Chapter Four **Lethal Encounters: Non-conflict Armed Violence**

BY FAR THE largest aspect of the global burden of armed violence is the deaths and injuries that occur in non-conflict or non-war settings. Countries such as South Africa, Jamaica, and El Salvador suffer from extremely high recorded levels of homicide, with more deaths each year than in many contemporary wars. This fact alone underlines the importance of adopting a more comprehensive approach to armed violence, since a narrow focus on conflict-related deaths by development donors and practitioners excludes the significant burden of armed violence that occurs in non-conflict settings.

This chapter provides a regional and subregional breakdown of the global distribution of non-conflict violent deaths, both in absolute terms and as rates per 100,000 population. It also examines the limited available trend data and provides information on the burden of violence in cities, firearm homicides, the gendered dimension of violent deaths, and the issue of the effectiveness of criminal justice systems.

The main findings of this chapter are as follows:

- Approximately 490,000 deaths from homicide are estimated to have occurred in 2004.[1] The world average homicide rate in 2004 was 7.6 per 100,000 population.

- Southern Africa, Central America, and South America are the three subregions with the highest homicide rates. West and Central Europe, East Asia, and South-east Europe are the three subregions showing the lowest rates of homicide.[2]

- Approximately 60 per cent of all violent deaths are committed with firearms, with variation from a low of 19 per cent in West and Central Europe to a high of 77 per cent in Central America, based on data from 45 countries.

- In countries with high homicide rates, women make up around ten per cent of the victims. As homicide rates drop, women make up a greater percentage of victims, up to around 30 per cent in European countries. Available data is seldom, however, disaggregated by sex.

- Trend data shows few increases in homicide rates over the past decade. The majority of subregions examined show flat or slightly increasing or decreasing trends. There is little evidence that armed violence has, at least at the subregional level, increased overall in the Americas, Europe, and Central Asia and Transcaucasia in recent years.

Arriving at these findings is a complex and delicate exercise, and the chapter also explains some of the difficulties involved in measuring armed violence. Existing statistics and data-gathering mechanisms are underdeveloped, and greater investment in effective measurement of the burden of armed violence will be needed in order to develop a more accurate picture of its overall scope and impact.[3]

Defining and measuring violent deaths

'Homicide' is a legal label used to gather information about a specific way in which people die. Most generally, homicide can be defined as unlawful death inflicted on a person by another person. Such a broad definition encompasses a wide range of acts that may result in death and a whole spectrum of states of mind of the perpetrator.

The focus of this chapter is intentional homicide, or murder. Intentional homicide requires that the perpetrator purposefully intends to cause the death or serious injury of a victim. Situations where the perpetrator is reckless or grossly negligent, or where the perpetrator kills in self-defence,

PHOTO ▼ Supporters of the opposition armed with machetes, clubs, and axes run from tear-gas and bullets in Kibera slum, Nairobi, Kenya. © Jon Hrusa/EPA

are therefore usually excluded from the category of intentional homicide. The fact that a person is intentionally killed by another does not necessarily mean that the act is a homicide in law. The killing of a person by a police officer acting legitimately in the line of duty is an obvious exclusion, as is the killing of an enemy combatant during a war or armed conflict.

Despite varying definitions, 'homicide' is the most widely collected data source on non-conflict-related armed violence across and within countries. The killing of a person is one of the most serious crimes and therefore tends to be recorded more effectively than other crimes. The fact of a dead body is usually processed by the medical or public health system, in addition to the police and criminal justice system, creating two potential sources of administrative statistics. In addition to counting direct and indirect deaths from armed conflict, numbers and rates of homicides are useful indicators to capture the non-conflict-related burden of armed violence.

Armed violence also results in many tens of thousands more victims than the 490,000 homicide victims in 2004. There are, however, no reliable estimates for the number of people who are injured (with either minor injuries or permanent disabilities), or who become victims of armed crimes such as robbery, carjacking, or armed assault.

The legal label 'homicide' captures a wide range of acts, including domestic disputes that end in a killing; interpersonal violence; violent conflicts over land, resources, grazing, or water rights; inter-gang clashes over turf or control; and predatory violence and killing by armed groups. For example, most of the deaths in Kenya in the aftermath of the disputed 2007 election would be considered intentional homicide, as would the more than 2,500 persons killed in drug-related

violence in Mexico in 2007–08 (BBC, 2008; *Los Angeles Times,* 2008; Reuters, 2008). By contrast, the 79 suspected gang members killed in clashes with police in Sao Paulo in May 2006 may not be counted as homicides (BBC, 2006). Similarly, neither the nearly 3,000 persons killed in the attacks on the United States on 11 September 2001, nor the nearly 200 persons killed in terrorist attacks on 11 March 2004 in Madrid, Spain were recorded as homicides. These examples highlight that while 'homicide' is a broad category that goes beyond interpersonal violence, it does not capture all intentional killing.

The difference between deaths arising from armed conflict and non-conflict deaths is often described by the organization of the killing. Homicide is usually committed by individuals or small groups, whereas the killing in armed conflict is committed by more or less cohesive groups of up to several hundred members (Collier and Hoeffler, 2004, p. 3). But there is often little difference in intensity between large-scale criminal violence and low-level armed conflict, and the line between the two is often blurred.

A comparative analysis of homicide statistics must be conducted cautiously. Legal definitions of homicide vary among countries, and may or may not include crimes such as assault leading to death, euthanasia, infanticide, or assistance with suicide. Societies define those killings that are perceived as acceptable and others that are not in their legal codes. Comparing intentional homicide among countries and regions is, therefore, a comparison not only of the level of intended killing of persons, but also of the extent to which countries and regions deem that a killing should be classified as such.

Official statistics rarely capture the number of actual criminal events that have occurred. Figures

and rates should therefore be assumed to be conservative estimates. Homicide can be reported by relatives and witnesses, but obviously cannot be measured through reports by victims. The quality of homicide figures is also affected by different criteria and approaches to case recording, and the capacity of national institutions to gather data and accurately record events (Aebi, 2004).

The capacity gap between developed and developing countries particularly affects the cross-national comparison of police-recorded crime statistics (UN, 2007a), with the result that administrative statistics are not a particularly strong basis for the study of cross-national differences in criminal activity (Aebi, 2004, p. 163). Some analysts (Soares, 2004a, p. 851) have demonstrated that variations in crime reporting rates are 'strongly related to measures of institutional stability, to police presence, and . . . to a subjective index of corruption' (see also Soares, 2004b). Cross-national differences in reported crime must therefore take into account both state capacity and crime victim reporting rates.

PHOTO ▲ Police officers patrol near the house where two Chinese students were found murdered in Newcastle, UK, August 2008. © Paul Ellis/AFP/ Getty Images

There are also important differences between data obtained from public health, police, or criminal justice institutions. All measure subtly different phenomena and are therefore unlikely to provide identical numbers.[4] The differences between health and police statistics are especially marked in developing countries, with some analysts noting that health statistics may be up to 45 per cent higher than police-recorded figures. In higher income countries, such as those in West and Central Europe, significant differences remain for some countries between police and health statistics (Shaw, Van Dijk, and Romberg, 2003, pp. 46–47). Such differences may be linked to limitations in

the capacity of police and law enforcement agencies to identify and record homicide events, and other factors such as the lethality of assaults.

Despite the proliferation of increasingly dangerous weapons and an increase in the number of serious criminal assaults in developing countries since 1960, the lethality of such assaults has dropped dramatically due to developments in medical technology and medical support services, in both North America and Western Europe (Harris et al., 2002; Aebi, 2004). As a consequence, not only is it difficult to explain long-term homicide trends in one region without taking into account improvements in health care, but it is also difficult to draw

