



After the Smoke Clears: *Assessing the Effects of Small Arms Availability*

Introduction

Small arms and light weapons are made to maim and kill. Even conservative estimates suggest that well over half a million lives are lost to them each year: some 300,000 in armed conflict and another 200,000 from gun-inflicted homicides and suicides. The direct effects of small arms availability and use include death and injury. The opportunity costs of such small arms in terms of foregone investment, health costs and lost educational opportunities run into the billions of dollars. The broad array of indirect socio-economic impacts, while hard to measure, is devastating. These indirect effects emerge only gradually 'after the smoke clears'. Then it becomes obvious that the global spread of small arms and light weapons is exacerbating human insecurity, fuelling the creation of 'cultures of violence', and undermining the stability of states and entire regions. Indiscriminate arms use not only jeopardizes individual welfare and livelihoods, it also imperils broader sustainable development opportunities from the local to the international level. This chapter addresses the following three questions:

- Why are small arms so readily available?
- What is the relationship between their high availability and their actual use?
- What are their direct and indirect effects?

The chapter begins with a review of the process by which small arms find their way into civilian hands. Though only tentative conclusions can be drawn, their accessibility is linked to the liberalization of markets and the emergence of new brokering activities. Their availability is also a legacy of the Cold War and the recirculation of previously stockpiled arms. The chapter then goes on to assess the accessibility thesis, by demonstrating the association between easy access to, and ownership of, small arms with armed violence. Manifestations of armed violence range from suicide and domestic abuse to homicide and armed massacres. As the chapter shows, unregulated small arms availability has destabilizing implications, particularly in areas engaged in, or attempting to recover from, armed conflict.

The chapter identifies the direct effects of small arms availability—that is, mortality resulting from homicide, suicide, domestic violence, and armed conflict. Among the many direct effects common to the so-called North and South are the high rates of firearm-related homicide, suicide, and accidental death. However, Southern populations are subject to disproportionate levels of armed homicide while Northern societies experience higher rates of suicide committed with firearms. Conflict and post-conflict environments invariably generate unique situational variables that influence the scale of mortality and morbidity attributed to firearms. What is more, the unregulated availability of such weapons has made the (re)constitution of war accessible to both professional and amateur—the trained and the untrained—alike. Today we live in a world where even the poorest and most marginalized communities have access to military-style weapons capable of transforming a localized dispute into a bloodbath.

Small arms ... have damaged development prospects and imperilled human security in every way. Indeed, there is probably no single tool of conflict so wide-spread, so easily available and so difficult to restrict, as small arms.

Kofi Annan,
UN Secretary General

The chapter also distils a broad array of indirect effects—social and economic impacts resulting from small arms availability and use. Such effects range from deteriorating public health facilities and the rise of banditry and armed criminality, to the obstruction and diversion of humanitarian relief and reductions in overseas development assistance (ODA) to insecure regions. The resultant anxiety of individuals and communities in both the North and the South has encouraged the privatization of security and the resort to extra-legal forms of protection. The unregulated access to, and use of, firearms has adverse implications for public safety, peace-building and reconciliation, humanitarian aid and development, good governance and the rule of law.

Rates of armed homicide are proportionally higher in the South while suicide ranks higher in the North.

These direct and indirect effects are interconnected. The real or perceived threat of firearm death or injury clearly influences everyone’s daily decision-making behaviour—from children to criminals to combatants. Furthermore, small arms-inflicted casualties reduce economic productivity and often strain public services that are already overextended. This has a self-perpetuating effect as, to cite just two examples, declining labour productivity and limited access to health clinics and hospitals can lead, in turn, to increased mortality and morbidity.

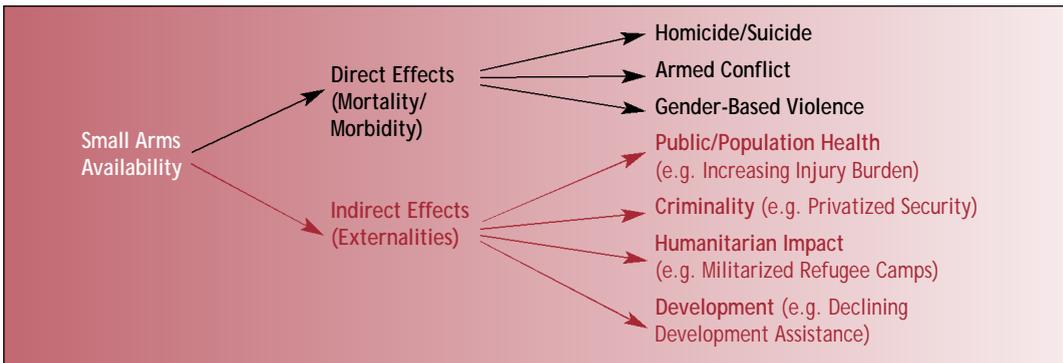
In its conclusion, the chapter calls for a shift away from a conventional demilitarization perspective. Instead, it stresses the multi-dimensional impact of arms-related insecurity on public health, exposure to criminality, access to, and impact of, humanitarian assistance, and the overall development of societies (see Figure 6.1).

In providing a comprehensive overview of the direct and indirect effects of small arms there are a number of caveats to be considered. First, there are real gaps, flaws, and omissions in both theory and data reliability. This is partly a result of the novelty of the subject matter, though it can also be attributed to under-reporting and poorly managed or under-financed data collection facilities. While such statistics are vital, quantitative precision is not necessarily as important at this stage as a solid qualitative appreciation of the magnitude of the effects.

Second, the plethora of competing views on the effects of firearms issuing from criminologists, in addition to gun-control, public health, humanitarian and disarmament constituencies, makes it impossible to record in detail every facet of every argument. Rather, the chapter endeavours to present a survey of the current ‘state of knowledge’ on effects—as a baseline for future editions of the Small Arms Survey.

Ultimately, the Survey’s long-term goal is to develop and refine competing perspectives on small arms and to introduce new techniques to assess their impacts. In this regard, the following chapter raises more questions than it answers.

Figure 6.1 Mapping the effects of small arms and light weapons



A global flood of small arms

Contemporary intellectual debate on the diffusion of small arms often begins with an abstract discussion of the catalytic role of globalization in the post-Cold War decade.¹ There have been ominous reports documenting the proliferation of millions of small arms and light weapons as the world's major military powers reduced their armed forces or, as in the case of the former Soviet Union, collapsed outright.

Defence economists and political analysts have documented how small arms availability has increased as a result of state manufacturers attempting to reconcile surplus production with decreased demand (PRODUCERS). Globalization, here defined as rapid market liberalization and the privatization of 'non-competitive' public arms industries, is purported to have contributed indirectly to accelerating the spread of such weapons.

Small arms proliferation is by no means a new phenomenon. Nor is there sufficient evidence to suggest that their availability is wholly attributable to globalization. It should be recalled that 40 years of the Cold War encouraged the diffusion of small arms throughout virtually all layers of society. The crackle of automatic gunfire has been background noise on the streets of San Salvador and Kabul for over three decades. In the US, as a result of Americans' demand for guns, there are more gun retail outlets than McDonald's restaurants and the equivalent of one weapon for every one of the country's 250 million residents. More often than not, the proliferation of small arms take place between local officials, formal and informal retailers, and civilians. But the effects can be deeply traumatic and are felt globally—from high-school massacres in Littleton, Colorado to large-scale genocide in Rwanda.

In the industrialized countries of the North, the state-sanctioned arming of civilian populations, such as reservists in Switzerland, Israel, or the US National Guard, was often conducted as part of a strategic project to bolster national defence against perceived or potential external aggressors. Alternatively, the arming of communities in the former Yugoslavia, Kenya, Colombia, and Albania ensured the presence of militia or paramilitary groups to shore up domestic authority. The consequences of widespread arms proliferation following economic and political state collapse have illustrated the perils of such strategies (Box 6.1). The resulting interpersonal trafficking of arms for profit and protection was inevitable.

What is different today is the sheer multiplicity of actors that have access to small arms—whether via illicit channels or not. Ours is a turbulent era during which many government and guerrilla armies are fragmenting, warlords are growing in financial and territorial influence, and the distinctions between various forms of violence (e.g. political, communal, religious, and criminal) are blurring. Paradoxically, this is also a time when guarantees of public security remain unfulfilled in large parts of the world. Rather, the provision of security—particularly of the kind administered by governmental institutions—is becoming a commercially tradable commodity.

Even were there a consensus on the actual number of small arms circulating in the wrong hands, many more questions would remain unanswered. Of urgent concern is a practical appreciation of precisely how small arms are made available and in what way they actually affect people. The international community needs to understand where they are affected geographically and who are the most vulnerable.

Also, a clearer appraisal is required of the relationship between the high availability of arms and their use. Particularly with regard to the latter point, the small arms debate has expanded to accommodate a range of perspectives that seek to clarify the positive association between these two variables.

In the US, there are more gun retail outlets than McDonald's restaurants and the equivalent of one weapon for every one of the country's 250 million residents.

Box 6.1 From Albania to Kosovo: A flood of arms

In the former Yugoslavia and throughout the Balkans, sweeping socio-economic transitions toward market deregulation and the development of democratic institutions have taken place in tandem with the diffusion of light weapons into civilian hands. Arms saturation—accompanied by acute unemployment, ineffective state control, corruption, and a weakened civil society—makes for a volatile mixture. Not only are armed attacks on refugees, internally displaced persons (IDPs), and minorities increasingly common, the availability of small arms discourages such vulnerable groups from returning to their original homes. Casualties resulting from armed attacks, even among peacekeeping personnel, have occurred repetitively in the course of United Nations (UN) operations in Croatia and Bosnia and Herzegovina and are of continuing concern to NATO and the UN.

During the Albanian crisis of March 1997, the country was brought to the brink of civil war. Angered over allegations that the regime of President Sali Berisha had defrauded thousands of their life savings through pyramid financial schemes, Albanian citizens pillaged massive weapons stockpiles built up during the dictatorship of Enver Hoxha. With a defence strategy premised on militia-partisan warfare, state collapse unleashed a flood of arms into civilian hands, since the location of fortification programmes and small arms depots installed in every city and rural district were well known.

As a result, an estimated 80 per cent of the country's military arsenal was pillaged, including 2,500 rocket-propelled grenades, 800 mortars (60mm), 1.5 billion rounds of ammunition (7.62mm), 3.5 million hand grenades, and 1.4 million anti-personnel mines (Smith, 2000). The

**Map 6.1 Illicit Albanian arms flows:
When the dam bursts**



A relationship between arms availability and armed violence

Is there a relationship between arms availability and armed violence? The answer appears to be a qualified yes. It goes almost without saying that the risk of being killed as a result of armed violence is much greater in some parts of the world than in others—unsurprisingly, these locations frequently correlate with areas of high weapons availability.

For example, in parts of the Horn of Africa (e.g. Somalia), South Asia (e.g. Sri Lanka), Central America (e.g. El Salvador), and the Balkans (e.g. the former Yugoslavia), conflict and post-conflict environments jeopardize civilian security. Countries undergoing various forms of economic and political transition (e.g. the former Soviet Republics) are also susceptible to the mutually reinforcing effects of armed conflict and crime. In South East Asia (e.g. the Philippines) and Latin America (e.g. Colombia), transnational crime, armed violence, and insurgencies pose critical, intertwined threats to human security. Still other regions, particularly North America (e.g. USA) and Western Europe (e.g. Switzerland), find themselves grappling with how to prevent a different kind of tragedy: suicide committed with firearms.

absence of comprehensive small arms control policies, coupled with lax controls on collected surplus, led to black market trading from one simmering Balkan conflict to the next. For example, an estimated one million assault-rifles looted from state armouries and arms depots later resurfaced on the black market, selling for as little as US\$ 15 apiece.

As the internal conflict intensified, the Albanian armed forces scattered, leaving the country at the mercy of mob rule. *The Sunday Times* (Loyd, 1997) reported, '... ten-year-old children scrambled with adults and local mafia gangs to seize whatever weapons they could, firing them in jubilation ... As car boots were loaded up with heavy machine guns, mortars and rockets, grenades, tossed like discarded fruit, exploded all over the base, and a teenager was killed by his brother as they grappled over an assault rifle.'

The consequences of state collapse for the region were recognized early on by scholars and policy analysts alike. Professor Tom Gallagher, University of Bradford (UK), predicted that the Albanian conflict had the potential to ignite the already-brewing revolt against Serb rule in adjacent Kosovo. Gallagher (1997) argued that the vast supply of arms in Albania would find its way across the Kosovo border, provoking the Milosevic regime that was 'looking for a diversion to dig itself out of the political hole it is in at home.' Indeed, analysts believe that more than 50 per cent of all pillaged weapons were taken out of the country.

Albania's smugglers quickly profited from the growing unrest in Kosovo, selling looted Kalashnikovs for US\$ 150 apiece (Planck, 1997). An OSCE emergency meeting called in March 1997 supported an early military intervention to help end the chaos. Carl Bildt, the international community's top civilian representative in Bosnia at that time, said of such an intervention, 'It will send a signal to other parts of the region that Europe will deal more decisively with potential threats to stability than was the case at the beginning of the Yugoslav crisis. We must not fail again' (Malone, 1997).

One week later, the OSCE was engaged in negotiations concerning its possible involvement in collecting illegally possessed light weapons (Toth, 1997). The OSCE ultimately failed to take an active role despite the apparent humanitarian and strategic interests at stake. More than a year later, in June 1998, NATO officials stressed their concern over arms smuggling from Albania, where they estimated that 'half a million guns are still in the hands of civilians after last year's turmoil.' Much like the so-called 'war on drugs', government rhetoric in favour of eradication of illicit weapons trafficking substituted for active pragmatic measures. The Albanian experience provides yet another example of the need to control the use and spread of small arms and light weapons in conflict regions.

Source: King, 2000

The provision of security is becoming a commercially tradable commodity.

Civilian vulnerability to firearm injury and death varies from region to region and country to country. For example, in Latin America and the Caribbean, there are some 80 million household robberies and an estimated 140,000 murders (including homicides committed with firearms) per annum.² The regional homicide rate (all causes) is twice the world's average: 22.9 as against 10.7 per 100,000 (UNDP, 2000). For the Organization for Economic Co-operation and Development (OECD), whose members comprise the world's most industrialized countries and have twice the aggregate population,³ but only one-third the population growth rate of Latin America and the Caribbean, the rates and scale of homicide and armed robbery are significantly less.

Statistical discrepancies are similarly dramatic between individual states. According to a UN study (1998b), there were 54 firearm homicides per 100,000 inhabitants in Colombia, 27 in South Africa, 26 in Brazil, six in the US, and 0.13 in the UK. Further, the risk of firearm-related violence is differentiated within, as well as between, countries. Urban residents, especially those living in slums, or disenfranchised groups, minorities, and young men often suffer disproportionately from armed violence. For example, firearm homicide rates among young unemployed males in Bogota,

In Latin America and the Caribbean, where the regional homicide rate is twice the world's average, there are an estimated 140,000 murders each year.

Johannesburg, Rio de Janeiro, Washington DC, and London are at least double the national average in their respective countries.⁴ The following sections explore some of the reasons why certain societies are more prone to armed violence than others.

The Accessibility Thesis—an emotive debate

Cultural traditions and institutions, both formal and informal, are of primary importance. Depending on a country's firearm legislation and enforcement capacities (e.g. formal institutions), citizens may be permitted to own and use everything from pistols and revolvers to hunting guns and military-style assault rifles. Naturally, behaviour and attitudes toward firearms (e.g. informal institutions) also condition their use. While impossible to verify with absolute certainty experts agree that, while small arms availability is not their principal cause, it does positively influence the likelihood of homicide, as well as the 'success rates' of suicide, violent crime, domestic violence, the probability of accidents in gun-owning households, and armed conflict. Put another way, the availability—even the presence—of small arms increases the risk of both intentional and unintentional injury.⁵ But the relationship is far from straightforward.

The accessibility thesis claims that the availability of guns is a risk factor for armed violence.

When comparing the availability and use of small arms and light weapons, determining a causal link poses a challenge. The accessibility thesis, which contends that the accessibility of guns facilitates violence, is frequently contested.⁶ Gun advocates and proponents of gun control are polarized—arguing over increasingly divergent claims to the 'truth'. Drawing on Boccaccio's infamous aside in the 14th century secular classic, *The Decameron*, pro-gun advocates claim that it is not the weapons, but the people who do the killing.⁷

Indeed, pro-gun lobbyists argue that focusing on restrictive gun policies misses the point. They contend that, rather than introducing more restrictive gun ownership legislation, the structural or root causes of violence need to be addressed. They are adamant that there is little concrete evidence to substantiate a tangible relationship between liberal firearm policies and a higher-than-average firearm death and injury rate. Gun advocates have also claimed that there is insufficient data to even gauge firearm availability,⁸ noting that some researchers have erroneously focused on the proportion of gun ownership per household rather than the number of guns in circulation per se.

'Weapons defend the lives of those who wish to live peacefully, and they also, on many occasion, kill [murder] men, not because of any wickedness inherent in them but because those who wield them do so in an evil way.'

Boccaccio,
The Decameron

Some analysts have attempted to prove that advance notice of imminent gun legislation has actually catalyzed surplus production and, as a result of lowered costs due to economies of scale, spurred unintentional diffusion. Furthermore, gun lobbyists, like the United States' National Rifle Association (NRA) and the World Shooting Federation (WSF), continue to insist that responsible gun owners and recreational users pose little threat to public safety.⁹ A number of researchers have also argued that facilitating increased access to arms for self-protection (e.g. concealed weapons) may even reduce mortality and morbidity.¹⁰ Ultimately, they argue, research studies attempting to confirm a positive correlation between weapons availability and increased mortality are biased, partisan, and unsystematic.

Not so, counter-proponents of gun control and representatives of the public health community. While conceding that not all gun owners and households are at equal risk, a series of epidemiological studies have detected a positive correlation between the rate of firearm ownership and the incidence of homicide and suicide (Wintemute et al, 1999; CDC, 1997). Research has also indicated that the risk of being murdered by an intimate partner increases with the availability of firearms (Kellerman, 1993). Without underemphasizing the importance of situational variables, social scientists have found overwhelming evidence that various types of violent crime are positively associated with gun ownership rates and availability.¹¹

An assessment of the relationship between gun ownership and firearm deaths from a selection of Canadian provinces, the US, England and Wales, and Australia concluded that over 90 per cent of the variance in death rates could be explained by access to firearms (Miller and Cohen, 1997). Further, a standardized survey of victimization carried out in fifty-four industrialized countries indicates that high rates of gun ownership are significantly related to both increases in the incidence of robbery and sexual assault (Van Dijk, 1997). But while firearm ownership and availability may affect an individual's choice of method, it is clear that other factors, such as social and cultural norms, also play a role in the decision.

Figure 6.2 Firearm ownership and deaths in industrialized countries

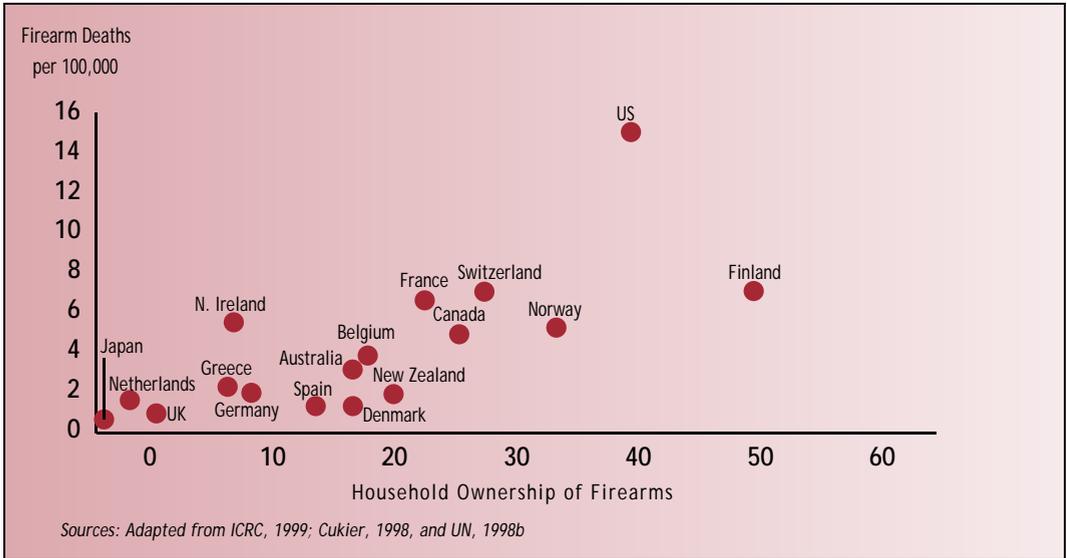


Figure 6.2 illustrates the relationship between legal household possession of firearms and recorded firearm deaths (e.g. homicides and suicides) among a sample of Northern countries. It draws upon aggregate population data from: the UNDP Human Development Report 2000 ; firearm death and household ownership rates in the UN Firearms Study (1998b), the ICRC's seminal study on small arms availability (1999), and Cukier (1998b). There is compelling evidence that, among industrializing societies, higher ownership rates result in higher mortality and morbidity rates (see Appendix 6.1). Although a precise determination of the relationship between illegal firearm possession and firearm death is impossible to calculate, it stands to reason that the association between illicit ownership and firearm death would hold.

The relationship is more ambiguous among states in the South. Indeed, there appears to be no statistical association between firearm ownership and firearm-related mortality. This is due, in large part, to an absence of reliable or standardized data on legal possession, firearm-related homicide, or suicide.

The Accessibility Thesis and demographics

When national statistics on victims are disaggregated along demographic and socio-economic lines, even more compelling trends emerge. In the US, for example, the Bureau of Justice Statistics noted that indicators documenting homicide and crime in the country are higher than the industrialized country average. Compared with Canada, a country with more restrictive legislation on firearm ownership and use, the per capita rates of homicide committed without guns are roughly equivalent. However, the rate

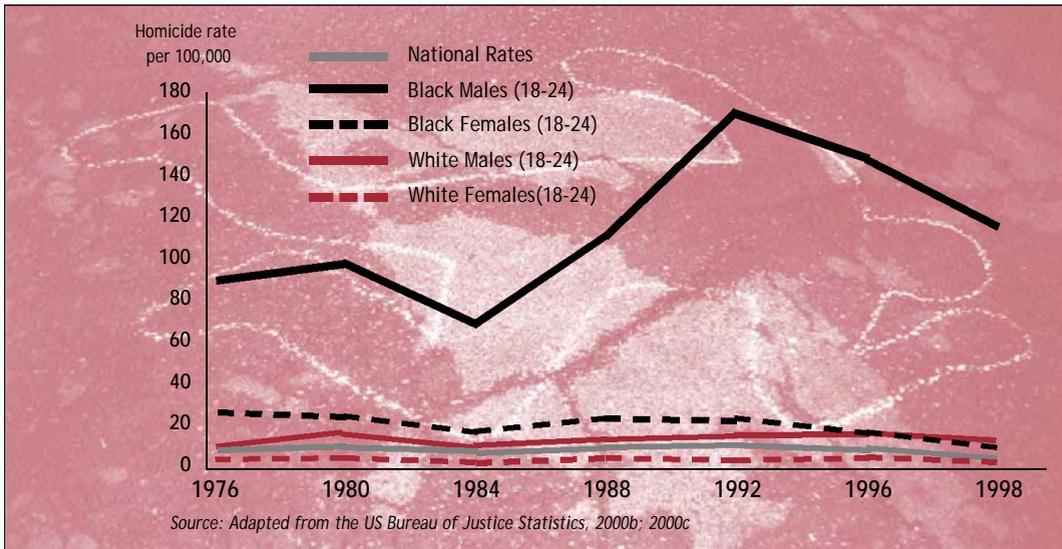
Social scientists have found overwhelming evidence that various types of violent crime are positively associated with gun ownership rates and availability.

