



An ex-combatant brings weapons to a disarmament point set up by the United Nations Mission in Liberia, April 2004.

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Man, the State, and War

THE THREE FACES OF SMALL ARMS DISARMAMENT

INTRODUCTION

Small arms and light weapons disarmament measures are becoming routine and widespread. When the United Nations Development Programme announced an initiative in late 2008 to disarm and demobilize 182,900 former combatants in Sudan, the news was neither surprising nor unprecedented (IRIN, 2008). Perhaps the most striking aspect was its very normalcy. Several comparable initiatives were unveiled elsewhere in 2008, as were other new small arms collection and disarmament projects.

Small arms control stresses core goals and common procedures, with results that fall far short of international uniformity, but at least seem generally consistent. Small arms disarmament, by comparison, has been continuously reinvented, leading to an ever-growing canon of projects, many of which seem tailored to unique circumstances, without broader relevance. This chapter seeks to clarify the accomplishments and limitations of small arms collection and disarmament as it affects civilians, the state, and non-state actors. It challenges writers like Colin Gray, who argue that disarmament eliminates weapons best when it is needed least (Gray, 1992). The chapter shows that, whether it is a cause of change or a correlate, collection and disarmament measures usually are associated with a reduction of armed violence and promotion of political stability. Among its key findings:

- Destruction of state-owned small arms has been roughly comparable in scale to that of civilian firearms.
- Disarmament of non-state forces is by far the smallest quantitatively, but it may be most important for international and domestic security.
- The best prospects for further large-scale disarmament involve destruction of state surpluses.
- Disarmament has destroyed 40 per cent of some military arsenals and as much as 20 per cent of civilian weapons.
- Extrapolated globally, the findings suggest that at least 76 million military small arms and 120 million civilian firearms could be eliminated.
- Whether voluntary or compulsory, civilian weapons collection and destruction is most effective when accepted as legitimate. Coercive disarmament efforts often fail.
- While the impact of civilian weapons collection and destruction is difficult to separate from other reforms, it is associated with reduction or control of homicide and suicide rates.

Disarmament is an enormous subject, relevant to the full spectrum of ‘deadly quarrels’, from disputes between individuals to the ‘clash of civilizations’ (Richardson, 1960; Huntington, 1996). Small arms, light weapons, and their ammunition are part of this spectrum of human conflict, ranging from domestic violence to world war, with a role for disarmament in all. Disarmament measures, moreover, can take many forms, from reducing a particular type of weapon to complete elimination of a whole category (see Box 5.1). An overarching theory of small arms disarmament—

explaining when it is possible, how it is implemented, and what it achieves—remains a distant goal. Although a thorough understanding of disarmament progress requires such insight, this chapter does not explicitly consider such fundamental issues.

This chapter instead provides an empirical review of the contributions disarmament processes have made to conflict and violence abatement. It focuses not on enhanced control over arms inventories or tighter regulation of firearms ownership, but on systematic weapons collection, followed by outright destruction. Similarly, it

explores the role of collection and disarmament among all three major actors affected by the use of small arms and light weapons: society, state agencies, and non-state combatants.

Disarmament can mean the absolute elimination of an entire category of weapon, as called for by the 1993 Chemical Weapons Convention or the 1997 Anti-Personnel Landmines Treaty, but in practice it is usually a process of incremental steps and partially attained accomplishments. Small arms disarmament has more in common with agreements that reduced armaments without eliminating them, such as the 1990 Treaty on Conventional Armed Forces in Europe or the 1991 Strategic Arms Reduction Treaty. All too often, disarmament occurs in a conflicted political atmosphere, where destruction of old weapons is accompanied by acquisition of new models. Other forces are also shaping events. Part of an environment full of conflicting impulses and parallel efforts, small arms disarmament rarely yields to easy assessment. Small arms collection and disarmament, rather, is a realm of weak generalizations.

The chapter introduces three major categories of small arms and light weapons disarmament, each stressing particular actors, methods, and trends. Examining in turn the disarmament experience among civilians, states, and non-state actors, each section assesses overall data and illustrative case studies. The chapter reaffirms the diverse forms of small arms collection and disarmament, each of which relies on separate methods, produces data that is difficult to compare, and achieves distinct goals. Civilian arms collection and destruction, for example, is all about reducing violence. State disarmament reduces stockpiles to diminish costs and illicit diversion. Disarmament of non-state actors is largely about symbolic dividends, including confidence building and restoration of state authority. Consequently, there is no single way to compare disarmament performance; each subfield, sometimes each experience, must be evaluated separately.

Box 5.1 Arms control vs. disarmament

Small arms control refers to regulations establishing conditions on ownership, limiting acquisition of certain quantities or types of weapons or ammunition, or restricting storage, transfer, and resale. Control does not aim to reduce weapons numbers, but rather to ensure greater safety of existing and future inventories.

Small arms disarmament is a process involving collection and destruction of weapons, sometimes combined with erecting barriers against acquisition of new weapons. It can be incremental, partial, or comprehensive.

THREE FACES OF DISARMAMENT

All small arms, light weapons, and ammunition disarmament undertakings share a desire to transcend the limits of arms control, to minimize the dangers of armed violence through outright destruction of weapons and ammunition. In application, though, disarmament programmes differ depending on the nature of the parties involved. Reducing the small arms holdings of individual owners involves very different goals and mechanisms from the trimming of

state arsenals or the disarmament of insurgent forces. These three categories are summarized here as *man*, the *state*, and *war* (Waltz, 1959). They differ in terms of rationales, symbolism, and measures of success to such a degree that they share little more than the definitive act of weapons destruction.

Civilian weapons collection and destruction addresses the safety and social environment of individuals. Participants are usually otherwise ordinary men and women. They may be former combatants but are no longer organized or responsive to military command. The state usually is the crucial actor organizing civilian collection and disarmament processes, although inter-governmental and even non-governmental organizations can play important roles. But, in this case, the state is not giving up its own weapons. Civilian weapons collection and destruction can be principally symbolic. As weapons become part of a dialogue about social goals, their number or quality may be less important than the ceremonies designed to transform their meaning, potentially making guns and gun use less heroic and more repugnant. In many cases, success is measured not so much in absolute numbers of weapons as in social outcomes, such as the reduction of domestic or criminal violence or, more modestly, changed attitudes towards weapons possession and use.

State disarmament is usually undertaken by governments to reduce their own arsenals. Except for enforced disarmament of defeated states after wars, state disarmament is usually essentially home-grown, driven by the priorities and capabilities of the state. Foreign governments and multilateral organizations can play facilitating roles, but the crucial decisions belong to the state that controls the weapons. State disarmament can have symbolic elements, but it is intended primarily to improve the security of the state and its citizens by reducing dangers of weapons diversion and, in the case of ammunition, depot explosions. It also promises economic savings. The success of state disarmament is readily measured in terms of the absolute number or proportion of total weapons eliminated, especially in relation to identified surplus.¹

Disarmament of non-state actors is about reducing the risks of (renewed) warfare and (continuing) armed violence. With the decline of state-to-state war, conflict disarmament today typically applies to non-state combatants (Mack, 2005). Former government soldiers or militiamen may be included, but the emphasis of formal disarmament, demobilization, and reintegration (DDR) is on building domestic and regional security by facilitating reintegration of former combatants into civilian life. With the quantity and quality of weapons secondary to the goal of social and political reintegration (ACEH), the numbers or types of weapons eliminated is often less important. Former insurgents are seldom willing to surrender all their weapons, least of all when embarking upon a peace process of uncertain resilience. With only a limited share of weaponry involved, destruction is valued as a symbol of commitment more than a physical impediment to the resumption of fighting. Quantity and quality are still relevant, but even modest disarmament may be enough to advance a political process.

Through much of the 20th century, disarmament advocates pressed their preferred instrument as a transformative tool, one that would make many other security policies unnecessary. Elimination of weapons of mass destruction or major conventional weapons systems was expected to change the nature of international relations (Myrdal, 1976; Noel-Baker, 1926). Small arms disarmament, by contrast, is rarely promoted today as an end in and of itself. Only in very specific circumstances is disarmament the dominant goal; destruction of excess man-portable air defence systems (MANPADS) may be the best example of this.

As the dominant actor in international small arms processes, states are vital to the business of disarmament, largely determining where it is emphasized and what it can achieve. The way states view disarmament is revealed

Gun destruction is a symbol of commitment more than an impediment to renewed fighting.

Table 5.1 Government seizure and destruction information for 49 countries

Country	Year(s)	Description	Military	Civilian	Police	Combatant
Angola	2006	small arms and light weapons		75,323		
Argentina	2002-03	firearms		7,396		
Austria	2006	surplus	82,252			
Bosnia and Herzegovina	2007	small arms and light weapons	95,000			
Botswana	2006	firearms		1,159		
Brazil	2004-05	small arms		253,321		
Bulgaria	2002	surplus	75,612			
Cambodia	1999-2007	small arms and light weapons		242,000		
Canada	2003	surplus revolvers			20,000	
China	1996-2004	illegal		4,000,000		
Croatia	2008	small arms and light weapons	27,741			
Czech Republic	2006	seized		4,500		
Ecuador	2003-07	firearms		15,519		
El Salvador	1996-2004	small arms		24,566		
Estonia	2006	pistols	6,000			
Finland	2007		12,368	3,283		
France	1998-2000	small arms	140,000			
Germany	1990-2007	surplus	2,155,892			
Ghana	2001-07			2,500		
Greece	2001-02		570	1,190		
Haiti	2002*			249		
India	1990-2007	terrorist				49,953
Italy	2007	small arms and light weapons	169,925			
Kazakhstan	2004	firearms		875		



Kenya	2003-08	small arms and light weapons		20,136		
Lesotho	2001-04	firearms		3,800		
Lithuania	2001			1,004		
Macedonia, former Yugoslav Republic of	2003-07	weapons		17,000		
Mexico	2007			28,302		
Namibia	2007			1,426		
New Zealand	2007	police rifles			750	
Nicaragua	2004	MANPADS	333			
Niger	2000-04	confiscated		1,746		
Nigeria	2004	assorted				1,466
Norway	2004	firearms		29,308		
Paraguay	2003	firearms		2,615		
Peru	2002-05	firearms		3,736		
Philippines	2007-08	captured				57,200
Portugal	2006	apprehended		1,215		
Romania	2002-03	small arms and light weapons	195,510			
Serbia	2001-04	small arms		108,789		
Solomon Islands	2003-04	former military				2,542
South Africa	1999-04	small arms	271,867	42,642	162,000	
Sri Lanka	2005	captured		35,000		
Tanzania	2001-05	illicit		8,540		
Togo	2006	firearms		8,062		
Turkey	1984-2007	terrorist				89,381
Uganda	2005-06	seized		53,000		
Uruguay	2008	civilian		8,000		
Total			3,233,070	5,006,202	182,750	200,452

* The year for Haiti is approximate.

Sources: Parker and Cattaneo (2008) for all countries except Angola (2006, p. 10); Finland (2008, pp. 6, 10); India (2008, p. 5); Mexico (2008, p. 3); Norway (2005, p. 9); and Turkey (2008, p. 1)

in their statements about the issue. Table 5.1 collects official disarmament information from annual reports on implementation of the 2001 UN *Programme of Action*.² These reports do not provide a complete picture of global disarmament. Many countries have not reported at all while others do not offer much information about their disarmament activities. They may, for example, only report on their assistance for disarmament in other countries. Despite their great variation, these reports constitute the single most comprehensive repository of information about national disarmament practices available today (Parker and Cattaneo, 2008).