Map 4.1 Homicide rates per 100,000 population, by subregion, 2004
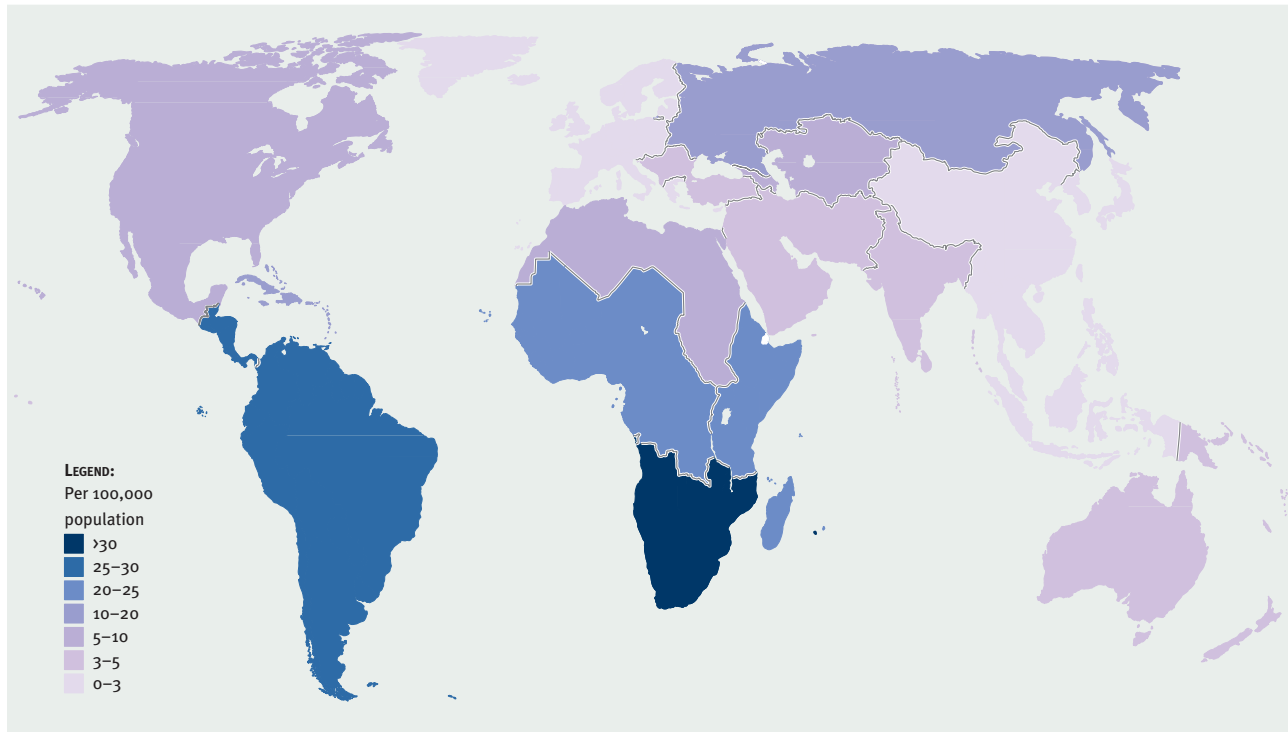
Legend:
Per 100,000 population
- >30
- 25–30
- 20–25
- 10–20
- 5–10
- 3–5
- 0–3

Note: The boundaries and designations used on this map do not imply endorsement or acceptance.
Source: UN Office on Drugs and Crime (UNODC) estimates

comparisons between regions of the world that have different healthcare systems.

Estimating global homicide levels

This section disaggregates the estimated 490,000 non-conflict violent deaths using results from analysis of available national-level data.[5] Data is presented in this section as subregional aggregates due to the difficulties in comparing homicide data directly at the country level. The resulting homicide estimates are expressed as the number of homicides per 100,000 people in one year.

Map 4.1 shows the global distribution of homicide captured as population-weighted homicide levels for 16 subregions for 2004. These subregional figures are calculated from 201 individual country or territory homicide level estimates, each derived from available national-level administrative data.[6]

The world average for 2004—the most recent year for which comprehensive data is available—is 7.6 homicides per 100,000 population. The highest homicide rates are concentrated in Africa (with the exception of North Africa) and Central and South America, and fall within the higher homicide rate ranges of from 20 to more than 30 homicides per 100,000 population. By contrast, East and South-east Asia and West and Central Europe show the lowest homicide levels, with rates lower than 3 homicides per 100,000 population. The Caribbean and East Europe are affected by relatively high homicide rates that are in the range of 10–20 homicides per 100,000 population. North Africa, North America, and Central Asia follow with

FIGURE 4.1 Homicide rates per 100,000 population by region and subregion, 2004
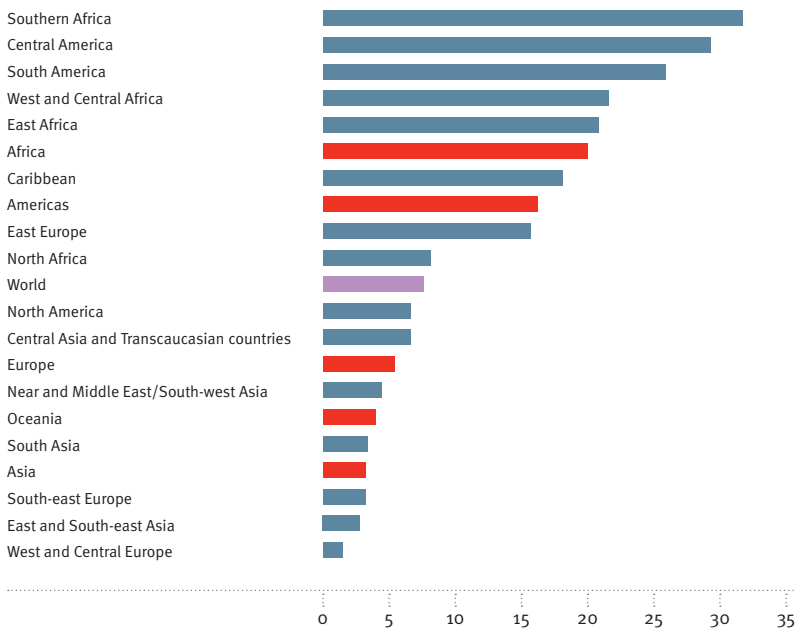
NOTE: Regional and subregional estimates are derived both from public health and police or criminal justice data sources at the national level. The full methodology is described in the on-line appendix at ‹http://www.genevadeclaration.org›. Data for Africa derives primarily from public health sources, while data for Europe and Asia uses police data as the preferred source. Data for the Americas represents both public health and police data. As set out in this chapter, police and health statistics measure subtly different phenomena, with the result that data sets may not be directly comparable. Where possible, such differences have been taken into account at the national level, prior to the calculation of subregional figures.

SOURCE: UNODC estimates

rates between 5 and 10, while Oceania, the Near and Middle East/South-west Asia, South Asia, and South-east Europe show homicide rates in the range 3–5 per 100,000 population.

Figure 4.1 provides in graphic form details of the regional and subregional distribution of homicide rates. In Africa, high homicide rates may be associated with a series of social and economic indicators also linked to crime. These include, for example, a low overall Human Development Index (HDI),[7] low economic performance,[8] high levels of income inequality,[9] a youthful population,[10] rapid rates of urbanization, poorly resourced criminal justice systems, and a proliferation of firearms, related in part to the recurrence of conflict in all regions of the continent (UNODC, 2005, p. ix). Systematic analysis of the nature of these linkages, however, remains to be done (see Box 4.1).

In Africa, some conflict-related deaths may appear in homicide statistics, but overall the number of direct conflict-related deaths in Africa (approximately 17,700 conflict deaths were recorded via incident reporting in 2004[12]) pales compared to an estimated 180,000 non-conflict violent deaths in 2004. There is nevertheless a link between conflict and non-conflict violence. Armed conflict has the potential to influence violent crime both during and after the end of hostilities (ARMED VIOLENCE AFTER WAR). Contemporary conflicts often also overlap with organized criminal activity and other forms of looting and predation. The psychological impact of war, destruction of social fabric, loss of livelihoods, social displacement, and increased availability of weapons may also all contribute to high post-conflict levels of crime and insecurity that are reflected in homicide levels (UNODC, 2005, p. x).

The Americas, with the exception of North America, show the second-highest regional homicide levels. Central and South American rates are higher than the global average, representing the second- and third-highest subregional rates globally: 29.3 and 25.9 homicides per 100,000 population, respec-

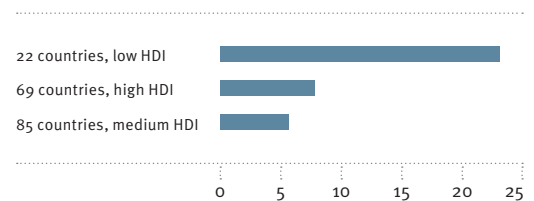**Box 4.1** Homicide and human development

Analysis of homicide rates by level of human development reveals the concentration of violent deaths in countries marked by a lack of resources and poverty. Figure 4.2 shows the population-averaged homicide rate for 176 countries, grouped by low, medium, and high levels of human development as assigned by the United Nations Development Programme (UNDP) HDI. The HDI combines measures of life expectancy, literacy, education, and gross domestic product (GDP) per capita as means of measuring and comparing levels of human development.

The homicide rate in countries with low levels of human development is more than three times higher than the average rate in countries with high or medium levels of human development. This should come as no surprise: crime rarely occurs in isolation and is one of a range of co-factors associated with underdevelopment. High levels of income inequality, rapid urbanization, a high share of unemployed youth in the population, poorly resourced criminal justice systems, and the proliferation of firearms are all associated with both crime and low levels of development. However, while Figure 4.2 suggests broad links between development and homicide levels, a strong correlation does not exist between the two at the level of individual countries.[11] Rather, the HDI captures development indicators that are both affected by and partly symptomatic of the level of violence in a given society.