The rate of homicide committed with handguns was 15 times higher in the US than in neighbouring Canada during the mid-1990s.

of homicide committed with handguns was 15 times higher in the US during the mid-1990s.¹² In a now famous study contrasting neighbouring cities, Seattle (US) and Vancouver (Canada), differences in the rate of gun ownership were described as the principal variable determining differences in the rates of mortality and morbidity (Sloan et al, 1988).

The pervasiveness of guns in the US has had tragic consequences. Although almost a million people in the US have died from firearm-related injuries since the 1960s, certain population groups have been disproportionately affected. While firearm ownership tends to be concentrated among white middle-class adult males (Kates et al, 1994), gun-related mortality and morbidity affects all demographic sectors. The greatest increases in recent years have been among teens 15-19 years of age, young black males aged 20-24, and adults aged 75 and over (Figure 6.3 and Appendix 6.2). Young white males have also been particularly 'successful' at suicide.¹³

Figure 6.3 The demographics of homicide in the US



Accessibility and the 'Trigger Effect'

With few exceptions, the more accessible the tools of violence, the more likely they are to be used, whether intentionally or accidentally. Even though certain humanitarian agencies are careful to distance themselves from the claim that widespread availability actually causes violations of international humanitarian law,¹⁴ the accessibility thesis is supported in virtually all the peer-reviewed literature. Also, the positions of major public health and safety groups continuously emphasize the relationships between availability, acquisition, and (mis)use.¹⁵

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There is also ample evidence that small arms proliferation and poorly managed stockpiles of automatic weapons have contributed to the outbreak of complex humanitarian emergencies and severely hampered attempts at post-conflict reconstruction and development.¹⁶ Availability, however, is distinct from 'acquisition'—where the triggering effect of increased transfers on conflict outbreak is more clearly defined.¹⁷ But the two elements—availability and acquisition—frequently overlap. For example, the genocide in Rwanda, as well as the collapse of Somalia, Albania, and Afghanistan, all occurred in the context of new weapons acquisitions, coupled with systemic long-term availability. Also, the intensification of warfare and criminality in Colombia, Sri Lanka, and Democratic Republic

of Congo (DRC) has been facilitated by ongoing acquisitions, in addition to accessible small arms stockpiles (see Box 6.2).

Recent studies exploring the symbolic and socially constructed value attached to small arms suggest that the argument is even more complicated. It is not only the availability of arms—it is the arms themselves that condition violence. The Kalashnikov rifle, for example, has been described as ‘the most effective assault weapon in the world ... it has changed the way wars are fought forever ... (it) is an icon of the anti-establishment insurgent, the symbol of revolutionary resistance’ (Cock, 2000, pp. 78-79).

Guns have in many cases acquired a symbolic resonance—much like a state’s flag, a military chevron, or a combat infantry badge. In some cases, the gun itself embodies a symbol of emancipation and entitlement among widely disparate and otherwise unconnected groups, including so-called ‘freedom-fighters’ (e.g. Hezbollah) and ‘pro-gun advocates’ (e.g. the NRA).¹⁸ Guns often retain a social and political dimension that far exceeds their utilitarian value. The Mozambican flag, for example, prominently displays an assault rifle crossed over a hoe. Seen in this light, Chairman Mao’s famous dictum that ‘political power grows out of the barrel of a gun’ acquires an even more ominous tone.

Undoubtedly, the type of weapons, together with the psychological mindset of armed perpetrators, are factors conditioning the lethality and value attached to the arms themselves. The emboldening effect of weapons possession, particularly by those who are disenfranchised, either as a result of political or religious persuasion, race, sex, age, or who are under the influence of drugs, is significant. The legacy of small arms proliferation in South Africa, for example, has exacerbated confrontational social identities and a culture that accepts armed violence as a solution to social conflict, as well as a legitimate means of acquiring and retaining power and status.

Creating cultures of violence

Survey after survey reveals that one of the key reasons why individuals acquire firearms in the first place is that they perceive a high or increasing level of gun-violence in their communities.¹⁹ Even under conditions of ‘imperfect information’, there is evidence that individuals arm themselves because they see their neighbours doing the same. The faith of civilians in micro-deterrence and the social construction of demand are ironic, particularly in light of the overwhelming support among civil societies for rigid controls on gun ownership. The privatization of armed violence, then, can be interpreted as both a cause and effect of small arms availability. Where societies are subject to prolonged or protracted increases of small arms proliferation and use, ‘cultures of violence’ may emerge.

According to the UN (1999c) ‘... while not in themselves causing the conflicts in which they are used, the proliferation of small arms ... affects the intensity and duration of violence and encourages militancy ... we see a vicious circle in which insecurity leads to higher demand for weapons.’ Part and parcel of cycles of armed violence, the manifestation of such cultures of violence can be conceived as the changing matrix through which attitudinal and behavioural norms are acted out in a given society. In this way, they are dynamic and conditioned by a range of situational variables.

For example, such cultures are purported to be influenced by ‘consumerist militarism’—a reference to the banalization, even glorification, of war, weaponry, military force, and violence through TV, film, literature, song, sport, and recreation.²⁰ Naturally, the particular cause and expression of such ‘cultures’ varies from place to place. While the normalization of violence in British news and media may not have had a palpable or objective impact on homicide and crime rates, public perceptions of insecurity are growing throughout the UK.²¹ Where cultures of violence find tangible expression in a society, the implications are more severe. At their worst, as in Sierra Leone or Liberia, cultures of violence glorify armed violence and small arms are elevated to the status of a totem.

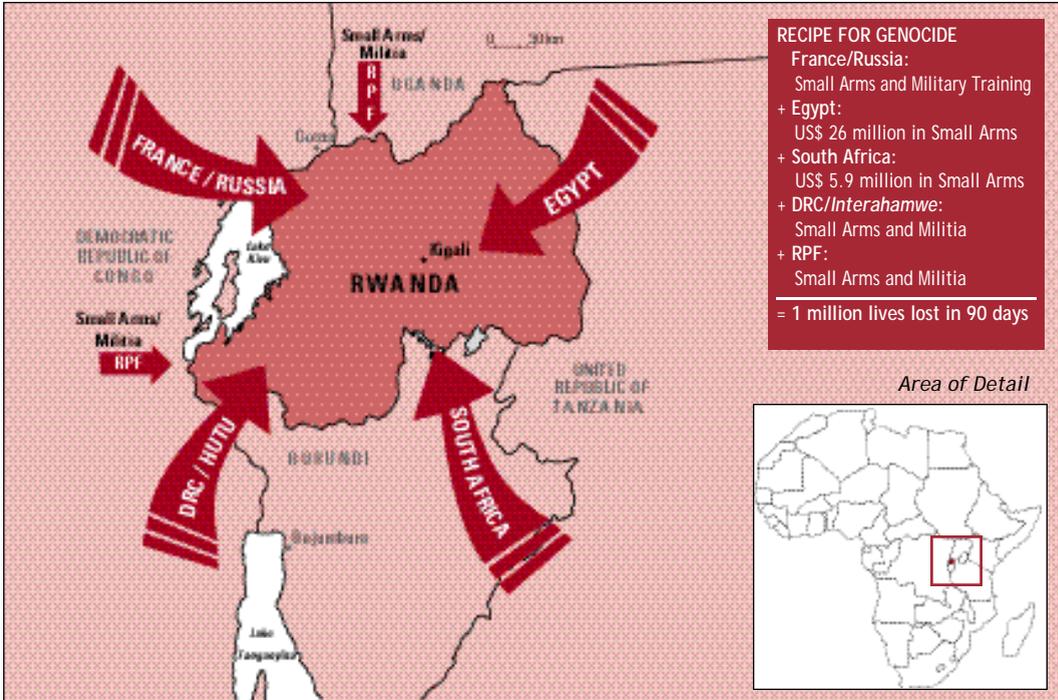
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Box 6.2 Small arms availability in Rwanda: Triggering genocide?

In the course of a few horrific months in 1994, up to one million people were killed in Rwanda. Despite the fact that international covenants had been adopted to assure that genocide would never again take place, the international community not only failed to prevent the events in Rwanda; by seeking to actively support the economy, it actually facilitated the conditions that

Map 6.2 Recipe for genocide



made armed violence possible. More than a dozen nations helped fuel the Rwandan war, and both factions within the country purchased considerable weaponry through private sources on the open market. Furthermore, by its own admission, the Rwandan Government bankrupted its economy to pay for the weapons.

Secret arms deals between the Egyptian Government and the Hutu-led regime prior to the genocide amounted to US\$ 26 million. The first deal, orchestrated by the then-Foreign Minister of Egypt, Boutros-Boutros Ghali, and guaranteed by a French Bank, amounted to US\$ 5.8 million.

In Colombia, a country notorious for its culture of violence, someone is murdered every 20 minutes—a homicide rate higher than that of car theft.

In parts of Cambodia, for example, youth frequently threaten people with guns over traffic jams and even pastoral cattle tenders carry guns for protection. Government and NGO reports have documented the use of B-40 rocket launchers in simple robberies—weapons that, in the late 1990s, could be bought for as little as US\$ 30. Victim surveys have repeatedly indicated that women fear that intoxicated men will turn their own guns on family members. Similar developments have been reported in northeastern and northwestern Kenya and throughout Nicaragua.

By way of comparison, in Colombia, a country notorious for its culture of violence, someone is murdered every 20 minutes—a homicide rate higher than that of car theft.²² Even more disturbing, in

It was comprised of 60,000 grenades, three million rounds of ammunition, 18,000 bombs, 4,200 assault rifles, 16,000 60mm and 82mm mortar shells, 122mm D-30 howitzers, rocket-propelled grenades, plastic explosives, and rocket launchers. The consignment was shipped from Cairo International Airport to Kigali, Rwanda as 'relief materials'.

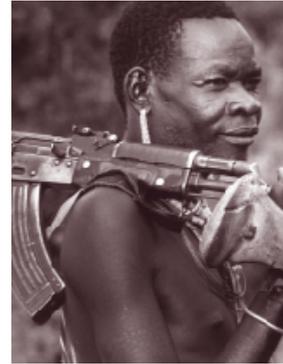
Still more weapons, including AK-47 assault rifles from Russia, mortars, and light artillery continued to flood into the country, complemented by military training of Hutu militia by France. According to Goose and Smyth (1994), 'in October 1992, on the heels of the Egyptian deal, Rwanda made a US\$ 5.9 million purchase from South Africa'. This included '100 60-mm mortars, 70 40-mm grenade launchers with 10,000 grenades, 20,000 rifle grenades, spare parts and 1.5 million rounds of ammunition for R-4 rifles, and one million rounds of machine gun ammunition'.

'There was a seemingly unstoppable flow of arms to Rwanda' (Melvern, 2000). The weapons, Rwanda's President Juvenal Habyarimana argued, were needed to fight the three-year civil war against the Ugandan-supported Rwandan Patriotic Front (RPF). But how did the Rwandan Government, then virtually bankrupt, pay for the arms? Part of the answer is buried in the records of the IMF and the World Bank.

A 'Structural Adjustment Programme' (SAP) had been negotiated in the early 1990s and some US\$ 260 million, complemented by bilateral contributions from France, Germany, Belgium, and the US, was forwarded directly to the Rwandan Government. Various EU governments, particularly the French, also provided in-kind support. But the acquisition of foreign currency from the SAP was not the only contributing factor to arms accumulation in the region. On the one hand, the economic 'shock-therapy' of Rwanda's SAP contributed to worsening economic conditions among its citizens, leading to a zero-sum game between Tutsis and Hutus. On the other hand, the Rwandan regime simultaneously exchanged tea, the country's second highest export earner, for small arms from the Egyptian Government.

Media coverage was perhaps responsible for the general impression that the 1994 genocide was committed primarily with machetes. This is a largely misguided assumption. Indeed, documents obtained in Kigali reveal that huge numbers of machetes, hoes, axes, knives, and razors were imported in the months preceding the genocide. However, just before the killing began, peacekeepers estimated that 85 tons of weapons had also been distributed throughout the country. The huge quantities of low-intensity weapons contributed to the number of victims and the speed of the killing. In the words of Goose and Smyth (1994), 'much of the killing was carried out with machetes, but automatic rifles and hand grenades were also commonly used. Their wide availability helped Hutu extremists carry out their slaughter on a horrendous scale. The huge piles of Tutsi bodies massacred in Rwanda since April are now juxtaposed with the huge piles of rifles in Goma, Zaire, that were confiscated from fleeing Hutu.'

In Gitarama, a town of 150,000 residents, there were an estimated 50,000 pistols and rifles. Six large massacre sites were later uncovered in the region. The relationship between weapons availability and use was emphasized in a Human Rights Watch report (HRW, 1994) issued just prior to the genocide, which warned 'it is impossible to exaggerate the danger of providing automatic rifles to civilians ... [and] of large numbers of ill-trained civilians equipped with assault rifles'.



Africa during the Rwandan genocide, Hutu militia (Interahamwe) were trained to murder 1,000 people every 20 minutes—a killing rate five times that achieved by the Nazis in World War II (Melvern, 2000) and unprecedented even with automatic weapons, much less with machetes and knives. In virtually all of today's internal conflicts, narcotics and alcohol are used to incite combatants, particularly child soldiers, to kill their neighbours and community members so as to destroy personal ties and sever pre-existing social networks.

Automatic military weapons have been frequently employed to increase the speed and scale of carnage. In some cases, after the bullets were used up, the barrels of assault rifles were used to rape

women. As a result of their sheer fear and powerlessness, civilian interpretations of 'reasonable' or 'acceptable' thresholds of violence have been profoundly distorted. Indeed, the long-term psychosocial implications for witnesses of large-scale armed violence are only now being explored. In the short-term, however, it is clear that 'the greater the fear of armed assailants, the bitterness over lost lives and property, the desire for retribution, and the demand for weaponry, ... the more difficult it will be to achieve reconciliation and disarmament, and the longer the violence is likely to endure' (Faltas, 2000, pp. 1-2).

Direct effects

The most traumatic effect of firearm use is loss of life. On average, an estimated 300,000 intentional firearm deaths occur each year as a direct result of armed conflict. An additional 200,000 intentional firearm deaths also occur in 30 countries ordinarily classified as 'peaceful'.²³ Besides fatalities, millions more suffer life-threatening injuries, many of which reduce longevity. Firearms are also the most lethal instruments of suicide: 93 per cent of attempts are completed as compared to 30 per cent using other means.²⁴ What possesses people to kill each other, or indeed themselves? Why has the 20th century been the most violent in history? Understanding the root causes of mass violence is as complex as it is evasive.

While not the focus of this chapter, the motives underpinning armed violence and conflict are varied and hotly contested. Observers have typically focused on a combination of factors: exclusion and inequality;²⁵ competition for economic resources (greed) and lack of access to social justice (grievances);²⁶ and the erosion or absence of democracy and institutions of governance. Others have emphasized a lack of respect for national and international norms,²⁷ communal or religious hatreds, and 'ideologies of exclusion' flaring up in a post-Cold War world.²⁸ Still other analysts have pointed to the socialization of violence among young males, the cultures of violence nurtured by patriarchal societies,²⁹ and the abundance of valuable (exploitable) primary commodities.³⁰

It is clear that contemporary armed violence and internal conflict disproportionately affect the poorer countries of the South—though it has also been occurring with increasing frequency on the doorstep of wealthier countries. Even so, whereas the levels of firearm homicides are higher in the South, the rates of firearm-related suicides are frequently higher (in both absolute and relative terms) in so-called 'developed' countries (see Figure 6.4). In any hemisphere and during any era, however, the abundance of small arms during conflict situations is positively correlated with higher mortality rates.

Homicide and suicide

There is a growing sense that people are more vulnerable to firearm injuries and death than ever before. While the direct effects are experienced in both the North and the South, developing countries affected by conflict or emerging from war suffer disproportionately from firearm-related mortality. That said, there are common trends among specific constituencies in both developed and developing countries. For example, in the US, firearm injury is already the leading cause of death among adult Afro-Americans; given mid-1990s trends, the prognosis is that it will surpass automobile accidents for the entire population by 2003 (CDC, 2000). In Brazil, rapid urbanization, combined with high levels of unemployment and the breakdown of family structures, are purported to have contributed to a situation where almost 60 per cent of deaths among youths are caused by firearms (ISER, 2000).

Each year an average 300,000 intentional firearm deaths occur as a direct result of armed conflict. Another 200,000 occur in 30 countries ordinarily classified as 'peaceful'.

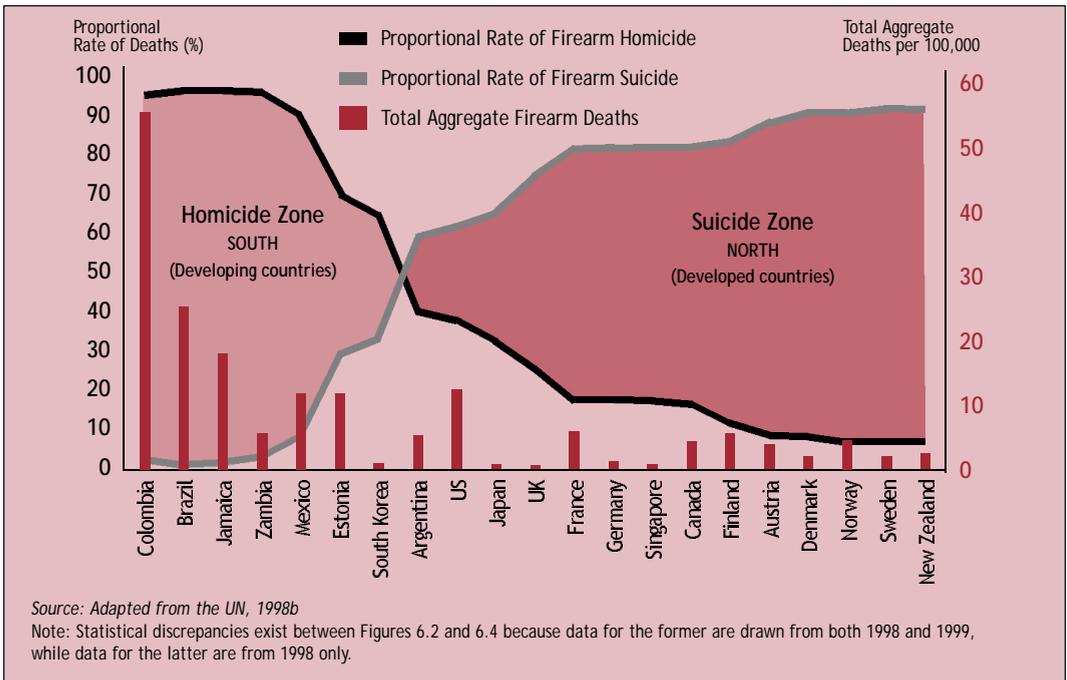
Firearm injury is already the leading cause of death among adult Afro-Americans; the prognosis is that it will surpass automobile accidents for the entire population by 2003.

It is worth recalling that, partly as a result of the reach of media, the international community is today more informed and acutely aware of the effects of armed violence than ever before. For this reason, many communities are intensely concerned about the direct effects of small arms use, even though homicide and suicide rates may actually be declining in real terms.

In industrialized countries, suicide committed with firearms occurs more frequently than firearm-related homicide.³¹ The graphic (see Figure 6.4) provides a snapshot of the proportional impacts of firearm-related homicide and suicide in a sample of developed and developing countries. Though only the most tentative conclusions may be drawn, the figure suggests that lesser developed countries are confronted with a relatively higher incidence of firearm-related homicide while more developed states are grappling with firearm-related suicide. For example, Colombia has an aggregate firearm homicide rate 500 times higher than the UK but a firearm suicide rate only six times greater. Brazil has a firearm homicide rate 125 times higher than Denmark, but a firearm suicide rate five times less.

Colombia has a firearm homicide rate 500 times higher than the UK and a firearm suicide rate only six times greater.

Figure 6.4 Proportional rate of firearm deaths: Homicide and suicide in the North and the South



The proportion of 'successful' homicides and suicides carried out with firearms is particularly illuminating: 98 per cent of Jamaica's and Brazil's homicides were carried out with firearms. Well over 75 per cent of all reported firearm deaths among Southern countries are a result of homicide. In contrast, only seven per cent of all firearm deaths were a result of homicide in Sweden and New Zealand.

It should be noted that, while included in the figure above, overall rates of firearm homicide and suicide remained dramatically low in East Asia (see Appendix 6.3).³² While not included in the figure, in Australia, more than 70 per cent of all firearm deaths in 1998 were suicides. Of these, most were men aged over 65.

Armed conflict

Defining conflict: 'Armed confrontations resulting in over one thousand battle-related deaths per annum'. SIPRI, 1999

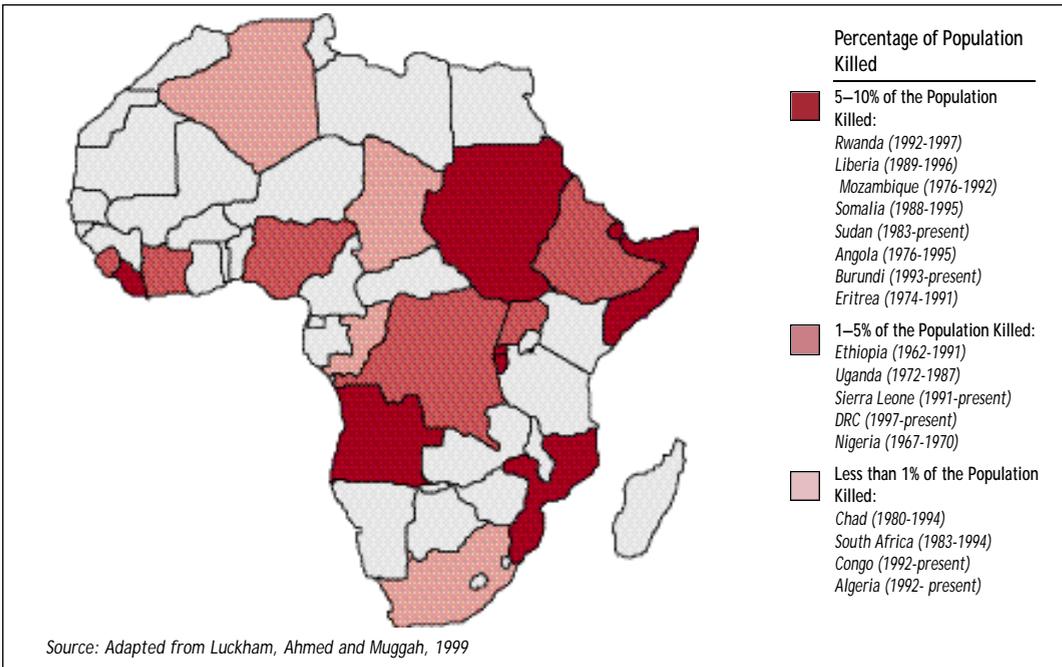
Armed conflict and post-conflict environments result in high levels of firearm-related mortality and morbidity. 'Conflicts' are defined by the Stockholm International Peace Research Institute (SIPRI, 1999) as 'armed confrontations resulting in over one thousand battle-related deaths per annum'.³³ This threshold is set deliberately low because of the unreliability of data on casualties and the fact that governments and non-state actors often under-report deaths and injuries.