Equally important, the disarmament activities that governments emphasize in their reporting reveal much about their policies and priorities. While the civilian, state, and ex-combatant categories feature regularly in the reports, individual submissions usually focus on a particular aspect of small arms disarmament. Of the 49 governments providing disarmament data in Table 5.1, only South Africa reports on all actors of state and society (military, police, and civilians, but not non-state combatants). Most countries focus on either state or civilian disarmament. Regardless of emphasis, though, the total quantities of weapons involved in each of the two categories are roughly comparable. Removing the biggest statistical outliers (China and Germany) makes the overall categories of state and civilian disarmament even more similar.

**Purely voluntary
gun turn-ins can
be surprisingly
effective.**

As shown in Table 5.1, few governments reporting on their implementation of the *Programme of Action* say much about the disarmament of non-state armed groups. The quantities of weapons involved in such cases can be much smaller than disarmament of state agencies or collection of weapons from civilians, a reflection of the relatively smaller size of most insurgencies, as well as their ambivalence about participating. No less revealing, governments that stress armed groups in their reporting do not describe any disarmament of national military or law enforcement agencies.

MAN: COLLECTING CIVILIAN GUNS

Although civilian weapons collection is principally governed by domestic small arms policy, the pool of shared experience is expanding as a result of the efforts of particular countries. The need to reduce arms supply often continues well after armed conflict has ended and former combatants have been disarmed and demobilized. Armed civilians—rather than insurgents or the state—are often at the centre of the worst cycles of today's violence in countries such as Brazil, Guatemala, Haiti, Jamaica, Mexico, South Africa, and Venezuela. State forces are hardly blameless; often they are heavily implicated in social chaos. In most of these countries, though, civilian inventories—sometimes augmented by warfare and terrorism—are most likely to be used in acts of violence.

Civilian weapons collection in post-conflict countries ideally includes three parallel processes: weapon turn-ins (voluntary, with some form of individual compensation, or weapons-for-development exchanges), combined with regulatory reform to inhibit sudden or sustained rearming or acquisition of more powerful firearms, and institutional reform to enhance local security and weaken demand for new weapons. Such projects, like any others, require meticulous management. Success is most likely when all three aspects are pursued simultaneously, minimizing uncertainty and discouraging rearming (Buchanan and Widmer, 2006, pp. 11–18).

When it comes to civilian weapons, most of the states listed in Table 5.1 seem happiest to emphasize the collection and destruction of crime guns. This section, however, pays greater attention to systematic efforts to eliminate

whole categories of civilian weapons, as illustrated by five major examples in Australia, Brazil, Britain, the Solomon Islands, and South Africa. Although such initiatives are few in number, the resulting reduction in civilian ownership tends to be much greater, making their lessons especially important.

Preconditions of civilian weapons collection

To its most vociferous critics, civilian disarmament is eternally associated with the crimes of Nazi Germany, when Jews and Communists were denied weapons permits and required to turn in their firearms. The effort to stain civilian weapons collection with the blood of the Holocaust is a common trope of gun rights advocacy (Halbrook, 2000). This obscures basic realities: except for police seizure of crime guns, the most successful undertakings are highly consensual. Just as careful assessment questions whether Nazi gun policy actually achieved much at all (Harcourt, 2004), it appears that other civilian collection programmes have been quite effective fulfilling limited aims. That said, the preconditions for success can seem just as demanding as those for disarmament between rival states counting nuclear warheads.

Civilian weapons collection and destruction varies greatly, from the complete cessation of legal civilian gun ownership, as in the Solomon Islands since 2002 and proposed under the 2005 Brazilian referendum, to ending legal ownership of particular categories of firearms, such as handguns in Britain and automatic weapons in Australia, to simply banning carrying firearms in public, as in parts of Yemen since 2005. Uniting these measures are restrictions on previously permissible ownership, usually involving a reduction in the number or types of guns civilians are permitted to own.

One of the most difficult issues for civilian weapons collection is whether a programme should be voluntary or compulsory. In practice, a mixture of both may be necessary. Purely voluntary turn-ins can be surprisingly effective. The most successful experiences banning particular types of firearms—in Australia and Britain—involved stronger measures (see below). While civilian collection and destruction cannot be effective without widespread support, it may not be taken seriously without threat of sanctions. In lieu of some compulsion, moreover, free-rider problems can undermine cooperation (everyone gains security regardless of whether each individual participates). But sanctions without support are not politically sustainable either. In the short run, the fastest implementation appears to come through the combination of strong public support with a legal requirement for mandatory compliance. Whether voluntary or compulsory, civilian weapons collection and destruction is most effective when its legitimacy is accepted (see Box 5.2). Experiences with *coercive* disarmament, involving the threat or use of state force, may not be universally disastrous, but they tend to fail (see Box 5.3).

To be effective over the longer term, civilian weapons collection must be combined with arms trade control to minimize rapid replacement. The Burundi example shows that this is not easily done by weak states with porous borders (Pézar and Florquin, 2007). Geography undoubtedly plays a major role in the effectiveness of such efforts, yet, in the long run, reducing *demand* may be even more critical.

A major source of doubt in any evaluation is the inability to isolate the effect of civilian weapons collection from other measures implemented simultaneously to reduce crime

Box 5.2 Preferred circumstances for effective civilian collection

- High *public support* for collection measures;
- Widespread acceptance of *government authority*;
- Public belief in *state institutions* to assure personal security;
- Carefully calibrated *compensation*;
- Corresponding *restrictions* on replacement purchases; and
- Readily *controlled international borders*.

and illegal gun use. The issue is part of the enigma surrounding crime decline anywhere (Zimring, 2006). The causes of crime increases can often be isolated, with a small number of key factors at work. The same cannot usually be said of crime declines, typically the result of a combination of social forces and policy choices. In every case examined here, civilian weapons collection was part of a larger reform package, typically including gun control (such as purchasing restrictions, changes in the right to carry arms, and gun registration) and better law enforcement. Community activism and demographic change (an ageing population) often were at work as well. Further clouding our understanding of the specific role of civilian collection and destruction, all the cases examined here involved only partial measures. Most eliminated only a small proportion of the country's total civilian arsenal.

For want of systematic data on any but the most ephemeral aspects of crime gun seizures, this section relies instead on careful examination of five prominent experiences: Australia, Britain, Brazil, the Solomon Islands, and South Africa (see Table 5.2). Although the sample is small, these cases suggest that elimination of roughly 20 per cent of a country's civilian inventory may be entirely feasible financially and politically. Of a global civilian inventory of some 650 million guns, this amounts to at least 120 million readily suitable for collection and destruction.³ Whether such actions are thought worthwhile, however, is typically determined by local circumstances. The distinctiveness of each case is striking, none more so than that of China. Chinese economic and social statistics are often received sceptically, complicating interpretation (Small Arms Survey, 2002, pp. 94–96). The Chinese example noted in Tables 5.1 and 5.2 is huge and has been emphasized by officials, but it is not examined further here. While none of these cases proves that weapons collection was instrumental in reducing armed violence, most were followed by such a reduction. More broadly, even if it is not possible to confirm exactly what disarmament measures have accomplished, it is clear that in no case reviewed here was disarmament progress associated with an increase in firearms homicide. Only in Britain was weapons collection followed by deteriorating social stability ('anti-social behaviour'), and this remains small by international standards (ASB, 2003). Although methodological barriers make it difficult to prove exactly how much disarmament helped in these cases, none suggest it led to an increase in the number of deaths.

Table 5.2 Examples of major civilian collection programmes

Country	Registered civilian guns	Est. total civilian guns ^a	Destroyed	Years	Proportion destroyed
Australia	3,200,000	3,900,000	713,000	1997-2003	18%
Brazil	3,688,506	15,000,000	748,177	1998-2005	5%
China	680,000	40,000,000	4,000,000	1996-2006	10%
Solomon Islands	n/a	3,520	3,714	2003-04	106% ^c
South Africa	3,737,676	5,950,000	442,337 ^d	2001-05	7%
United Kingdom ^b	1,934,633	3,700,000	162,198	1997-98	4%

Notes:

^a Estimated total civilian guns before destruction.

^b United Kingdom data here refers only to England, Scotland, and Wales.

^c The number of weapons in the Solomon Islands was underestimated; more were destroyed than previously thought to exist.

^d The South African disarmament total subtracts 88,640 decommissioned police weapons (Gould et al., 2004, p. 243).

Sources: Australia: Chapman et al. (2006, p. 365); Lee and Suardi (2008, p. 23). Brazil: Dreyfus and Nascimento (forthcoming). China: Parker and Cattaneo (2008). Solomon Islands: AP (2004); Muggah and Alpers (2003). South Africa: Lamb (2008, p. 20); Gould et al. (2004, p. 243). United Kingdom: UK Parliament (1999). Other data: Small Arms Survey (2007a, ch. 2, app. 3).

Box 5.3 Coercive disarmament and the mistakes of others

Governments struggling to impose control over parts of their territory may see forced disarmament as the best solution to their problems. Actual experience, however, suggests otherwise. *Compulsory disarmament*—legally mandated and regulated—can be highly effective when the preconditions discussed earlier are met. This approach is different from coercive disarmament, which relies on the threat or use of state force. The risks of *coercive disarmament* have been shown repeatedly in north-east Africa, where heavily armed tribesmen and former militiamen are a powerful force.

The trans-border region of Ethiopia-Kenya-Sudan-Uganda has long been unstable due to migratory lifestyles of major cattle herding tribes (the Karimojong, Pokot, Toposa, and Turkana) and their tendency for 'predatory expansion' (Mburu, 2007, p. 71). Persistent drought and acquisition of automatic rifles, both intensifying in the mid-1990s, aggravated traditional instability. Guns increased the risks of raiding and cattle theft but also the potential rewards for such crime (Leff, 2007). The result is a classic arms spiral; gun ownership no longer assured individual security, but disarmament was too risky in the absence of sufficient state power. Instead, disarmament was imposed in all these countries to restore state authority and regional stability.

In southern Sudan, disarmament of civilians has been used repeatedly in an effort to consolidate the authority of the Sudan People's Liberation Army-led government and to promote stability, but the results vary. The most controversial events occurred in 2006, though accounts are complex and confusing. Local observers regarded some aspects of the disarmament of rival militias in Jonglei state as relatively successful. Although described as 'voluntary', the most successful were organized on a command basis through local chiefs. This yielded roughly 3,300 weapons, many of good quality. Other elements of the programme were disastrous, provoking military resistance from the White Army and the Lou Nuer tribe. Although roughly 1,400 small arms and light weapons were seized in this part of the process, it led to widespread fighting, with hundreds of deaths and serious dislocation (Small Arms Survey, 2007b, pp. 4-5). Research in Jonglei by the Small Arms Survey shows a substantial decline in criminal victimization since the peace process and disarmament. In various Jonglei regions, 76.4 to 84.0 per cent of survey respondents report feeling more secure or about the same, while 12.4 to 18.1 per cent report feeling less secure (Garfield, 2007, pp. 28-29).

There is nothing new about disarmament in the Ugandan region of Karamoja: James Bevan records nine campaigns from 1945 to 2007. As a response to chronic Karimojong attacks on neighbouring tribes, the highly publicized 2001-02 campaign was intended to restrain Karimojong power. More than 10,000 firearms were seized, roughly one-quarter of the estimated Karimojong arsenal. But the heavy-handed campaign turned the Karimojong from government supporters into enemies, a situation that further deteriorated when the Ugandan Army withdrew from the region in 2002. Another campaign by the Ugandan Army to restore order and take Karimojong weapons in 2005-06 achieved few positive results (Bevan, 2008a, pp. 54-60).