FIGURE 4.2 Homicide and HDI: homicide rate per 100,000 population, 2004*

22 countries, low HDI
69 countries, high HDI
85 countries, medium HDI

0   5   10   15   20   25

* The classification of high, medium, and low human development is used in the UNDP *Human Development Report* to describe countries that have a HDI value of 0.800 or above (high), 0.500–0.799 (medium), or less than 0.500 (low). See UNDP (2008, ‹http://hdr.undp.org/en/media/hdr_2007 2008_readers_guide.pdf›, p. 222).

SOURCE: UNODC estimates

tively. The Caribbean rate of 18.1 is more than twice as high as the global average (7.6 per 100,000 population).

However, the socioeconomic situation of the Americas is qualitatively different to that of Africa. GDP per capita for the Caribbean and South and Central America is about double that of Africa and the average HDI is 0.78, as compared with 0.53 for Africa.[13] Out of a total of 41 main armed conflicts globally, 16 occurred in Africa, while there were only 2 in the Americas (DIRECT CONFLICT DEATH).

This suggests a different set of factors associated with a high homicide rate. While the Americas region does have some history of armed conflict (especially in Central and South America), it is drug trafficking, criminal activity, and youth gangs that play a more significant role in driving homicide levels, particularly in Central America and the Caribbean (OTHER FORMS OF ARMED VIOLENCE). The drug trade fuels crime in numerous ways: through violence linked to trafficking; by normalizing illegal behaviour; by diverting criminal justice resources from other activities; and, importantly with respect to homicide, by contributing to the widespread availability of firearms (UNODC, 2007, p. 15; UNODC and World Bank, 2007, pp. i–ii).
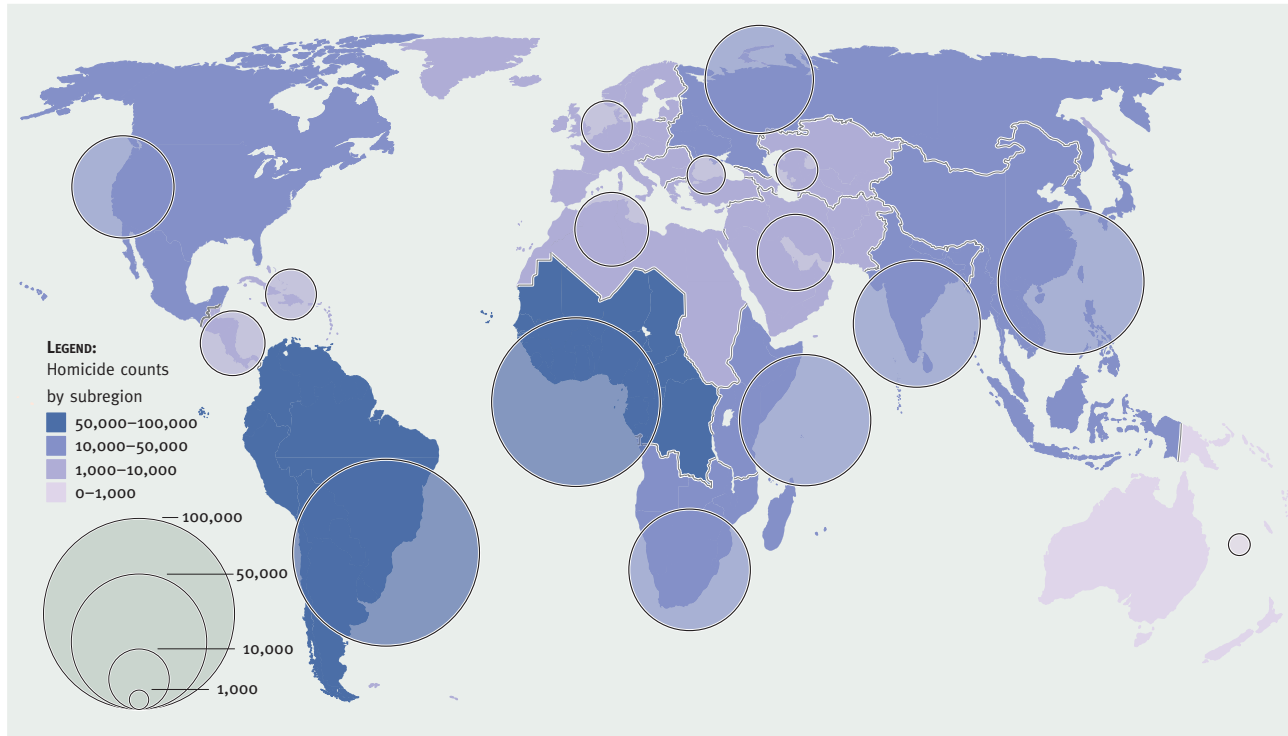
By comparison, as a region, Asia has the lowest average intentional homicide rate. However, its subregions show considerable variability, from 6.6 per 100,000 population for Central Asia and Transcaucasia to 2.8 for East and South-east Asia. South Asia is slightly higher at 3.4 per 100,000, as is the Near and Middle East/South-west Asia at 4.4 per 100,000 population. It is worth noting that average homicide levels in South Asia are almost six times lower than for Africa, even though average GDP per capita in South Asia is approximately equal to that for Africa. There is

no clear explanation for this, but it does call for a nuanced perspective on the association between economic performance (as measured by GDP) and levels of armed violence.

Oceania shows a homicide rate slightly higher than for Asia, at 4.0 per 100,000 population. Factors particularly affecting this comparatively low rate may include the unique geographic and demographic features of Oceania, with some 23 out of 26 countries or territories having a population under 1,000,000 persons. Fifteen of these do not reach 100,000 inhabitants. While the regional average is low, countries within Oceania show considerable variability, ranging from 15.2 to less than 1 per 100,000 population.

PHOTO ▲ An armed gang member in a Rio favela. © Q. Sakamaki/Redux

MAP 4.2 Absolute homicide counts by subregion, 2004

LEGEND:
Homicide counts
by subregion

- 50,000–100,000
- 10,000–50,000
- 1,000–10,000
- 0–1,000

100,000
50,000
10,000
1,000

NOTE: The boundaries and designations used on this map do not imply endorsement or acceptance.
SOURCE: UNODC estimates

The South-east and West/Central European sub-regions have among the lowest rates of homicide worldwide, at 3.2 and 1.5 homicides per 100,000 population, respectively. The overall average for Europe, 5.4 homicides per 100,000, is influenced by the high value for East Europe of 15.7 homicides per 100,000 population. West and Central Europe, taken as a whole, has detailed homicide statistics available from police and criminal justice sources, which implies comparatively efficient police forces capable of crime prevention, detection, and investigation functions. This may be a significant factor in the low figure for West and Central Europe and may partly explain the consistently decreasing

trend of homicide levels. Figures from EUROSTAT, for example, suggest that homicides recorded by the police fell by about three per cent annually in European Union member states where consistent figures could be provided for the period 1995–2005 (Tavares and Thomas, 2007, p. 2). This pattern is most noticeable in South-east Europe, where absolute numbers of homicides declined by around 50 per cent between 1998 and 2006 (UNODC, 2008, p. 39).

The global burden of homicide can also be expressed in absolute counts. These figures are not representative of homicide levels, because they are unrelated to the population from which

the homicide count is derived. Nonetheless, Map 4.2 presents a representation of absolute numbers of homicides by subregion and provides a broad idea of the global distribution of non-conflict violent deaths.

Of around 490,000 people who were killed in homicides in 2004, the largest number died in the subregion of South America: some 95,000, representing 19 per cent of the total. West and Central Africa followed with an estimated total of 78,000 deaths. Homicides in Africa and the Americas together represent 66 per cent of the overall figure; 37 per cent and 29 per cent, respectively. Asia follows with 25 per cent of global homicides. Europe accounts for around 9 per cent of homicide deaths and Oceania for 0.3 per cent of the total.