The magnitude of conflict-induced deaths is particularly great in Africa, although it is difficult to determine the extent to which all of them are directly attributable to small arms (see Map 6.3).³⁴ Since the independence wars of the 1960s, millions of formal and irregular combatants and civilians have been killed or severely injured by small arms—the weapon of choice in Africa's conflicts. This is not necessarily a new phenomenon. But, while the post-Cold War period may not be qualitatively more violent, there is a 'new and wider awareness of the extent of prevailing brutality and of the difficulties in gainsaying the forces of inhumanity' (Frohardt et al, 1999, p. 13).

Prior to the 20th century, an estimated 90 per cent of conflict casualties were combatants. One in five soldiers fighting in World War I—a total of 12 million—were killed, and an additional 21 million injured. A function of changing technology and military strategies, approximately 35 million combatants died in World War II, with just under 50 per cent of them civilians. According to the ICRC's People on War Report (2000b), well over one in four of all combatants in contemporary conflict, including those of Sub-Saharan Africa, has been injured.³⁵ With an estimated 110 million people dying as a result of conflict, the last 100 years have been described as the 'mega-death' century (Sivard, 1997).

According to some estimates, small arms have been the exclusive weapons used in 90 per cent of the 49 conflicts started since 1990.³⁶ During this same decade, approximately six million civilians

Map 6.3 Africa's killing fields



were killed in conflict. While statistical breakdowns between military and civilian fatalities are not always available, civilians constitute between 30 and 90 per cent of all conflict-related deaths.³⁷ Indeed, the proportion of civilians killed in the 'crossfire', in violation of international humanitarian law, is increasing, though not necessarily in real terms.³⁸ It is these changing trends that prompted Justice Richard Goldstone of South Africa to observe, 'if you want to be safe in a modern world, join an army'.³⁹

Analysts have long noted the rising rates of retributive activity during (and following) armed conflict, and the concomitant reductions in suicide. However, a recent study in Croatia challenges Durkheim's classic theory that populist wars strengthen social integration and thus result in lower suicide rates.⁴⁰ In South Croatia, both figures went up: '... there was an increased number of homicides and suicides during the war, especially among the younger population and the military' (Gojanovic et al, 1996, p. 5). While high blood alcohol levels figured prominently among perpetrators and victims alike, small arms constituted the primary weapon of choice for committing homicide (61 per cent) and suicide (30 per cent).

Even during the post-conflict period, an increasing frequency of homicides and suicides in Croatia was observed—a tragic consequence of the availability and abuse of large amounts of handguns, rifles, hand grenades, mortars, and other military weapons. The situation is analogous to post-conflict Cambodia, Guatemala, El Salvador, and even the 19th century post-civil war US.⁴¹ Civilian death rates are known to remain constant or even rise in post-conflict situations, largely because the boundaries between war and peace, as between war and crime, tend to be blurred.

As for the weapons themselves, it should be stressed that the mortality and morbidity associated with any given injury vary, according to both the weapon's design (e.g. type) and the context (e.g. environment) in which it is used. Weapons can kill, maim, or contribute to various forms of long-lasting secondary effects. The design of weapons determines their killing and stopping power: a function of ammunition type and twist, propulsion and the amount of kinetic energy distributed throughout the body (see Appendix 6.4). Similarly, the context of use—whether in close proximity to the victim or from afar, whether close to a health clinic or not—invariably influences the outcome (see Commentary 6.1).

Intentional deaths resulting from small arms can be positioned on a continuum that runs from flagrant violations of human rights and international humanitarian law to compliance with existing and legitimate police norms. Studies indicate, however, that non-combatants are frequently killed or injured from fragmenting munitions (e.g. bombardments or artillery) during conflict while those killed outside of conflict are more likely to have been intentionally attacked with firearms.⁴²

On the other hand, legitimate police and military actors, who kill criminals or insurgents in self-defence or within the parameters of the Laws of War⁴³ (a proportional judgement of military utility versus human cost), are often considered to be operating within their legal jurisdiction (De Mulinen, 1987). However, there are clearly exceptions to this rule.

Take the case of Brazil. While not at war, Brazil has one of the highest firearm-related death rates in the world. With only three per cent of the global population, Brazil accounted for between 9 and 13 per cent of the world's firearm deaths in the 1990s. According to the Institute for Religious Studies and Viva Rio in Rio de Janeiro (ISER, 2000, p. 12), '... Brazil lives under conditions of micro conflicts of criminality'. Similarly, studies on Afghanistan demonstrate that, in regions experiencing intermittent peace and conflict, 'weapons injuries not attributable to combat are common ... social changes accompanying conflict and the widespread availability of weapons may be predictive of use of weapons that persists independently of conflict' (Michael et al, 2000, p. 415).

According to some estimates, small arms have been the exclusive weapons used in 90 per cent of the 49 conflicts started since 1990.

Brazil has one of the highest firearm-related death rates in the world. With only three per cent of the global population, it accounted for between 9 and 13 per cent of the world's firearm deaths in the 1990s

Commentary 6.1 Why are guns so lethal?

Television screens the world over are saturated with images of males of all ages brandishing deadly arrays of military hardware. Lurid tales of the destruction wrought by armed violence are an omnipresent feature of global news reporting. In many viewers' minds, genocide, armed massacres, and conflict deaths are automatically equated with widespread availability of small arms and light weapons. And yet, military weapons that find their way into civilian hands are notably diverse in their stopping power. A crucial attribute is the weapon's lethality—the degree to which it can inflict damage on one or more vital bodily organs or structures. Factors affecting lethality involve much more than simply the type of weapon; they also include context, vulnerability, and ballistics.

In terms of context, unrestrained arms availability is highly correlated with a pervasive collapse of public institutions and the inability of the state to ensure civilian security. In such an environment, faltering first aid, evacuation capability, and follow-up treatment may increase mortality rates. Other factors are more a function of the location of weapons use and the relative vulnerability of those exposed. For example, organized and formal militaries go to some lengths to protect themselves from the effects of fragmenting munitions—for instance through reinforced bunkers and sandbags. Civilians in areas where such weapons are used and who lack access to protective measures are more vulnerable than military personnel.

Increased vulnerability is another important consideration, since the shelling of civilian inhabited areas is a relatively common feature of many recent conflicts. For example, tribal fighting in Afghanistan appears to have undergone a major qualitative shift away from assaults on individuals and towards a form of combat more typical of organized military factions. Mortars accounted for 90 per cent of injuries in one such tribal clash, and more than 25 per cent of those injured were women or children. In fact, in a number of settings, mortars are the most common cause of civilian death or injury resulting from inter-factional combat. On the other hand, assault rifles are responsible for most deaths and injuries in other situations outside the context of inter-factional combat (e.g. domestic disputes and banditry).

Analyzing non-combat use of assault rifles reveals that the weapon was frequently being used at close range to resolve an interpersonal dispute. Another common scenario is the accidental discharge of an assault rifle while being (mis)handled. In either case, with the victim in non-combat situations much closer to the weapon, the increased kinetic energy carried by the projectile inflicts greater tissue damage and there is increased probability of lethal injury.

Ballistics also has a bearing on weapon lethality. Like all rifles, military assault rifles have a twisting series of grooves within the barrel referred to as rifling. This imparts a twist to the projectile in flight in order to ensure aerodynamic stability. The amount of twist per unit of barrel length changes with different models of assault rifle, even those of the same calibre or within different series of the same model. Organized militaries are outfitted with ammunition specifically designed to match the rifling within the barrel of their assault rifle. This is not always the case with informal militia.

A mismatch between barrel rifling and ammunition means that the projectile has less stability in flight and creates larger bullet wounds. Not surprisingly, stocks of assault rifles, produced at different times in different places and circulating in many parts of the world, are unlikely to be matched with appropriate ammunition. The resultant tendency towards large bullet wounds is yet another factor in the increased lethality associated with widespread weapons availability.

Source: Meddings, 2000a

The opinions expressed above are those of the author and are not in any way to be attributed to the ICRC.

A question of gender?

Consideration of gender is particularly relevant in the discussion of direct effects since a disproportionately large percentage of both aggressors and victims (during conflict or peace) are men. An analysis of deaths from the use of firearms in Rio de Janeiro illustrates that the male-female mortality ratio is similarly unbalanced (ISER, 2000). For example, of Rio residents who died in 1998 from firearms, approximately 94 per cent were male and only six per cent female. Among young people in Rio over the same period, males between the ages of 15 and 29 were approximately 24 times more likely to die from the use of firearms than were females of the same age group.

And yet women are explicit targets of certain types of armed violence—simply because they are women. Some forms of violence—like domestic abuse, sexual assault, and rape—are uniquely conditioned by gender-based relations, which means that understanding their dynamics is critical for effective intervention (see Commentary 6.2). For example, women are frequently symbolic targets in conflict—an offensive gesture designed to disgrace and undermine the morale of enemies.

Consider the circumstances of sexual assault. Women constitute the vast majority of victims. For example, an estimated 20-50,000 women in Bosnia and Herzegovina were systematically raped during the conflict in the fragmenting former Yugoslavia (WHO, 2000; Collins, 1998).

In Burundi, a specific armed faction known as Sans Capotes ('Without Condoms') reportedly raped women at gunpoint before murdering them. Guns are also used extensively as instruments of sexual violence against women in South Africa (Cock, 1997). In northeastern Kenya, women are raped and assaulted indiscriminately; even the threat of small arms possession undermines solidarity among large groups searching for firewood or foodstuffs. Nevertheless, there is considerable evidence that women are not merely passive victims during conflict; their involvement runs the gamut from active combat to peace-building and reconciliation.

Women are more at risk from domestic violence at the hands of intimate partners, while men are more at risk from male acquaintances. Where arms are readily available, they are the weapons of choice when male spouses kill their partners.

Commentary 6.2 Direct effects of gun violence: What's gender got to do with it?

Most small arms owners and users are male. In the US, it is estimated that 42 per cent of men, as compared to nine per cent of women, own guns. In Canada, 85 per cent of gun owners are male. The fact that there are proportionately few female gun owners in relation to female gun victims has been one of the arguments advanced for positioning the firearms debate in the context of human rights and gender.

Guns also figure prominently in the 'cycle of violence' against women. Even when a gun is not fired, it has the capacity to inflict serious psychological damage on those threatened. For every case in which women are killed or physically injured with firearms, there are many more in which they are threatened. The patterns of intimidation are similar across cultures and include such behaviours as shooting the family pet as a warning or getting the gun out and cleaning it during arguments. Studies of abused women in many parts of the world—Australia, New Zealand, South Africa, and Canada—report similar phenomena.

Public opinion polls in many countries reveal a significant gender split in attitudes towards firearms, as well as in firearm-related electoral voting behaviour. For example, in the US House of Congress during the final vote for the Brady Bill (legislation designed to ensure background checks on prospective gun purchasers), 81 per cent of women voted for passage as against only 51 per cent of men. Another relevant US example is the 1999 'Million Mom March', which dramatically illustrated the power of women to lobby against violence, to raise awareness, and potentially to effect societal change. As Canadian Senator Janice Johnston observed, 'if there were more women in Parliament, we would not even be having this debate'.

Source: Cukier, 2000b

Indirect effects

'There is less threat and more insecurity than ever before'.

Jan Egeland,
UN Special
Representative
for Colombia

The international community is increasingly cognizant of violent crime and the attendant costs of armed insecurity. There is mounting concern over the rising number of peacekeeping missions dispatched to insecure regions, the rates of cross-border and internal displacement, the incidence of child soldiers, and the combined impact of these factors on development.

While the qualitative effects of armed violence on societies include the manifestations of cultures of violence and a heightened sense of personal insecurity, the quantitative impacts are more elusive. They range from direct effects (e.g. numbers of casualties) to indirect externalities (e.g. overextended public health facilities or declining foreign investment). Calculating the indirect effects of the availability and use of small arms and light weapons is an imprecise science. However, an increasing number of approaches, including transaction cost theory, opportunity costing, and proxy analysis, are being applied. For further information on these and other methodologies, please refer to the Small Arms Survey website at <http://www.smallarmssurvey.org>.

There is a need for an informed and balanced perspective to counteract the temptation to conflate figures and attribute all spiralling crime, humanitarian emergencies, and underdevelopment to the abundance and (mis)use of light weapons. It must be kept in mind that small arms are not the origin of crime, complex emergencies, or underdevelopment. Nor should any narrow strategy focusing solely on their reduction or elimination be considered a solution to address these complex challenges.

The following sections will explore a range of overlapping and indirect effects of small arms availability through a variety of disciplinary lenses. The discussion begins with a review of the impacts of small arms on the welfare of individuals and public health systems. It then considers the implications of small arms availability on criminality and the growth of privatized security. The section then turns to the consequences of small arms availability on humanitarian interventions and operational security. Finally, it concludes with a review of the opportunity costs of small arms availability on development initiatives and takes a brief look at the relationships between poverty, inequality, and firearm use.

In sickness and in health

In South Africa and the US, armed violence is fast overtaking infectious disease as the principal cause of ill health and premature mortality.

Death and injury resulting from firearms has been classified simultaneously as a 'scourge' (Boutwell et al, 1995), an 'epidemic' (ICRC, 1996), a 'disease' (Colletta and Kostner, 2000), and a 'preventable global health problem' (CDC, 1999). The biological analogies are not accidental. In South Africa and the US,⁴⁴ armed violence is fast overtaking infectious disease as the principal cause of ill health and premature mortality. Indeed, according to South Africa's National Injury Mortality Surveillance System (Butchart, 2000, p. ii), a registry that captures approximately 25 per cent of the estimated 60,000 fatal injuries a year, 'firearms overshadowed all other external causes [of death]. The total of 3,906 firearm deaths was greater than the 3,684 deaths due to all motor vehicle accident (MVA) categories combined'.

It comes as little surprise that a humanitarian stance on small arms has been embraced by the medical profession. Weapons are designed to wound or kill; health professionals are trained to identify, prevent, and treat factors that contribute to mortality and morbidity. The Open Society Institute (1999), for example, has declared gun violence an international public health and safety hazard, as well as a significant and preventable source of suffering and death. The public health community has already begun to forge a 'neutral bridge' to reconcile highly politicized discussions on firearms and traditional supply-side or militarist theorizing on arms control.⁴⁵

The World Health Organization (WHO) and the International Committee of the Red Cross (ICRC) have taken the lead in rethinking the question of mortality and morbidity as measured by

firearm-related violence (see Box 6.3). The wider medical community's efforts to recast the problem as a 'measurable' public health issue amenable to medical intervention has greatly contributed to sensitizing the international community (see Commentary 6.3).⁴⁶

International humanitarian law⁴⁷ has been developed to safeguard the welfare of non-combatants and the wounded; humanitarian norms have evolved to limit the excessive and 'injurious' effects of certain weaponry.⁴⁸ However, both these initiatives are inadequately applied or monitored. As a result, many concerned with the health impacts of small arms have focused on the importance of universal criteria, appraisal of the military utility of various arms, and the need to achieve proportionality between military benefits and human costs (ICRC, 1997). Still others have focused on raising awareness of the social and economic costs of firearms to population health.



Box 6.3 Defining a role for the public health sector

The proliferation and misuse of small arms exacts a high health toll: injury, disability and death, not to mention mental health consequences for victims and their families and friends. Although precise data on the annual number of small arms-related deaths are not yet available on a global scale, there have been some cross-national studies. The largest one to date involved 36 high- and upper-middle-income countries with a total population of 1.19 billion. This study revealed that, even though none of the countries was engaged in civil conflict, more than 88,000 people had died from firearm injuries in a one year period in the mid-1990s.

The health sector has multiple roles in reducing the adverse impact of small arms on health and longevity. Its most immediate responsibility is the provision of effective care and support for victims and their families. Unfortunately, in many countries where small arms proliferation is high, health care resources are low. In some cases, the surfeit of small arms contributes indirectly to economic decline and decreasing resources available for health care. In others, human and material resources for hospital and surgical care or rehabilitation are lacking.

A second important role for the health sector is data collection on the magnitude, risks, and protective factors for small arms injuries. Evidence and information on deaths, injuries, and disabilities, and on the costs of these health consequences are vital for policy and decision-makers. As previously mentioned, very little is known about mortality rates attributed to specific small arms, and even less on the number and variety of injuries, the types of weapons most involved, and the demographic characteristics of victims and perpetrators and their relationships.

The third role of the health sector is to participate in the design, implementation, and evaluation of interventions to prevent interpersonal, self-inflicted, and gun violence in general. These activities could focus on behavioural issues like reducing the presence of guns in the home, promoting safer gun storage, or decreasing alcohol consumption. The health sector could also contribute to evaluating the impact of interventions implemented by others. Gun buy-back programmes, weapons collection and destruction, or legislation passed to reduce the traffic or illegal possession of small arms should ultimately reduce the number of injuries and deaths they cause. Emergency room and forensic data collection could also make a substantive contribution to assessing the impacts of such programmes.

Finally, in the same way as it does for physically communicable diseases like HIV/AIDS, TB, or malaria, the health sector could advocate increased attention to this 'socially communicable' health issue. It should provide decision-makers with information on the human and financial costs of such problems and demonstrate that, in certain countries and age groups, small arms are a leading cause of death. This information can then be linked to demands for more effective measures to counteract the public health danger.

Sources: Krug, 2000a, 2000b

Commentary 6.3 Violence costs

Health economics has long been used to estimate the direct economic impacts of various threats to health, whether it be tobacco, AIDS, motor vehicle accidents, or bullets. Some studies have focused on tallying the economic burden for public institutions (e.g. to hospitals, clinics, and policing institutions).

Other studies have added indirect costs, such as the value of lost life in terms of earning power. The value or presumed 'quality of life' will vary considerably based on the earning power of the victims, their age, and gender. As Michael Renner notes, the concept of 'value of lost life ... is highly controversial ... it is inherently biased toward the better off in society'.

The cost of firearm-related death and injury (including murder, suicide, and unintentional injuries) in the US, Canada, and Latin America are tremendous. The potential range of secondary effects that could be considered is vast. For example, armed violence affects the blood supply, and the fact that emergency responses to large scale violence often do not perform thorough HIV/AIDS testing can result in additional problems (Coupland, 1996; Sidel, 1995).

Dealing with the health effects of armed violence impedes the provision of basic health care and diverts much needed resources from other health and social services. Similarly, armed violence and the prevalence of weapons also create psychological stress that fuels other health problems and creates insecurity. Living in arms-infested environments yields observable symptoms of post-traumatic stress disorder, such as overwhelming anxiety and a lack of motivation.

Source: Cukier, 2000a

How heavy is the health burden?

Of the hundreds of thousands of victims killed by firearms, millions more survive their injuries but are left with permanent physical disabilities and mental health consequences. Victims of small arms injuries often require resource-intensive surgery, followed by prolonged hospitalization and rehabilitation. These treatments are expensive and often drain resources away from already impoverished health systems.

There are even more victims who are unable to access health services or medical treatment. For example, the conflict and instability generated by the unregulated availability of small arms often hampers civilian travel to and from immunization service centres and affects the coverage of vaccination programmes, all of which ultimately contribute to the spread of infectious disease.

The cost of treating firearm injuries is staggering. The most reliable statistics on the financial costs of such injuries are recorded by institutes in the US and Canada. According to Miller (1995, p. 1263), the average gun in the US, whether 'fired at targets ... at animals ... at people ... gathering dust ... or under the bed' carries an annual injury tag of US\$ 630 per capita. In 1997, for every person shot and killed with a firearm, there were an additional three others treated for non-fatal firearm injuries. For each adult gunshot victim, the price tag amounted to US\$ 154,000, US\$ 3 million for child fatalities, and US\$ 390,000 for hospitalized individuals.

Medical care and the lost productivity resulting from premature disability and death, firearms injuries, and fatalities cost the US health system approximately US\$ 126 billion in 1992 (Miller and Cohen, 1997). A follow-up study by Cook and Ludwig (2000) suggests that the costs were closer to US\$ 100 billion per year in the late 1990s. Anrest et al (1996) estimates that over 80 per cent of the economic costs of treatment and care were borne by US taxpayers. In Canada, Miller (1995) estimated that the costs of firearm mortality and morbidity exceeded US\$ 4.7 billion (CAD 6.5 billion) per year.

The average gun in the US—whether 'fired at targets ... at animals ... at people ... gathering dust ... or under the bed' carries an annual injury tag of US\$ 630 per capita.

The aggregate figure included US\$ 54 million (CAD 75 million) in medical and police costs and US\$ 1.1 billion (CAD 1.5 billion) in lost work opportunities.⁴⁹ The consequences of gunshot wounds cost each Canadian the annual equivalent of US\$ 170 (CAD 235).⁵⁰

Similar effects are experienced in the South. Though statistics are limited, it is possible to render tentative estimations. In Latin America, the Inter-American Development Bank (IDB) calculated the regional economic costs of violence, since the mid-1990s and including the costs of health, policing, and 'value of life lost', at US\$ 140-170 billion per year. In Brazil, approximately 10 per cent of annual GDP is consumed by treating victims of violence and increased policing. In Colombia, the figure rises to 25 per cent. At a more localized level, a 1997 study estimated the cost of treating severe firearm injuries in one South Africa hospital at US\$ 2.5 million to US\$ 10 million (ZAR 12-47 million) per annum (Burrows et al, 2000). Costs to the hospital and clinics in Central America are reported to be similarly high (Godnick, 2000).

For the individual, the repercussions from firearm injury are profound. The costs include treatment, medication, physiotherapy, and counselling, all of which may lead to the need for loans or informal credit and may finally end with the closure of businesses and even repossession of assets. To this economic cost must be added long-term, often permanent, psychological trauma and social marginalization. The indirect effects of small arms on community health, while not captured in the statistics, may be inferred from the diminished quality of life among individuals.

There is a palpable increase in fear among vulnerable sectors of society, which affects their normal domestic and social routines (see Box 6.4). Armed violence creates an atmosphere of anxiety with negative multiplier effects that erode the human, economic, and social capital of communities.



Armed violence creates an atmosphere of anxiety, with negative multiplier effects, that erodes the human, economic, and social capital of communities.

Box 6.4 On being shot in South Africa

People living in contemporary South Africa are at tremendous risk from firearms. Recent statistics reveal that more than 75 per cent of armed robberies with aggravated assault were committed with firearms. The increase in armed violence has had a direct impact on policing and medical facilities, stretching them well beyond normal capacity. It also affects the well being of victims and communities at the physical, psychological, and economic level.

A series of interviews were conducted with six armed robbery survivors (three men, three women) and their friends and family. The victims were all residents of KwaZulu-Natal Province and varied in age, gender, geographic distribution, and economic status. A majority were also small business owners, operating in either the informal or formal sector.

In each case, the victim was approached by two or three armed men, pretending at first to be customers, who then demanded money or goods. All robberies occurred during off-peak hours at either the beginning or end of the day. Each gunshot victim underwent traumatic operations for the removal of bullets.

Though the injuries sustained were not perceived as insurmountable physical obstacles, most victims chose not to return to work for fear of recurrence. The female victims, in particular, felt that their self-image and self-esteem had been damaged and felt uncomfortable interacting outside of their immediate social circle. Their sense of alienation was reflected by their reduced trust in others, with some victims revealing that they had become paranoid about the potential role of other entrepreneurs (or 'competitors') in the incident.

All victims registered acute fear of loud noises and suffered from bouts of anger, flashbacks, and nightmares. They all felt emotionally and psychologically distressed and in need of help from family, friends, and neighbours.