In all these cases, coercive disarmament initially was seen as an instrument for restoring the authority of the state and rule of law. Yet experience reveals that there are no shortcuts to nation-building. While collecting unwanted guns such as those found in unguarded village caches in north-east Africa contributed to security, taking weapons from groups still convinced of their vulnerability had the opposite effect. Studies by the Small Arms Survey conclude that disarmament works best when preceded by restoration of state authority, not the other way around (Bevan, 2008a, p. 18; Leff, 2007, p. 5; Garfield, 2007, p. 38).

A radically different critique comes from US gun advocates who embrace the Karimojong as fellow victims, wrongfully stigmatized because 'for countless generations, cattle rustling has been a traditional . . . pursuit' (Kopel, Gallant, and Eisen, 2008, p. 38). Even this perspective does not dispute that proliferation of automatic rifles dramatically worsened tribal violence in north-east Africa. Nor do its advocates offer evidence that additional guns will have a positive effect. The only promising solution appears to be state-building and restoration of the rule of law to suppress cattle theft, prior to consensual disarmament.

Australia

Not only did Australia enact one of the proportionately largest civilian firearms collection and destruction schemes ever attempted, but it also has become the centre of an important debate on its effectiveness.

Firearms licensing and registration was established in the 1970s, but laws were permissive and had little effect on the country's gun culture, which permitted ownership of military-style weapons, although handguns were more regulated. Change came after a series of mass killings that began in the 1980s and culminated in the Port Arthur



Weapons are stacked in Sydney, Australia, having been handed over on the last day of the firearms buyback and destruction programme, September 1997. © Megan Lewis/Reuters

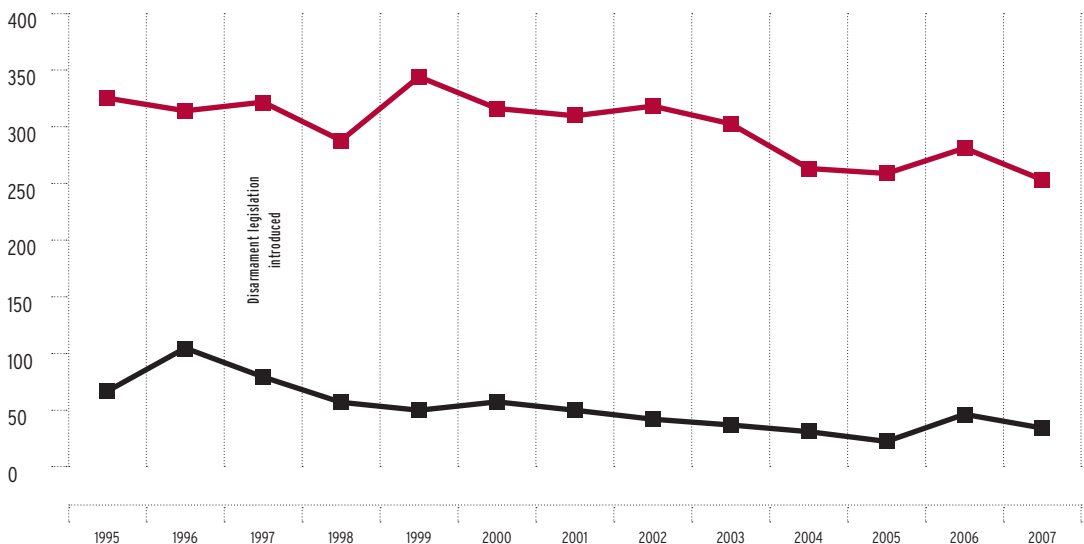
massacre of 28 April 1996, when a lone gunman murdered 35 people and wounded 18 more (Chapman and Alpers, 2006). The major legislative response was Australia's 1996–97 National Firearms Agreement, which bans civilian ownership of automatic and semi-automatic rifles and shotguns. The subsequent buyback and destruction programme eliminated 643,726 semi-automatic rifles, pump-action shotguns, and other unwanted firearms, bought back from their owners at market value (Reuter and Mouzos, 2003). A second campaign was launched after an incident on 21 October 2002 at Monash University of Melbourne, in which a gunman killed two people and wounded five. The National Handgun Buyback, which ran from July to

December 2003, collected and destroyed 70,000 handguns, for a total of more than 713,000 firearms surrendered in all (Lee and Suardi, 2008).

Figure 5.1 **Homicide in Australia, 1995–2007**

■ All homicides ■ With firearms

NUMBER OF HOMICIDES



Sources: 1995–97: Chapman et al. (2006, p. 369); other data: ABS (2008, p. 9)

The impact of these measures has been the subject of extensive research and intense debate. Death from homicide and suicide had already been declining in Australia and continued after weapons destruction was done, sparking a major dispute over the effect of the initiative (see Figure 5.1). Did partial disarmament actually reduce gun crime or suicide? The total scale of the reforms was not small, eliminating roughly 20 per cent of the firearms held by the country's civilians, if one accepts the estimate of a total of 3,900,000 civilian guns before disarmament (Chapman et al., 2006; Small Arms Survey, 2007a, app. 3). Australian gun ownership advocates prefer an estimate of four to six million, which would dilute the relative size of the collection programme (Christie, 1999).

The debate has continued for more than a decade, making this the most sustained and focused gun policy dialogue outside the United States. The clearest effect is the total elimination of *mass* murders. Between 1979 and 1996, Australia endured 13 mass shootings, each causing at least five deaths. In these events, 112 people were shot dead and at least another 52 were wounded. There have been no comparable incidents since 1996 (Chapman et al., 2006). The rate of firearms homicide and suicide has also continued to decline. Some observers argue that by removing one-fifth of the country's firearms, including much of the public inventory of its most destructive types, these measures accelerated an existing trend. The same analysis stresses the impact on suicide, especially the 70 per cent drop in the rate of male firearm suicide between 1997 and 2003. In absolute terms, it fell from 3.1 to 1.8 per 100,000 (Chapman et al., 2006).

Other researchers have challenged these findings, noting the lack of strong causal models or correlation. Any effect, they maintain, is largely coincidental, the apparent result of more fundamental changes in Australian society, or dumb luck (Baker and McPhedran, 2007; 2008). Others note more charitably that any statistical impact of partial disarmament may well be masked by continuing trends of declining murder and suicide rates (Lee and Suardi, 2008). Australian and British statistical analyses are complicated by the low level of homicide, which magnifies otherwise inconsequential annual variations (Neill and Leigh, 2007). Even after allowing for such uncertainty, though, this review supports the conclusion that the effects of partial disarmament in societies such as Australia and Britain are real but small. Others note the rising use of handguns in homicides and suicide, a new development that might undo some of the gains of the previous decade (Davies and Mouzos, 2007, p. 2). A middle perspective concludes that the debate probably cannot be resolved, but 'to the extent that this evidence points anywhere, it is towards the firearms buyback reducing gun deaths' (Neill and Leigh, 2007, p. ii).

Brazil

The specific role of civilian weapons collection is difficult to isolate from the broad constellation of factors commonly associated with the decline of social violence in Brazil. It was one dimension in a renaissance of community-based social activism, more systematic



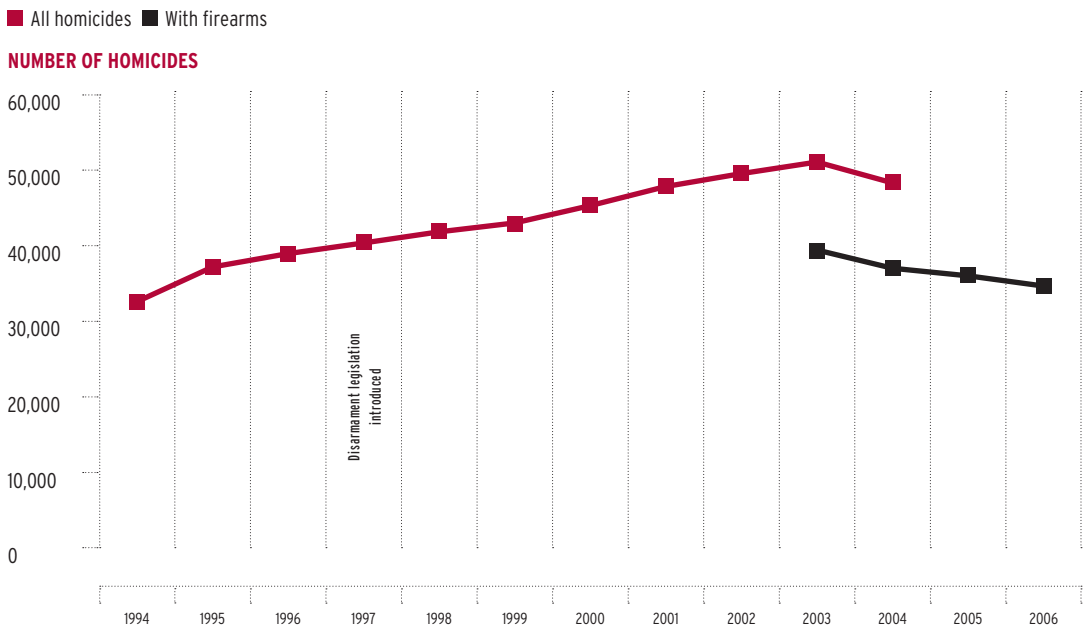
Rifles and assault guns are burnt in Rio de Janeiro, 6 July 2003, as part of an event involving the destruction of 4,000 firearms. © Antonio Scorza/AFP

integration of official policy and community needs, and improved law enforcement. Buttressing this was the introduction of civilian arms control in 2003 and disarmament measures in 2004. These changes coincide with a marked decline in homicide, and particularly gun homicide. Although civil violence remains high by any standard and the decline should not be exaggerated, Brazil has lost its rank among the world's most deadly societies.

A virtually unrestricted gun culture—along with organized crime and police corruption—was a major force behind the steady deterioration of public security in the 1980s and 1990s. Brazilian cities became some of the most violent places on earth. Between 1979 and 2003, some 550,000 Brazilians were killed by firearms (Waiselfisz, 2005). Firearms were the overwhelming weapons of choice, figuring in 68.8 per cent of murders. Homicide peaked in 2003, the same year the long-debated firearms Disarmament Law came into effect. The law ended the right to carry weapons, restricted sales, and required registration (Gawryszewski and Mercy, 2004). Although a referendum to ban public gun ownership was decisively defeated, a voluntary turn-in campaign reduced ownership by 460,000 guns (Dreyfus and Nascimento, forthcoming).

In 2004, firearms homicide rates began to decline (see Figure 5.2). In the state of São Paulo, the murder rate plummeted from 36 per 100,000 in 1999 to 11.6 per 100,000 in 2007. In Rio de Janeiro state, the murder rate dropped from a high of 46.1 per 100,000 in 2002 to 39.5 per 100,000 in 2006, according to police figures (Downie, 2008).⁴ Compared to extrapolations from previous trends, the total number of lives saved by declining homicide rates was estimated at approximately 5,563 people in 2004 and roughly 23,961 people between 2004 and late 2007 (De Souza et al., 2007; CS, 2007).