Behind the numbers: trends and distribution of violent deaths

A global analysis of homicide trends over the past fifty years points to no clear trends. Twelve out of thirty-four countries for which World Health Organization (WHO) mortality statistics were available showed significant increases—also described as 'crime booms'—in homicide levels between 1956 and 1998 (LaFree and Drass, 2002). However, there
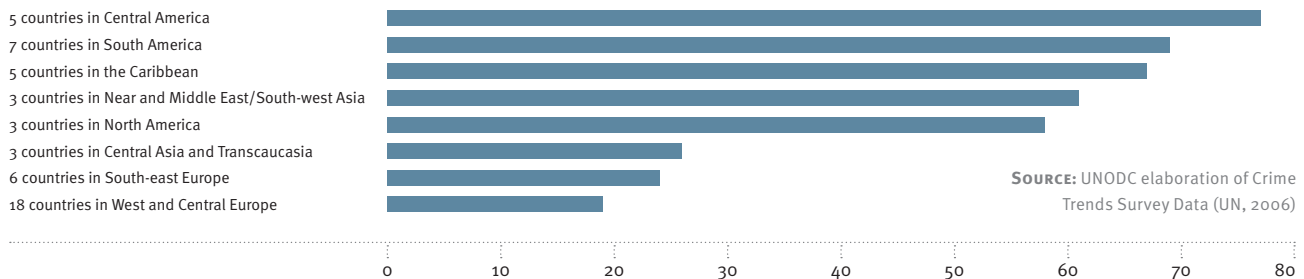
Box 4.2 Guns and homicide

Firearms are not the only weapons used in armed violence, and death is not the only outcome. Death by firearm is nonetheless a crucial aspect of the global burden of armed violence. Using figures from the Ninth UN Survey on Crime Trends and Operations of Criminal Justice Systems (UN, 2006), Figure 4.3 presents the percentage of homicides committed by firearm for countries from eight subregions for which data was available.

The percentage of homicides committed by firearm varies from 19 per cent in West and Central Europe to 77 per cent in Central America. On a global scale, percentages may be divided into subregions with more than 50 per cent of homicides committed by firearm—Central America, South America, the Caribbean, the Near and Middle East, South-west Asia, and North America—and those under 50 per cent—Central Asia and Transcaucasia, South-east Europe, and West and Central Europe.

Although a number of interpretations may be given to the data, such as the effect of gun control laws and differing availability of small arms and light weapons between subregions, the results must be interpreted with caution. Countries operate different recording systems and may inaccurately record the number of homicides committed by firearms. This may be a result of limited criminal justice statistics-gathering capacity, factual difficulties in identifying the cause of death, or simply a lack of follow-through from operational case notes to official police statistics. Some homicide by firearm statistics reported to the UN Survey on Crime Trends (UN, 2006; 2008) (and not included in the above analysis) reveal inconsistencies either with data from previous years or as compared to the total homicide figure provided.

Despite these difficulties, the available data suggests that approximately 60 per cent of total homicides in the eight subregions were carried out with a firearm. This figure excludes all of Africa, Oceania, East and South-east Asia, and South Asia, for which no reliable figures were available. It is, however, worth noting that if the 60 per cent figure is applied to the global total of 490,000 estimated total homicides in 2004, the result (approximately 245,000 firearms deaths) is somewhat higher than previously estimated (Richmond, Cheney, and Schwab, 2005; Small Arms Survey, 2004).[14]

FIGURE 4.3 Percentage of homicides committed with a firearm for countries in eight subregions, 2004 or closest available year

5 countries in Central America
7 countries in South America
5 countries in the Caribbean
3 countries in Near and Middle East/South-west Asia
3 countries in North America
3 countries in Central Asia and Transcaucasia
6 countries in South-east Europe
18 countries in West and Central Europe

SOURCE: UNODC elaboration of Crime Trends Survey Data (UN, 2006)

0   10   20   30   40   50   60   70   80

is no conclusive evidence to support the argument that crime booms have been universal since the Second World War.[15] More recently, analysis of homicide and homicide attempts in the 1990s in Europe shows an increase between 1990 and 1992, followed by a gradual but consistent decrease in homicide levels between 1992 and 2000 (Aebi, 2004). According to data from EUROSTAT, this decline has continued to the year 2006 (Tavares and Thomas, 2007).

In a longer historical perspective, however, all analysts agree that homicide rates in Western Europe have dropped more or less steadily—and

PHOTO ▼ An Italian soldier guards a train station in suburban Rome. © Tony Gentile/Reuters

dramatically—over the past several centuries. Homicide rates dropped roughly by half from the medieval to the early modern period (late 16th and early 17th centuries), and by the 19th century had dropped five to ten times further. This holds from England and Scandinavia to Germany, Switzerland, the Netherlands, and Italy. The homicide rate in England dropped from about 23 per 100,000 population in the 13th and 14th centuries to 4.3 per 100,000 by the end of the 17th century, to 0.8 per 100,000 by the first half of the 20th century. In the Netherlands and Belgium, equivalent figures were 47, 9.2, and 1.7 per 100,000; while in Germany and Switzerland, the figures fell from 37 per 100,000 to below 2.0 for the 20th century (Eisner, 2001; Gurr, 1981; Monkkonen, 2001). Although the exact timing and scope of the decline varies from place to place, there is no doubt about the historical decline in lethal violence within European states.

Various explanations have been advanced for this decline, including increases in state capacity (policing, criminal justice), increased urbanization and levels of education, and changing norms towards interpersonal violence. Whatever the causes, the long-term decline in lethal violence should provide some insight into contemporary global trends analysed over a short time period.

The analysis presented below looks at homicide trends in selected countries based on results from multiple data sources. It captures the best available data for the period 1998–2006 in order to provide a temporal context to the subregional estimates presented above for 2004.[16] This trend analysis refutes the existence of 'crime booms' in the Americas, Europe, and Central Asia and Transcaucasia in recent years. It shows that there were very few sustained increases of greater than ten per cent in homicide levels. The majority

TABLE 4.1 National-level homicide trend analysis by subregion, 1998–2006

	Caribbean	Central America	North America	South America	Central Asia and Transcaucasia	East Europe	South-east Europe	West and Central Europe	Total
Increasing trend	1	2	–	7	1	–	–	–	11
Decreasing trend	3	1	2	1	6	3	6	11	33
Flat trend	1	2	1	1	–	–	1	11	17
Single dominant change	–	–	–	–	1	1	–	5	7
Total	5	5	3	9	8	4	7	27	68
Number of countries/ territories in subregion	16	7	3	13	8	4	9	34	94

SOURCE: UNODC estimates

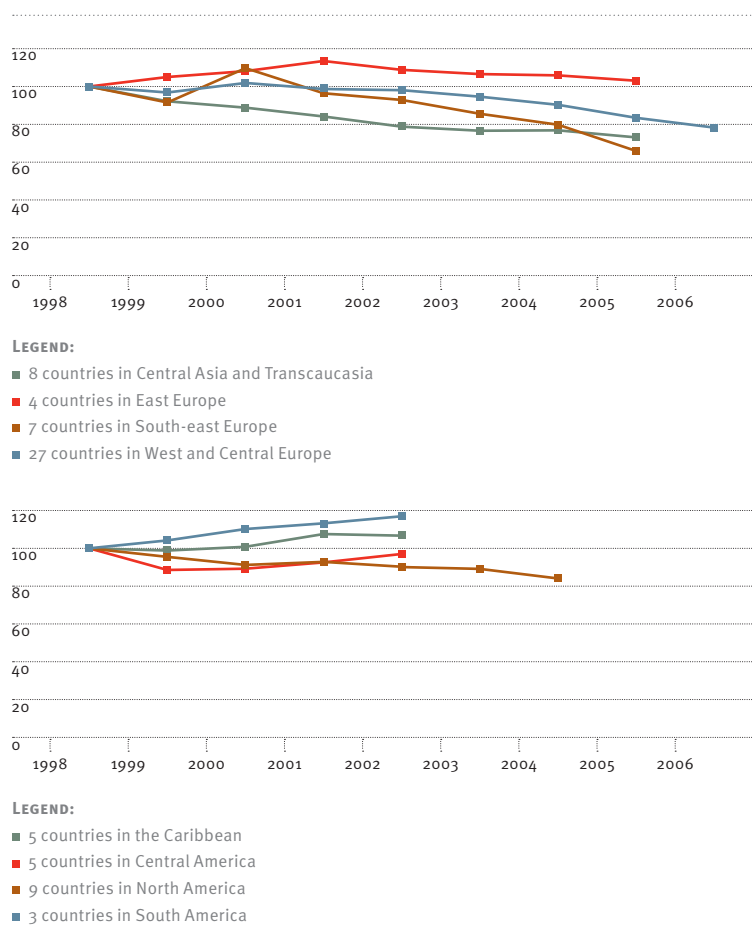of subregions examined show flat or slightly increasing or decreasing trends.

The examination of homicide trends over time can be undertaken, provided that reporting and recording practices, as well as legal definitions of the offence, do not change during the period considered. Trend analysis further requires a rigorous approach to data completeness: it is important that data from the same set of countries is compared year to year and that, where sub-regional or regional trends are examined, data is collected from as many representative countries as possible. Reliable trend analysis also usually requires that countries with fewer than one million inhabitants be excluded, as small numbers may contribute to a lack of statistical reliability (Aebi, 2004).