(continued)

Although support was made available by church bodies, nurses, and business entrepreneurs, kin and friendship networks were most sustaining in terms of financial assistance, counselling, and moral support. About half the victims were satisfied with the assistance they received from police and paramedics. As no arrests were made, there was a general feeling of frustration that justice had not been done.



The direct medical costs of the injury did not affect the victims as much as the indirect costs of closing down their businesses. All victims claimed that not only their health, but also their economic status, had been irrevocably damaged as a result of the incident. Each had been the primary household income-earner. Although the initial payments required for emergency hospital bills⁵¹ were covered through loans and donations from kinship networks, the victims ended up using the lion's share of their savings to pay off debts and meet household expenses. As a direct consequence, all victims and households had to adapt their lifestyles and financial management, resulting in a diminished quality of life. Several had their assets (e.g. household possessions and vehicles) repossessed by the banks soon after the incident.

Testimonies from victims in Natal, South Africa

Respondent	Description of Injuries
Male	' ... Shot at close range with extensive damage to leg leading to amputation. Not taking well to new prosthetic limb. Experiencing further pain and unable to carry articles with his right hand. Development of heart complications and mild epilepsy ...'
Male	' ... Shot at close range. He still suffers from pain—particularly during colder weather. Experiences difficulty getting out of bed. Frequently visiting the hospital to drain puss from his wounds that are not healing on account of diabetes. Suffers from headaches and blackouts ...'
Male	' ... Shot 13 times with one clean wound (no vital organs touched) through the chest. He has recovered physically and experiences occasional pain ...'
Female	' ... Shot at close range. She spent two months in intensive care. Her left side is paralysed and her speech severely affected ...'
Female	' ... Shot three times at close range. Comatose for three weeks losing extensive blood. Her left eye was removed and she suffers from continued limping ...'
Female	' ... Shot three times at close range—two to the stomach and one in the right hand. She has difficulty lifting heavy objects with her right hand. She no longer permits customers to sit inside her house ...'

Source: Arms Management Programme, Institute for Security Studies, 2000a

Crime and punishment

Controlling arms-related violence through appropriate legislation and action is part of a state's inherent obligation to ensure and protect the human rights of its citizens. In the context of structural adjustment, privatization, and the expansion of organized crime,⁵² governments the world over have been forced to make difficult decisions regarding public spending priorities. As public expenditures for basic services decline and funding for welfare and social safety nets is diverted to debt servicing, civil societies bear the brunt of the burden and thus become more vulnerable to criminality.⁵³

The state's declining control over stockpiles and inventories, in addition to its desire to generate much-needed foreign exchange has resulted in a situation in which the preferred tools of criminals are more readily available than ever before (BROKERS). In many countries there is a fine line between policing and criminality, and guns are often sold to civilians at a premium. As for increasingly at-risk citizens, partly as a consequence of crime and the relative under-capacities of public security, they are resorting to other forms of protection. The privatization of security—that is, the growing tendency of individuals, groups, and organizations to rely on private security forces rather than the state's police and paramilitary formations—is a global phenomenon (Boutwell and Klare, 2000). Increasingly, the provision of security is shifting from the public to the private domain.

Increasingly, the provision of security is shifting from the public to the private domain.

Privatizing security

The widespread availability and trafficking in small arms is creating new security threats. A good indicator of global unease is the proliferation of security firms and private military companies (PMCs). Fear of armed crime and violence has led to enclosed fortress-like communities that are emblematic of the widening divide between the 'haves' and 'have-nots'. Illustrative of the mental militarization and insecurity of communities, those who cannot afford 'protected castles and the ... commodification of their security are forced to organise their self-defence outside legal parameters' (Lock, 1999a, p. 31). As a result, we are witnessing 'the evolution of private security into a mutually reinforcing system of multi-polar societal "re-armament" cascading down the social ladder where it amounts to an informal militarization ... at the lower end of the social pyramid' (Lock, 1999a, p. 32).

Private commercial actors had been heavily involved in the provision of public security well before the state's so-called monopoly on violence. 'Private Security Companies' (PSCs) emerged as long ago as the 16th century during the era of Italian mercantilism when rival merchants hired security groups as a means of controlling trade routes and protecting their assets. Between the late 16th and 18th centuries, PSCs evolved under the auspices of colonial exploration companies.⁵⁴ By the mid-20th century, they came into their own throughout Africa, Asia, and Latin America. As they became better established, PSCs provided services ranging from personnel and installation protection to security training and counter-industrial espionage for corporate clients working in regions of instability and conflict.⁵⁵

Private security is a lucrative growth industry. Analysts predict that it will be worth more than US\$ 200 billion per annum in the US alone by 2010.

According to Lock (1999b, p. 9), the 'ideal-type security order with the state fully commanding the monopoly of legitimate coercion ... existed, if ever, at the end of the post-World War II boom in social-democratic states in Europe'. Since the beginning of the 1990s, private security has come to represent a lucrative growth industry with significant numbers of corporations and states relying on contracted or in-house services rather than public policing. PSCs represent, not only one of the fastest growing sectors in the global economy, but also a vital sector in the emerging economies of the South.⁵⁶

In 1991, US PSCs employed 1.5 million personnel and spent US\$ 52 billion. In contrast, public law-enforcement was employing 600,000 personnel and spending less than US\$ 30 billion.

The ratio in 1998 increased to US\$ 90 billion (in the case of PSCs) as compared to US\$ 40 billion (for public policing). In 1998, for example, PSCs with publicly traded stock in the United States grew at twice the Dow Jones industrial average. American private security and policing companies outspent public policing by 73 per cent and employed more than 4 million personnel. Analysts predict that the industry will be worth more than US\$ 200 billion a year in the US alone by 2010 (O'Brien, 2000).

On a global scale, revenues from the private security market topped US\$ 97.6 billion in 1990 and are expected to more than quadruple to some US\$ 402 billion by 2010.

Though the security risks may differ from place to place, the situation is comparable in Europe. For example, since the mid-nineties, Germany's security firms have doubled in number. In the UK, private security personnel have grown from 10,000 in the 1950s to more than 250,000 in the year 2000, outnumbering even the British Army. On a global scale, revenues from the private security market topped US\$ 97.6 billion in 1990 and are expected to rise to some US\$ 402 billion by 2010 (O'Brien, 2000).

In the former Soviet Union, a significant proportion of the hundreds of thousands of soldiers demobilized from the armed forces have joined PSCs. Numerous connections between unemployed ex-soldiers and organized crime are becoming apparent. This is taking place at a time when demand for security is growing. By 1994, for example, 6,605 private security enterprises or security services companies were registered, with more than 26,000 private investigation licences issued. This is analogous to the situation in Central Asia and the Pacific Rim, where demobilized combatants, both formal and informal, have sold their services to a variety of organized crime operations involved in small arms trafficking, prostitution, 'human smuggling', and the drug trade.

In Africa, the situation is exceedingly complex owing to the collusion of PSCs and private military companies (PMCs) with the ruling elite, the police, and the army (BROKERS). In South Africa alone, there were 5,939 registered PSCs employing some 136,000 personnel by 1998. Even this figure is considered low, given that the official ratio of private security personnel to police in that country is 9:1. With an estimated 4.2 million registered firearms and a new gun licensing rate of 20,000 per month, PSCs contributed approximately US\$ 1.6 billion (ZAR 10 billion) per year to the country's GDP in 1999.

With Central and South America described as among the most heavily militarized regions in the world,⁵⁷ it comes as no surprise that in Guatemala City arms are more readily available than telephones. With '1.5 million guns in Guatemala City ... they currently outnumber the population' (Weissert, 2000). As a result of escalating insecurity, between 1999 and 2000, the purchase of private security services and weapons in Guatemala has risen 50 per cent over rates that were already the highest in Central America (CIEN, 2000). There has also been a notable influx of military-style weapons (e.g. hand grenades and mortars) used in common criminal activity.

The rapid development and influence of private security and PMCs are viewed as a threat to existing democratic and judicial institutions, as they prioritize the profit motive over the public good of communities. They have been accused of lacking accountability and diffusing power away from the state without redistributing it to the people.

Organizing crime

The growth and reach of transnational organized criminal groups dealing in arms have been recorded in banner headlines around the world. A provisional list might include: Russian, Italian, and American mafiosi; criminal monopolies in the Golden Crescent and Triangle; triads in China; the decentralization of narco-trafficking and arms dealing in the Northern Andean region; and smuggling operations from South Asia to Central America and the Caribbean. In some cases, particularly among developing countries, criminal elements are better equipped and armed than the state's military, police, or customs apparatus.

The proliferation of globalized criminal markets has contributed to more frequent interactions between major organized crime groups with transnational ambitions (UNDCPP, 2000).

'Organized Criminal Group': A structured group of three or more persons, existing for a period of time and acting in concert, with the aim of committing one or more serious crimes or offences ... in order to obtain, directly or indirectly, a financial or material benefit.'

UN General Assembly,
2000

Criminal groups from a range of different countries have established a broad network of illicit businesses, trading goods and services, as well as information and resources across borders. In the Association of South East Asian Nations (ASEAN), for example, transnational crime syndicates, particularly drug traffickers and human smugglers, are perceived as ‘the principal recipients of small arms and light weapons and as threats to authority and good governance in the region’ (UNDDA, 2000, p. 2).

The presence of international crime networks, coupled with expanding markets and rapidly moving capital, has permitted underground or shadow economies to flourish. As a result, organized crime presents itself simultaneously as both a local and global phenomenon.⁵⁸ Transnational criminals are the new venture capitalists, thriving in high-risk markets and unstable or otherwise vulnerable environments. Though only recently recognized, there is a convergence between illicit drug and mineral trafficking⁵⁹ with arms proliferation in, among other places, Sierra Leone, Liberia, Angola, Colombia, Pakistan, and Afghanistan⁶⁰ (ILLICIT TRANSFERS). In economies weakened by armed conflict, criminal actors may well preside over a territory ripe for money laundering, trafficking in arms, primary commodities (e.g. diamonds, timber, and oil), drugs, abundant and cheap labour, and endless possibilities for exploitation. Though overhead costs can be high, it is a profitable business. Indeed, even where multinational companies and transnational criminal entities devote substantial resources to the provision of private security,⁶¹ the cumulative returns when operating in violent and crime-infested regions often far outweigh the costs.



Transnational criminals are the new venture capitalists.

From the abstract to the concrete

The impact of small arms on criminal violence is difficult to evaluate in the abstract. Crime-related firearm injuries include those caused by interpersonal violence, irrespective of whether the victims were the intended targets. Such injuries can be non-fatal or fatal. While firearms homicide data are, to a certain extent, available, there is little information on non-fatal firearm injuries resulting from crime. Though many countries have laws mandating that gunshot wounds be reported to the law enforcement authorities, there are few national—much less international—registries to monitor trends over time. This is because legislation is rarely consistently implemented at the national level and information is frequently gathered, if at all, in a piecemeal fashion.

Ultimately, the concrete manifestations of criminal and drug-related armed violence are felt locally. These range from the armed protection of interests or ‘turf’, to armed retribution against drug users unable to pay for their habits, to violence committed by users under the influence of drugs. In London, for example, the homicide rate between 1997 and 1999 was at its highest levels since the mid-eighties.⁶² Much of it was drug-related and more than 60 per cent of all cases involved firearms.

According to Thompson (2000), ‘modern weapons’ (e.g. handguns and automatic weapons) are increasingly being held by young drug dealers to protect themselves and their territories. According to research conducted by Lizotte et al (1994), young males who own guns for protection in the US are six times more likely to carry firearms and eight times more likely to commit a crime with a gun. Also, they are four times more likely to sell drugs, approximately five times more likely to be in a gang and three times more likely to commit serious and violent crimes than youth who do not own guns for protection (Lizotte et al, 1994). In the favelas of Brazil, the shantytowns intermingled among and encircling the country’s major cities, it is often the poor and marginalized that are affected by armed violence generated out of the drug trade (see Box 6.5). Automatic weapons are also used by young cocaine and crack traffickers in Bogota’s South End, Nairobi’s Eastleigh district and south-central Los Angeles.

In London, for example, the homicide rate between 1997 and 1999 was at its highest level since the mid-eighties. More than 60 per cent of all cases involved firearms.

Box 6.5 Danger in paradise: Urban criminal violence trends in Rio and Brazil

In Brazil between 1990 and 1999, an estimated 28,000 people died as victims of firearms. The widespread availability and use of small arms is a serious and rapidly growing problem.

A variety of factors contributed to the growth of violence in Brazil in the 1980s and 1990s. Increasing urbanization, coupled with growing socio-economic inequality, the demographic 'bubble' (youth), the erosion of public services, anachronistic laws, and institutional norms regulating public safety and justice—a combination of all these complex factors has created an enabling environment for armed violence. Although it is spurious to single out firearm availability as the only cause of violence, focusing on small arms is important because they are the major instruments of urban violence in Brazil.

In 1997, among young male Brazilians aged 15-19, 'external causes' (e.g. non-natural) leading to death constituted almost 80 per cent of all mortality. Approximately 36 per cent of these youths were killed with firearms. Put another way, a youth in Brazil was 1.6 times more likely to die from gun wounds than as a result of road accidents. The situation did not improve in 1999. In Rio de Janeiro, for example, approximately 40 per cent of all 'externally caused' deaths (and 93 per cent of homicides) were attributed to firearms.

Figure 6.5 Young guns: Risk of firearms death for males aged 15-29 in Rio and Brazil

Population group	Rio de Janeiro (deaths per 100,000)	Brazil (deaths per 100,000)
Total	41.8	17.5
Male, 15–29 years old	198	68.8
Relative risk factor	4.7	3.9

Source: ISER, 2000

Protecting people: A humanitarian imperative

At the centre of the human rights agenda and humanitarian law is protection—the safeguarding of political, economic, social, and cultural rights of all individuals and the upholding of the Geneva Conventions and Protocols. Humanitarian advocacy and action on the small arms issue revolves around three complementary and overlapping policy agendas:

1. Human rights and supply-side controls: Addressing international humanitarian law (IHL) abuses resulting from legal, grey, or 'illegal' shipments to particularly abusive regimes;
2. International humanitarian law and civilians: Addressing violations of IHL and the human rights of civilians during armed conflict; and
3. Deteriorating security: The impact of arms availability on the protection of personnel and the effectiveness of humanitarian relief and development operations.

The recently launched International Action Network on Small Arms (IANSA), a loose coalition of over 250 NGOs working on arms control and violence reduction, is drawing on all three policy agendas.⁶³ Each perspective, along with its major proponents, is treated in greater detail below.

Human rights and supply-side controls

Spearheaded by a number of like-minded states, international human rights organizations, and non-governmental agencies (NGOs) actively pursuing demilitarization, this perspective highlights the importance of supply-side controls on producer or exporting states to rights-abusing regimes.⁶⁴ Proponents of this view contend that a significant majority of arms flows into conflict environments are supplied by governments in direct contravention of international law.

These weapons, it is argued, are frequently used by importing governments to violate the basic human rights of innocent civilians. Thus, efforts should be increased to curb both legal and covert arms trade, since producer and distributor states have an obligation, under Article 1 of the Geneva Conventions, to 'respect and ensure respect' for international humanitarian law. In particular, they argue that the 'provision of arms into situations where serious violations of international law occur or are likely to occur should be condemned' (ICRC, 1999, p. 64). In its strongest form, this perspective suggests that countries that 'distribute to regions of conflict are, by their acts of commission or omission, or sheer neglect, accessories to the abuses that are being committed. If the abuses rise to the level of war crimes, they may be accessories to war crimes, even genocide' (Hilterman and Bondi, 1999).

The humanitarian advocacy community argues that the major and mid-level small arms exporting states, including the US, the Russian Federation, Brazil, Germany, Bulgaria, China, and the UK have an obligation to impose restrictions on licencing arrangements and sales to abusive regimes (LEGAL TRANSFERS). Adopting a rights-first approach, these actors call for increased accountability, governmental scrutiny, and policies on brokering and end-user certification. They also demand ethical policies and codes of conduct on the small arms trade so as to improve transparency on the production, distribution, and receipt of small arms.⁶⁵

Of course, proponents of this rights-based approach recognize the limitations of focusing on transfers and newly produced small arms, particularly in light of the high level of illegal arms circulating or leaking from existing stockpiles. Nevertheless, they seek to situate the debate over small arms transfers within the framework of human rights rather than in the comparatively less politicized arena of global trade.

International humanitarian law and civilians

A second approach—one preferred by the United Nations, some donors, the ICRC, and major international relief agencies—aims to heighten international awareness and, in some cases, actively mitigate the impact of armed violence on non-combatants and vulnerable groups.⁶⁶ Operating in the complex realities of the field in regions where demand for small arms is high, they must respond to armed violence on a massive scale. A number of these actors condemn and investigate armed attacks and massacres committed against unarmed civilians by belligerent public authorities and non-state actors. They also campaign against torture, the summary execution of captured victims, and the recruitment of child soldiers.

Humanitarian and development agencies are particularly alarmed that civilians are increasingly the primary target of armed conflict and war. The ICRC (1999, p. 71) for example, notes that, not only do civilian casualties frequently outnumber those of combatants, but that human suffering continues, frequently years after hostilities have ended 'as the widespread availability of arms ... undermines the rule of law and threatens efforts at reconciliation among former warring parties'. In other words, the widespread availability of small arms threatens the foundations of international humanitarian law, 'one of the principal means of protecting civilians in times of armed conflict' (Herby, 1999).

Significant small arms exporting states—e.g. the US, Brazil, the Russian Federation, China, Germany, Bulgaria, and the UK—have an obligation to impose restrictions on licensing arrangements and sales to abusive regimes.

Humanitarian and development agencies are alarmed that civilians are the primary target of armed conflict.

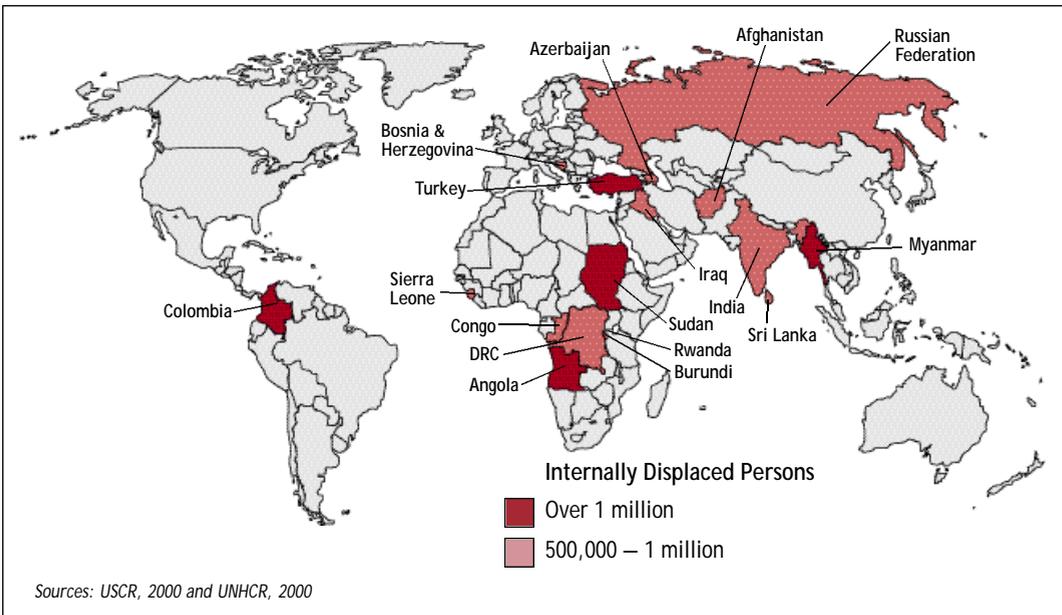
In many cases, the forced displacement of civilians is the object, rather than the by-product, of coercive violence. There are strong indications that availability of small arms is correlated with repeated cycles of cross-border and internal displacement (see Box 6.6).

From the beginning of the 1990s, the deliberate displacement of civilians has been common practice in Angola, Sierra Leone, DRC, and Uganda (see Map 6.4). For example, as a result of the extraordinary availability of military-style arms and 'ground attacks involving far more weaponry' in the Congo, 'relief officials estimate that there are 750,000 refugees, compared with at most 200,000 a year ago' (Fisher, 2000). What with the availability of a seemingly endless supply of weapons in return or resettlement regions, the long-term character of displacement seems assured.

To take another example, the 1994-96 occupation of Rwandan refugee camps in Eastern Zaire by the Interahamwe drew the attention of the international media to the problem of militarized refugee camps (see Box 6.7). While the presence of armed elements in refugee camps is by no means a new phenomenon (e.g. the PLO in Palestinian camps, Saharwi rebels in Algeria, and South African members of the ANC's military wing in Mozambique and Tanzania), it has taken on increasing relevance for the international humanitarian community.

With combatants unaware of, avoiding compliance with, or in deliberate contempt of international humanitarian law, the implications for humanitarian agencies seeking to deliver assistance are serious. In conflict and post-conflict settings where small arms remain widely available, there is a combustible mix of recently active or demobilized soldiers, banditry, and in some cases, predatory state activity. Even a single armed person can block supply routes and 'the resulting loss of life is significant ... both from lack of access to relief programs and ... the protection international agencies offer as "witnesses" to deter atrocities' (Greenaway and Harris, 1998, p. 14). For this and other reasons, increased hostage taking, banditry, and violent theft is common in the aftermath of conflict.⁶⁷ Consequently, demands for physical protection for both beneficiaries, host communities, and relief/ODA personnel have risen to the top of the humanitarian agenda.

Map 6.4 Violence-induced internal displacement: A growing menace



Box 6.6 Flee or perish: The scourge of internal displacement in Africa

For decades, the African continent has witnessed the forcible displacement of civilians as a result of armed conflict. Since the 1980s, however, the number of cross-border refugees has decreased, while the number of people displaced within their own national borders has grown dramatically. The number of internally displaced persons (IDPs) in Africa reached 12 million by mid-2000—an increase of 4 million during the last two years of the century. By contrast, the African refugee population was nearly halved to an estimated 3.6 million between 1994 and 1999.

The proliferation of modern small arms in the Great Lakes Region has been well-documented (see, for instance, Box 6.2). For example, Rwandan soldiers who fled to then-Zaire after having participated in the 1994 Rwandan genocide were able to acquire new arms in spite of a UN embargo. These weapons are fuelling a brutal civil war in the eastern part of the Democratic Republic of Congo (DRC). Referred to as Africa's 'First World War', Burundi, Rwanda, and Uganda deployed troops in the region in support of rebel factions fighting forces loyal to the late DRC President Kabila, while the latter has received support from Angola, Namibia, Chad, and Zimbabwe.

Local militias arms supplies have been regularly replenished by external sources, setting the scene in the eastern DRC for some of the most systemic and widespread violence—and violations of humanitarian law—in Africa. A pattern of reprisal attacks on civilian settlements has been observed since the resumption of civil war in 1998. The complexity of the conflict is illustrated by reports of villagers who, after having been attacked by so many different armed groups, can no longer distinguish between friend and foe. As a result, between 1999 and 2000, the number of IDPs in the area increased by over half a million.