Figure 5.2 **Homicide in Brazil, 1994-2006**



Note: Not all firearms deaths are homicides. According to Waiselfisz (2007, p. 136): 'In 2004 Brazil registered 37,113 deaths under this chapter: 92.1% being homicides; 3.3% suicides; 0.5% accidents involving firearms; and 4% of undetermined intent.'

Sources: CS (2007); Waiselfisz (2007, p. 124)

The exact contribution of weapons collection to these trends is elusive. Most of the weapons destroyed by the Brazilian Army—the agency responsible for small arms destruction—were seized by law enforcement officials during criminal investigations and arrests. According to the officer responsible, the Brazilian Army destroyed 748,177 civilian small arms between 1998 and 2005. These included 253,321 of the 460,000 weapons received through voluntary disarmament from August 2004 to July 2005 (Dreyfus and Nascimento, forthcoming). Reduction of civilian inventories by 460,000 firearms also had the effect of reducing the pool of weapons available for theft. Although causality is difficult to pin down, cautious researchers agree that the decline in gun killing is ‘a fact directly attributable to the disarmament policies implemented that year’ (Waiselfisz, 2007). Other studies stress the importance of improved law enforcement and community initiatives but also conclude that ‘gun control was another important factor in the crime drop’ (Kahn and Goertzel, 2007).

The Brazilian case prompts further qualifications, however. Unlike Australia and Britain, for example, Brazil’s extremely high homicide rates eliminate most problems of trend detection, but not the problem of statistical masking. Moreover, even after a cumulative drop in firearms deaths of 18 per cent, gun crime remains very high by global standards. Improvements are slight for specific groups—above all, poor young men—and particular regions (Ruediger, Riccio, and Britto, 2007). For example, in Recife, Brazil’s most violent big city, the homicide rate declined, but less dramatically, from a high of 58.9 per 100,000 in 2001 to 53.9 per 100,000 in 2007 (Downie, 2008). For Brazil as a nation, losing the status of *most murderous* is an important accomplishment. It is easy to sense the euphoria implicit in the observation of Julio Jacobo Waiselfisz that, ‘for the first time in Brazilian history, we have had three years in which the measures of fatal violence have fallen’ (Downie, 2008). Instead, it is the Venezuelan capital of Caracas that has emerged as the most dangerous city on the continent, with an annual murder rate of 130 per 100,000 residents (Llana, 2008; Romero, 2006).

Great Britain

British gun policy was transformed by mass killings with legally owned firearms.⁵ After the killing of 16 people and wounding of 15 in Hungerford in 1987 by a lone gunman with semi-automatic weapons, legislation banned semi-automatic rifles, pump shotguns, and several other categories of firearm. The killing of 16 primary-school students and their teacher and the wounding of 17 more in Dunblane, Scotland, again by a single gunman with legally owned handguns, in 1996, led to further amendments to the Firearms Acts, prohibiting private ownership of virtually all handguns (Cullen, 1996). The result was some of the strictest gun legislation anywhere and a series of campaigns to collect the banned weapons.

Firearms collection is a regular feature of British gun policy. During the 1988 general amnesty that followed the Hungerford massacre, 48,000 firearms were surrendered (Cusick, 1996). The collection programme mandated under the 1997 Firearms (Amendment) Act only applied to one part of the civilian arsenal: banned handguns. Between 1 July 1997 and 28 February 1998, a total of 162,198 handguns were received by police in England, Scotland, and Wales (UK Parliament, 1999). A general amnesty in 2003 received nearly 44,000



The symbolic destruction of firearms in London, 9 July 2004.
© Alessandro Abbonizio/AFP

Table 5.3 Weapons collection in Britain

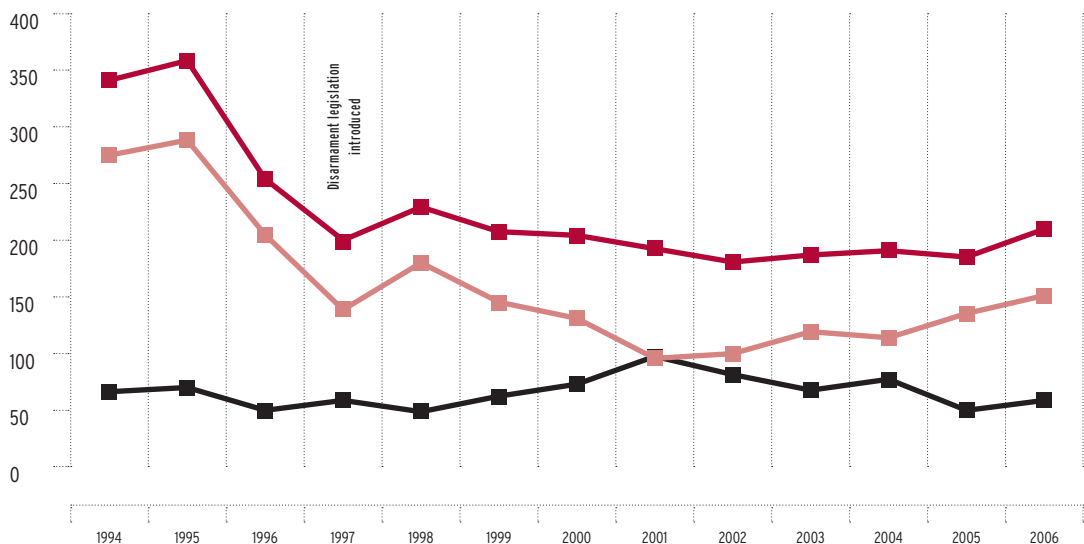
Year	Firearms type	Legal status	Quantity collected
1966	Various	Voluntary amnesty	25,000
1988	Various	Voluntary amnesty	48,000
1996	Various	Voluntary amnesty	20,000
1997-98	Handguns	Mandatory	162,198
2003	Various	Voluntary amnesty	43,908

Sources: Cusick (1996); Hales, Lewis, and Silverstone (2006, p. 7); Hales (2009); UK Parliament (1999)

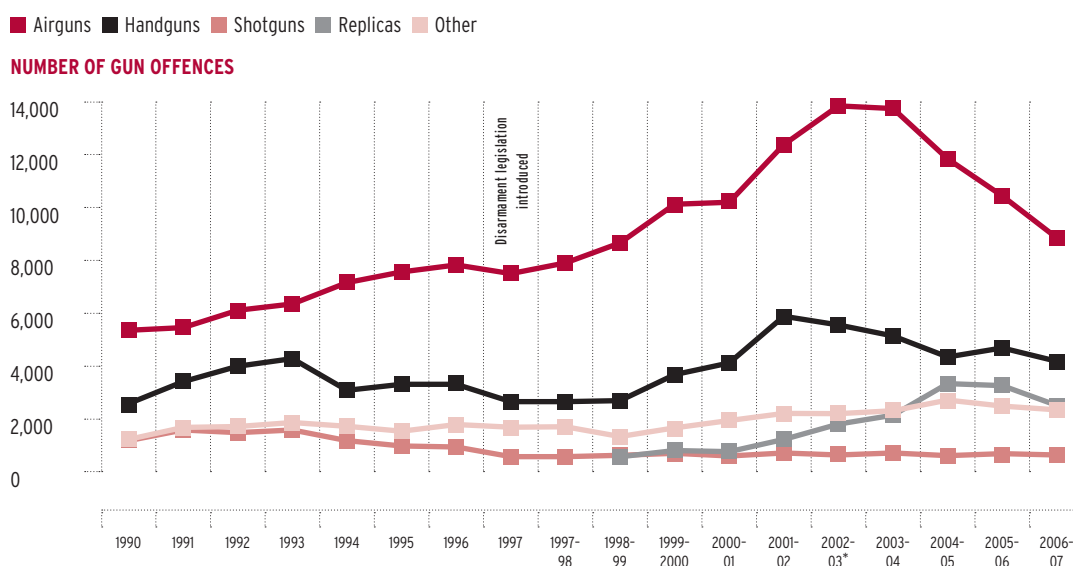
guns (Hales, Lewis, and Silverstone, 2006, p. 7). Many thousands more have been collected through criminal seizures and have often been destroyed. Since 1996, a combined total of approximately 226,000 firearms have been eliminated through such measures (see Table 5.3). The net result is the elimination of virtually all previously legal handguns but a smaller proportion of rifles and shotguns. Of about four million publicly owned firearms held in England, Scotland, and Wales (registered and estimated unregistered) in 1997, about six per cent were removed (Small Arms Survey, 2007a, app. 3).⁶ This was a relatively comprehensive but narrowly targeted campaign, stressing specific types of firearms, mostly registered handguns. Britain destroyed proportionately fewer weapons than most of the countries examined here, but they were the type most suited for crime and domestic violence (Small Arms Survey, 2007a, app. 3).⁷

Figure 5.3 Intentional firearms death in England and Wales, 1994-2006

■ Total ■ Homicide ■ Suicide

NUMBER OF GUN DEATHS

Sources: Kaiza (2008); Povey (2004, p. 49)

Figure 5.4 **Firearms offences in England and Wales, 1990–2006/07****Notes:**

Airguns use compressed gas to propel a non-explosive cartridge.

Replicas include 'softair' guns, such as BB guns.

Other guns include paintball guns, rifles, stun guns, incapacitating gas devices, machine guns, and unidentified guns, among others.

Source: GCN (2007); Kaiza (2008, p. 48)

Gun killings in Britain remain relatively rare. In 2007–08, there were 59 firearms homicides in England and Wales, perpetuating one of the lowest rates in the world (see Figure 5.3). Intentional firearm deaths declined significantly just before Dunblane and have since stabilized, although firearms suicides appear to be increasing (see Figure 5.3). Firearms homicides stand at 0.15 per 100,000, less than half the rate in Finland, one-third that in Switzerland, and one-fifth that in Italy (Squires, Grimshaw, and Solomon, 2008, p. 16). In recent years, guns were used in eight per cent of all homicides (Povey, 2004, p. 1). Yet, since the Dunblane massacre and the 1997 Firearms Act, overall gun crime has increased by one-third, hitting its peak in 2003–04 (see Figure 5.4). This has included a significant increase in the criminal use of imitation firearms and compressed airguns.

Not surprisingly, then, much of the British discussion stresses not murder or violence, but the much broader category of 'gun crime'. The British definition of 'firearm' covers weapons such as air guns, imitations, and replicas that are excluded in most societies. Indicative of the great sensitivity of British society, official statistics also track crimes with imitation and replica guns that might be overlooked elsewhere (Hales, 2006). In a country that bans handguns outright, any possession is criminal (Squires, Grimshaw, and Solomon, 2008). Headlines such as 'Gun Crime Soars by 35%' are often driven by events involving imitations. Crime data may also be inflated by changes in reporting practices and police priorities (BBC, 2003; Hales, 2006, pp. 6, 10; Hales, Lewis, and Silverstone, 2006, p. 115).

A major problem in understanding the connections between British firearms policy and gun crime—even the most serious, such as attempted murder—is imperfect reporting. 'Previous qualitative research on gun crime highlights the fact that even very serious firearms offences, such as attempted murder, may go unreported, particularly if the victim is himself involved in criminal activity'—a problem hardly unique to the United Kingdom (Hales, 2006). Limits in official reporting mechanisms also preclude clear determinations of the proportion of crimes committed with legally

owned or illicit, unregistered guns (Coaker, 2007).⁸ A further irony of the Dunblane legislative reforms is that they coincided with an apparent smuggling boom, partially fuelled by the end of war in Bosnia and Herzegovina (Bryan, 2004; Gallagher, 2004). In general, however, little is known about the numbers and sources of British crime guns.