National-level time series data was examined for the existence of possible trends, and countries (or territories) classified as 'increasing', 'decreasing', 'flat', or 'single dominant change'. The category 'single dominant change' describes the situation where homicide levels show a '∩'- or '∪'-shaped trend. Countries exhibiting short-term fluctuations or cyclic changes with multiple peaks and troughs, but no overall trend, were classified as flat. The full methodology used to produce trend data and to classify it according to these four categories is described in the methodological annex available on the Geneva Declaration Web site.

Table 4.1 shows the results of homicide time series data for 68 countries in eight subregions for which sufficient data was available. In 33 out of 68 countries, the trend is declining. The majority of countries with an increasing trend are in Central and South America. A large number of countries in West and Central Europe show no overall upward or downward trend, although only a few of these exhibited a completely flat trend, with the rest showing significant year-on-year variation.[17] A number of countries in West and Central Europe, East Europe, and Central Asia and Transcaucasia showed a '∩'- or '∪'-shaped trend over the period, suggesting some short- to medium-term change in homicide trends. Figure 4.4 shows overall trend graphs by subregion for the period 1998–2006.

FIGURE 4.4 Trends in intentional homicide in the Americas, Europe, and Central Asia and Transcaucasia, 1998–2006

LEGEND:

■ 8 countries in Central Asia and Transcaucasia
■ 4 countries in East Europe
■ 7 countries in South-east Europe
■ 27 countries in West and Central Europe

LEGEND:

■ 5 countries in the Caribbean
■ 5 countries in Central America
■ 9 countries in North America
■ 3 countries in South America

NOTE: The figure provides a visual representation of the overall subregional trend classifications. As with the 16 subregional homicide estimates for the year 2004, the subregional trends in the figure represent population weighted averages for each year. The trend is made up from data corresponding to the same sub-set of countries within the subregion in each year. The practice of excluding data from countries with a population of less than one million persons has been followed. The graphs have all been set to a nominal starting value of 100 in order to allow direct comparability of trends, irrespective of actual homicide levels, i.e. real homicide rates are not shown. The full methodology used for trend calculation is provided in the on-line appendix at ‹http://www.genevadeclaration.org›.

SOURCE: UNODC estimates

Between 1998 and 2006, subregional homicide levels appear relatively stable. Rates change reasonably slowly and consistently and do not generally exhibit unpredictable large increases or decreases from year to year. In the Americas, for example, only four data points show a five per cent change or greater as compared with the previous year.

In Europe and Central Asia, rates are slightly less stable. Only South-east Europe and Central Asia and Transcaucasia, however, show a significant number of changes of greater than five per cent between individual years. During the whole period, a change of greater than ten per cent between individual years occurs only three times, each time in South-east Europe. A change greater than 10 per cent occurs as an increase from 1999 to 2000 (20 per cent), and a decrease from 2000 to 2001 (12 per cent) and from 2004 to 2005 (17 per cent).

East Europe shows a particular turning point in 2001. Homicide rates were gradually increasing prior to this date and began a consistent decline thereafter. It is possible that this change is due, in part, to increased rule of law initiatives and reform within the subregion introduced around this time.[18]

In other European subregions, homicide trends are generally decreasing. In South-east Europe, homicide rates declined between 2001 and 2006 by over 40 per cent after a peak in 2000: an annual average decline of 5.1 per cent. This pattern is matched, although less dramatically, in Central Asia and Transcaucasia, with an annual average decrease in the same period of 4.2 per cent. West and Central Europe shows a decreasing trend throughout the period 1998–2006, with an average decrease of 2.8 per cent. As a subregional average, however, this masks the fact that, as shown in Table 4.1, some countries showed con-

sistent increases during the time period, while others demonstrated '∩'- or '∪'-shaped trends.

By contrast, South America shows the greatest rate of consistent increase between 1998 and 2002 (four per cent). The Central America rate fell between 1998 and 1999, but increased consistently thereafter. North America decreased between 1998 and 2002, with an average annual decrease of 2.4 per cent. The Caribbean shows

no clear linear increase, but presented a homicide rate six per cent higher in 2002 than 1998. The increasing trend in the Caribbean links with previous findings of rising crime in the subregion and a vulnerability to narcotics trafficking and the violence associated with it (UNODC and World Bank, 2007, p. ii).

Trend analysis for the Americas, Europe, and Central Asia and Transcaucasia provides a con-

FIGURE 4.5 Homicide country rate per 100,000 population plotted against average % change in country homicide levels
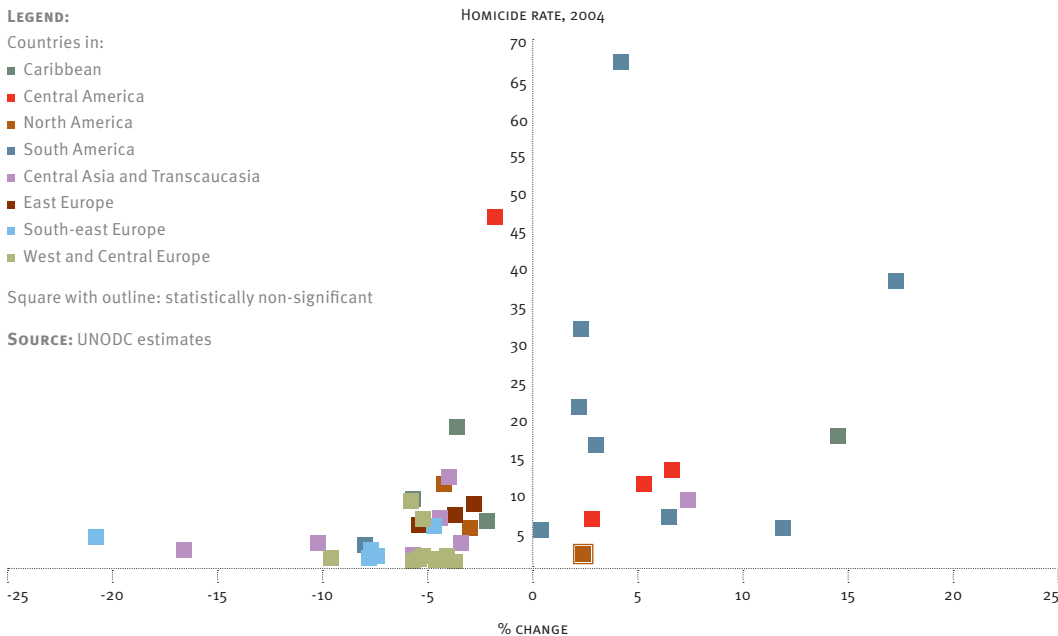
NOTES:

Each square represents data for one country, coloured by subregion. Data points in the top right of the chart indicate a high and increasing homicide rate. Data points in the bottom left indicate a low and decreasing homicide rate.

The plot in this figure represents the superimposition of national homicide levels per 100,000 population at the *end* of the trend period measured, with the corresponding average percentage change in homicide levels for that country over the time period. It should be noted that the period over which the average percentage change is measured is not identical among subregions. Homicide trend analysis was only possible for the years 1998–2002 in the Americas and for 1998–2005 in Europe, and Central Asia and Transcaucasia. Only countries showing a decreasing, increasing, or flat trend are plotted. It is not possible to calculate an average percentage change figure for those countries showing a single dominant change or where significant year-on-year variation occurred. These countries are excluded from the figure, which, as a result, is provided for visual comparison only.

text to the global subregional estimates for 2004 presented above. The high subregional 2004 homicide value for South America (25.9 per 100,000 population), for example, is a result of a consistent increase in homicide levels between 1998 and 2002. At the lower end of the scale, it can be seen that subregions with comparatively

low homicide rates in 2004—West and Central Europe, South-east Europe, and Central Asia and Transcaucasia—have achieved such values through consistent and, in some cases, marked decreases since 1998.

Figure 4.5 summarizes the homicide trends. It provides a visual indication of homicide levels

TABLE 4.2 Female homicides for selected countries, 2005

Country	Total homicides	Female homicides	Female homicides as % of total homicides	Rate per 100,000 population
Belarus	1,135	393	34.6	7.6
Brazil	48,600	4,520	9.3	4.4
Bulgaria	372	100	26.9	2.5
Canada	663	180	27.1	1.1
Colombia	18,111	1,493	8.2	6.4
Czech Republic	167	58	34.7	1.1
El Salvador	3,778	390	10.3	11.5
Germany	2,723	974	35.8	2.3
Guatemala	5,338	518	9.7	8.0
Honduras	2,417	171	7	5.0
Hungary	165	77	46.7	1.5
Ireland	62	9	14.5	0.4
Jamaica*	1,471	141	9.6	10.6
Kyrgyzstan	491	106	21.6	4.1
Netherlands	198	67	33.8	0.8
Nicaragua	729	60	8.2	2.2
South Africa**	18,528	2,409	13	10.1
Turkey	6,573	1,266	19.3	3.5
Ukraine	3,529	961	27.2	3.8

* 2004 figure.