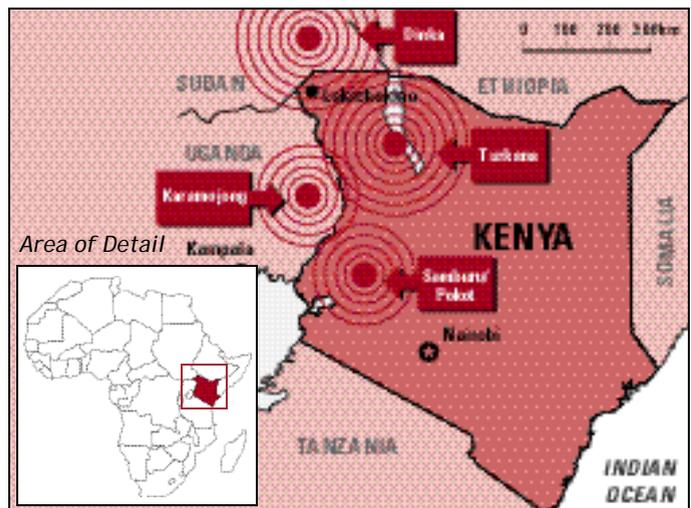
Armed skirmishes between Kenyan pastoralists and their neighbours clearly illustrate the relationship between the availability of small arms and the displacement of civilians (Map 6.5). Tribal conflicts—expressed through livestock raiding—are a custom in the area but, while cattle raids are a key traditional form of 'redistribution', they have come to involve external actors and modern weapons. The Karamojong pastoralists along the Uganda-Kenya border have an inventory of more than 100,000 light weapons, purportedly acquired from fleeing forces loyal to Idi Amin and sustained with purchases from sources in Kenya, Somalia, and Sudan. Between 100,000 and 135,000 people were displaced on the Ugandan side when the Karamojong

raided the area during the first half of the year 2000. While looting has characterized past raids, in this instance, systematic rape, killing, and destruction of property was also widespread. The same can be said of the Turkana, the Samburu, and the Sudanese Dinka livestock herders who also live in the region. According to some estimates, 95 per cent of all households possess a firearm (Muggah and Berman, 2001).

Source: Danevad, 2000



Map 6.5 Guns and cattle rustling in Kenya



Source: Muggah and Berman, 2001

Deteriorating security

By 1997, the UN considered 53 countries—about 25 per cent of all the world's countries— to be insecure.

The third perspective—the impact of arms availability on the protection of personnel and the effectiveness of relief and development operations—has been explored in great detail by academics, security and policy analysts, governments, multilateral agencies, the ICRC, and the UN. It stresses the deteriorating security environment for peacekeeping and humanitarian operations.⁶⁸ It notes that the nature of humanitarian and development work is changing—taking place amidst internal, rather than cross-border, conflict and is tied to a warfare economy. It acknowledges that civilians, and those who are seen to protect and assist them, are now regarded as legitimate targets for extortion, theft, threat, rape, and other brutalities.

In the late 1980s and early 1990s, the UN Security Co-ordinator was still able to report that 'security was not an issue' and that 'it was almost unheard of for a staff member to be killed or injured'. By 1997, however, the UN considered 53 countries to be insecure, operations in complex emergencies had increased fivefold, and the working environment for UNHCR and NGO staff had 'altered dramatically' for the worse over the previous half decade (Greenaway and Harris, 1998).

In recent years, United Nations staff and other humanitarian personnel have lost their lives in virtually every corner of our conflict-ridden world: Afghanistan, Albania, Angola, Bosnia and Herzegovina, Burundi, El Salvador, Ethiopia, Georgia, Guinea, Haiti, Indonesia, Iraq, Kenya, Kosovo, the Russian Federation (Chechnya), Rwanda, Sierra Leone, Somalia, Sudan, Tajikistan, and Uganda. Others have been abducted in Bosnia and Herzegovina, Colombia, Georgia, Guatemala, Liberia, Peru, the Philippines, the Russian Federation (Chechnya), Somalia, Tajikistan, and Yemen.

According to a 1997 UN press release, more than 1,500 international and national staff on UN missions have been killed by weapons since the 1945 founding of the United Nations (Dorn, 2000, p. 3). Over the past eight years, the most conservative estimate of the mean homicide rate for UN staff and dependants is approximately 35 per 100,000—on a par with the civilian homicide rates of Lebanon, and higher than in Azerbaijan, Jamaica, Nicaragua, the Russian Federation, or even Sri Lanka.

From January through July 1998, more UN civilian staff died in United Nations' service than soldiers involved in UN peacekeeping operations.

Between January 1992 and March 1997, 131 UN staff were killed with firearms, of which 21 per cent were engaged in humanitarian operations and 52 per cent were killed in societies experiencing state collapse. If international peacekeepers are included, the figure rises to 456. From January to July 1998, more UN civilian staff died in United Nations' service than soldiers involved in UN peacekeeping operations (Deen, 1998). Between January 1994 and March 1997, there were 119 individuals taken hostage, and an additional 500 were taken in 2000. Even now, there are only nine (and rising to 16 by the end of 2001) professional UN staff responsible for co-ordinating and managing the security system covering 70,000 UN staff and dependants at over 70 duty stations.

A recent study by Sheik et al (2000) noted that intentional violence was the cause of between 70 and 75 per cent of all deaths among humanitarian personnel between 1992-95. The study emphasizes that it was 'humans with weapons rather than motor vehicles [that] posed the greatest threat' (Sheik et al, p. 168). The number of deaths among UN peacekeepers and programme staff broadly follows the changes in the number of refugees and asylum seekers worldwide, providing an indirect measure of the prevalence and violence of conflicts.

The International Committee of the Red Cross (ICRC) reported that, in 1996, its delegates suffered 153 security incidents, including staff members killed or wounded. Between 1990 and 1999, a total of 93 staff members were killed and 280 injured, but trends suggest a general decrease over the past four years.⁶⁹ It is reasonable to assume that the UN and the ICRC are more security conscious and risk averse than many field NGOs⁷⁰—and that these figures under-represent the phenomenon in the wider international humanitarian aid community.

Box 6.7 The militarization of refugee camps: A burgeoning security risk

Over the past three decades, the spread of small arms and light weapons, whether as a result of covert or overt criminal activity, has been a contributing factor in forcing people to flee their homes and relocate in makeshift camps. Particularly in countries of asylum, the presence of small arms poses a serious law-and-order problem, threatening the security of civilian refugees both in and outside the camps. According to Milner (2000, p. 2), a perverse outcome of the growing 'security burden' in the region is that offers of 'asylum will become increasingly scarce in countries where hosting refugees is perceived to be a threat to state security'.

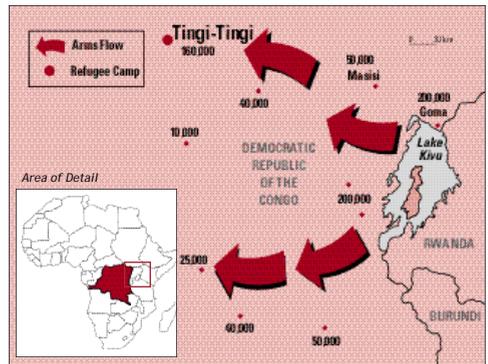
Camps have been used to slip rebels surreptitiously across borders to run guns and ammunition, and to establish rear bases or recruiting grounds for rebel forces. In some cases, host governments have supported the use of refugee camps for cross-border, counter-insurgency activities. Examples include Ethiopian refugee camps in Eastern Sudan, Afghan camps in Pakistan, Khmer camps in Thailand, and Salvadoran and Nicaraguan refugee camps in Honduras. What is more, entire 'refugee generations' have grown up within such militarized environments. These and other factors have led to the militarization of many refugee camps.

A case in point is the Tingi-Tingi encampment in Eastern Zaire where an estimated 150-160,000 refugees, including several thousand unaccompanied minors, have been quartered in makeshift camps. According to a UNHCR spokesperson, in 1998 the militarization of the camp put the lives of innocent refugees, IDPs, host communities, and humanitarian workers at risk. According to CNN reports in 1997, about 25 children died each day. A UN assessment (1997) claimed that 'former Rwandan soldiers and militia in the settlement are receiving weapons, ammunition and uniforms by air and are being sent to the front-line ... Military elements are being deployed in positions near the camps ... and sections of the encampment are being used as storage facilities for arms and ammunition. Young male refugees are being actively recruited.'

Small arms were frequently shipped under the direct cover of 'humanitarian assistance'. In the refugee camps of the former Zaire, Rwanda, and Burundi, arms were smuggled in by way of NGO aircraft as 'food aid' or 'farm implements'. According to the *East African* (1997), a regional news service, 'so many weapons have been flown into the Tingi-Tingi camp that they have interrupted relief shipments ... arms, uniforms and munitions are being supplied daily in the camp itself.' The same phenomenon has reportedly occurred in Sudan, where Christian aid organizations have been repeatedly accused by public authorities of functioning as screens for arms merchants. Similar claims have been levied against camps in Kenya, such as Kakuma and Dadaab, though little substantive evidence exists to back up such claims. To be sure, however, the 'host community' areas surrounding the camps are saturated with arms (Muggah and Berman, 2001).

The UNHCR has a stake in preventing this kind of instability that leads to forced displacement. The organization recognizes that curtailing the production, sale, or transfer of small weapons would contribute to greater stability and security and mitigate the circumstances that cause people to flee. To this end, the UNHCR has adopted a 'security-first' approach, involving the deployment of international police advisors to improve security and law-enforcement capabilities (e.g. to Kosovo Albanian camps in the Former Yugoslav Republic of Macedonia, as well as to Burundian refugee camps in Tanzania). In some cases, the UNHCR has also hired host-country soldiers to provide security in refugee camps, and funded firewood collection programmes to reduce refugee and IDP vulnerability. Further, it has established a Permanent Working Group on Safety, while the Field Safety Section has recently prepared a Camp Security Survey to address this issue in camps and refugee populated areas.

Map 6.6 Refugees and arms flows in eastern Democratic Republic of Congo



Personal safety is a major source of stress for expatriate field staff working in violence-prone areas. About 95 per cent of those interviewed cited on-site 'security problems'.

Death, injury or armed harassment of humanitarian personnel has become an almost everyday occurrence (see Commentary 6.4). Relief workers are increasingly forced to negotiate with child soldiers, ex-combatants, and non-state factions. The recent proliferation of agencies in high-risk theatres of operation has resulted, in many cases, in increased 'security incidents'. The UNHCR alone calculates that in 1997 it had 3,000 staff working in areas designated insecure, and an additional 10,000 if associated NGOs were added to the equation. A total of 158 security incidents affected UNHCR staff and property between December 1999 and May 2000. Though they ranged from petty theft to life-threatening events and death, approximately 50 per cent were considered to be serious in nature. Threats were reported in Afghanistan, Colombia, Georgia, Greece, Malaysia, Pakistan, Tajikistan, and Thailand. Convoys and relief activities were explicitly targeted in Kosovo, Sudan, and West Timor.

A recent survey of the international humanitarian aid community concluded that personal safety was a major source of stress for expatriate field staff working in violence-prone areas. Approximately 95 per cent of those interviewed, including development workers recorded varying degrees of on-site security problems. For example, the ICRC estimates that approximately 50 per cent of its international and national staff suffer from emotional difficulties during and following their assignment while an estimated 30 per cent have endured a serious 'security incident' in the field.⁷¹ According to a UN Survey, 'armed conflict, mines, gunfire, murder, banditry, car-jacking, robbery, the narcotics trade, substance abuse and other criminal activities in the ... surrounding areas were reported stress factors'.

Commentary 6.4 West Timor: A tragic communiqué

'My next post needs to be in a tropical island without jungle fever and mad warriors. At this very moment, we are barricaded in the office. A militia leader was murdered last night—he was decapitated and had his heart and penis cut out. Segments of Timorese society must be some of the most violent and gory people anywhere on Earth: Atambua suddenly shut down when news spread that trucks and buses full of militias were coming from Betun (my former home) to Atambua. The town is suddenly deserted and all the shops were boarded up in a matter of minutes. Traffic disappeared and the streets are strangely and ominously quiet. I'm glad that a couple of weeks ago we bought rolls and rolls of barbed wire.

'I was in the office when the news came out that a wave of violence would soon pound Atambua. We sent most of the staff home, rushing to safety. I just heard someone on the radio saying that they are praying for us in the office. The militias are on the way, and I am sure they will do their best to demolish this office. The man killed was the head of one of the most notorious and criminal militia groups of East Timor. These guys act without thinking and can kill a human as easily (and painlessly) as I kill mosquitoes in my room. You should see this office. Plywood on the windows, staff peering out through openings in the curtains hastily installed a few minutes ago. We are waiting for this enemy, we sit here like bait, unarmed, waiting for the wave to hit. I am glad to be leaving this island for three weeks. I just hope I will be able to leave tomorrow.

'As I wait for the militias to do their business, I will draft the agenda for tomorrow's meeting on Kupang. The purpose of the meeting: to discuss how we are to proceed with this operation.'

These words were written in the last hours of the life of UNHCR staff member, Carlos Caceres, in Atambua, West Java. Emailed to a UNHCR colleague in the Macedonian city of Skopje on 6 September 2000, this communiqué was sent shortly before he and two colleagues were shot and killed—the most serious incident yet experienced by the UNHCR. This excerpt was read by Sadako Ogata, former High Commissioner for Refugees, at a memorial service for Mr. Caceres on 8 September 2000.

'The world can never be at peace unless people have security in their daily lives ... the search for security... lies in development, not in arms'

UNDP Human
Development
Report, 1994

Other surveys of private sector workers in high-risk environments are similar. The psychological stress of working in situations where one's personal safety is continually jeopardized, of enduring extended separation from family who are constantly aware of their loved ones' extreme danger, and of being surrounded on a daily basis by armed violence—all of these factors contribute to critical levels of stress and the potential for psychosocial trauma. Unsurprisingly, real and perceived insecurity adversely impacts the productivity of relief and development operations.⁷²

A threat to development

Armed conflict and violence are today concentrated in the world's poorest countries. According to the Organisation for Economic Co-operation and Development (OECD/DAC, 1998), conflict has reduced, even reversed, development gains in the developing world. In 1999, of the thirty countries at the bottom end of the UNDP's Human Development Index (HDI), 22 were engaged in, or just emerging from, some form of complex emergency. In Africa alone, 29 of the 45 UNDP programme countries were experiencing some form of complex humanitarian emergency. The micro and macro impacts of such armed conflicts and widespread violence on development are severe.

At the microeconomic level ...

At a microeconomic level, small arms availability undermines development by inducing some individuals to invest, not in education, but in honing their criminal and combatant skills. Furthermore, arms availability fragments pre-existing social networks, as people feel isolated and increasingly reluctant to leave their homes. The widespread availability and use of small arms disrupts agricultural production, transportation networks, and commercial trading (Luckham, Ahmed and Muggah, 1999) and has therefore contributed to extended food shortages, increasing market prices, and the need for emergency feeding programmes (RGSA, 2000; Collins, 1998).

One particularly vulnerable segment of the population is children. Not only do they suffer as victims of gun violence; they also suffer from being used as soldiers. From Sierra Leone to Afghanistan, in situations of fear and economic insecurity, children often 'receive an AK-47 and little else, leading them to terrorise civilians in their search for food and other material goods' (Colletta & Nezam, 2000, p. 7). Youth excluded from formal markets often adopt a gun-linked livelihood that appears to bestow on them an adult status that commands respect (see Box 6.8). For boys, this practice is particularly potent when combined with the role small arms play in reinforcing patriarchal networks and dominant masculine codes as protector and defender.

In Somalia and northern Kenya, the widespread availability of high-powered weaponry puts gun-toting youths beyond the customary controls exercised by clan elders. In addition, entire generations of young men forced into 'economic apartheid' (e.g. exclusion from the formal market) are increasingly susceptible to the temptation to 'consider armed violence as a means to enforce their inclusion' (Lock, 1999a, p 34). Unemployment and exclusion from educational opportunities among Sinhalese and Tamil youth has been a primary cause of Sri Lanka's bloodshed. Indeed, young men (and women) from country villages and towns join one army or another for lack of anything else to do.

In regions of transit, communities are reported to have adopted new forms of informal trade that involve smuggling and theft, as well as the cultivation of cultures of violence. As a result, entire regions can become economically dependent on conflict and arms; Pakistan's North-West Frontier Province, a main conduit for insurgent arms during the Afghan-Soviet war, is now a significant cottage-industry weapons producer. Due to their abundance, small arms are often acquired at a fraction of their original value. Indicators of their impact on societies include



Twenty-two of the 30 countries at the bottom of the UNDP's 1999 Human Development Index (HDI) were currently engaged in, or just emerging from, some form of complex emergency.

Box 6.8 Children and guns: The tragedy of child soldiers

The spread of inexpensive small arms has had one especially pernicious effect: it has made it much easier to turn children into soldiers. According to the Coalition to Stop the Use of Child Soldiers, there are over 300,000 (both military and insurgent) children under the age of 18 currently taking part in over 30 armed conflicts around the world.

As a continent, Africa is by far the largest recruiter of child soldiers, accounting for approximately 135,000 or 45 per cent of the global total. The principal recruiters operate in Sierra Leone, Sudan, Uganda, Angola, and the Great Lakes countries of Burundi, Congo, and Rwanda.

Asia has an estimated 75-100,000 child soldiers. Afghanistan is the principal recruiter in this region, although its ranking has slipped. The average age of recruits in the late 1990s tended to hover at approximately 14 years of age, whereas, prior to that time, even children between the ages of 10 and 11 were being actively recruited. Militaries and rebel groups in Myanmar and Sri Lanka⁷³ are also accused of recruiting heavily from among youth—particularly from orphanages, elementary schools, and rural communities.

As for their weapons, due to relatively easy portability, maintenance, and availability, the most popular small arms used by children are the AK-47 and M-16. Testimonies of children familiar with Galils, AR-15s, Uzi sub-machine guns, Ingrams, and 357 Magnums have also been recorded. Moreover, due to their agility and fearlessness, child soldiers are particularly valued in the handling and laying of landmines.

Children are not spared from the horrors of conflict. The most immediate risk is the high likelihood of death or injury as a result of participation in combat. In Chechnya, between February and May 1995, children made up 40 per cent of all civilian casualties. Red Cross field workers found that children's corpses told a grim story; they bore unmistakable marks of having been systematically executed with a bullet through the temple. In the years following Rwanda's genocide, a similar story of systematic executions was repeated again and again. When not killed, children are frequently wounded; in Sarajevo, Bosnia and Herzegovina, almost one child in four has been wounded in the course of the region's long drawn-out conflict.

The most frequent child-specific combat injuries are loss of hearing, sight, and limbs, all of which have permanent or at least long-term repercussions on the victim's future reintegration and 'value' in society. Secondary effects include higher susceptibility to health hazards, such as malnutrition, psychosocial trauma and psychological disorders, skin and respiratory diseases, malaria, as well as sexual exploitation among both sexes laying them open to increased risk of sexually transmitted infections (STI's), HIV/AIDS, pregnancy, abortion, or premature, involuntary childbirth. Other documented non-combat related injuries include beatings, deprivation of food/drink, and bone deformation from carrying heavy loads (Machel, 2000, and World Vision, 1996).

Over the long-term, there are a number of serious challenges for child soldiers in terms of post-conflict rehabilitation. First, there are the obvious problems related to disarmament of children and their reintegration into a civilian society trying to reintroduce peacetime values. These child soldiers may be reluctant to relinquish their weapons, which have also given them a decidedly unchildlike sense of economic and social status, particularly when the local economy has been undermined as a result of prolonged conflict. Additional long-term challenges relate to the lack of vocational and educational training, difficulties of reintegrating children who have committed atrocities, and the particularly sensitive difficulties associated with the reintegration of girls.

Source: Coalition to Stop the Use of Child Soldiers, 1999

In the year 2000, there were over 300,000 children under the age of 18 taking part in over 30 armed conflicts around the world.

Coalition to Stop the Use of Child Soldiers

the heightened militarization of young men, the introduction of voluntary and involuntary restrictions on mobility, and a dwindling confidence in public institutions.

... and at the macroeconomic level

At the macroeconomic level, small arms proliferation discourages foreign and direct investment, as well as domestic savings, as people lose confidence in a country's prospects for growth. Armed conflict, crime, and domestic violence also damage prospects for economic development, affecting school enrolment rates and overall productivity.

According to the UNICEF offices in Burundi, over 200,000 Burundians have been killed since 1993 while some 110,000 children are unable to attend school because of killed and displaced family members. The agency also estimates that, in addition to a deficit of 3,000 primary and secondary school teachers, it will cost approximately US\$ 12 million to repair damaged public school infrastructure. To make matters worse, this is happening at a time when public expenditures on health and education are declining and bilateral aid decreasing.⁷⁴ The negative multiplier effects of small arms have resulted in lowered incomes, reduced consumption, and the reduction of aggregate demand for goods and services.

Armed conflict and crime impose significant constraints on the ability of affected countries to implement national development programmes. On the one hand, national resources are diverted away from social welfare to purchase arms to protect civilians' security. On the other hand, vital infrastructure needed for development initiatives is put in jeopardy by arms-related anxieties. Foreign-funded development projects are often cancelled or postponed to prevent assets from being diverted towards criminal ends (OECD/DAC, 1998). Though the gross costs of responding to armed violence might be higher in the industrialized world, the proportional impact on GDP and government budgets is higher among developing countries.

During 1998, armed violence cost the equivalent of 12 per cent of Latin America's GDP—a combination of lost human capital, private investment, and property transfer. El Salvador, for example, has been particularly affected by armed violence in the post-conflict period (see Box 6.9). The costs of responding to armed violence (e.g. in terms of expenditures from the health, policing, and judicial sectors) amounted to just under US\$ 800 million—approximately 13 per cent of GDP in 1998 (Bunivinic et al., 1999). The costs are often higher in countries experiencing on-going conflict.

Similar impacts are apparent in South Asia.⁷⁵ In Sri Lanka, for example, military expenditures as a percentage of GDP have increased from 3.8 per cent in 1985 to 6.5 per cent (US\$ 867 million) in 1996. As a percentage of health and education expenditures, military spending grew from 17 per cent in 1985 to 107 per cent in 1996. According to the World Bank, the impacts of communal war in Sri Lanka between 1984 and 1996 have cost the national economy approximately US\$ 1.18 billion. The Institute of Policy Studies in Colombo estimates that foregone investment, loss of workers to death and emigration, and other attendant costs of the war amount to 200 per cent of GDP in 1999. And yet, throughout this period, Sri Lanka's economy grew at a rate of 4.4 per cent per annum. According to one estimate, the economy of a Sri Lanka at peace would grow at an average annual rate of 9 per cent—thus absorbing 140,000 people entering the workforce each year (Harris, 1996). This is prosperity lost and part of the high price of war.

Indeed, armed conflict 'can no longer be viewed as an externality to development ... rather conflict and its aftermath is one of the key constraints to development and one of the main causes of poverty' (Holtzman, 1999). While the causal relationship is far from straightforward, armed conflict can be seen as a cause and effect of poverty and inequality.



During 1998, armed violence cost the equivalent of 12 per cent of Latin America's GDP—a combination of lost human capital, private investment, and property transfer.

Box 6.9 Central America: Unravelling development

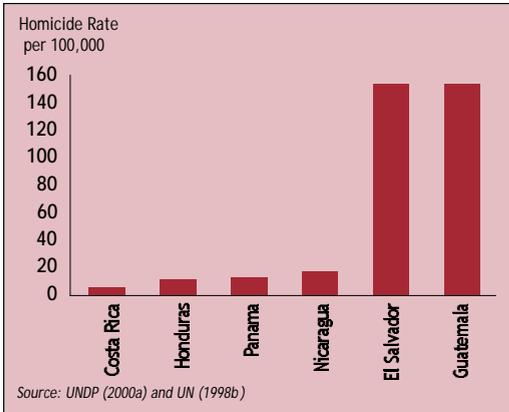
Central America has no uniform system to measure the impact of small arms use on public health systems or other socio-economic and political structures. The regional growth of the private security industry and commercial purchasing of firearms can be interpreted as a response to the insecurities bred out of the large quantities of arms left over from civil wars and now in the hands of civilians, including criminals. Their growth cannot be seen apart from the incomplete process of disarmament and reintegration of ex-combatants, increased drug trafficking throughout the region, pre-existing cultures of gun ownership and violent conflict resolution, growing poverty and inequality, as well as corrupt and inefficient judiciaries and public security institutions.