The effects of the legislative changes on murder, armed violence, and broader gun crime remain unclear. It is certainly possible that the post-Dunblane reforms have suppressed gun theft and criminal use, sparing the United Kingdom even worse problems of gun proliferation, but this remains unproven. Foreign smuggling, use of air guns and replicas, and unreported theft all appear to be important elements of the 'gun crime problem', but no firm evidence reveals how much any one element contributes (Summers, 2007). Despite the seriousness of such questions, there is no discussion in the United Kingdom comparable to Australian debates on the effects of its 1997 Firearms Act. There is less statistically based research as well. This is probably a measure of a stronger national consensus on

current policy and commitment to tight controls on ownership. More attention is devoted to the question of how to deal with gun violence among the worst-affected social groups, especially gangs and ethnic minorities.

Solomon Islands

While the other cases considered here focus on criminal violence and suicide, the Solomon Islands endured outright warfare. Although isolated and small (with a population of 581,318), this situation points to basic problems of managing civilian armaments in post-conflict environments. The example is especially relevant to other countries afflicted with high levels of post-conflict violence.

The problems of post-conflict environments are well known: a potentially poisonous mix of weak institutions, insecure and vulnerable populations, and plentiful reserves of weapons and ammunition. As instruments acquired for military dominance are turned to factional, sectarian, and criminal purposes, the level of armed violence previously associated with warfare can be sustained for years or can even increase (POST-CONFLICT SECURITY). The most common mechanism for dealing with post-conflict situations is DDR. But, as shown



Jimmy Rasta, commander of Solomon Islands militia, turns in weapons and ammunition on 15 August 2003. © Reuters

below, this is best for symbolic disarmament designed to reassure former enemies of peaceful intentions, not for the sustainable removal of large quantities or proportions of lethal equipment (Geneva Declaration Secretariat, 2008). By the time conditions were ripe for disarmament in the Solomon Islands, warring groups had largely evaporated, and the issue had become post-conflict crime suppression and civilian weapons collection.

The conflict that broke out in December 1998 had its roots in tensions between the native Gwale of Guadalcanal and Malaitan migrants. The Guadalcanal Revolutionary Army (also known as the Isatabu Freedom Movement) began attacking Malaitans, provoking large-scale displacement and the emergence of the Malaita Eagle Force (Fraenkel, 2004; Moore, 2004). The conflict continued until July 2003, when Parliament welcomed intervention by a Commonwealth force of 300 police and 1,800 soldiers from 15 countries led by Australia. The Regional Assistance Mission to Solomon Islands is a long-term, well-funded intervention that has been cited as a model for other stability-building initiatives (Dobbins et al., 2008).

Assuring security was the most immediate goal. There was no formal DDR element, although in July 2002 and July 2004 the UN Development Programme helped retrain more than 1,000 police special constables, most of whom were recruited from former armed groups (Dobbins et al., 2008, p. 188). Disarmament of civilians—mostly former militiamen—was a prominent element of the intervention. The option had been considered before, leading some critics to inveigh against ‘the madness of civilian disarmament in the South Pacific’, which they predicted would lead to Rwanda-like genocide (Kopel, Gallant, and Eisen, 2000). The actual results were very different. With security assured, disarmament was widely accepted and reinforced the end of armed violence.

A total of 3,714 firearms were received in response to a series of appeals from 2003 to 2004 (Llewellyn, 2004). This was more than the total number of weapons previously estimated in the country, as shown in Table 5.2 (Muggah and Alpers, 2003). This example demonstrates both the conservatism of conventional estimating procedures and the problems they can cause by underestimating the weapons to be collected. Even with participation levels that were higher than expected, the programme left an unknown number of weapons available, including hundreds of military rifles.⁹

The Solomon Islands did not endure the precipitous rise in post-conflict violence all too common elsewhere. Studies stress the importance of disarmament, among other factors, in the virtual cessation of armed violence. In that regard, the islands compare favorably to cases such as those of the Democratic Republic of the Congo, East Timor, or Haiti, where removal of weapons has proven very difficult, making any outburst of tensions potentially dire (Muggah, 2009). Yet the Solomons have reportedly seen new security problems, such as an increase in crocodile attacks, which now requires action from officials instead of armed civilians (ABC, 2003; AP, 2004; Dunnigan, 2004). The greatest test of disarmament and security building was the civil unrest of April 2006, following highly contested elections. The resulting political instability and rioting showed the Solomon Islands remain far from fully peaceful. Nevertheless, the situation has been managed without a resumption of deadly violence, evidence that disarmament may have inhibited escalation to fatal violence.

While the Solomon Islands are the primary example of civilian post-conflict disarmament examined here, it is in many respects too distinct for easy comparison. The Solomons are, above all, small and insular; import of large quantities of arms and ammunition is more difficult than for many other places. They also had the advantage of a large and sustained intervention by an international peacekeeping force, undoubtedly instrumental in ensuring security and political stability.

The Solomon Islands did not endure the rise in post-conflict violence common elsewhere.

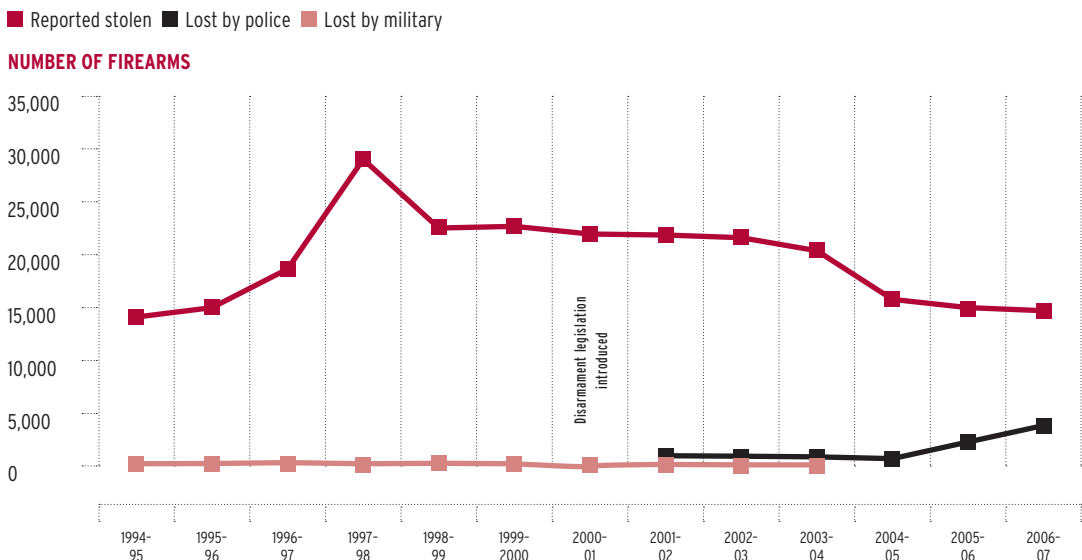
South Africa

After the Solomon Islands, South Africa has enacted the most ambitious disarmament measures of the countries examined here, eliminating surplus military, law enforcement, and civilian weapons in roughly equal quantities. All potentially contribute to the decline of violence, but the impact of such programmes in South Africa seems weaker than in other cases considered here.

The role of poorly controlled state arsenals is especially relevant in South Africa. In some cases, the connection between state arsenals and civilian effects can be overwhelming, as illustrated by the experiences of Afghanistan, Albania, Iraq, Somalia, and Uganda (Bhatia and Sedra, 2008; Bevan, 2008a). In South Africa, the flow is less extreme but nonetheless consequential. Leakage from the armed forces and law enforcement appears to be an important source of crime guns. Theft or loss of well over 2,000 law enforcement and military firearms is reported annually, including many of the most powerful small arms released into South African society (see Figure 5.5). In 1994–2003, a total of 208,090 firearms were reported lost or stolen from civilian owners (Gould et al., 2004, p. 201). Actual theft is undoubtedly greater, since owners of unregistered weapons must be cautious about reporting.

South African civilian gun policy reform began in the early 1990s, responding to rising concern over easier access to guns and apparent changes in society, most visibly higher crime, including homicide. Between 1995 and 1998, the proportion of all murders committed with firearms increased from 41.5 to 49.3 per cent (Hennop, Potgieter, and Jefferson, 2001). This percentage appears to have increased since, but a lack of disaggregated crime data since 2000 makes it impossible to categorize murders by the immediate cause of death. The causal impact of better gun control and partial disarmament is difficult to evaluate, although it is associated with declining violence (Lamb, 2008, p. 2).

Figure 5.5 **Reported firearms theft and loss in South Africa, 1994–2007**

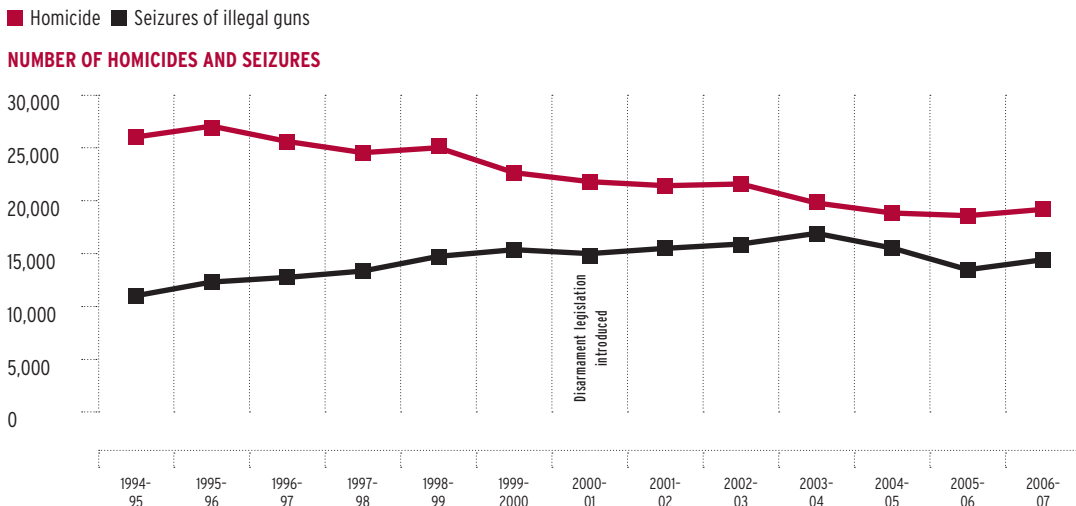


Sources: Civilian losses: Lamb (2008, p. 8). Police losses: Lamb (2008, pp. 12-13). Military losses: Gould et al. (2004, p. 158)

Continuous gun amnesties, turn-ins, recoveries, and seizures became prominent, framing attitudes and expectations. Some of the most publicized focused on suppression of gun trafficking from neighboring Mozambique—reportedly the origins of many illegal guns—but, in recent years, attention shifted to the illegal and unwanted guns of South Africa itself. The most important reform was the 2000 Firearms Control Act. It introduced new requirements for firearms licensing, ended automatic licence renewal, and required secure storage. After four years of negotiations to complete regulatory aspects, the Act came into effect in July 2004. Implementation has been controversial, especially among gun owners who complain of inadequate support for licensing and registration. Weapons collection has been among the most visible aspects of implementation, with major turn-in campaigns accelerating the collection of unwanted guns. An amnesty in 2005 elicited more than 100,000 firearms, handed in without financial compensation (Kirsten, 2006).