** South African Police Service statistics are given from April 2005 to March 2006.

Source: World Bank Group (2008); SIM Datasus (n.d.); Colombian National Police;[19] Observatorio Centroamericano sobre Violencia (2007); Campana de prevencion de violencia de género en El Salvador (2006); IIDH (2006); Jamaica Police Constabulary;[20] South African Police Service;[21] UNECE (2008)

Box 4.3 Sex, age, and armed violence

Sex disaggregated data on homicide shows that male homicides vastly out-number female homicides. There are no comprehensive and reliable statistics disaggregated by sex, but data from various sources—which are not directly comparable with the dataset used in this chapter—indicates that male homicide rates are usually four or five times greater than female homicide rates.

Table 4.2 presents female homicide data for a selection of states. Aside from the great variation in rates—between 0.4 and 11.5 per 100,000 population—one potential relationship stands out: as a country's rate of female homicide decreases, the percentage of its total homicide victims that are women increases. In countries that have relatively high overall homicide levels, female homicides represent between 7 and 13 per cent of total homicides. Colombia, El Salvador, Jamaica, and South Africa have particularly high female homicide rates. For countries with lower overall rates of homicide (Germany, the Netherlands, and Canada, for example), the proportion of female homicides is higher, falling between 27 and 46 per cent.

This suggests that as homicide levels rise, the deaths are concentrated among young men, perhaps linked to larger patterns of criminal activity (e.g. drugs, gangs, etc.). It also suggests that intimate partner violence may not necessarily decline along the same path that other forms of lethal violence follow. This might be linked to the persistence of traditional gender roles and violent masculinities across time and place. Data and analysis for many more countries would be needed, however, in order to test this observation.

Data from WHO also confirms the general notion that men between the ages of 20 and 29, or 30 and 44, are the most vulnerable to being victims of lethal armed violence compared to other age categories (see Figure 4.7). Women, by contrast, are shown to be most vulnerable to homicide in their first year of life, and to have a roughly equal level of vulnerability from age 20 onwards. This might be linked to practices of female infanticide and the general neglect of girl children in many societies, based on the greater value accorded to male children (ARMED VIOLENCE AGAINST WOMEN).

While these figures provide an overall picture of the distribution of homicide among different sex and age groups, much remains to be done to improve data collection. So far, most sex- and age-disaggregated datasets are from WHO, but these are often of limited utility due to their incompleteness.[22] In order to develop a better understanding of the distribution among different sexes and age groups, data gathering on the national level should include these categories in standard reporting mechanisms on homicide.

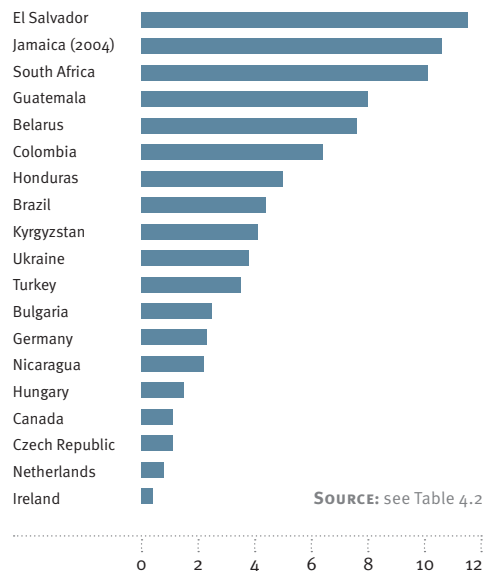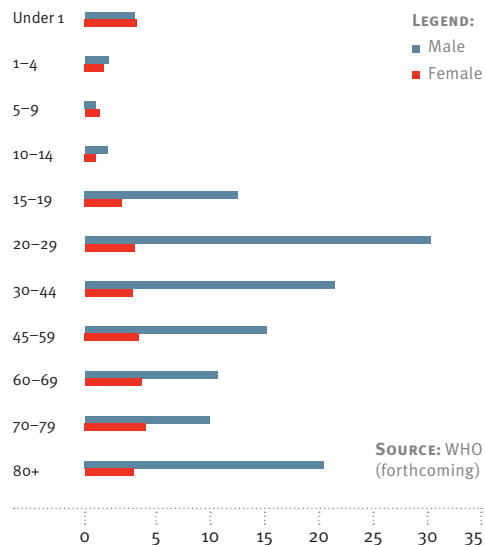**FIGURE 4.6** Female homicide rates per 100,000 population, 2005

SOURCE: see Table 4.2

FIGURE 4.7 World estimates for homicide rates per 100,000 population by age, 2004

LEGEND:
■ Male
■ Female

SOURCE: WHO (forthcoming)

Box 4.4 Up close and personal:
arms availability and female homicide

The simple existence of a gun in a household increases the risk for women becoming a homicide victim. In the United States, between 40 and 50 per cent of all female homicides are intimate partner homicides. Of these homicides, 67–80 per cent involve physical abuse of the female by the male partner before the homicide. Access to a gun and previous threats with a gun have been found to increase the risk of homicide by about three times (Kellermann et al., 1993; Campbell et al., 2003, p. 1089).

In 2005 in the United States, 1,858 females were murdered by men. More than 50 per cent (52 per cent) of these female homicides were committed with firearms, and more than 90 per cent (92 per cent) of the victims were murdered by someone they knew (VPC, 2007). In South Africa, 43 per cent of female homicides were committed with a gun in 2000, making it a major external cause of death for women. The majority of these homicides are committed by legally possessed firearms. Thus, rather than contributing to higher levels of protection, gun ownership at home can increase the risk of homicide by a family member or intimate partner (Campbell et al., 2003, p. 1084; NIMSS, 2001, p. 21).

and rates of change across eight subregions for 47 countries (but see the note beneath the figure). The countries of South and Central America predominantly fall towards the top right of the graph, indicating high and increasing homicide levels between 1998 and 2002. The countries of West and Central Europe, South-east Europe, and North America fall to the bottom left, indicating low and decreasing homicide levels (between 1998 and 2005). Countries of the Caribbean and Central Asia are more widely distributed. They generally fall higher in the graph and to the left. A number of outliers, however, show strongly increasing trends with resultant effects on overall subregional trends. Overall, this figure suggests that homicide rates are highly sensitive to local factors, including, as discussed above, cross-national differences in healthcare systems.

Armed violence and the criminal justice system

An effective criminal justice response to armed violence is an important element of prevention and reduction policies—both for its deterrent effect and for the prevention of reoffending. An effective and successful criminal justice system boosts public confidence and perceptions of security. As might be expected, however, the 'success' of a criminal justice system in detecting crime and bringing perpetrators to justice depends on many factors. These range from the efficiency and level of resources and training of police and justice personnel to the level of sophistication of criminal activity in a particular country and the degree to which corruption and bribery allow criminals to operate with impunity.

The measurement of 'success' is a complex task, and a number of possible tools have been proposed. The *justice attrition rate* compares the number of recorded cases of armed violence, the number of persons arrested for this crime, the number of persons prosecuted, the number of persons convicted, and the number of persons sentenced to deprivation of liberty. The utility of the method suffers, however, from the fact that police, prosecution, court, and penal systems frequently use different methods of case recording and different definitions, and from the problem that cases may take a significant amount of time to be processed by the police and justice system. As a result, comparison of such figures as published in official statistics is rarely appropriate.

Another tool is the *police detection rate*. The detection rate is frequently defined simply as the number of cases solved divided by the number of cases recorded (Smit, Meijer, and Groen, 2004, p. 229). The Tenth UN Survey of Crime Trends and Operations of Criminal Justice Systems (UN, 2006) defined a case 'solved' if it conforms to the following criteria:

- The police are satisfied of a suspect's guilt because there is a corroborated confession and/or because of the weight of the evidence against him or;
- The offender was caught in the act (even if he denies all guilt) or;
- The person who committed the offence has been identified (regardless of whether he is in custody, on provisional release, still at large, or dead) or;
- Police investigations reveal that no penal offence was in fact committed (UN, 2007b, p. 39).

