)

NORINCO in China in 1997 (*Asia Defence Yearbook 1999–2000*, quoted in Lintner, 2002, p. 9). This transfer, however, cannot be linked to a corresponding transfer reported to UN Comtrade, and is thus not included in Table 3.¹¹ In total, these quantities do not appear high enough to impact on the total stockpile in a significant way. The recorded importation of small arms ammunition etc. is also not significant (see Table 3).¹²

Table 5
Reported exports of pistols, revolvers, and their parts to Cambodia, 1992–2003

Year of export	Country of origin/ Transport hub	Units	Value in USD
Pistols and revolvers (category 930200)			
1994	Hong Kong	52	10,351
1994	Malaysia	214	16,387
1994	Poland	n.a.	123,000
1995	Hong Kong	72	32,834
1995	USA	50	16,710
1996	USA	20	9,739
1996	USA ¹	7	3,750
1996	Hong Kong	58	44,735
1997	Czech Republic	n.a.	6,523
1997	Switzerland	n.a.	2,111
1998	Czech Republic	n.a.	2,718
1998	Switzerland	n.a.	786
<i>Total</i>		<i>473</i>	<i>269,644</i>
Parts and accessories of revolvers and pistols (category 930510)			
1997	Czech Republic	n.a.	3,360
2002	Russia	n.a.	4,379
<i>Total</i>		<i>n.a.</i>	<i>7,739</i>

¹ USA (1997).

Source: UN Comtrade (2006) (unless otherwise noted)

Imports of pistols, revolvers, and sporting and hunting weapons amount to over 12,000 items over 11 years, which is also not a significant number (see Tables 5, 6, and 7). This figure has been derived by assuming an average price of USD 284 for pistols and revolvers and USD 84 for sports and hunting rifles and shotguns. This assumption is based on the average price paid where the database records both the number of units and the total price, excluding outliers.

Table 6
Reported exports of sporting and hunting rifles, shotguns, and their parts to Cambodia, 1992–2003

Year of export to Cambodia	Country of origin/Transport hub	Units	Value in USD
Sporting and hunting rifles and shotguns (categories 930320 and 930330)			
1994	France	n.a.	11,026
1994	Hong Kong	16	11,386
1994	Malaysia	5	5,352
1994	USA	27	3,476
1995	Hong Kong	n.a.	41,624
1995	USA	20	3,556
1996	Hong Kong	38	34,392
1997	China	10,200	799,000
1997	Hong Kong	7	5,295
1997	Switzerland	n.a.	986
1997	USA	2	6,822
2002	South Korea	n.a.	23,537
2003	France	n.a.	5,653
<i>Total</i>		<i>10,315</i>	<i>952,105</i>
Parts and accessories of shotguns or rifles (category 930529)			
1994	Malaysia		2,020

Source: UN Comtrade (2006)

Applied to the dollar value for which no unit number has been provided, an additional 476 pistols and revolvers and 986 sport and hunting weapons are estimated to have been imported, in addition to the units mentioned (see Tables 5, 6, and 7).

There are additional unrecorded flows of an unknown quantity of weapons from Thailand, but there is no indication that the numbers would significantly increase total imports.¹³

Table 7
Estimated number of imported units of pistols, revolvers, and sporting and hunting guns, 1992–2003

Type	Total price in USD for export with known number of units	Average price per unit in USD	Total reported units (from Tables 5 and 6)	Estimated additional units (calculated on basis of average price)	Total estimated imported units
Pistols and revolvers	134,506	284	473	476	949
Sporting and hunting rifles/shotguns	869,279	84	10,315	986	11,301
<i>Total</i>					<i>12,250</i>

Reports of the export of Cambodian civil war weapons have surfaced time and again. Specifically, exports from Cambodia to Aceh (Indonesia), the Philippines, Sri Lanka, north-east India, and Kashmir have been reported (Small Arms Survey, 2002, p. 99). It is impossible to determine the precise number of weapons that have been transferred to these places. However, a look at the stockpiles of the relevant armed groups and the variety of places where weapons could be sourced in the 1990s suggests that exports from Cambodia may have been in the magnitude of up to 10,000 items (see Table 8).