The experience of Central American countries is varied. Despite Costa Rica's relatively low level of militarization, PSCs are growing in number and commercial firearms sales continue to escalate (STOCKPILES). While Honduras and Panama did not experience outright civil wars, they were militarized through the Cold War strategies promoted by the US. Indeed, the presence of recirculated arms has been documented throughout the region. For example, American M-16s supplied to South Vietnam resurfaced two decades later in Honduras and Nicaragua.

There are high levels of violence and a demonstrated civilian willingness to use armed violence as a form of conflict resolution (see Figure 6.6). According to the Inter-American Development Bank (IDB), 'in post-war El Salvador or Guatemala ... the widespread availability of weapons and attenuation of inhibitions against the use of violence tend to exacerbate such already powerful contributing factors to social and domestic violence as inequality and high levels of poverty' (Buvinic *et al*, 1999).

Source: Godnick, 2000

Figure 6.6 Homicide in Central America



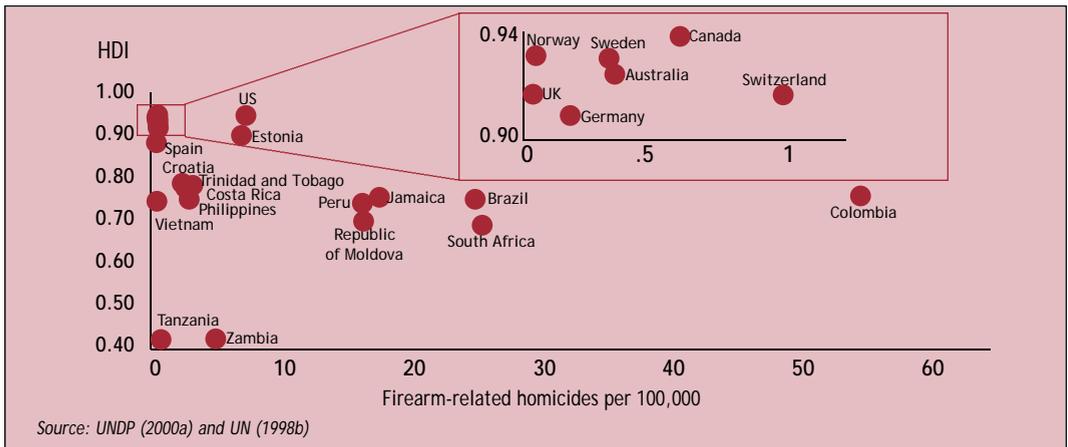
Map 6.7 Focusing on Central America



Guns, poverty, and inequality

The inverse correlation between human development and firearm-related homicide is illustrated in Figure 6.7. Human development indicators are a weighted composite index of variables including life expectancy at birth, adult literacy, gross primary, secondary and tertiary school enrolment, and GDP per capita.⁷⁶ Firearm homicide rates are drawn from publicly available information provided to the UN (1998b). They consist of the proportion of reported intentional homicides committed with firearms. While the focus on homicides does not provide a complete picture of firearm use or availability in a given country, it does provide a starting point for comparisons and trends across regions. The point of bringing the two variables together is to begin considering the empirical relationship between levels of development and firearm-related homicide.

Figure 6.7 Is there a relationship between human development and firearm homicide?



Since Figure 6.7 does not account for rates of firearm availability, whether licit or illicit, only tentative observations may be drawn. However, under certain circumstances, there is some evidence that countries with high levels of development (HDI of 0.90 to 1) experience lower rates of homicide committed with firearms. The institutions of the judiciary and the police, as well as the rule of law, among other things, are presumably working more effectively in such countries than in others. Conversely, states with lower levels of human development (between 0.60 and 0.80) tend to be much more susceptible to high levels of firearms-committed homicides (see Appendix 6.5). Unfortunately, due to the unavailability of data, there is virtually no information on the countries at the lowest end of the HDI scale (between 0 and 0.6). The Survey will further assess the empirical association between poverty and inequality with firearm use in subsequent editions.

Human development indicators are a weighted composite index of variables, including life expectancy at birth, adult literacy, gross primary, secondary, and tertiary school enrolment, and GDP per capita.

Human Development Report, UNDP, 2000

Opportunity costs in the field

For multilateral donors, bilateral aid agencies, and development institutions the consequences of small arms availability on their programmes and personnel are severe. Their responses to this increasing atmosphere of insecurity and its implications for development opportunities are twofold:

- **Quantitative:** Funding and commitment to long-term development efforts are shifted to short-term relief-oriented projects, particularly towards conflict-prevention and response.⁷⁷ For example, OECD Overseas Development Assistance (ODA) earmarked for emergencies has expanded from two per cent in the mid-1980s to five per cent in 1995.⁷⁸ As a proportion of ODA, emergency relief has ballooned to between nine and ten per cent in 1999.⁷⁹
- **Qualitative:** Due to the frequently suspended or delayed operations on account of insecurity, field operations include an increasing number of 'insecure' areas where not even relief workers dare to tread. Even where they do work, the risks of 'danger habituation'⁸⁰ among local and expatriate staff and stakeholders are very real. As a result, relief and development personnel are more susceptible to insecurity.

The paradox is that, even as aid workers call for more co-ordination in regions prone to violence, peace-building, rehabilitation, and development activities are not being carried out in regions where they are most urgently needed. At worst, official development programmes close down on account of insecurity and regions are declared 'no-go areas'. Growing insecurity, and risks to government extension workers and aid personnel, force many to seek alternative regions where return on investment and performance indicators may justify continued funding.

Thus, unchecked small arms availability undermines development by encouraging a culture of withdrawal. When development projects are implemented in insecure regions, 'project staff may be at risk, project sites may remain unused by the population for fear of being seen as supporting the government, and sites may attract armed attacks to disturb the transition process' (Colletta and Kostner, 2000). Indeed, recent UNDP reports (1998a; 1998b) indicate that there are few prospects for development without security—highlighting the importance of legitimate local judiciaries and police forces to enforce public order.

Conclusions

There is a growing awareness, across many sectors, that small arms are a serious risk to human security. In recognition of the problem, the analytical appraisal of the effects of small arms has diversified. But the field is undergoing a process of self-definition. The contours of the debate are broadening as more and more actors call for a multidisciplinary and integrated approach to disarmament, recognizing that small arms constitute a challenge, both in terms of supply and demand. Even if one could turn off the small arms tap tomorrow, they would continue to circulate between conflicts, communities, and combatants. This is because the diffusion of small arms takes place at the interface of local and global arenas, in situations of inequality and insecurity, posing intricate challenges to national, regional, and international actors.

Effective responses require reliable information. While far from providing a complete picture, this chapter attempts to tease out a range of methodologies that quantify the effects of small arms proliferation and use. While this chapter has generated only the most tentative of conclusions, subsequent editions of the Small Arms Survey will revisit and refine these approaches.

Under certain circumstances, arms availability appears positively associated with armed violence, injury and death. Some societies, especially in the North, are affected by firearm-related suicide. Others, especially in the South, are confronting escalating levels of armed homicide. Though difficult to generalize, the obstacles facing societies are often similar: heavy pressures on public health facilities, increasing rates of criminality, growing humanitarian emergencies, or lost development opportunities.

But there are important differences, not only between countries and regions, but also within individual states and urban centres. Comparative analysis will continue to be hampered by the unreliability and inadequacy or even non-existence of consistent data. Thus, there is an urgent need to undertake site-specific studies with comparable indicators and to generate in-depth quantitative and qualitative research capacities.

The health sector, for example, has been extremely successful in terms of recasting what has been treated as a conventional disarmament issue into a quantitatively measurable threat to people's health and well-being. In bringing the tools of epidemiology, health economics, and human rights to bear, its proponents have usefully highlighted the short- and long-term impacts of small arms and defined preventive measures to reduce their impact.

Social scientists have generated a convincing case for the relationship between small arms and insecurity. The costs of insecurity and its implications for the effectiveness of public institutions have been carefully documented. Relief and development workers, in addition to donors and governments, have also begun reviewing the humanitarian implications of small arms and their real impact on relief and reconstruction efforts in the field. It is now acknowledged that armed violence is a serious impediment to social and economic development. More and more people agree that an environment free from fear and insecurity is a prerequisite for sustainable development.

For further information and current developments on small arms issues please check our website at www.smallarmssurvey.org

6 List of Abbreviations

ANC	African National Congress
ASEAN	Association of South East Asian Nations
CDC	Center for Disease Control
DRC	Democratic Republic of Congo
GDP	Gross Domestic Product
HDI	Human Development Index
HRW	Human Rights Watch
IANSA	International Action Network on Small Arms
ICRC	International Committee of the Red Cross
IDB	Inter-American Development Bank
IDP	Internally Displaced Person
IHL	International Humanitarian Law
IMF	International Monetary Fund
ISER	Institute for Religious Studies
ISS	Institute for Strategic Studies
MVA	Motor Vehicle Accident
NATO	North Atlantic Treaty Organization
NGO	Non-Governmental Organization
NRA	National Rifle Association
ODA	Overseas Development Assistance
OECD	Organization for Economic Co-operation and Development
OSCE	Organization for Security and Co-operation in Europe
PLO	Palestinian Liberation Organization
PMC	Private Military Company
PSC	Private Security Company
RPF	Rwandan Patriotic Front
SALW	Small Arms and Light Weapons
SAP	Structural Adjustment Programme
SIPRI	Stockholm International Peace Research Institute
UK	United Kingdom
UN	United Nations
UNDCCP	United Nations Office for Drug Control and Crime Prevention
UNDP	United Nations Development Program
UNHCHR	United Nations High Commissioner for Human Rights
UNHCR	United Nations High Commissioner for Refugees
US	United States
USCR	United States Committee for Refugees
WHO	World Health Organization
WSF	World Shooting Federation

6 Endnotes

1 See works by Boutwell and Klare (2000), Karp (2000), Klare (1999), Lock (1999a, 1999b), and Willett (1998).

2 See Londono and Guerrero (1999).

3 The population of Latin America and the Caribbean is recorded as 498 million while the combined population of OECD countries accounts for 1.1 billion (UNDP, 2000, p. 226).

4 The most recent Human Development Report (UNDP, 2000: 247-250) has tabulated both country homicide rates as a whole and rates in the largest city. Virtually without exception, every urban site cited in the report demonstrates a considerably

higher rate than the country average. Although the report does not differentiate between homicide committed with or without firearms, a number of examples are instructive. The US rate was 9.0 per 100,000 and 21.3 in New York City while the Jamaican rate was 29.8 and 62.4 in Kingston.

5 The reverse is also tentatively born out in practice. In a recent study documenting the effects of gun bans in two Colombian cities, preliminary results indicate that homicide rates were lower during periods when the firearm-carrying ban was in effect compared to other periods (Villaveces et al, 2000). The reduction of availability and use through strong

disincentives (gun ban) was 'associated with a reduction in homicide rates for Cali and Bogota' (Villaveces et al., p. 1205).

6 See, for example, Lott (1998), Lott and Mustard (1997), Kopel (1993), and Mauser (1991).

7 The *Decameron* was written by Boccaccio in the middle of the 14th century.

8 The conclusion of Killias (1993), however, is that the percentage of suicides using firearms is a valid proxy of gun ownership, but not the percentage of homicides using guns, even though this has formed the basis of many evaluative studies.

9 According to the WSF (see, for example, www.worldshoot-inglederation.org), the organisation 'will NOT [sic] be a political lobbying organization. It will however aim to reinforce the notion that sport shooting is a legitimate recreational activity responsibly practiced by millions of law-abiding participants worldwide. It will set out to establish that there is another legitimate use for firearms in the world other than just Law Enforcement and self-defence'.

10 See, for example, Lott (1997) and Kleck and Gertz (1995).

11 See Klugman (2000), Musah and Thompson (1999); and Miller (1997).

12 Canadians own an estimated one million handguns as compared against the 77 million handguns owned by residents in the United States (Musah and Thompson, 1999, p. 291). But, such figures should be treated with caution because 'no one really knows the actual number'. Personal correspondence with Michael Renner, October 2000.

13 See CBS (2000) at www.cbs.com.

14 As noted in the ICRC's seminal study *Arms Availability and the Situation of Civilians in Armed Conflict* (1999, p. 15), 'concern about the widespread availability of arms is driven by the misuse of the weapon'.

15 For a detailed discussion consult the American Academy of Paediatrics (2000), Dugan (2000), Sherman (2000), Webster and Ludwig (2000), Black and Nagin (1998), Ludwig (1998), Webster et al (1998), Hememway (1997), and Webster et al (1997).

16 See Muggah and Berman (2001), Klugman (1999), and Collins (1998).

17 Klare (1999) has also drawn a distinction between the proliferation of major weapons systems and the diffusion of small arms and light weapons (see TRANSFERS).

18 See the Hizbollah and NRA websites at www.hizbollah.org and www.nra.org.

19 See, for example, IISS (2000), ICRC (1999), and Meddings (1999).

20 See Lock (1999a, 1999b), Cock (1997), and Cukier (1991).

21 It should be noted here that the actual perception of a threat is as important as any construction or presence of an objective threat. This is true even if misinterpreted and later proved to be without basis (see Milner, 2000).

22 See Fajnzylber et al (1998).

23 According to a WHO report on injury (Krug, 2000), the gross estimate of global deaths from all forms of homicide, war, and suicide in 1998 stood at 2,272,000. For homicides, the number of deaths was 736,000, from war, the number totalled 588,000, and from suicide, it amounted to 948,000.

24 According to an ICRC report (1999, p. 31) 'increased access to

firearms make such impulsive acts more likely to be lethal. [I]nternational comparative studies have found a negative correlation between firearm ownership and suicides committed by other means, suggesting that other means are not used to substitute for reduced access to firearms in countries with lower rates of firearm ownership'. See also Zimring and Hawkins (1997).

25 Cornia (2000) and Stewart (1998) have theorized on different forms of inequality. 'Vertical' (e.g. among undifferentiated households) and 'horizontal' (e.g. between social, class, or communal groups) inequality have been empirically proven to cause political instability and social tensions. The UNDP (2000) has pointed to research on complex humanitarian emergencies and concluded that 'horizontal inequalities' between groups—whether communal, religious or social—are the major cause of the current wave of civil conflicts.

26 See, for example, Keen (2000), Lock (1999), and Duffield (1998).

27 See, for example, ICRC (1999), and UNHCR (1997).

28 See, for example, Kaplan (1997), or Ignatieff (1993).

29 See, for example, Cock (2000, 1997), and Cukier (2000c).

30 See, for example, Berdal and Malone (2000), and Collier (2000).

31 While suicides were more likely to be committed with a hunting rifle, homicides were more likely to be committed with a handgun (CDC, 1997).

32 On the other hand, the extremely low levels of homicide and suicide in Asia are frequently attributed to the protective value of cultural and communal homogeneity combined with the preservation of traditional Chinese values and kinship structures. Situational factors such as high levels of natural surveillance and a contained jurisdiction are also regarded as advantageous. In Hong Kong, for example, a city experiencing a homicide rate of 12 per 100,000, the presence of a large colonial-style police and strict gun laws are believed to contribute to lower levels of armed violence.

33 The notion of 'complex humanitarian emergencies' has been advanced to capture the 'total or considerable breakdown of authority resulting from internal or external conflict which requires an international response' (Stewart, 1998, p 1). Complex humanitarian emergencies have been described as profound social crises in which a large number of people die and suffer from war, disease, hunger and displacement owing to man-made or natural disaster (Klugman, 1999; Holtzman, 1999). The idea of 'public violence' also seeks to broaden the frame of reference to capture a range of insecurities including firearm-related mortality. The US Government, for example, lists 74 countries where physical insecurity and public armed violence is endemic—of which approximately 34 endure actual civil war or rebel insurgency.

34 Existing estimates are not only inconsistent with each other, but also are internally inconsistent as to whether they cover only violent deaths, those arising from conflict-induced starvation and disease, or some broader 'guesstimate' of deaths which would not have occurred in the absence of conflict (Keen et al, 1996).

35 The number was reported to have been higher among combatants in Afghanistan (46 per cent), Somalia (45 per cent), Bosnians in Bosnia-Herzegovina (43 per cent), and Lebanon

(41 per cent).

36 See Boutwell and Klare (2000).

37 The direct impact of small arms on civilians in Afghanistan, for example, was estimated to account for an average of 45 per cent of injuries requiring hospitalization (Meddings and Connor, 1999).

38 According to studies conducted by Coupland and Meddings (1999), the standard ratio of injuries to death experienced during conflict is in the order of 3:1 (though it can be much higher). But where the rate of death is on par with or exceeds injuries, violations of human rights or international humanitarian law almost certainly have occurred. The ratio is profoundly distorted when firearms are used against people who are immobilised, in a confined space, or unable to defend themselves. UNICEF noted that in Chechnya, between February and May of 1995, 40 per cent of all civilian casualties were children. Red Cross workers found that there was not a large proportion of injured relative to those killed and that children's bodies bore marks of having been systematically executed with a bullet through the temple' (Machel, 1996). During what are called 'communal conflicts'—there is evidence that the targeting of children, future generations of the enemy, is increasing (Collins, 1998).

39 The high incidence of civilian deaths could be partly attributed to the fact that the ratio of soldiers to civilians is decreasing despite population growth. For example, there were 5.7 soldiers per thousand people in 1987 but by 1997 this was down to only 3.7 per thousand (BICC, 1999).

40 For a discussion of Durkheim's theory consult Giddens (1986).

41 Indeed, it was the civil war, rather than any inherent belief in the right of individuals to carry guns, that first armed America—and then created the first crime wave to go with it. In the decade immediately following the civil war of 1861-65, murder rates soared and guns became the murder weapon of choice. Fear of crime and the fashionability of hunting spurred production and use. For other countries mentioned above consult CIEN (1999), Moser and McIlwaine (1998), UNDP (1998b), and Romano (1997).

42 This is not always the case. According to statistical records from the one of the world's largest war-hospitals (ICRC Lokichokio Lopiding Hospital in Kenya)—approximately 98 per cent of Sudanese war-wounded are attributable to small arms. Injuries resulting from landmines, shells, and bombs account for less than two per cent of the total (Muggah and Berman, 2001).

43 As defined in the Hague Conventions from 1907, the most recent Geneva Conventions and the Hague Cultural Property Convention dating from 1949 and 1954. This definition also draws on the Geneva Protocols and the Convention on Certain Conventional Weapons from 1977 to 1980.

44 The annual incidence of firearm injuries in the United States was reported to be 39 per 100,000 in 1997. This was roughly the same rate as demonstrated in Afghanistan during the same period (Michael et al., 2000, p. 415).

45 Many gun advocates argue, however, that bridges cannot always be trusted. For example, in 1979 the American public health community adopted the 'objective to reduce the num-

ber of handguns in private ownership', the initial target being a 25 per cent reduction by the year 2000. Propelled by leadership from the CDC, pro-gun lobbyists fear that the objective has broadened to the extent that it is calling for the eradication of handguns, restrictive licensing of owners of other firearms, and eventual elimination of firearms from American civil society. Excluded from the ban would be a small elite of extremely wealthy collectors, hunters, or target shooters. This is the case in many European countries (Kates et al., 1994).

46 See for example, Krug (2000a), ICRC (1999), Cukier (1998a), Miller and Cohen (1997), and Robinson (1997).

47 For example, the Universal Declaration of Human Rights (1948), the Genocide Convention (1948) and the first Geneva Convention (1949), and Additional Protocols (1977).

48 For example, the Protocol on Superfluous Injury and Unnecessary Suffering (ICRC, 1997).

49 And an additional US\$ 3.6 billion (CAD 5 billion) for pain, suffering and lost 'quality of life'.

50 Another study estimates that the cost of domestic violence against women imposes a further annual cost of US\$ 463 million (CAD 684 million) on the criminal justice system and US\$ 136 million (CAD 187 million) on policing institutions.

51 Jefferson (2000a, p. 4) writes: 'two victims were able to afford expensive private hospitals (paying between US\$ 960-1140 or ZAR 4500-R535) and four victims were admitted to government hospitals (paying between US\$ 145-170 or ZAR 680-R800) ... treatment, medication and follow-up visits varied according to the degree of injury and the specific hospitals'.

52 The United Nations Convention Against Transnational Organised Crime defines an 'organised criminal group' as '... a structured group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences ... in order to obtain, directly or indirectly, a financial or material benefit' (UNGA, 2000, Article 2).

53 Despite years of analysis, the roots of crime are still misunderstood. Most observers attribute the rise of extreme levels of criminality to a complex interplay of social exclusion, inequality and the demobilization of millions of former combatants with few opportunities for sustainable employment or alternatives.

54 Examples include the Jan Compagnie of VOC in Holland, the British South Africa Company of Cecil Rhodes, and the British East India and Dutch East Indies Companies (see O'Brien, 2000).

55 Examples of contemporary PSCs include Group 4 (UK), Control Risk Group (UK/USA), LifeGuard Management (UK), and Kroll Associates (US/UK). These differ from Private Military Companies (see chapter on BROKERS) in that PSCs rarely engage in sophisticated military operations (see O'Brien, 2000).

56 ISS (1999, p. 256) and Irish (1999).

57 The homicide rate from Latin America and the Caribbean is one of the highest in the world—surpassed only by Sub-Saharan Africa which has an aggregate 40 homicides per 100,000 inhabitants (Murray and Lopez, 1996).

58 The costs of piracy on lost cargo is estimated to be US\$ 200 million. If one adds to this the additional costs to shippers, manufacturers, retailers and insurers, the toll rises well above US\$ one billion. Certain economies are more vulnerable to piracy than others—of the 285 pirate attacks in 1999, 34 were directed against Japanese-registered vessels. The International Maritime Bureau reports 78 fatalities attributed to pirates with well-organized groups using AK-47s and AK-56s (see Kenkel, 2000).

59 Indeed, studies employing multivariable regression analysis have demonstrated a positive correlation between the abundant presence and exploitation of primary commodities and armed violence (Berdal and Malone, 2000; Fajnzylber et al 1998).

60 See, for example, Global Witness (2000), Lock (1999a), Collier (1999), HRW (1999), and Naylor (1995).

61 According to one source, oil firms pay between six and nine per cent of their budgets for security in Colombia and Algeria respectively. Much of this money is spent on crude precautions: 'security firms staffed by ex-soldiers ... houses in crime-torn Lagos or Johannesburg come equipped with a bewildering array of defences: razor wire, panic buttons, pistol-brandishing guards' (Economist, 2000).

62 There were 429 homicides in London between 1997-99.

63 The IANSA website is located at www.iansa.org.

64 See, for example, Carle and Lewis (2000), Gillard (2000), Saferworld (1999), DFAIT (1999), ICRC (1999), and Oxfam (1998).

65 This perspective is captured particularly well by UN Secretary General, Kofi Annan (IANSA, 2000): 'an estimated 50 to 60 per cent of the world's trade in small arms is legal—but legally exported weapons often find their way into the illicit market. The task of effective proliferation control is made far harder than it needs to be because of irresponsible behaviour on the part of some states and lack of capacity by others, together with the shroud of secrecy that veils much of the arms trade. Member States must act to increase transparency in arms transfers if we are to make any progress. I would also urge that they support regional disarmament measures, like the moratorium on the importing, exporting or manufacturing of light weapons in West Africa'.