Photo ▲ A member of the 18th Street Gang lies dead, gunned down by a rival gang member in Guatemala City, 2001. © Donna DeCesare
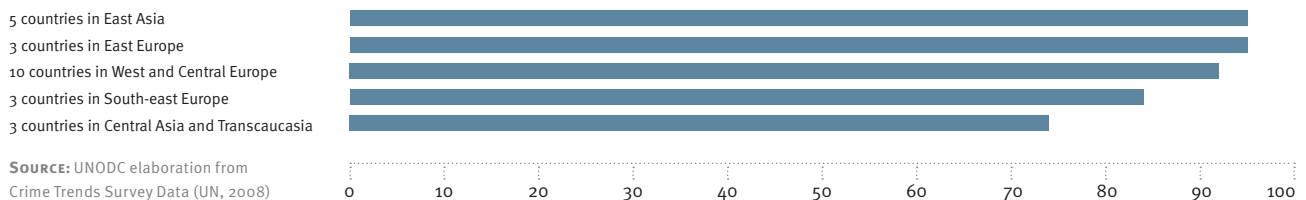
Figure 4.8 highlights preliminary results for the number of recorded homicide cases that are solved, based on state responses to a question in the UN Survey on Crime Trends. It must be noted that only a limited number of responses were received, from countries predominantly in Europe and Asia, and that these countries have very different criminal justice systems. In general, however, responding countries indicated a very high percentage of homicide cases solved.

The overall median value for all 24 countries responding to the question of the number of solved cases was 90 per cent. For 16 countries in Europe, the median was 92 per cent, while for 8 countries in East Asia, Central Asia, and Transcaucasia the median was 76 per cent. In 13 countries (3 Asian

and 10 European) the percentage of homicide cases solved was greater than 90 per cent, while in 7 countries (4 Asian and 3 European) the value was less than 80 per cent. The differences between the subregional medians are relatively modest, and, as noted above, a range of factors may affect police performance in resolving cases. In particular, as the data relates to recorded cases in one particular year (2005), cases solved in the next year involving crimes committed in 2005 may not be taken into account.

Commentators note that the majority of solved cases are solved at the moment of registration or shortly thereafter (Smit, Meijer, and Groen, 2004, p. 229). Moreover, the standard as to what constitutes 'satisfied of a suspect's guilt' or 'the person

FIGURE 4.8 Median percentage of recorded homicide cases solved in 24 countries by subregion, 2005

5 countries in East Asia	
3 countries in East Europe	
10 countries in West and Central Europe	
3 countries in South-east Europe	
3 countries in Central Asia and Transcaucasia	

0   10   20   30   40   50   60   70   80   90   100

Source: UNODC elaboration from Crime Trends Survey Data (UN, 2008)

Map 4.3 Homicide clearance rates in Central America

who committed the offence has been identified' may vary between countries. The suspect may or may not have to be formally charged before this

Figure 4.9 Respondents saying it is possible to bribe a judge to get a reduced sentence in Central American countries (%), 2004

criterion is satisfied. Overall, while little may be said about the differences between subregions, the results indicate a generally high level of success of the various criminal justice systems.
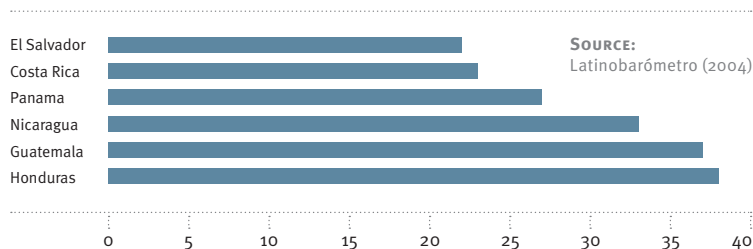
Nevertheless, these figures should not underestimate the significance of the problem of ineffective justice and correctional services for violence prevention and reduction. In Guatemala, for example, in the year 2000 there were 2,707 murders with a suspect and only 197 without suspects (UNODC, 2007, p. 32). In addition, 37 per cent of respondents in a survey for Latinobarómetro (2004) indicated that it is possible to bribe a judge to receive a reduced sentence (see Figure 4.9). Other Central

American countries have similar trends, even if they are not as acute as Guatemala (Map 4.3). In Africa, the chances of a murder resulting in a conviction are only around 11 per cent. This figure increases to 18 per cent in South Africa and stands in comparison to 56 per cent in the United States and 61 per cent in the United Kingdom (UNODC, 2005, p. 13).

The inability to prosecute offenders, corruption, and the absence of adequate prison facilities foster a perception of impunity for homicide. The experience of justice reform in Jamaica and the Dominican Republic highlights that better cooperation among the police, justice, and correctional services (supported by integrated information systems) and embedding justice reform in a broader multi-sector strategy of violence and crime prevention can help in dealing with impunity and increase the effectiveness of institutional responses to crime (UNODC and World Bank, 2007, pp. 126–27).

Conclusion: knowledge gaps and policy implications

The use of international homicide data as an indirect means to assess the global burden of armed violence is in its infancy. This chapter has made use of extensive and rigorous data gathering and analysis in order to provide a comprehensive snapshot of the scale and magnitude of lethal non-conflict armed violence. It has also attempted to provide some indication of recent trends, and of the possible spatial, demographic, and socio-economic factors that might affect levels of armed violence.

Some cross-national comparisons of homicide levels have recently begun to appear in development-related publications, including the *Human Develop-*

Box 4.5 Violent death in the city

Received wisdom claims that victimization by more serious crimes is correlated with increases in the proportion of the population of a country living in larger cities. Criminologists frequently argue that urban density is thought to be associated with crime, since greater concentrations of people lead to competition for limited resources, greater stress, and increased conflict (Glaeser and Sacerdote, 1996; Van Dijk, 1998, p. 69; Naudé, Prinsloo, and Ladikos, 2006).

When it comes to urban *armed violence,* however, its frequency and effect is strikingly heterogeneous and it results from multiple causes. It is linked to factors such as the drug trade, the availability of weapons, and forms of social organization such as street gangs and militia or quasi-militia groups (Small Arms Survey, 2007). While not all urban violence ends in homicide, homicide rates are related to more general violent acts.

The complexity of urban armed violence is highlighted by the fact that there is no clear correlation between city population and levels of urban homicide (Small Arms Survey, 2007). In order to provide further insight into differences between urban and rural homicide rates, research was undertaken to identify homicide rates per 100,000 population in major cities. Data for the largest available city in 67 countries was located. The cities ranged from a population of just over 6,000 persons to more than 14 million persons. The median city population was slightly over 1.2 million. The results of this comparison are presented in Figure 4.10 and are summarized by subregion. Insufficient data prevented meaningful comparisons being carried out for Africa, Oceania, and Asia, with the exception of East Asia. The methodology for major city/rest of country comparisons is described in full in the on-line appendix (www.genevadeclaration.org).

A common theme in the literature is that crime levels are higher in urban areas than rural areas (UN-HABITAT, 2006). While this may be true for North America, Central Asia and Transcaucasia, West and Central Europe, and South-east Europe, the reverse appears to be true for East Europe, Central America, and East Asia. South America shows only a small difference between urban and rural homicide rates.

A first possible explanation for differences may relate to differing degrees of urbanization in the rest of the country. The 'major city' rate may, for instance, be compared with a 'rest of country' rate that itself contains many large urban centres. A look at urbanization rates only partially explains the differences, however. While a low urbanization rate in Central Asia and Transcaucasia (50 per cent) corresponds with a homicide rate one and a half times as high in the largest city as for rest of country, the pattern is more complicated in other subregions. The four countries examined in East Europe and the five countries in East Asia, for example, show average urbanization rates (both around 60 per cent) lower than those for the countries examined in North America (80 per cent) and West and Central Europe (73 per cent).[23] This is despite the fact that East Europe and East Asia show higher homicide rates for 'rest of country' than major cities. ▶▶

Another reason may be that homicide rates are not dictated by simple urban–rural distinctions, but by the nature of urban settings themselves. Small towns may have levels of violent crime as high as in large cities because people are more likely to remain in contact, leading to pressure to solve ongoing conflict (Garrido, Stangeland, and Redondo, 2001). Rapid urbanization in subregions such as Central America may lead to the growth of many small towns and a subsequent higher homicide rate in the rest of the country as compared to the largest city.

The results suggest that a number of factors may be at work in different social, cultural, and national contexts. Patterns of violence may differ between urban and rural areas according to whether the perpetrator is an individual, a gang, or an organized criminal group, and whether the crime is driven by factors such as drugs, personal vendettas, or simple opportunism. Police presence and effective state control are also likely to differ between urban and rural areas, particularly in developing countries.