The South African Police Service reports that it has destroyed a total of 530,977 guns since 2000. This is in addition to 271,867 small arms destroyed by the armed forces and far in excess of the 42,642 civilian guns reported as destroyed in the country's reports to the UN (Lamb, 2008, p. 20; see Table 5.1). There is some confusion about exactly whose guns these were, though. Police destruction seems to include 88,640 decommissioned police firearms (Gould et al., 2004, p. 243). The weapons destroyed more recently in routine disarmament ceremonies appear overwhelmingly civilian. These include military or police weapons that were apparently received or seized from civilian owners (van Lill, 2006). In all, weapons collection has probably reduced South Africa's total civilian arsenal by some 440,000 guns (Lamb, 2008, p. 20).¹⁰ Better law enforcement reinforces further disarmament, shown by declining gun theft, with the curious exception of theft and loss from police (see Figure 5.5). Sustained disarmament by all sectors of South African society—civilian and state—has corresponded with a decline in homicide. Lack of comprehensive data on gun homicide and other crime leaves considerable uncertainty, but trends appear to indicate declining firearm homicide rates (see Figure 5.6).

Figure 5.6 **Homicide and seizures of illegal guns in South Africa, 1994-2007**



Source: Lamb (2008, p. 2)

THE STATE: CUTTING NATIONAL ARSENALS

Disarmament policy of donor governments and international institutions stresses destruction of surplus small arms, light weapons, and ammunition held by state militaries (Courtney-Green, 2008; Kryvonos and Kytömäki, 2008).¹¹ This tendency might seem surprising, since civilians have most of the world's firearms. As noted in previous editions of the *Small Arms Survey*, there are at least 875 million firearms in the world today, with roughly three-quarters of these in civilian hands. This translates as 650 million civilian, 200 million military, 26 million law enforcement, and fewer than 1 million insurgent firearms distributed around the world (see Figure 5.7; Small Arms Survey, 2007a, p. 43). State surplus destruction, rather, is most valuable for reducing costs and the risk of depot explosions, illicit diversion, or irresponsible transfers to regions in conflict.

The quantitative dominance of civilian firearms inventories, while real, is exaggerated by the unique contribution of the United States, where private owners control roughly 270 million firearms (Small Arms Survey, 2007a, p. 39). When the United States is dropped from the totals, a more balanced view emerges of typical distributions across the rest of the world (see Figures 5.7 and 5.8). From this perspective, civilians still have the most firearms, but military inventories rise from one-quarter to one-third of the global total. Private and state inventories are evenly matched in many countries, and the armed forces almost always control more powerful small arms, as well as light weapons rarely seen anywhere in civilian hands. Of the 200 million modern military firearms worldwide, at least 76 million are surplus, priority candidates for destruction (Small Arms Survey, 2008, p. 77). By this standard, then, official arsenals are neither puny nor inconsequential, with a rightful place on the international disarmament agenda.

Although their firepower is often greater, military weapons are, in a sense, less destructive than their civilian counterparts. Of the estimated 300,000 gun deaths every year, at least 60 per cent are homicides and suicides unrelated to armed conflict or crime (Wille and Krause, 2005). While almost two-thirds of all homicides are committed with firearms, most are the result of crime—including domestic violence—and not warfare (Geneva Declaration Secretariat,

2008, pp. 9, 67, 69). Of course, military small arms are exceptionally dangerous in other ways. Not only are they generally more powerful than civilian or law enforcement weapons, but they also tend to be the only small arms that are routinely stockpiled. Militaries are ideally positioned to collect and ship tens of thousands of rifles overnight. History has repeatedly shown how military surpluses, delivered to sensitive locations, can instantly bring down a government, plunge a country into civil war, or otherwise transform conflict. Other people's surpluses were crucial in recent wars in Liberia and Sierra Leone and help perpetuate armed conflict in the Democratic Republic of the Congo and Somalia today (HRW, 2003;



A Kalashnikov rifle is destroyed in Ukraine as part of a NATO-sponsored project to eliminate 1.5 million excess Ukrainian military firearms and 133,000 tons of ammunition, January 2007. © Sergei Supinsky/AFP

Figure 5.7 **Global small arms distribution, with the United States, 2007**

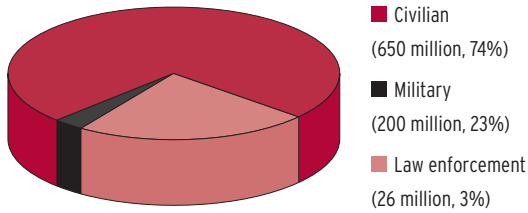
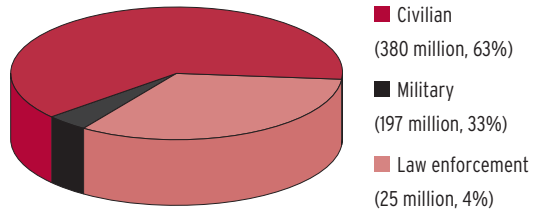


Figure 5.8 **Global small arms distribution, without the United States, 2007**

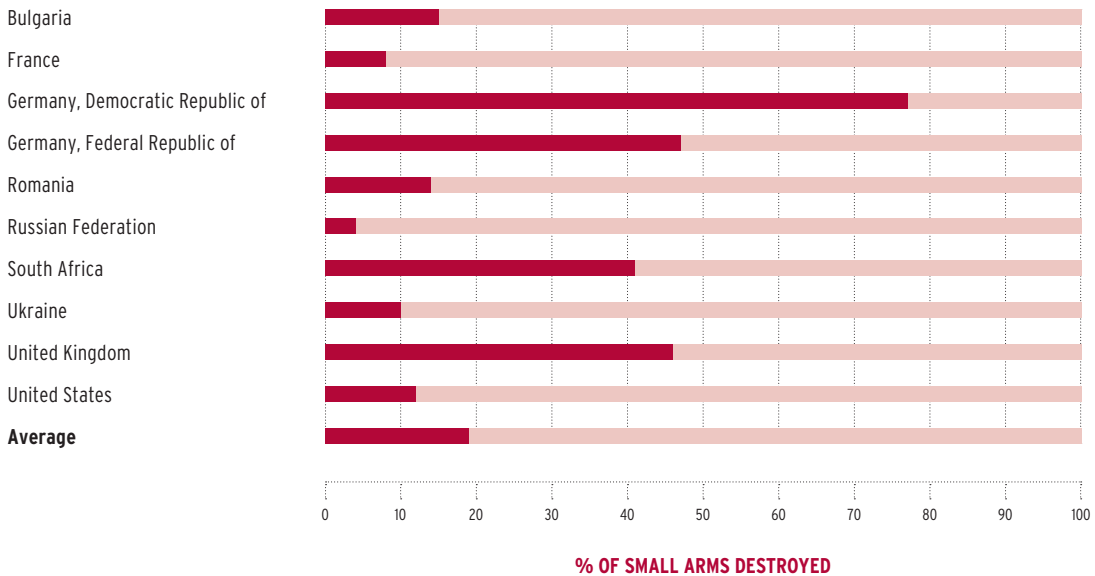


Sources: Small Arms Survey (2006, ch. 2; 2007a, ch. 2)

UNSC, 2008, pp. 33–36). State disarmament is the sensible alternative to long-term storage, uncontrolled diversion, and irresponsible transfer abroad.

Military small arms, light weapons, and ammunition are handled very differently from other disarmament candidates. A distinctive characteristic of small arms disarmament is the lack of treaty obligations. Unlike other forms of state disarmament, small arms destruction is neither reciprocal nor managed through bilateral or multilateral arrangements. None of the examples of state disarmament shown in Figure 5.9 involved one country destroying part of its small arms inventory on the condition that another do the same. These were all unilateral, national decisions. Some states received foreign support—such as Bulgaria, Romania, and Ukraine—but pressure from donors appears to have

Figure 5.9 **Selected state military small arms disarmament, by proportion destroyed**



Notes: This graph is based on figures for completed destruction only, not planned. Destruction in the German Democratic Republic does not include about 304,000 former small arms that were transferred abroad (Beeck, 2008, p. 60). Destruction in the Federal Republic of Germany includes a total of 2,155,892 destroyed, minus 1 million counted as destruction in the GDR (Germany, 2008, p. 21; Beeck, 2008). US totals include 3,054,553 in 2005 inventories plus the destruction of 830,000 firearms and the known foreign transfer of 1.2 million weapons since 1990. Additional US weapons were estimated statistically. The average is calculated by dropping statistical outliers.

Sources: Germany: Germany (2008, p. 21); Beeck (2008). Romania: Faltas (2008, p. 95). Estimates: Small Arms Survey (2006, ch. 2, pp. 44, 46).

been minimal. The UN *Programme of Action* and several regional instruments commit states to dispose of and (preferably) destroy surplus, but the practical role of donor governments and multilateral institutions is encouragement and help. These processes lack the classic signifiers of disarmament progress: there are no international summits, treaty-signing ceremonies, or generous media attention. DDR programmes aimed primarily at non-state actors, examined below, are much closer to those traditional models.

Although state disarmament tends to be domestically driven, it produces significant results. The destruction projects shown in Figure 5.9 are among the best-publicized cases. They demonstrate the freedom of states to destroy very large proportions and absolute quantities of weapons. Based on such experiences, the destruction of roughly 20 per cent of any country's small arms and light weapons arsenal is typically possible, and 40 per cent or more in many cases, a finding that confirms similar conclusions achieved through analysis of military doctrine (Small Arms Survey, 2008, p. 77).

Disarmament alone minimizes the cost and dangers of weapons and ammunition storage. Surpluses arise when military requirements change, eliminating any clear need for the equipment. While surpluses can be stored, this is problematic over the longer term. The dangers of ammunition storage are made clear enough by the reality of catastrophic depot explosions. Surplus weapons do not explode but may be lost or stolen—especially if stockpile security is weak, as it often is for surplus equipment. Disarmament alone minimizes financial cost and the dangers of poorly supervised weapons and ammunition, especially depot catastrophes, pilferage, and illegal diversion (Bevan, 2008b).

WAR: DISARMING NON-STATE ARMED GROUPS

Disarmament, demobilization, and reintegration may be the most rigorously studied aspect of small arms disarmament. It is far and away the most visible and best funded. More than 60 programmes have been launched since the late 1980s (Muggah, 2009, p. 6). As of 2008, at least 19 internationally sponsored DDR projects were in progress, involving some 1.1 million participants, with combined budgets of \$1.6 billion (Caramés and Sanz, 2008, pp. 1–2). This is roughly 25 times the total amount allocated in any one year for destruction of state small arms, light weapons, and ammunition surpluses (Karp, 2008).

While most research on conflict termination and post-conflict reconstruction stresses problems of successful reintegration of former fighters, this section focuses on the narrow issue of disarmament in DDR. Why is there a *disarmament* element in DDR? To be sure, DDR is always a broad programme and should not be judged by one component. Nor should any component be unevaluated. As shown here, the cumulative effect of disarmament on the arsenals of insurgent groups is often dubious. Yet disarmament remains a foundational element of international efforts to bring fighting to a close and restrain resumption of armed conflict. Disarmament of non-state combatants may not collect most insurgent weapons, nor their best weapons, but it is associated with many of the most successful examples of conflict resolution. Why is disarmament so important in this context?