66 See, for example, UNDP (2000), UNHCR (1999), and ICRC (1999).

67 In Jolo, Philippines, in the spring of 2000 approximately twenty foreigners were kidnapped by Abu Sayyaf rebels. Most of the hostages were released over the next five months in exchange for over US\$ 15 million in ransom provided by the Libyan government. According to Lamb (2000), 'the Abu Sayyaf has used the money to buy new equipment and weapons ... which has helped the rebels increase the size of their forces tenfold since June ... the rebels recruited more than 2000 young men ... they bought bazookas [and] mortars'.

68 See, for example, Koenraad Van Brabant's (2000) handbook entitled *Operational Security Management in Violent Environments*.

69 Personal communication with representatives of the ICRC in Geneva, October 2000.

70 A UN inter-agency standing committee (IASC) has recently established a reference group (RGSa) to identify the impact of small arms availability and use on security, program design, and operational limitations of agency activities from pre-conflict to post-conflict situations. See also Muggah and Berman (2001).

71 Personal communication with representatives of the ICRC in Geneva, October 2000.

72 The Small Arms Survey, in co-operation with Oxfam-GB, is preparing and implementing a survey on small arms and their impacts on humanitarian staff in 70 countries. The survey will be expanded in 2001 to include humanitarian and development agencies around the world.

73 The journalist Crampton (2000) reported the case of a captured child soldier who began fighting on behalf of the LTTE at the age of seven. According to the CSUCS (1999), child soldiers between the ages of seven and eight have also been recruited throughout Africa.

74 Private communication from UNICEF Burundi to ERD Geneva, April 2000.

75 See also Dasgupta, Hussain, and Shah in Banerjee, ed., (2000).

76 Countries are classified according to three categories: high human development (>0.8), medium human development (0.5-0.79), and low human development (<0.5). Although the concept of human development is much more complex than what can be captured by a composite index, it provides a useful marker from which to gauge a country's progress.

77 An artificial continuum is frequently invoked by policymakers who envision the transition from war to peace as following a smooth linear progression from 'relief' to 'rehabilitation' and 'reconstruction'. In real life, however, humanitarian and development concerns overlap and rarely follow any fixed sequence. See, for example, World Bank (1999) and the OECD/DAC (1998).

78 Overseas Development Assistance (ODA) is declining for two reasons: the movement toward market-driven development and the growing priority attached to peacekeeping and humanitarian assistance. For example, in the first 45 years of the UN's existence, the organisation spent approximately 20 per cent (US\$ 3.6

billion) of its budget on peacekeeping. In the last decade, the figure has risen to almost 80 per cent—or roughly US\$ 12 billion (Colletta and Kostner, 2000; Macrae and Bradbury, 1997).

79 Personal communication with representatives of OECD/DAC, November 2000.

80 Danger habituation is described as 'a usually unconscious adjustment of one's threshold of acceptable risk resulting from constant exposure to danger; the result is a reduction of one's objective assessment of risk, leading possibly to increased risk-taking behaviour' (Van Brabant, 2000, introduction). See also Bracken and Petty (1997).

6 Appendices

Appendix 6.1 Firearm ownership and deaths in industrialized countries (Figure 6.2)

Country	Firearm Availability per 100,000	Firearm Deaths per 100,000
Australia	16.00	2.74
Belgium	16.60	3.30
Canada	26.00	3.95
Denmark	16.00	0.80
Finland	50.00	6.65
France	22.60	5.40
Germany	8.90	1.44
Greece	8.00	1.80
Japan	0.30	0.07
Netherlands	1.90	0.74
New Zealand	20.00	2.02
Northern Ireland	8.40	4.70
Norway	32.00	4.20
Spain	13.10	0.70
Switzerland	27.20	6.20
UK	4.00	0.46
US	41.00	13.47

Appendix 6.2 Demographics and homicide in the US (Homicide per 100,000) (Figure 6.3)

Dates	National Rates	White Males (18-24)	Black Males (18-24)	White Females (18-24)	Black Females (18-24)
1976	9.00	11.00	89.00	4.00	25.00
1980	10.00	16.00	97.00	5.00	24.00
1984	8.00	12.00	68.00	5.00	18.00
1988	8.00	12.00	109.00	4.00	21.00
1992	9.00	17.00	171.00	4.00	21.00
1996	8.00	17.00	149.00	4.00	17.00
1998	6.00	15.00	117.00	3.00	14.00

Appendix 6.3 Firearm homicide and suicide in the North and the South (Figure 6.4)

	Homicide (%)	Suicide (%)	Total Aggregate per 100,000
Colombia	97	3	55.85
Brazil	98	2	26.22
Jamaica	98	2	18.59
Zambia	97	3	5.52
Mexico	91	9	10.79
Estonia	71	29	11.20
South Korea	66	33	0.60
Argentina	40	60	5.16
US	38	62	11.96
Japan	33	66	0.60
UK	25	75	0.44
France	17	83	6.26
Germany	17	83	1.39
Singapore	17	83	0.24
Canada	16	84	4.48
Australia	15	85	2.79
Finland	12	88	6.64
Austria	9	91	4.48
Denmark	9	91	2.48
Switzerland	9	91	6.20
Norway	7	93	4.25
Sweden	7	93	2.27
New Zealand	7	93	2.21

Appendix 6.4 Lethal impact-terminal ballistics and health effects

Terminal ballistics is the study of what happens when projectiles hit their targets. Wound ballistics is a science that assesses the interaction of projectiles with living tissue. It can relate to other disciplines such as law, the design of weapons, forensic pathology, and surgery. Coupland et al (2000) has sought to make the complex subject accessible to and understandable to health professionals. There are two major contributions made by the science of wound ballistics to the surgical management of war-wounded people.

The first is the demonstration of the transfer of kinetic energy from the projectile to the tissues along the projectile's track ('down track'); this explains the heterogeneity of war wounds. A projectile damages tissue by accelerating the tissues away from the front of the projectile representing the transfer of kinetic energy that the projectile carries. This kinetic energy is arrived at by the equation:

$$E \text{ (joules)} = mv^2/2$$

(where m = mass in kg and v = velocity in m/s). The down track deposit of energy of a projectile is determined principally by the mass and velocity of the projectile and also, in the case of a bullet, by its construction and sta-

bility in flight. The location and rate with which energy is transferred determines the amount of tissue damage. If surgeons recognise the heterogeneity of wounds they can adopt management strategies for each individual wounded person. The second contribution relates to fractures; the transfer of energy from the projectile to the bone and its surrounding soft tissues has important implications for fracture management.

In the context of the Laws of War and, in particular, the Hague Declaration of 1899, the ICRC study proposes that down track deposits of energy as opposed to technical consideration of bullet construction should be the starting point for the legal debate about weapons. Certain bullets have been prohibited in warfare by international treaties, not because of their ability to cause tissue damage, but because of their ability to cause tissue damage near their entry—when the energy deposited is early in the track. Following this argument, legislation supplementing existing law should be based on the wounding potential of a weapon system and not around the construction of the bullet.

Source: Coupland et al., 2000

Appendix 6.5 A relationship between human development and homicide? (Figure 6.7)

Country	Firearm Homicide (per 100,000)	Human Development Index Ranking	Country	Firearm Homicide (per 100,000)	Human Development Index Ranking
Canada	0.60	0.94	Costa Rica	2.57	0.79
US	6.24	0.93	Trinidad & Tobago	3.42	0.79
Australia	0.36	0.93	Colombia	53.99	0.76
Germany	0.21	0.91	Brazil	25.78	0.75
Estonia	6.12	0.90	Philippines	3.60	0.74
UK	0.13	0.92	Vietnam	0.12	0.74
Sweden	0.31	0.93	South Africa	26.60	0.69
Switzerland	0.90	0.92	Rep. of Moldova	17.06	0.70
Spain	0.19	0.89	Jamaica	18.23	0.74
Norway	0.16	0.93	Peru	17.00	0.74
Croatia	2.51	0.79			

6 Bibliography

- Africa Confidential . 2000. 'South Africa: Policemen Plod On.' Vol. 41, No. 20.
- Ball, Nicole and Tammy Halevy. 1996. *Making Peace Work: the Role of the International Development Community* . Overseas Development Council, Policy Essay 18. Washington, DC: Johns Hopkins Press.
- Banatvala, Nicholas and Anthony Zwi. 2000. 'The Public Health and Humanitarian Interventions: Developing the Evidence Base.' *British Medical Journal*, Vol. 321, pp. 101-105.
- Banerjee, Dipankar, ed. *South Asia at Gun Point: Small Arms and Light Weapons Proliferation* . Colombo: Regional Centre for Strategic Studies.
- Berdal, Mats and David Malone, eds. 2000. *Greed and Grievance: Economic Agendas in Civil Wars* . London: Lynne Rienner.
- Le Billon, Philip. 2000. *The Political Economy of War: What Relief Agencies Need to Know* . Network Paper 33 HPN. London: ODI.
- Black, Dan and Daniel Nagin. 1998. 'Do Right-to-Carry Laws Deter Violent Crime.' *Journal of Legal Studies*, Vol. 27, pp. 209-219.
- Blumstein, Alfred, Frederick Rivera and Richard Rosenfeld. 2000. 'The Rise and Decline of Homicide – and Why.' *Annual Review of Public Health*, Vol. 21, pp. 505-541.
- Boccaccio, Giovanni. 1921. *The Decameron* . Translated by M. Rigg. London: David Campbell.
- Bonn International Center for Conversion. 1999. *Conversion Survey 1999: Global Disarmament, Demilitarisation and Demobilisation* . Baden-Baden: Nomos Verlagsgesellschaft.
- Boutwell, Jeffrey, Michael Klare and Laura Reed. 1995. *Lethal Commerce: The Global Trade in Small Arms and Light Weapons* . Cambridge, MA: Committee on International Security Studies.
- Boutwell, Jeffrey and Michael Klare. 1999. *Promoting an International Regime to Control Light Weapons* . Discussion Paper. Washington, DC: World Bank.
- _____. 2000. 'Waging a New Kind of War: A Scourge of Small Arms.' *Scientific American*. June.
- von Brabant, Koenraad. 2000. *Operational Security Management in Violent Environments* . Good Practice Review 8. London: Overseas Development Institute and Humanitarian Practice Network. June.
- Bracken, Patrick and Celia Petty, eds. 1998. *Rethinking the Trauma of War* . London: Free Association Books/SCF.
- British American Security Information Council. 1998. *Combating Illicit Weapons Trafficking: Developments and Opportunities* . Research Report. London: British American Security Information Council.
- Broadhurst, Roderick. 1999. *Homicide in Hong Kong* . Draft paper for the Conference of the Hong Kong Sociology Association. Hong Kong: University of Hong Kong.
- Brunei, Sylvie and Jean-Luc Bodin. 2000. 'Humanitarianism Should Not Eclipse Humanity.' In *International Committee of the Red Cross, ed. Forum: War Money and Survival* . Geneva: International Committee of the Red Cross.

- Buck, Andrew, Simon Hakim and Uriel Speigle. 1993. 'Endogenous Crime Victimization, Taxes.' *Social Science Quarterly*, Vol. 73, No. 2.
- Bunvinic, Mayra, Andrew Morrison and Michael Shifter. 1999. *Violence in Latin America and the Caribbean: A Framework for Action*. Technical Study for the Inter-American Development Bank. Washington, DC: IDB.
- Canada. Department for Foreign Affairs and International Trade. 1999. Notes for an Address by Honourable Lloyd Axworthy, Minister of Foreign Affairs to the National Forum. Montreal. 22 January.
- Carle, Christophe and Patricia Lewis. 2000. *Removing Military Weapons from Civilian Hands: A Draft Discussion Paper Circulated for Comment*. Geneva: United Nations Institute for Disarmament Research.
- Castellanos, Julieta. 2000. 'Honduras: Armamentismo y Violencia.' Paper presented to the Primer Foro Centroamericano Sobre la Proliferacion de Armas Livianas. Antigua, Guatemala, 26-29 June.
- Center for Disease Control. 1997. 'Rates of Homicide, Suicide and Firearm Related Death Among Children: 26 Industrialized Countries.' *CDC Weekly Report*, Vol. 46, No. 5.
- _____. 1999. *United States: Injury Surveillance, Research and Preventative Activities*. Atlanta: National Center for Injury Prevention and Control/CDC.
- Centro de Investigaciones Economicas Nacionales. 1999. 'Diagnostico de la Violencia en Guatemala.' Paper presented to a seminar on the Magnitude and Costs of Violence in Guatemala sponsored by the Program on Security and Development, Monterey.
- Chaffee, Wilber. 1992. *The Economics of Violence in Latin America: A Theory of Political Competition*. New York: Praeger.
- Chetty, Robert, ed. 1999. *Firearm Use and Distribution in South Africa*. Pretoria: National Crime Prevention Centre.
- Child Safety Network. 1997. *Childhood Injury: Cost and Prevention Facts*. Landover, MD: Child Safety Network/Economics and Insurance Resource Centre.
- Chinchilla, Laura, ed. 1999. *Seguridad Ciudadana y Justicia Penal: Perspectiva de la Sociedad Civil*. San José: UNDP.
- Coalition to Stop the Use of Child Soldiers. 1999. *The Use of Children as Soldiers in Africa: A Country Analysis of Child Recruitment and Participation in Armed Conflict*. London: Coalition to Stop the Use of Child Soldiers.
- Cock, Jacklyn. 1995. 'A Sociological Account of Light Weapons Proliferation in Southern Africa.' In Jasjit Singh, ed. *Light Weapons and International Security*. New Delhi: Pugwash Conferences on Science and World Affairs.
- _____. 1997. 'Fixing our Sites: A Sociological Perspective on Gun Violence in Contemporary South Africa.' *Society in Transition*, Vol. 1, No. 4, pp.70-81.
- _____. 2000. 'Weaponry and Culture of Violence in South Africa.' In Virginia Gamba, ed. *Society Under Siege: Managing Arms in South Africa*. Pretoria: Institute for Security Studies.
- Colletta, Nat and Markus Kostner. 2000. 'Reforming Development Co-operation: from Reconstruction to Prevention.' In International Committee of the Red Cross, ed. *Forum: War, Money and Survival*. Geneva: ICRC.
- Collier, Paul. 1998. *On the Economic Consequences of War*. World Bank Working Paper. Washington, DC: World Bank.
- _____. 2000. 'The Economic Causes of Civil Conflict and their Implications on Policy.' In Chester Crocker, Fen Hampson and Pamela Aall, eds. *Managing Global Chaos*. Washington, DC: US Institute of Peace.
- Collier, Paul, Ibrahim Eldabawi and Norman Loayza. 1998. *The Economics of Civil Wars and Crime and Violence: An Outline of Main Issues and Tentative Schedule of Activities*. Washington, DC: DECRG/World Bank.
- Collins, Cindy. 1998. *Humanitarian Implications of Small Arms Proliferation*. Unpublished Paper. New York: Organization for the Coordination of Humanitarian Affairs.
- Cook, Philip and Jens Ludwig. 1997. *Guns in America: National Survey on Private Ownership and Use of Firearms*. National Institute of Justice Research Brief. Washington, DC: US Department of Justice. May.
- Cornia, Anrea. 2000. 'Inequality and Poverty Eradication: Toward a Post-Washington Consensus.' *UNU Nexions*. Helsinki: UNU/WIDER.
- Coupland, Robin. 1993. 'Hand Grenade Injuries Among Civilians.' *Journal of the American Medical Association (JAMA)*, Vol. 270, No. 5, pp. 624-625.

- Coupland, Robin, Beat Kneubuehl, David Rowley and Gavin Bowyer. 2000. 'Wound Ballistics, Surgery and the Law of War.' *Trauma*, Vol. 2, pp. 1-10.
- Coupland, Robin and David Meddings. 1999. 'Mortality Associated with Use of Weapons in Armed Conflict, Wartime Atrocities and Civilian Mass Shootings.' *British Medical Journal*, Vol. 319, pp. 407 - 410.
- Cranna, Michael. 1994. *The True Cost of Conflict*. London: Earthscan.
- Cruz, Jose Miguel, Alvaro Trigueros Arguello and Francisco Gonzales. 1999. *The Social and Economic Factors Associated with Violent Crime in El Salvador*. Report. Washington, DC: World Bank.
- Cruz, Jose Miguel and Francisco Gonzales. 1997. 'Magnitud de la Violencia en El Salvador.' *Estudios Centroamericanos*, Revista 588, pp. 953-966.
- Cukier, Wendy. 1991. *Ceasefire: Guns and Violence Against Women*. Ottawa: Canadian Advisory Council on the Status of Women.
- _____. 1998. 'International Firearms Control.' *Canadian Foreign Policy*, Vol. 6, No. 1.
- _____. 2000a. *Economic Effects of Small Arms Proliferation and Misuse*. Background Paper. Geneva: Small Arms Survey.
- _____. 2000b. *Gender and Small Arms*. Background Paper. Geneva: Small Arms Survey.
- Cukier, Wendy, Antoine Chaptelaine and Cindy Collins. 2000. *Globalisation and Firearms: A Public Health Perspective*. Policy Paper. Ottawa: Canadian Centre for Foreign Policy Development.
- Cummings, Peter and Thomas Koepsell. 1998. 'Does Owning a Firearm Increase or Decrease the Risk of Death?' *Journal of the American Medical Association*, Vol. 280, No. 5, pp. 471-475.
- Dandurand, Yvon. 1998. *Firearms, Accidental Deaths, Suicides and Violent Crime: An Updated Review of the Literature with Special Reference to the Canadian Situation*. Ottawa: Canadian Firearms Centre/Department of Justice.
- Davenad, Andreas. 2000. *Flee or Be Shot: How Small Arms Have Contributed to Unprecedented Internal Displacement in Africa*. Background Paper. Geneva: Small Arms Survey.
- Deen, Thalif. 1998. 'Politics-UN: UN Personnel Killed with Impunity.' *Inter Press Service*.
- van Dijk, Jan. 1997. *Criminal Victimization and Victim Empowerment in an International Perspective*. 9th International Symposium on Victimology. Amsterdam, August 25-29.
- Dorn, Walter. 2000. *Small Arms, Human Security and Development*. Draft for Development Express. Ottawa: CIDA.
- Duffield, Mark. 2000. 'Globalisation, Trans-border Trade and War Economics.' In Mats Berdal and David Malone, eds. 2000. *Greed and Grievance: Economic Agendas in Civil Wars*. London: Lynne Rienner.
- Dugan, Julie. 2000. *Violent Injury and Firearm Availability*. Background Paper. Geneva: Small Arms Survey.
- The East African. 1997. 'Zaire: Deeper US Involvement in the Peace Process was Reflected by a Request to Assist Rebel Leader Kabila.' 15 February.
- The Economist. 2000. 'Business in Difficult Places.' 20-26 May, pp. 101-103.
- Fajnzylber, Pablo, Daniel Lederman and Norman Loayza. 1998. 'Que Causa el Crimen Violento?' In Roberto Steiner and Mauricio Cardenas, eds. *Crimen y Violencia*. Bogotá: Fedesarrollo.
- Faltas, Sami. 2000. *Firearm Availability and Firearm Violence*. Background Paper. Geneva: Small Arms Survey.
- Fisher, Ian. 2000. 'New Risks in Congo? Rebel Leader Challenges Kabila on Accord.' *International Herald Tribune*. 21 September.
- Frattaroli, Shannon and Stephen Teret. 1998. 'Why Firearm Injury Surveillance?' *American Journal of Preventative Medicine*, Vol. 15, No. 3S, pp. 2-5.
- Frohardt, Mark, Diane Paul and Larry Minear. 1999. *Protecting Human Rights: The Challenge to Humanitarian Organizations*. Occasional Paper 35. Providence: Brown University/IIS.
- Gallagher, Tom. 1997. 'This is no Time for Western Powers to Sit on their Hands.' *The Sunday Times*. 16 March.
- Gamba, Virginia, ed. 2000. *Society Under Siege: Managing Arms in South Africa*. Pretoria: Institute for Security Studies.
- Gartner, Rosemary. 2000. 'Cross Cultural Aspects of Interpersonal Violence: A Review of the International Empirical Evidence.' Paper presented at the International Conference on Crime and Violence: Causes and Policy Responses sponsored by the World Bank. Washington, DC, May.
- Giddens, Anthony 1986. *Durkheim on Politics and the State*. Stanford: Stanford University Press.