In the more developed countries of North America and West and Central Europe, higher homicide rates in major cities may actually indicate a concentration of violent offences in urban areas, because police and medical systems usually provide effective country-wide coverage. In East Asia and East Europe, it is difficult to conclude whether violent crime is indeed higher outside of the major cities or whether other factors, such as differences in the urban–rural availability of medical care, are responsible for the apparent difference. In South and Central America, it is possible that a range of forms of violent crime operate across the countries examined. These can include organized crime and drug trafficking or opportunism and banditry, giving rise to similar homicide rates for major cities and the rest of the country.
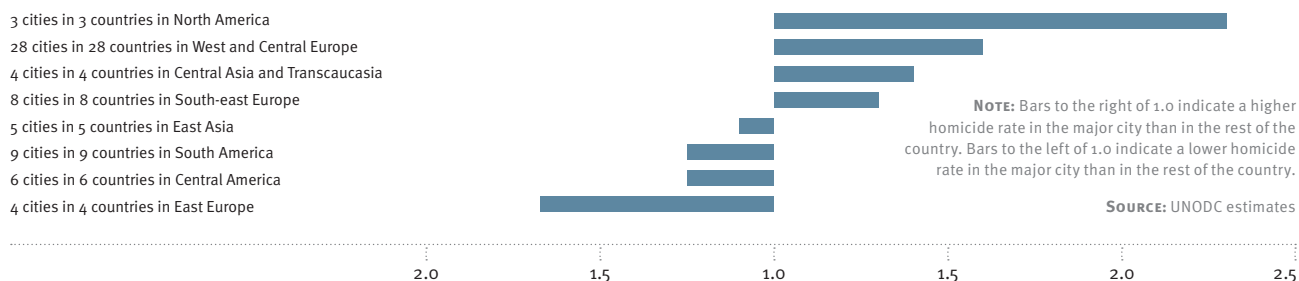
Finally, the blurring of traditional classifications of urban and rural through the widespread growth of shantytowns and super-conurbations dictates that comparisons should be interpreted with caution. Such effects make accurate definition of the population of a 'major city' an extremely difficult task. In turn, when population figures do not correspond with the area covered by police administrative statistics, a significant degree of error may be introduced into the urban–rural comparison.

ment Report 2007/8, *The Economist*'s Global Peace Index, and the Ibrahim Index of African Governance. These analyses all stress the negative impact that high levels of lethal violence can have on states and societies, and the utility of homicide as a proxy to capture overall levels of armed violence and insecurity.

Other studies conducting cross-national comparison and interpretation of data using police and public health statistics on homicide (Neapolitan and Schmalleger, 1997; LaFree, 1999; 2005) have attempted to describe the phenomenon with reference to time series data and correlations with other variables. Van Wilsem (2004) notes, for example, a statistical connection between homicide and other forms of violent crime. Other research has detected correlations between homicide levels and political, economic, and social variables, in an attempt to identify co-determinates of homicide (Collier and Hoeffler, 2004; Fajnzylber, Lederman, and Loayza, 1998; Bye, 2008). A few studies have also attempted to make cross-national or historical comparisons of homicide levels (Gartner and Parker, 1990; Stamatel, 2008). But the overall results are still inconclusive, in part because analysts are working with poor or insufficiently detailed data.

These studies represent the first steps towards providing solid policy- and programme-relevant

FIGURE 4.10 Ratio of homicide rates in major cities and rest of country, 2005

3 cities in 3 countries in North America
28 cities in 28 countries in West and Central Europe
4 cities in 4 countries in Central Asia and Transcaucasia
8 cities in 8 countries in South-east Europe
5 cities in 5 countries in East Asia
9 cities in 9 countries in South America
6 cities in 6 countries in Central America
4 cities in 4 countries in East Europe

NOTE: Bars to the right of 1.0 indicate a higher homicide rate in the major city than in the rest of the country. Bars to the left of 1.0 indicate a lower homicide rate in the major city than in the rest of the country.

SOURCE: UNODC estimates

2.0   1.5   1.0   1.5   2.0   2.5

evidence on the patterns and distribution of non-conflict violence. Greater information on the effectiveness of criminal justice systems, and on who is at risk, from what kind of violence, from what source, and where and when they are vulnerable are all important keys to improving the ability of the international community to design practical policies to reduce the global incidence of armed violence. 🔴

Abbreviations

GDP	gross domestic product
HDI	Human Development Index
UNDP	United Nations Development Programme
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

Endnotes

1   The most recent date for which comprehensive global data is available is 2004.

2   The world's regions are subdivided as follows: *Africa*: East Africa, North Africa, Southern Africa, West and Central Africa; *Americas*: Caribbean, Central America, North America, South America; *Asia*: Central Asia and Transcaucasia, East and South-east Asia, Near and Middle East/South-west Asia, South Asia; *Europe*: East Europe, South-east Europe, West and Central Europe. *Oceania* is not subdivided.

3   An on-line appendix (‹http://www.genevadeclaration.org›) also provides a comprehensive account of the methodology used to arrive at the figures given in this chapter, including an explanation of data sources and the calculations of subregional estimates, homicide trends, major city/rest of country homicide ratios, and the percentage of homicides committed with firearms.

4   In official public health statistics, important differences may arise among cause-of-death recording systems. The individual responsible for determining the cause of death and the manner in which such decisions enter official statistics may also vary. In one country, doctors may enter a cause of death on a death certificate; however, in another country, a medico-legal coroner may be required to certify the cause of death. Most importantly, the public health

system cannot determine the legal existence of an intentional homicide, merely the fact that a person has been killed by an act of violence that appears to have been carried out intentionally. Sometimes, doctors may even be reluctant to classify a death as a homicide for social reasons or as a result of pressure from the victim's family.

5   Described in the on-line appendix at ‹http://www.genevadeclaration.org›.

6   The results represented in Map 4.1, and also in Figure 4.1, correspond to population weighted averages. As a result, they are sensitive to the distorting effect of countries with particularly high or low homicide rates (outliers). An alternative method of calculation of subregional figures is the use of median values. These are available for comparison in the on-line appendix at ‹http://www.genevadeclaration.org›.

7   Countries in Africa have an average HDI of 0.53. See UNDP (2008, ‹http://hdrstats.undp.org/indicators/1.html›).

8   Countries in Africa have an average gross domestic product per capita just over one-third that of countries in the Americas and around one-sixth that of countries in Europe. See UNDP (2008, ‹http://hdrstats.undp.org/indicators/5.html›).

9   On average, the richest 10 per cent in Africa earn 28 times more than the poorest 10 per cent. See UNDP (2008, ‹http:// hdrstats.undp.org/indicators/145.html›).

10   Forty-three per cent of the population are under the age of 15. See UNDP (2008, ‹http://hdrstats.undp.org/indicators/44.html›).

11   R^2 = 0.2, for 176 countries.

12   This figure accounts for 21 armed conflicts in Africa in 2004 (see Chapter 1).

13   See UNDP (2008, ‹http://hdrstats.undp.org/indicators/1.html›; ‹http://hdrstats.undp.org/indicators/5.html›).

14   Richmond, Cheney, and Schwab (2005) estimate total non-conflict-related firearm mortality at between 196,000 and 229,000; Small Arms Survey (2004, p. 200) estimates it to be between 180,000 and 250,000.

15   In the 12 'boom' countries identified, rates were reported to have increased from around 2 homicides per 100,000 population in 1956 to nearly 3 per 100,000 population in 1998, and from just below 4 per 100,000 population in 1956 to 7 per 100,000 by 1995 in developing countries. Over all 34 countries, while 30 were reported to show an upward trend direction, this was characterized as 'sustained' in only 15 countries, including the 12 considered to show a homicide boom (LaFree and Drass, 2002).

16   Insufficient data was available to enable reliable trend analysis in Africa, Oceania, and Asia, with the exception of Central Asia and Transcaucasia. In the remaining eight subregions, however, sufficient national-level data was available for trend analysis between 1998 and 2002 in

the Americas, and between 1998 and 2005 in Europe, and Central Asia and Transcaucasia.

17   In West and Central Europe, some 8 countries demonstrated significant fluctuations of up to 50 per cent from year to year, with no overall upward or downward trend in homicide levels.

18   During the early to mid-1990s, for example, both the Russian Federation and Ukraine adopted significant legislative acts aimed at providing a modern framework for policing. This was followed in the mid-1990s by the adoption of 'Concept of Development' Programmes for the reform of police in the Russian Federation and Ukraine, which included short-, medium-, and long-term plans relating to police activity, resulting in changes to police legal status, organizational structure, operational police forces, work patterns, and supervision and control (Robertson, 2004).

19   Figures on Colombia based on data provided by the Colombian National Police.

20   Figures on Jamaica based on data provided by the Jamaica Police Constabulary.

21   South African Police Service statistics received through written correspondence with Angelica Pino from the Centre for Study of Violence and Reconciliation, ‹http://www.csvr. org.za/›.

22   These datasets include the WHO mortality database (WHO, n.d.); the WHO *World Report on Violence and Health* (WHO, 2002); the PAHO mortality database (PAHO, n.d.); the PAHO age-standardized mortality rate (PAHO, n.d.); WHO (forthcoming); and projected deaths by WHO region, age, sex, and cause (WHO, 2006).

23   See UNDP (2008, ‹http://hdrstats.undp.org/indicators/ 41.html›).