Conceptual approaches

The greatest barrier to evaluating the role of disarmament in DDR is the sheer diversity of such projects. Unlike other forms of international disarmament, regulated through a single treaty such as the 1993 Chemical Weapons Convention or the 1997 Ottawa Convention banning anti-personnel landmines, DDR is a set of practices adapted to the unique

characteristics of each situation. Its harshest critics focus exclusively on DDR failures—of which there are many—and ignore its numerous successes (Kopel, Gallant, and Eisen, 2008; Malcolm, 2005). Such criticism overlooks the typical complexity of human conflict. Just as disarmament cannot ensure sustainable peace by itself, so it almost always is too limited to cause the worst ills attributed to it, such as vulnerability to genocide. The lessons from actual disarmament experience tend instead to be ambiguous, reflecting the messy reality of post-conflict situations.

Disarmament is regarded as the easiest phase of DDR to implement, more mechanical and self-contained than the more context-dependent demobilization and reintegration. Given the limited quantities and quality of weapons that may be collected in such interventions, it is frequently argued that disarmament is mostly symbolic. This is the core of Colin Gray's biting critique that disarmament works only when it is not needed (Gray, 1992). But symbolic does not mean unimportant. As culturally sensitive writers note, some of the most vicious conflicts have been fought for purely symbolic goals (Diamond, 2005; Keegan, 1994). Some research finds more measurable results, especially reduction in killing; one such study concludes that DDR in Colombia reduced homicides by 13 per cent in areas of operation of demobilized groups, averting between 650 and 2,300 homicides in its first year (Restrepo and Muggah, 2009, p. 43). Others question any effect, arguing that, 'combatants not exposed to the DDR programme appear to reintegrate just as successfully as those that participated' (Humphreys and Weinstein, 2009, p. 49).

Confusion over effectiveness is exacerbated by the multiple goals of many disarmament programmes, in which the specific contribution of disarmament often is poorly articulated or unrelated to other steps in demobilization. According to Béatrice Pouligny, this obscurity is not accidental. Rather,

disarmament is an integral symbolic and practical element of the demobilization process, of which it is often an essential part. Yet it should be noted that disarmament can also take place before, during and after demobilization, and that it can be separate from the latter process. (Pouligny, 2004, p. 5)

The reason lies in the fundamental goal of DDR, which 'is more than just about putting weapons beyond use, but is rather about changing attitudes' (Pouligny, 2004, p. 5). From this perspective, the disarmament element of DDR serves no inherent purpose; the real function of the overall programme essentially is veterans support for rebels (Peake, 2009). Others stress the empirical benefits of post-conflict disarmament. In Pouligny's words, 'when disarmament is not undertaken . . . small arms frequently reappear in acts of organized and spontaneous violence. They constitute genuine threats to international, regional and domestic security' (Pouligny, 2004, p. 14). Others, like Robert Muggah, maintain that disarmament is most useful as a measurable index of performance in otherwise nebulous environments where outcomes are poorly documented; the number of guns is easier to measure than ethnic or sectarian tension (Muggah, 2006, p. 197).

Disarmament's role in DDR may be largely symbolic. But even limited arms collection and destruction can help promote conflict resolution. Strategic theory stresses the importance of reciprocal arms limitations for confidence building, persuading participants of the safety of further détente and cooperation, vital in all armed conflicts (Spear, 2006, p. 173). The symbolic power of disarmament also contributes to the transformation of social priorities and expectations, suppressing the visibility and importance of weapons in post-conflict affairs. Although they often are hard to measure, the practical effects should not be discounted. Experience with disarmament of combatants within ongoing armed conflicts shows that all sides often can agree on the mutual benefits of specific forms of disarmament activity (see Box 5.4).

The lessons from disarmament experience tend to be ambiguous, reflecting a messy post-conflict reality.

Box 5.4 Disarming before peace?

The greatest disadvantage of the DDR paradigm is that it postpones disarmament until the end of an armed conflict. The parties to a conflict agree to DDR, in other words, because they are done fighting. While this is the best-funded and most prominent approach for dealing with insurgent armament, there are alternatives.

An important option is going directly to the armed groups, before or independently of any peace settlement. This is often controversial; it can mean abandoning rhetorical commitments not to bargain with terrorists. And it can be sensitive; groups confronted with requests to disarm too early may abandon negotiations altogether (Hottinger, 2008). But there are important precedents to build upon. As in many other aspects of small arms policy, an illustrative path was staked out by work on landmines. The most active NGO in this field, Geneva Call, reports agreements to ban anti-personnel mines with 35 non-state actors (NSAs) (Geneva Call, 2008, p. 4). Other organizations, most prominently the Danish Demining Group and Landmine Action, have led actual destruction of NSA landmine stockpiles. In Iraqi Kurdistan, Mine Advisory Group and Norwegian People's Aid are assisting 'the world's largest indigenous mine action (destruction) programme' (Geneva Call, 2008, p. 28).

Landmines are covered by a global ban. The prospects for small arms are different since they are not the subject of an international prohibition. They also constitute the military mainstay of virtually all insurgent forces. Even advocates are cautious:

engaging armed groups on a total ban on small arms would be asking them to come to the negotiation table and eventually to renounce the armed struggle. . . . NSAs will not surrender small arms before peace has been achieved. (Sjöberg, 2007, p. 35)

This may exaggerate the barriers; for non-state actors, disarmament does not mean giving up completely, but it probably requires them to accept that they cannot win through force of arms alone. The most promising approach appears to be banning particular categories of small arms, light weapons, and ammunition, those already renounced by most states. Another promising path is opening dialogue on weapons storage, security, and re-transfers (Florquin and Warner, 2008, pp. 21-22).

Even within the counter-terrorist paradigm, there are important disarmament options. The best way to keep a weapon out of terrorist hands, as is often noted in other contexts, is to ban it outright. Although states may not be ready to renounce their own right to such weapons, outright banning may be the best way to achieve counter-terror goals. Usually, this logic is expressed in the context of nuclear weapons and other forms of weapons of mass destruction. But it can also be applied to specific forms of light weapons. Banning highly accurate munitions such as GPS-guided mortar shells may be politically feasible (Bonomo et al., 2007, p. xix). Other candidates are high-power sniper weapons and MANPADS.



Colombian soldiers watch the destruction of landmines and explosives in Valle del Cauca province, 31 August 2004.
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Empirical insight

Many of these issues can also be illuminated by a look at the evidence. The 45 DDR programmes identified in Table 5.4 have spent almost USD 2.7 billion overall, with the disarmament components yielding more than 430,000 small arms and light weapons. Among the 20 programmes with complete performance data, the cost of removing a weapon, measured against total programme cost, was approximately USD 18,750 each (after dropping outliers). But since it is virtually impossible to separate the disarmament element from demobilization and reintegration, these figures include the complete cost of DDR. Albert Caramés and Eneko Sanz find that disarmament and demobilization are the quickest and cheapest part of a typical programme, estimated to consume 6 to 10 per cent of a total DDR budget (Caramés and Sanz, 2008, p. 2). This suggests disarmament alone costs about USD 1,900 per weapon or less.

In practice, the *most costly* programmes are often *least successful* in disarmament terms. Prominent examples are the Democratic Republic of the Congo, Haiti, and Côte d'Ivoire. The cheapest tend to be those that achieved the most disarmament. There is a logic here: disarmament presumes political accommodation, which reduces costs and greatly facilitates the likelihood of overall success. Large outlays per weapon tend to reveal a programme in trouble.

Much more difficult to evaluate is the *effectiveness* of DDR as a disarmament tool. What proportion of insurgent small arms and light weapons are actually recovered? A straightforward assessment of the data in Table 5.4 suggests the total proportion is relatively low—an average of roughly 14 per cent for factions reporting sufficient data. Although limited, this is not dramatically different from the average for state disarmament of 19 per cent (see Figure 5.9). There are obvious incentives for former combatants to hedge by withholding weapons. This accounts for the well-known tendency for DDR to recover few weapons or rusted metal. In reality, disarmament performance often is much better, although this must be set against the common (but not universal) tendency for non-state factions to inflate their personnel numbers to improve bargaining strength.

With this problem in mind, thresholds of success become somewhat clearer. A review of the examples in Table 5.4 reveals the weakness of current evidence. Despite the breadth of DDR experience, there is a dearth of systematic evidence for comparison or establishing a clear threshold for disarmament success. Several well-

Table 5.4 Summary of disarmament outcomes in 45 DDR programmes

Country	Year(s)	Number of weapons collected	Total programme cost* (USD)	Cost per weapon (USD)	Combatants demobilized	Weapons collected/ combatant	Est. total arsenal**	Proportion collected
Afghanistan	2003-	131,811	141,200,000	1,326	63,380	1.7	101,408	130%
Angola	1991-92	32,731	132,000,000	3,089	134,289	0.3	214,862	15%
	1994-98				115,980		185,568	
	2002-	33,000	184,000,000	5,576	97,390		155,824	15%
Bosnia and Herzegovina	1995-99		8,500,000		400,000		640,000	
	2000-04		17,510,000		22,666		36,266	
	2002-		11,000,000		13,500		21,600	
Burundi	2004-	5,404	87,900,000	16,266	22,688	0.2	36,301	15%
Central African Republic	2004-07		13,100,000		7,565		12,104	
Chad	2005-				9,000		14,400	
Colombia	2003-06	18,051	302,600,000	16,763	31,761		50,818	36%
Congo, Democratic Republic of the	2004-	2,332	208,000,000	3,355	124,059	0.1	198,494	1%
Congo, Republic of the	2000-03	1,776	17,000,000	1,443	10,100	1.2	16,160	11%
Côte d'Ivoire	2006-	110	150,000,000	1,363,636	981	0.1	1,570	7%
Djibouti	1993-2002		29,900,000		15,000		24,000	
East Timor	1999-2003		12,000,000		1,308		2,093	
El Salvador	1991-96	10,200			38,000	0.3	60,800	17%
Eritrea	1993-97		68,800,000		54,000		86,400	
	2001-06		197,000,000		200,000		320,000	
Ethiopia	1991-96				350,000		560,000	
	2001-05		174,100,000		148,000		236,800	
Guatemala	1996-98	1,818			3,000	0.6	4,800	38%
Guinea-Bissau	2000-05		26,000,000		11,445		18,312	
Haiti	1993-96		8,600,000		5,482		8,771	
	2006-	200	15,700,000	78,500	500	0.4	800	25%



Indonesia	2005-	840	35,000,000	41,667	6,145	0.1	9,832	9%
Liberia	1994-97	10,036	99,300,000	9,894	41,647	0.2	66,635	15%
	2003-06	28,314	91,000,000	3,214	103,019	0.3	164,830	17%
Mali	1995	2,700	2,000,000	741	12,000	0.2	19,200	14%
Mozambique	1992-97	200,000	112,900,000	2,444	92,881	0.5	148,610	135%
Namibia	1989-96		41,200,000		57,000		91,200	
Nepal	2007-	3,475	18,400,000	5,295	19,602	0.2	31,363	11%
Nicaragua-Honduras	1989-2002	17,883	92,000,000	5,145	22,383	0.8	35,813	50%
Niger	1995-06	166	2,400,000	14,458	3,160	0.1	5,056	3%
Philippines	1996-2004		16,100,000		7,500		12,000	
	2006-				0		0	
Rwanda	1997-2001		19,400,000		18,692		29,907	
	2002-		65,500,000		35,367		56,587	
Sierra Leone	1996-2004	56,163	100,000,000		71,043	0.4	113,669	49%
Solomon Islands	2002-04	3,730	1,200,000	322	1,424	2.6	2,278	164%
Somalia	1992-95		1,600,000				0	
	2000-		32,800,000		1,266		2,026	
Sudan	2005-		69,440,000		91,000		145,600	
Uganda	1992-97		43,200,000		36,358		58,173	
	2002-		7,400,000		16,245		25,992	
Totals		560,740	2,655,750,000	18,750	2,516,826		4,026,922	14%

Notes: Blank cells reflect a lack of data.