A review of the available sources dealing with the Liberation Tigers of Tamil Eelam (LTTE) in Sri Lanka suggests that Cambodia is unlikely to have provided more than perhaps 5–10 per cent of the stockpile of the estimated 7,000 LTTE combatants. It was estimated in 1999 that 60–70 per cent of the LTTE's weapons stockpile came from the Sri Lankan security forces (Gunaratna, 1999, p. 262). The remaining 30–40 per cent came from a variety of sources in South-East Asia, North Korea, Afghanistan, Lebanon, Cyprus, Greece, Turkey, and Ukraine (Gunaratna, 1999, p. 262). Cambodian militaries figure in this list, and it is known that the LTTE acquired a surface-to-air missile in Cambodia in 1994 (Gunaratna, 1999, p. 262). If it is assumed that 5–10 per cent of the LTTE stockpile came from Cambodia, this is unlikely to underestimate the flow. Smith estimates the LTTE to have 7,000 combatants and perhaps 14,000 weapons

Table 8
Estimates of the possible magnitude of exports to rebel groups outside Cambodia¹

	Estimated number of combatants	Estimated number of weapons ²	5–10%
Sri Lanka, LTTE	7,000 ³	14,000	700–1,400
Indonesia, Free Aceh Movement	50 ⁴	100	
Philippines, New People's Army	8,000 ⁵	1,600	800–1,600
Philippines, Moro Islamic Liberation Front	6,000–10,000 ⁵	12,000–20,000	600–2,000
Philippines, Moro Islamist Reformist Group	900 ⁵	1,800	90–180
Philippines, Abu Sayaf Group	500 ⁵	1,000	50–100
<i>Total</i>			2,240–5,280

¹This table is not based on specific information.

²A standard factor of 2 is assumed in the absence of any specific information.

³Smith (2003, p. 17).

⁴IISS (1998, p. 183).

⁵IISS (1998, p. 195).

(Smith, 2003, p. 17). The total number of weapons originating in Cambodia could have thus been around 700–1,400.

The approximate total outflow of weapons to other rebel groups is estimated by assuming a similar ratio for weapons exports to that documented for the LTTE. Table 8 does not indicate the known number of combatants in these armed groups, nor their stockpiles, nor actual transfers that took place. It has only been compiled in an attempt to estimate the order of magnitude of weapons transfers out of Cambodia. The error factor will be high, but is probably not above 100 per cent. The maximum total transfer may therefore have been above 10,000 weapons, but not much more.

This review of import and exports shows that imports and exports have had a marginal impact on the total number of small arms and light weapons in Cambodia since the period of the UN Transitional Authority in Cambodia.

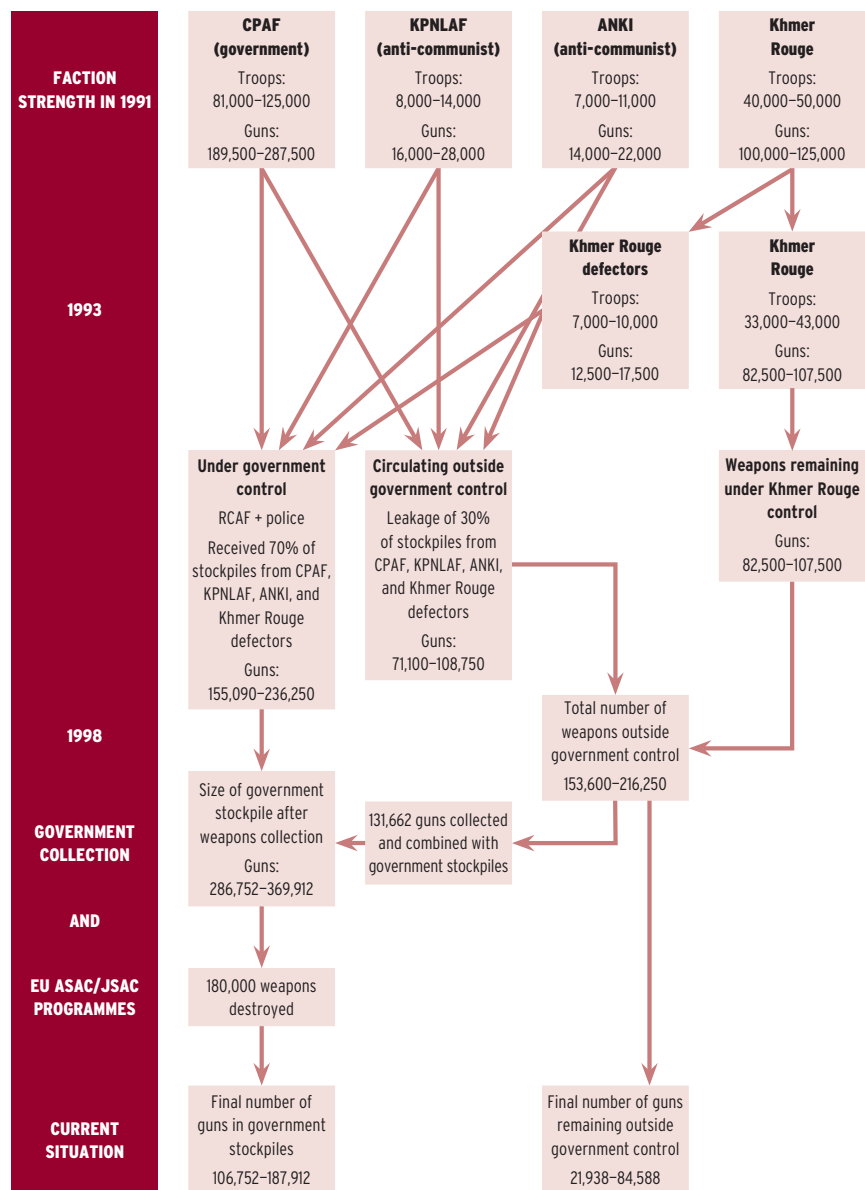
Because it is impossible to tell whether the exported weapons came from government or non-governmental stockpiles, they have not been included in the estimates of weapons totals presented in this paper.