- Gillard, Emanuela-Chiara. 2000. 'What's Legal? What's Illegal?' In Lora Lumpe, ed. *Running Guns: The Global Black Market in Small Arms*. London: Zed Books.
- Gissinger, Ranveig and Nils Petter Gleditsch. 2000. *Globalisation and Conflict: Welfare, Distribution and Political Unrest*. Oslo: NTNU.
- Godnick, Bill. 2000. *Small Arms in Central America*. Background Paper. Geneva: Small Arms Survey.
- Gojanovic, Marija Definis, Vesna Capkun and Ankica Smoljanovic. 1996. 'Influence of War on Frequency and Patterns of Homicides and Suicides in South Croatia 1991-1993.' *Canadian Medical Journal*, Vol. 3081.
- Greene, Owen. 1999. 'Tackling Illicit Arms Trafficking and Small Arms Proliferation: Developing Legal and Regulatory Controls.' Paper presented at the Conference on Microdisarmament, Security and Development. March 18-20.
- Greenaway, Sean and Andrew Harris. 1998. 'Humanitarian Security: Challenges and Responses.' Paper presented to the Forging Peace Conference. Harvard University, MA, March.
- Harris, Paul. 1996. 'The Economic Costs of Armed Conflict: The Iran-Iraq War and the Sri Lankan Civil War.' Paper presented to the Development Studies Association Conference sponsored by the University of Reading.
- Heis, Lori. 1993. 'Violence Against Women.' *World Health Statistics Quarterly*, Vol. 56, No. 1.
- Hemenway, David. 1997. 'Survey Research and Self Defence Gun Use: An Explanation of Extreme Overestimates.' *Journal of Law and Criminology*, Vol. 87, No. 4, pp. 1430-1445.
- Herby, Peter. 1999. *Developing a Humanitarian Law Approach to the Problem of Arms Availability*. Geneva: ICRC.
- Hiltermann, Joost and Loretta Bondi. 1999. *State Responsibility in the Arms Trade and the Protection of Human Rights*. Washington, DC: Human Rights Watch.
- Holsti, Kevin. 1996. *The State, War and the State of War*. Cambridge: Cambridge University Press.
- Holtzman, Steve. 1999. *Rethinking Relief and Development in Transitions from Conflict*. Brookings Institution Project on Internal Displacement, Occasional Paper. Washington, DC: Brookings Institute.
- Human Rights Watch. 1994. *Arming Rwanda: The Arms Trade and Human Rights Abuses in the Rwandan War*. Vol.6, No. 1. New York: Human Rights Watch.
- Ignatieff, Michael. 1993. *Blood and Belonging: Journey's Into the New Nationalism*. New York: Farrar, Straus and Giroux.
- Institute for Religious Studies (ISER). 2000. *The impact of firearm injuries on public health in Brazil*. Background Paper. Geneva: Small Arms Survey.
- Institute for Security Studies, Arms Management Programme. 2000a. *The Effects/Impacts of Firearm-Injury*. Background Paper. Geneva: Small Arms Survey.
- _____. 2000b. *The Relationship Between Crime and Firearms in South Africa*. Background Paper. Geneva: Small Arms Survey.
- Instituto Universitario de Opinion Publica de la Universidad Centroamericana. 2000. 'Diagnostico sobre las Armas en El Salvador.' Paper presented to the Primer Foro Centroamericano Sobre la Proliferacion de Armas Livianas. Antigua, Guatemala, 26-29 June.
- International Action Network on Small Arms. 2000. *IANSA Newsletter*, Vol. 4.
- International Committee of the Red Cross. 1997. *The SIRUS Project: Toward a Determination of Which Weapons Cause 'Superfluous Injury or Unnecessary Suffering'*. Geneva: ICRC.
- _____. 1999. *Arms Availability and the Situation of Civilians in Armed Conflict*. Geneva: ICRC.
- _____. 2000a. *Forum: War, Money and Survival*. Geneva: ICRC.
- _____. 2000b. *The People on War Report*. Geneva: ICRC.
- Irish, Jenny. 1999. *Policing for Profit: The Future of South Africa's Private Security Industry*. ISS Monograph Series 39. Pretoria: Institute for Security Studies.
- Kaldor, Mary. 1999. *New and Old Wars: Organised Violence in a Global Era*. Stanford: Stanford University Press.
- Kaplan, Mark and Olga Geling. 1998. 'Firearm Suicides and Homicides in the United States: Regional Variations and Patterns of Gun Ownership.' *Social Science Medicine*, Vol. 46, No. 9, pp. 1227-1233.
- Kaplan, Robert. 1997. *The Ends of the Earth: A*

- Journey at the Dawn of the Twenty First Century . London: Papermac.
- Karp, Aaron. 2000. 'Negotiating Small Arms Restraint: The Boldest Frontier for Disarmament?' Disarmament Forum, Vol. 2, pp. 5-12.
- Kartha, Tara. 2000. South Asia: A Rising Spiral of Proliferation. Background Paper. Geneva: Small Arms Survey.
- Kates, Don, Henry Schafer, John Lattimer, George Murray and Edwin Cassum. 1994. 'Guns and Public Health: Epidemic of violence or Pandemic of Propaganda.' Tennessee Law Review, pp. 513-596.
- Keen, David, John Ryle and Mark Duffield. 1996. 'The Fate of Information in a Disaster Zone.' Disasters, Vol. 20, No. 3, pp. 169-183.
- Kellermann, Arthur, Frederick Rivera, Norman Rushforth, Joyce Banton, Donald Reay, Jerry Francisco, Ana Locci, Janice Prodzinski, Bela Hackman and Grant Somes. 1993. 'Gun Ownership as a Risk Factor for Homicide in the Home.' New England Journal of Medicine, Vol. 329, No. 15, pp. 1084-1091.
- Kellermann, Arthur, Frederick Rivara and Grant Somes. 1992. 'Suicide in the Home in Relation to Gun Ownership.' New England Journal of Medicine, Vol. 327, No. 7, pp. 457-72.
- Killias, Martin. 1993. 'International Correlation's Between Gun Ownership and Rates of Homicide and Suicide.' Canadian Medical Association Journal, Vol. 148, pp. 1721-1725.
- King, Jeremy. 2000. The Albania Turmoil of 1997: Foreshadowing the Kosovo Conflict of 1998 . Background Paper. Geneva: Small Arms Survey.
- Kingma, Kees. 1999. Post-War Demobilisation, Reintegration and Peace-Building. Draft. Bonn: Bonn International Center for Conversion.
- Kleck, Gary and Mark Gertz. 1995. 'Armed Resistance to Crime: The Prevalence and Nature of Self-Defence with a Handgun.' Journal of Criminal Law and Criminology, Vol. 86, No. 1.
- Koop, Everett and George Lundberg. 1992. 'Violence in America: A Public Health Emergency.' JAMA, Vol. 267, No. 22, pp. 3075-3076.
- Kopel, David. 1993. 'Peril or Protection: The Risks and Benefits of Handgun Prohibition.' Public Law Review, Vol.12.
- Krause, Keith. 1999. Small Arms and Light Weapons: The Human Security Dimension . Unpublished Paper. Geneva: Graduate Institute of International Studies.
- Krug, Etienne. 2000a. A Growing Threat to Public Health. Background Paper. Geneva: Small Arms Survey.
- _____. 2000b. Methods for Data Collection on the Impact of Small Arms and Health . Background Paper. Geneva: Small Arms Survey.
- Krug, Etienne, ed. 2000c. Injury: A Leading Cause of the Global Burden of Disease . Geneva: World Health Organization.
- Krug, Etienne, Linda Dahlberg and Kenneth Powell. 1996. 'Childhood Homicide, Suicide and Firearm Deaths: An International Comparison.' World Health Statistics Quarterly, Vol. 49, pp. 230-235.
- Krug Etienne, Kenneth Powell and Linda Dahlberg. 1998. 'Firearm-Related Deaths in the United States and 35 Other High and Upper-Middle-Income Countries.' International Journal of Epidemiology. Vol. 27, No.2, pp. 214-221.
- Lamb, David. 2000. 'Kidnappers Lived High on Ransom Cash.' International Herald Tribune . 21 September.
- Laurance, Edward. 1999. 'The Role of the Business Community in Alleviating the Problems Associated with the Proliferation, Availability and Misuse of Light Weapons .' Paper prepared for the World Bank Conference on Micro-disarmament, Security and Development. Washington DC, March 18-20.
- Leon, Carmon Rosa, Carlos Ogaldes and Oscar Lopez. 1999. 'Guatemala: Diagnostico de la Problematica Postconflicto.' In CRIES, ed. Violencia Social en Centroamerica . Managua: CRIES.
- Lizotte, James Tesoriero, Terene Thornberry and Marin Krohn. 1994. 'Patterns of Adolescent Firearms Ownership and Use.' Justice Quarterly, Vol. 11, pp. 51-73.
- Lock, Peter. 1999a. 'Light Weapons and Conflict in Africa.' Peace and Security, Vol. 31.
- _____. 1999b. Pervasive Illicit Small Arms Availability: A Global Threat . HELINI Papers. Helsinki: the European Institute for Crime Prevention and Control.
- Londono, Juan and Rodrigo Guerrero. 1998. Epidemiologia y Costos de la Violencia en Colombia en Comparacion con America Latina. Bogota: DNP.
- Loria, Max Alberto. 2000. 'Costa Rica: Diagnóstico de Armas de Fuego'. 2000. Paper presented to the

- Primer Foro Centroamericano Sobre la Proliferación de Armas Livianas. Antigua, Guatemala, 26-29 June.
- Lott, John. 1998. *More Guns, Less Crime*. Chicago: University of Chicago Press.
- Lott, John and David B. Mustard. 1997. 'Crime Deterrence and the Right to Carry a Concealed Handguns.' *Journal of Legal Studies*, Vol. 26.
- Louise, Chris. 1995. *Social Impact of Light Weapons Availability and Proliferation*. Geneva: UNRISD.
- Louw, Antoinette. 1998. *Looking Forward: Using Socio-economic Data to Determine Crime Trends*. NEDCORE ISS Crime Index 3. Pretoria: Institute for Security Studies.
- Loyd, Anthony. 1997. 'Albanian Townsfolk Seize Army Base.' *The Sunday Times*. March 10.
- Luckham, Robin, Ismael Ahmed and Robert Muggah. 1999. *Conflict and Development in Sub-Saharan Africa*. Background Paper for the World Bank Poverty Status Report: Africa. Brighton: IDS.
- Ludwig, Jens. 1998. 'Concealed Gun-Carrying Laws and Violent Crime: Evidence from State Panel Data.' *International Review of Law and Economy*, Vol. 18, pp. 239-254.
- Machel, Graca. 1996. *United Nations Study on the Impact of Armed Conflict on Children*. A/51/306. New York: United Nations.
- _____. 2000. *The Impact of Armed Conflict on Children: A Critical Review of the Progress Made and Obstacles Encountered in Increasing Protection for War-Affected Children*. Winnipeg: International Conference on War-Affected Children.
- Macrae, Joanna and Mark Bradbury. 1997. *Tackling Transition: A Critical Analysis of Relief-Development Linkages in Situations of Chronic Instability*. London: Overseas Development Institute/UNICEF/Humanitarian and War Project, Brown University.
- Malone, Jim. 'Albania Falls to Mob Rule.' *The Sunday Times*. March 16.
- Mauser, Gary. 1996. 'Are Firearms a Threat to Public Health? The Misuse of Science in Medical Research.' Presented to the Canadian Law Society Association. Brock University, June 1-4.
- Meddings, David. 1997. 'Weapons Injuries During and After Periods of Conflict: A Retrospective Analysis.' *BMI*, Vol. 315, pp. 1417-1420.
- _____. 1998. 'Health Effects of Weapons: Issues and ICRC Experience.' Presented at the Conference The Human Costs of Unrestrained Arms Transfers and the Response to Date sponsored by NISAT. Oslo, May.
- _____. 2000a. *Factors Affecting Availability and Use*. Background Paper. Geneva: Small Arms Survey.
- _____. 2000b. *Human Security: A Prerequisite for Health*. Draft Paper. Geneva: ICRC.
- Meddings, David and Stephanie O'Conner. 1999. 'Circumstances Around Weapon Injury in Cambodia After Departure of a Peacekeeping Force: Prospective Cohort Study.' *BMI*, Vol. 319, pp. 412-415.
- Melvorn, Linda. 2000. *A People Betrayed: the Role of the West in the Rwanda Genocide*. London: Zed Books.
- Mercy, James, Robin Ikeda, and Kenneth Powell. 1998. 'Firearm Related Injury Surveillance: An Overview of Progress and the Challenges Ahead.' *American Journal of Preventative Medicine*. Vol. 15, No. 3S, pp. 6-16.
- Michael, Markus, David Meddings, Salah Ramez and Juan Luis Gutiérrez-Fisac. 1999. 'Incidence of Weapon Injuries to Inter-factional Combat in Afghanistan in 1996: Prospective Cohort Study.' *BMI*, Vol. 319, pp. 415-417.
- Miller, Mark and David Hemenway. 1999. 'The Relationship Between Firearms and Suicide: A Review of the Literature.' *Aggression and Violent Behaviour*, Vol. 4, No. 1, pp. 59-75.
- Miller, Ted. 1995. 'Incidence and Costs of Gunshot Wounds in Canada.' *Canadian Medical Journal*, Vol. 159, No. 9, pp. 1261-1268.
- Miller, Ted and Mark Cohen. 1997. 'Costs of Gunshot and Cut/Stub Wounds in US with Some Canadian Comparisons.' *Accident Analysis and Prevention*, Vol. 29, No. 3, pp. 329-341.
- Milner, James. 2000. *Sharing the Security Burden: Toward the Convergence of Refugee Protection and State Security*. RCS Working Paper 4. Oxford: QEH/RSC.
- Morales, Ninette. 1999. 'Repuestas Locales Frente a los Procesos de Desplazamiento de Población Nicaraguense a Costa Rica.' *Dialogo Centroamericano*, Vol. 40.
- Morrison, Andrew and Loreto Biehl. 1999. *Too Close to Home: Domestic Violence in the Americas*. Washington, DC: Inter-American Development Bank/Johns Hopkins University.
- Moser, Caroline. 1999. *Guatemala: Paz Urbana*. Washington, DC: WorldBank /CIEN/SEPREDI/AVANSCO/FUNDESCO/AMVA

- Muggah, Robert and Eric Berman. 2001. *The Humanitarian Impacts of Small Arms*. A Report for the IASC/RGSA. New York: UNICEF/UNDP/UNHCR/OCHA.
- De Mulinen, Frederic. 1987. *Handbook of the Law of War for Armed Forces*. Geneva: ICRC.
- Murray, Christopher and Alan Lopez, eds. 1996. *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Disease, Injuries and Risk Factors in the 1990s with Projections to 2020*. Boston, MA: Harvard University Press.
- Musah, Abdel-Fatau and Niobe Thompson, eds. 1999. *Over a Barrel: Light Weapons and Human Rights in the Commonwealth*. London: Commonwealth Human Rights Initiative.
- Naraghi-Anderlini, Sanam, Rita Manchanda and Shereen Karmali. 1999. *Women, Violent Conflict and Peace-building: Global Perspectives*. London: International Alert.
- Naylor, Tom. 1995. 'The Structure and Operation of the Modern Arms Black Market.' In Jeffrey Boutwell, Michael Klare and Laura Reed. 1995. *Lethal Commerce: The Global Trade in Small Arms and Light Weapons*. Cambridge MA: Committee on International Security Studies.
- Novello, Antonia, John Shosky and Robert Froehle. 1992. 'From Surgeon General, US Public Health Service: a Medical Response to Violence.' *JAMA*. Vol. 267, No. 22.
- O'Brien, Kevin. 2000. *A History of Private Security*. Background Paper. Geneva: Small Arms Survey.
- Office of Naval Intelligence. 1999. *Threats and Challenges to Maritime Security 2020*. Washington, DC: Office of Naval Intelligence.
- Open Society Institute. 1999. *Gun Control in the United States*. New York: OSI.
- Organization for Economic Co-operation and Development/Development Assistance Committee. 1998. *Conflict, Peace and Development Co-operation on the Threshold of the 21st Century*. Paris: OECD.
- Oxfam. 1998. *Small Arms, Wrong Hands: A Case for Government Control of Small Arms Trade*. London: Oxfam.
- Pan-American Health Organization. 1997. *Health Situation Analysis Program*. New York: Pan-American Health Organization.
- Paediatrics. 2000. 'Firearm-related Injuries Affecting the Paediatric Population.' Vol. 105, No. 4.
- Phebo, Luciana, Rubem Fernandes and Marcel Nascimento. 2000. *The Impact of Firearm Injuries on Public Health in Brazil*. Background Paper. Geneva: Small Arms Survey.
- Planck, Nina. 1998. 'Proliferation Dealers in Death.' Time. 2 November.
- Ramsbotham, David. 1995. 'The Changing Nature of Intervention: the Role of UN Peacekeeping.' *Conflict Studies*, No. 282, pp. 28.
- Reno, William. 1998. 'Humanitarian Emergencies and Warlord Economies in Liberia and Sierra Leone.' Paper presented at conference sponsored by UNU/WIDER/Queen Elizabeth House. Stockholm, 15-16 June.
- Reference Group on Small Arms. 2000. *Reference Group on Small Arms: Thematic Guidance Working Paper*. Geneva: RGSA.
- Romano, Luis. 1997. 'Los Costos de la Violencia en El Salvador.' *Estudios Centroamericanos*, Revista 588, pp. 967-977.
- Saferworld. 1999. *Light Weapons Controls and Security Assistance: A Review of Current Practice*. London: Saferworld.
- Schonteich, Martin. 1999. *Sentencing in South Africa: Public Perceptions and the Judicial Process*. ISS Paper 43. Pretoria: Institute for Security Studies.
- Sherman, Lawrence. 2000. 'Gun Carrying and Homicide Prevention.' *JAMA*, Vol. 283, No. 9, pp. 1193-1195.
- Sidel, Victor. 1995. 'Towards a Better World: The International Arms Trade and its Impact on Health.' *BMI*, Vol. 311, pp. 1677-1680.
- Singh, Jasjit, ed. 1995. *Light Weapons and International Security*. New Delhi: Pugwash Conferences on Science and World Affairs.
- Sivard, Ruth. 1996. *World Military and Social Expenditures*. New York: Institute for World Order.
- Sloan, John. 1988. 'Handgun Regulations, Crime, Assaults, and Homicide: A Tale of Two Cities.' *New England Journal of Medicine*, Vol. 319, pp. 1256-1262.
- Smith, Chris. 2000. 'Small Arms Trafficking May Export Albania's Anarchy.' *Jane's Intelligence Review*. January, pp. 24-28.
- Smith, Dan. 1997. *The State of War and Peace: Atlas 3rd Edition*. London: Penguin Books.
- Stewart, Frances. 1993. 'War and Underdevelopment:

- Can Economic Analysis Help Reduce the Costs.' *Journal of International Development* , Vol. 5. No. 4, pp. 357-380.
- Stockholm International Peace Research Institute. 1999. *SIPRI Yearbook: Armaments, Disarmament and International Security* . New York: Oxford University Press.
- _____. 2000. *SIPRI Yearbook: Armaments, Disarmament and International Security* . New York: Oxford University Press.
- Swift, Jeremy, ed. 1996. 'War and Rural Development in Africa.' *IDS Bulletin*, Vol. 27, No. 3.
- Teret, Stephen, Garon Wintemute and Peter Beilenson. 1992. 'The Firearm Fatality Reporting System.' *JAMA*, Vol. 267, No. 22, pp. 3073-3074.
- Thompson, Niobe and Devashish Krihnan. 1999. 'Small Arms in India and the Human Costs of Lingering Conflict.' In Abdel-Fatau Musah and Niobe Thompson. 1999. *Over a Barrel: Light Weapons and Human Rights in the Commonwealth* . London: Commonwealth Human Rights Initiative.
- Thompson, Tony. 2000. 'One in Three Young Criminals is Armed.' *Observer* . 3 September.
- Toth, M. 1997. *OSCE Mission Liaison, Conflict Prevention Centre, Vienna, Austria, electronic mail correspondence.*
- Travassos, Cláudia and Maria Lebrão. 1998. *Morbidade Hospitalar nos Jovens: Jovens Acontecendo na Trilha das Políticas Públicas* . Rio de Janeiro: Comissão Nacional de População e Desenvolvimento.
- United Nations. 1997. *Report on the Conference of Disarmament to the United Nations* . CD/1476. 9 Sept.
- _____. 1998a. *The Causes of Conflict and the Promotion of Durable Peace and Sustainable Development in Africa: Report of the Secretary General* . S/1998/318. 13 April.
- _____. 1998b. *United Nations International Study on Firearm Regulation* . New York: United Nations.
- _____. 1999a. *Relationship Between Disarmament and Development: Report of the Secretary-General* . GA/54/150.
- _____. 1999b. *UN Security Council Press Release*. SG/SM/7145, SC/6733.
- _____. 1999c. *Report of the Panel of Governmental Experts on Small Arms* . A/52/298. 27 August.
- _____. 2000. *Meeting the Challenge: The Role of the UNDP in Crisis, Post-Conflict and Recovery Situations, 2000-2003* . DP/2000/18. 20 March.
- United Nations Department for Disarmament Affairs. 2000. *Summary of the UNDDA Conference on Illicit Trafficking in ASEAN* . Jakarta: UNDDA/Small Arms Survey.
- United Nations Development Program. 1994. *Human Development Report* . New York: UNDP/Oxford University Press.
- _____. 1998. *Violencia e Inseguridad Ciudadana* . Guatemala: PNUD.
- _____. 1999a. *Development, Peace and Security* . <<http://www.undp.org/erd/archives/dps.htm>>
- _____. 1999b. *Human Development Report* . New York: UNDP/Oxford University Press.
- _____. 2000 *Human Development Report* . New York: UNDP/Oxford University Press.
- United Nations General Assembly. 2000. *Draft United Nations Convention Against Transnational Organised Crime* . Vienna: UNGA.
- United Nations High Commissioner for Refugees. 1997. *The State of the Worlds Refugees: A Humanitarian Agenda* . Oxford: Oxford University Press.
- _____. 2000. *The State of the Worlds Refugees: The Last Fifty Years* . Oxford: Oxford University Press.
- United Nations Interregional Crime and Justice Research Institute. 1997. *International Crime Victim Survey* . Rome/Turin: UNICRI.
- United Nations Office for Drug Control and Crime Prevention. 2000. *Global Studies on Organised Crime: Transnational Organised Crime: Dangerousness and Trends* . Vienna: UNCICP.
- United Nations Statistical Division. 1970. *Demographic Yearbook* . New York: UNSTAT.
- _____. 1980. *Demographic Yearbook* . New York: UNSTAT.
- _____. 1990. *Demographic Yearbook* . New York: UNSTAT.
- _____. 1998. *Demographic Yearbook* . New York: UNSTAT.
- United States. United States Department of Justice. Bureau of Justice Statistics. 2000a. *Serious Violence Crime Levels Continued to Decline in 1998* . <<http://www.ojp.usdoj.gov/bjs/glance.htm>>
- _____. 2000b. *Direct Expenditure for Each of the Major Criminal Justice Functions* . <<http://www.ojp.usdoj.gov/bjs/glance/exptyp.htm>>
- _____. 2000c. *Homicide Trends in the U.S* .

- <<http://www.ojp.usdoj.gov/bjs/homicide/totals.txt>>
- United States Committee for Refugees. 2000. World Refugee Survey . Washington, DC: Immigration and Refugee Services of America.
- Valdez, A. 1999. 'Es Como Una Pelicula se Repite.' La Prensa Grafica .
- Villaveces, Andrés, Peter Cummings, Victoria Espitia, Thomas Koespell, Barbara McKnight and Arthur Kellermann. 2000. 'Effect of a Ban on Carrying Firearms on Homicide Rates in 2 Colombian Cities.' JAMA, Vol. 283, No. 1, pp. 1205-1209.
- Wallensteen, Peter and Margareta Sollenberg. 'Armed Conflicts and Regional Conflict Complexes, 1989-97.' Journal of Peace Research, Vol. 35, No. 5, pp. 621-634.
- Webster, Daniel and Jens Ludwig. 2000. Myths About Defence Gun Use and Permissive Gun Carrying Laws. Berkeley, CA: Berkeley Media Studies Group.
- Webster, Daniel, Jon Vernick and Jens Ludwig. 1998. 'Webster and Colleagues Respond: No Proof that Shall-issue Laws Reduce Violence.' American Journal of Public Health , Vol. 886, pp. 982-983.
- Webster, Daniel, Jon Vernick, Jens Ludwig and Kathleen Lester. 1997. 'Flawed Gun Policy Research Could Endanger Public Safety.' American Journal of Public Health, Vol. 87, No. 6, pp. 918-921.
- Weissert, Will. 2000. 'Guatemalans Fear Crime Wave.' New York Times . 17 June.
- Wilkinson, Tracy. 2000. 'Palestinians Gun Culture Poses Political, Social Perils: Proliferation of Weapons Frustrates Efforts at Law and Order and Leaves Civilians Living in Fear.' Los Angeles Times . 18 August.
- Wintemute, Garen, Carrie Parham, James Beaumont, Mona Wright and Christiana Drake. 1999. 'Mortality Among Recent Purchasers of Handguns.' New England Journal of Medicine , Vol. 341, No. 21, pp. 1583-1589.
- Working Group for Weapons Reduction. 1998. WGWR Newsletter . July.
- World Almanac. 1998. Military and Veteran Affairs . New York: St. Martin's Press.
- World Bank. 1997a. From Civil War to Civil Peace. Washington, DC: World Bank/Carter Center.
- _____. 1997b. Crime and Violence as a Development Issue in Latin America . Washington, DC: World Bank.
- _____. 1998. Post-Conflict Reconstruction: The Role of the World Bank. Washington, DC: World Bank.
- _____. 1999. Security, Poverty Reduction and Sustainable Development: Challenges for the New Millennium . Washington, DC: World Bank.
- World Health Assembly. 1996. Prevention of Violence: Public Health Priority . Resolution WHA 49.25. Geneva: World Health Organization.
- World Health Organization. 2000. Information Kit on Violence and Health . <<http://www.who.int/eha/pvi/index.html>>
- World Vision. 1996. The Effects of Armed Conflict on Girls. World Vision Staff Working Paper 23. Geneva: World Vision.
- Zimring, Franklin and Gordon Hawkins. 1997. Crime is not the Problem: Lethal Violence in America. Oxford: Oxford University Press.