* Since published budgets rarely disaggregate components, these figures include demobilization and reintegration expenses, usually the most expensive elements of DDR programmes. Blank cells indicate a lack of data, not a lack of activity.

** Estimated at 1.6 firearms per combatant for all countries.

Source: based on compilations by Robert Muggah and Katherine Aguirre for the Small Arms Survey

regarded programmes involved collection and destruction of as little as 15 per cent of estimated insurgent weapons. Other projects were less successful establishing an enduring peace, despite collection of 50 per cent or more. Most striking are programmes collecting more than 100 per cent of the estimated number of combatant weapons—Afghanistan, Mozambique, and the Solomon Islands—a curiosity that underlines the dangers of relying on any estimate of guerrilla forces. In the absence of reliable baseline estimates of total insurgent weapons, it is virtually impossible to analyse disarmament accomplishments. Thus, the preference among many observers is to stress not the number of weapons but security outcomes.

This tendency also reflects the important symbolic role of disarmament in DDR. Traditional security-based approaches view disarmament as an end in and of itself, proof of completion of a process of political reconciliation.

DDR partially reverses this ordering. It uses disarmament less as a goal and more as an incentive for further rewards (Hartzell and Hoddie, 2006, p. 161). Without the transparency or enforcement needed to reassure concerns about cheating (withholding weapons), small arms disarmament cannot assure security by itself. It functions not as an impediment to resumption of fighting, but—like civilian weapons collection—as a confidence-building measure (Spear, 2006, p. 173). Former combatants present their weapons both as an index of individual commitment and as a token of the greater goal of secure demobilization and social reintegration.

DDR planners have been accused of contributing to this haziness by avoiding concrete goals. There is no commonly accepted definition of successful disarmament in the DDR context (Muggah, 2006, p. 198). The DDR community generally does not define success in terms of raw numbers or proportions of weapons recovered. Indeed, criteria for success, much less definitions of success itself, are seldom articulated. Instead, there is a tendency to justify DDR as a process rather than an end-state, with success described alternately as ‘the reduced risk of recurrent armed conflict, the neutralization of potential spoilers, the building of confidence between stakeholders or the promotion of long-term development’ (Muggah, 2006, p. 195). Even when weapons are collected, they may not actually be destroyed. Surrendered weapons and ammunition are typically turned over to the peacekeepers, national armed forces, or police for safe storage or destruction. ‘However, in most countries, there is reck-

Box 5.5 The US Army embraces DDR

If further evidence were needed of the near-universal acceptance of post-conflict disarmament and the increasingly synergistic appreciation of its relationship with security reform, nation-building, and peace-building, it could be found with the United States Army. As recently as 2003, US Army doctrine barely concealed prejudices against counter-insurgency and peace-building, prejudices inherited from the Vietnam War. The legacy of the Weinberger-Powell Doctrine left little sympathy for long engagements and tactical restraint (Bacevich, 2005, pp. 47-52; Nagl, 2005). These attitudes began to change in response to pressure to support state-building and conflict resolution in the 1990s (Dobbins et al., 2005). The challenges of war in Afghanistan and Iraq accelerated this trend. By 2008, disarmament had become a major element of US Army policy for conflict resolution.

In 2003, just weeks before the invasion of Iraq, the US Army published a new field manual for Stability Operations, its principle guidance on what to do after territory is taken. This showed all the disdain for disarmament that might be expected during the Rumsfeld era, when US strategy focused on rapid conquest, not long occupation. The document recognized disarmament only as a ‘typical flash point’ (US Army, 2003, p. 01-14). Its only other words on the subject were to warn commanders that, ‘the mandate may require the (Peace Enforcement) force to disarm or demobilize the belligerent parties. These tasks are complex, difficult, and often dangerous’ (US Army, 2003, p. 03-07). The tone was clear: avoid when possible.

The 2008 version of the guidance, by comparison, is highly sensitive to the imperatives and problems of military occupation and security assistance. Obviously influenced by the experiences of Afghanistan, Iraq, and many less conspicuous missions, it explicitly embraces DDR as an important element of nation-building and devotes considerable space to these issues (US Army, 2008, ch. 6). In a dramatic shift from its predecessor, the document states:

Often the situation requires disarming, demobilizing, and reintegrating personnel associated with armed forces or belligerent groups before and as part of SSR [security sector reform]. Military forces can expect to assume a primary role in disarmament . . . The DDR program is a critical component of peace and restoration processes and is accounted for in initial planning . . . The DDR program is a central contributor to long-term peace, security, and development. (US Army, 2008, pp. 6-5, 6-21)

The US Army approach is distinctive. Its doctrine also implies military ownership or control over programmes more typically associated with UN civilian mandates. But this does not reduce the scale of the change in US thinking. To eliminate any remaining doubt, ‘disarmament’ is also included in a list of ‘New Army Terms’ (US Army, 2008, p. G-3).

lessness and scarce monitoring of the final destinations of surrendered arms. These arms risk diversion in the very region in which they are collected' (Caramés and Sanz, 2008, p. 25).

Even successful DDR programmes often generate limited or disappointing disarmament accomplishments. These include relatively successful cases, such as Colombia, Liberia, and Sierra Leone, where weapons received varied between 15 and 49 per cent (see Table 5.4). Yet, all these countries saw a marked improvement in political stability and greatly reduced armed violence. The limits of DDR disarmament have been exposed more notably in cases such as the Democratic Republic of the Congo, Haiti, and Côte d'Ivoire, where participation was not forthcoming and conflict could not be brought under control. But criteria for success need to be adapted to the situation (Hänggi and Scherrer, 2008). Programmes that are considered weapons collection failures by some, such as that in Kosovo, are successful in the sense that the parties involved have not returned to fighting. This may help explain the unpremeditated embrace of DDR by previously disapproving institutions such as the US Army (see Box 5.5).

Even incomplete disarmament can contribute to political stability and reductions in armed violence.

CONCLUSION

For centuries, the vision of disarmament has tantalized and teased with revolutionary possibilities to transform relations between peoples and governments. The data and examples in this chapter support a more modest understanding of the prospects for small arms collection and disarmament. It should arouse neither 'irrational exuberance', nor dismissiveness or anxiety (FRB, 1996). The experiences recounted here show it is neither a universal antidote for armed violence and political instability, nor, when undertaken with public consent, a threat to liberty and security. Polemics conceal a nuanced reality. Disarmament's contribution may be largely positive—it may even be essential in some situations—but it is rarely sufficient to achieve major improvements in human security by itself.

Recent small arms collection and destruction successes—such as civilian programmes in Brazil and the Solomon Islands; state disarmament in Germany and South Africa; or the disarming of non-state actors in Colombia, Liberia, and Mozambique—were not stand-alone events. Each was a complex, integrated effort. In every case, success truly had many fathers. Similarly, more controversial examples—such as partial civilian disarmament in the United Kingdom, state destruction in the Russian Federation or Ukraine, and many DDR experiences—show few, if any, negative effects. Even with obvious failures—such as DDR in Haiti—it is extremely difficult to show that voluntary collection and disarmament efforts are detrimental. Measured against trends in homicide and suicide, surplus stock-pile disasters, or the maintenance of political stability, even highly incomplete disarmament typically helps. The only evidence of systematic harm is associated exclusively with coercive disarmament. Except when used to disarm defeated states, it has rarely been tried and almost always appears to be a mistake.

The prospects for further small arms collection and disarmament are considerable. Roughly 40 per cent of state arsenals—some 76 million small arms—appear to be surplus to requirements and highly suitable for destruction. State disarmament appears to be the easiest to negotiate and simplest to implement, although, even here, frustrations are common. Collection and destruction seems readily feasible for perhaps 20 per cent of all civilian firearms—at least 120 million altogether. Disarmament of former non-state combatants will never elicit comparable numbers of weapons, but, as these are some of the most destabilizing and symbolically important weapons, they warrant disproportionate attention. As shown here, though, even relatively small and incomplete undertakings can have invaluable symbolic effects, influencing possibilities and expectations.

Collection and disarmament therefore appears to be an extremely important instrument of small arms policy, but it is only one among many. It has a well-established role in managing small arms proliferation, but there is no evidence that it works in isolation from other tools of social reform. With effects difficult to isolate from simultaneous social policies, it appears to rely on interaction with other measures, although further research is needed to better understand how all these elements fit together. Small arms collection and disarmament, in other words, is not an alternative to social policy, but a potentially important element in any comprehensive programme for reducing the dangers of armed violence and instability. Given the possibilities, there is a tremendous need for rigorous dialogue on how to make better use of its potential. ■

LIST OF ABBREVIATIONS

DDR	Disarmament, demobilization, and reintegration	MANPADS	Man-portable air defence system(s)
		NSA	Non-state actors

ENDNOTES

- 1 For a discussion of such processes, see Bevan (2008a).
- 2 In 2001, the United Nations General Assembly adopted the *Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects* ('Programme of Action'); see UNGA (2001). For details on the implementation of the *Programme of Action* regarding export controls, see EXPORT CONTROLS.
- 3 Total civilian firearms are estimated in Small Arms Survey (2007a, ch. 2).
- 4 Sources disagree on the extent of the decline. More impressive figures are cited in the *Economist*, which reports that the homicide rate in Rio de Janeiro fell from 64 per 100,000 people in the mid-1990s to 39 per 100,000 in 2007. In São Paulo, the murder rate reportedly fell from 112 per 100,000 people in 1995 to 33 in 2006 (*Economist*, 2008).
- 5 Britain is used here to mean England, Scotland, and Wales. Data in this section does not include Northern Ireland.
- 6 If airguns are included, the total number of guns probably exceeds one million. Unlike softair guns, airguns are potentially lethal, yet neither requires a licence. The author thanks Gavin Hales for clarifying this point.
- 7 Gun ownership in the United Kingdom may be much more common than is often assumed. For England and Wales, estimates of registered and unregistered firearms range from 2.0 to 4.7 million, for an average of 3.4 million (Small Arms Survey, 2007a, app. 3; Squires, Grimshaw, and Solomon, 2008, p. 19). For the United Kingdom as a whole (including Northern Ireland and Scotland) combined totals vary from 2.5 to 5.5 million, for an average of 4 million estimated civilian guns. While the actual total cannot be declared with certainty, the United Kingdom appears to be armed at an average level for Europe (Small Arms Survey, 2004, ch. 2; 2007a, ch. 2).
- 8 Better information may emerge through the newly established National Ballistics Intelligence Service, a data sharing and tracing system for all police constabularies of England and Wales, designed to facilitate the tracing of illicit and suspect firearms (Terry, 2008).
- 9 Robert Muggah and Philip Alpers estimate that the Solomon Islands had a pre-conflict total of 1,010 to 1,270 military and commercially manufactured rifles. Only 300 of these appear to have been recovered (Dunnigan, 2004; Muggah and Alpers, 2003).
- 10 The South African disarmament total subtracts 88,640 decommissioned police weapons (Gould et al., 2004, p. 243).
- 11 This section on state armed forces and law enforcement agencies is designed as a brief overview, partially recapitulating themes covered in the *Small Arms Survey 2008* (Small Arms Survey, 2008).

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