Putting the estimates together

Figure 1 combines all of the estimates explained above of the various weapons flows in Cambodia, in order to provide an overall estimate of the total numbers of weapons currently remaining within and outside of government control.

This suggests that the government has 107,000–188,000 weapons in its stockpile, and that 22,000–85,000 weapons continue to circulate outside of government control. 📌

Figure 1
Estimated number of guns under and outside of Cambodian government control



Source: Wille (2006a)

V. Triangulation

The estimates of weapons stockpiles presented above are derived from historical reconstruction based on reported facts and assumptions. Particularly crucial is the assumption that 70 per cent of the stocks of the three factions and just over 10 per cent of the Khmer Rouge stocks were integrated into government stockpiles. Overall estimates of the number of weapons within and outside of government control are highly sensitive to changes in these assumptions. It is therefore important to verify the magnitude of these estimates through triangulation with other sources. The other sources that are considered here are estimates of current government stockpiles derived from reports on the strength of the armed forces and expenditure on government weapons storage racks reported by the European Union’s Assistance on Curbing Small Arms and Light Weapons in the Kingdom of Cambodia (EU ASAC) and JSAC programmes.

No official government figures on the current stockpile are available. The number of troops presently stands at 110,000, according to the latest government information, and a reduction in the strength of the armed forces to 72,000 is planned (Samean, 2006). The police are estimated to number 44,000.¹⁴

It is well known that there are many ‘ghost soldiers’ among the personnel of the Cambodian armed forces, who appear on the payroll, but are not real

Table 9
Present military and police small arms stockpiles

	Strength of the forces	Multiplier	Estimated stockpile
Military			
According to latest government figure	110,000	1.5	165,000
According to government plans	72,000	1.5	108,000
Police			
According to interview, Phnom Penh, February 2005	44,000	1	44,000

Table 10

EU ASAC construction of safe storage racks

Military Region 2 ¹	13,500
Military Region 4 ²	11,668
Military Region 5 ¹	24,000
Total	49,168
<i>Average</i>	<i>16,389</i>

¹ EU ASAC (2006a).² EU ASAC (2004, p. 8).

soldiers (Adams, 2001). This suggests that the gun per soldier ratio will not be very high, as the non-existent personnel will not require equipment. We may therefore assume a ratio of 1.5 guns per reported soldier for the armed forces and a ratio of 1 for the police.

This relatively low multiplier is confirmed by information on the safe storage facilities that EU ASAC and JSAC programmes have constructed as part of their programmes. EU ASAC has constructed storage facilities for the future needs of the RCAF once surplus weapons have been destroyed. The number of storage racks built is not made public by EU ASAC. However, for three of the six military regions, this information has been made available on the relevant EU ASAC Web site (EU ASAC, 2006a). If we assume that the construction rate in

Table 11

Estimated RCAF stockpile based on estimated construction of safe storage racks

	Lowest estimate	Mid-range estimate	Highest estimate
	Assuming the lowest number of 11,500 (Military Region 4)	Assuming average of 16,000	Assuming highest number of 24,000 (Military Region 5)
Estimate of safe storage racks to be built in remaining three military regions	34,500	48,000	72,000
<i>Total safe storage racks to be built</i>	<i>83,668</i>	<i>98,168</i>	<i>121,168</i>

Table 12

Safe storage racks constructed by the JSAC for police

Otdar Mean Chey Province	1,260
Banteay Mean Chey	1,818
Siem Reap	1,739
Total	4,817
<i>Average</i>	<i>1,600</i>

Source: E-mail from the JSAC, 27 October 2005

these three military regions is similar to what will be built in the other three regions, the total number of storage racks constructed can be estimated. On this basis, it is estimated that safe storage for a weapons stockpile of 83,500–121,000 weapons will be built for the future needs of the armed forces (see Tables 10 and 11 for the calculations).

The JSAC project has built safe storage facilities for the police in three provinces. On average, storage racks for 1,600 weapons were built in the three provinces (Table 12). If we assume that this is representative of other provinces, there would be some 38,000 police guns in Cambodia.¹⁵

Table 13 compares the Small Arms Survey estimate based on historical reconstruction with estimates derived from the construction of safe storage racks

Table 13

Estimates of the number of weapons held by security forces in Cambodia (RCAF and police)

	Low	High
Based on reported strength of the armed forces (High = 110,000, to be reduced to Low = 72,000), police (44,000), and assumed multipliers (1.5 for armed forces; 1 for police)	152,000	209,000
Based on EU ASAC and JSAC safe storage construction for RCAF and police	122,085 ¹	159,585 ²
Small Arms Survey estimate based on historical reconstruction	107,000	188,000

¹ Based on estimates of military safe storage of 83,668 weapons plus police safe storage of 38,417 weapons.² Based on estimates of military safe storage of 121,168 weapons plus police safe storage of 38,417 weapons.

and the use of the multiplier. Triangulation appears to confirm the validity of the Small Arms Survey estimate of weapons presently held in government stockpiles. By extension, this also suggests that its estimates of 22,000–85,000 illegally held small arms are plausible. 📌

VI. Is this a new number?

The proposed estimate of weapons in Cambodia is similar to plausible figures circulated in the past. While the Small Arms Survey total figure is not very different to previous estimates, this analysis has helped to clarify the proportion of the total stockpile held within and outside government control.

In 2002 the Small Arms Survey suggested that some 500,000 weapons circulated in Cambodia, including both government and illegal stockpiles (Small Arms Survey, 2002, pp. 99 and 296). The figure was based on the estimate of 220,000 armed men fighting in the Cambodian conflict (IISS, 1998). The baseline figure used for the estimate here is only slightly lower than that for the weapons (320,000–463,000), because of a lower multiplier for the militia and provincial unit forces.

At the time it was believed that half the weapons were controlled by the government and half by demobilized soldiers and other individuals (Small Arms Survey, 2002, p. 99). A thorough review of likely flows suggests that this estimate was broadly correct.

Other sources have quoted the figure of 900,000 weapons in Cambodia, but they are never clearly sourced. Fawthrop (2001) quotes the Khmer newspaper *Rasmei Kampuchea* as having published a figure of 900,000 unregistered guns. It is possible that this higher number was based on a household survey carried out in Phnom Penh in 1999. The survey reportedly found that 9,922 of the 15,000 interviewed households based in Phnom Penh admitted to possessing a weapon (Beck, 2004, p. 44). This works out at 0.66 guns per household, if we assume that each household only had access to one weapon. Applied to all households in Phnom Penh (173,678, according to the 1998 census [Cambodia, 2006]), this would amount to at least 114,627 firearms. This is a plausible figure for 1999, given the likelihood that weapons possession was more common in urban areas. It is also possible that a considerable number of these weapons were officially part of government stockpiles, and were simply kept at home by those associated with the security forces. Sub-decree 38 of 30 April 1999

specifically authorized civil servants and members of the security forces of a specific rank 'to handle a pistol per person as their own property' (Cambodia, 1999, ch. 4).

It is not certain, but quite possible, that the survey data was at the origin of the 900,000 figure (Fawthrop, 2001). The same rate may have been applied across the country. Applied to the country (2,188,663 households, according to the 1998 census [Cambodia, 2006]) this would mean more than 1.4 million firearms. Should this be the case, then this data is highly misleading. Phnom Penh is by no means representative of all of Cambodia. The cultural and socio-economic divide between urban and rural populations is enormous. Rural people are poorer, with less access to resources than the urban population. Fewer rural people are connected to government positions that provide access to firearms. A separate household survey would have to be carried out for rural areas to apply such a method.

Some publications have used the 500,000 and 900,000 figures to identify the number of 'illicit small arms' in the country (Beasley, Buchanan, and Muggah, 2003, p. 34).¹⁶ This, however, appears to be a misreading of the 500,000 and 900,000 figures, which referred to the total number of weapons in Cambodia, including government stockpiles. 📌

Conclusion

The estimates given in this paper suggest that the total pool of Cambodian conflict weapons was between 320,000 and 463,000, and that a total of 285,000–366,000 weapons have been brought under government control since the signing of the Paris Agreements in 1991. Of these, some 155,000–236,000 were brought into the government stockpile through the creation of the RCAF and the police and the defection of the Khmer Rouge. Weapons collection programmes removed 130,000 weapons from outside of government control. Destruction of 180,000 of the surplus government stockpile has substantially reduced the potential for leakage of unused arms into the general population. Combining all of these figures, it is estimated that some 22,000–85,000 weapons continue to circulate illegally in Cambodia. This is a considerable reduction from the situation in 1993, and suggests that the concerted efforts of the Government of Cambodia and donors, notably the EU ASAC and JSAC, have had a considerable impact on weapons proliferation in Cambodia.

These results are very encouraging. The cost of the programme to donors, of just over EUR 10 million over six years, has been quite modest (Wille, 2005, p. 7). The experience of Cambodia may thus provide an important example for future post-conflict actions.

The analysis of the impact of the small arms programmes in Cambodia is relatively unique. In only a few cases has there been an attempt to analyse in detail the impact of small arms and light weapons programmes carried out in post-conflict countries. It is hoped that similar work will in future be carried out for other post-conflict countries to increase the evidence base on the impact of such programmes. 📌

Endnotes

- 1 Interviews, Pailin, February 2005.
- 2 Chanrinthy Him (2000) recalls how representatives from the Khmer Rouge came to her family home and asked her father whether he had weapons, whereupon he turned over his pistols to them (p. 64). Her father had also earlier informed the family that the Khmer Rouge had ordered those associated with Lon Nol to give up their weapons, and that those who refused had been shot (p. 58).
- 3 Interviews with Khmer Rouge cadres, Pailin, February 2005.
- 4 Interview with former Khmer Rouge commander, Pailin, February 2005.
- 5 Interviews, Phnom Penh, April 2005.
- 6 Interviews, Phnom Penh, April 2005.
- 7 Interviews, Phnom Penh, January 2005.
- 8 The source 'Troung' comes from a moderated Web site of the Air Combat Information Group, which describes itself as 'a multi-national project dedicated to research about air war and air forces since 1945', where interested parties carry out online discussions on these subjects (Air Combat Information Group, 2006). Contributors are not identified beyond their user names. This system has the advantage that, in particular, experts from countries that restrict open discussion on military matters are able to contribute information in a relatively open way. Many members of the group appear to be retired members of national security forces and are thus well informed. It is impossible to verify the claims made by the Vietnamese member 'Troung', but his/her information is well respected in the discussion groups and there is no reason to assume that it is in any way less reliable than information obtained during a direct interview with any official.
- 9 There are few estimates of the total number of defections available, and no single source can be provided for the estimate put forward here. Most sources prefer vague wording such as 'small-' or 'large-scale defection', without attaching explicit numbers. *Wikipedia* believes that around 4,000 men defected in the 'mass defection' of 1996 (*Wikipedia*, 2006, Khmer Rouge). Based on this, the total defection may have been 7,000–10,000 men over a period of eight years.
- 10 The JSAC reports to have collected 11,662 weapons in phase I. On 17 March 2006 the total number of weapons collected by the JSAC stood at 14,308 (JSAC, 2006).
- 11 China only reported exports of USD 799,000 of sporting and hunting weapons (UN Comtrade categories 930320 and 930330) to Cambodia in 1997. The transfer of AK-47s could have been hidden in these categories.
- 12 Tables 3 and 4 include values of mixed UN Comtrade categories (930590, 930629, and 930690), which may contain non-small arms and light weapons items. The actual value may therefore be even lower. On the other hand, the lack of information from the Cambodian government on imports could also suggest that the total amount is underestimated, if Cambodia imported from countries that do not report to UN Comtrade.
- 13 Only very low quantities were transferred from Thailand to Cambodia in the period 1990–99 (Center for Peace and Conflict Studies, 2006).
- 14 Interview, Phnom Penh, February 2005.
- 15 Remaining provinces (21) x average number of storage racks needed (1,600) = 33,600; 33,600 + constructed storage racks in three provinces (4,817) = 38,417.
- 16 This point refers to the English language hard copy edition and the French and Spanish online versions of the publication referred to. The presently available English language Internet version has already taken account of this fact and has changed the relevant figures accordingly (Beasley, Buchanan, and Muggah, 2003).

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