UNODC
United Nations Office on Drugs and Crime

GLOBAL STUDY ON HOMICIDE

2011

TRENDS / CONTEXTS / DATA

UNITED NATIONS OFFICE ON DRUGS AND CRIME
Vienna

2011 GLOBAL STUDY ON HOMICIDE

TRENDS, CONTEXTS, DATA

UNODC
United Nations Office on Drugs and Crime

Acknowledgements

The 2011 *Global Study on Homicide* was prepared by the Statistics and Surveys Section under the supervision of Sandeep Chawla, Director, Division for Policy Analysis and Public Affairs.

Core team
Research coordination and study preparation
Angela Me, Enrico Bisogno, Steven Malby

Research, data analysis and data processing
Michael Jandl, Philip Davis, Catherine Pysden, Umidjon Rahmonberdiev, Felix Reiterer, Elizabeth Gurian, Cristina Mesa Vieira, Alberto Aziani and Mariaelena Cenci

Editing
Jonathan Gibbons

Graphic design, layout and mapping support
Suzanne Kunnen and Kristina Kuttnig (Studies and Threat Analysis Section)

The study benefited from the valuable input of many UNODC staff members (at headquarters and in regional and country offices) as well as from the dedication of the many national experts who have provided UNODC with crime and criminal justice data over the years.

The World Health Organization kindly provided the public health data presented in the study. The Organization of American States supported UNODC in the collection of data in the Americas. Many experts in research institutes and international organizations commented on early drafts and provided extremely valuable input.

The study was also made possible thanks to the financial contribution of the Small Arms Survey.

CONTENT

Preface 5

Explanatory notes 7

Executive summary 9

Introduction 15

1. THE GLOBAL PICTURE 19

2. HOMICIDE AND DEVELOPMENT 29

3. FIREARMS, TRAFFICKING AND ORGANIZED CRIME 39

4. WOMEN AND INTIMATE PARTNER/FAMILY-RELATED HOMICIDE 57

5. HOMICIDE AND DEMOGRAPHICS: WHO IS AT RISK? 63

6. THE LOCAL PICTURE 75

7. DATA CHALLENGES 83

8. METHODOLOGICAL ANNEX 91

9. STATISTICAL ANNEX 103

PREFACE

The UNODC 2011 *Global Study on Homicide* brings together global, regional, national and sub-national homicide data in one publication. It is hoped that the data and analysis of the most violent crime against the person will assist global efforts to design evidence-based policies to prevent and reduce crime in those areas and population groups where violence is most acute.

This study was made possible because of increased efforts by countries to produce and share good quality homicide data. However, homicide data remain far from perfect—indeed, the study draws attention to the large geographic and thematic data gaps in many regions of the world—and comparisons should always be made with caution. This is also true because legal systems and practices, as well as capacities in reporting intentional homicide, can vary significantly between countries and regions.

Nevertheless, there are a number of key messages that may be derived from the wealth of data in this study. First, there is a clear link between violent crime and development: crime hampers poor human and economic development; this, in turn, fosters crime. Improvements to social and economic conditions go hand in hand with the reduction of violent crime.

The development agenda must also include crime prevention policies and the enhancement of the rule of law at both national and international level. Reducing violent crime should also be a priority for achieving the Millennium Development Goals, particularly in those countries where crime is disproportionally high.

The study also represents an important advance in our understanding of the trends and patterns of homicide. One of the most important considerations is the recognition that different factors drive violent crime rates and trends. In some regions, organized crime, drug trafficking and the violent cultures of youth gangs are predominantly responsible for the high levels of homicide; while in others, killings connected to intimate partner and family-related violence account for an important share of homicides.

Although it is important to understand that the sharp increase in homicides in some countries, particularly in Central America, are making the activities of organized crime and drug trafficking more visible, it should not be assumed that organized crime is not active in other regions as well.

Another aspect is the role played by firearms in violent crime. It is crucial that measures to prevent crime should include policies towards the ratification and implementation of the UN Firearm protocol. Domestic policies in furtherance of the Protocol's provision can help avoid the diversion of firearms to fuel violence and increase homicides.

Knowledge of the patterns and causes of violent crime are crucial to forming preventive strategies. Young males are the group most affected by violent crime in all regions, particularly in the Americas. Yet women of all ages are the victims of intimate partner and family-related violence in all regions and countries. Indeed, in many of them, it is within the home where a woman is most likely to be killed.

As the 2011 *Global Study on Homicide* shows, gender-based violence affects a large number of women worldwide and represents a serious threat to the harmonious development of societies.

In the face of these trends, UNODC is working on a number of activities, in partnership with other

international organizations. As the guardian of the United Nations standards and norms in crime prevention and criminal justice, UNODC supports States' efforts to prevent crime and violence. The Office has developed a series of tools in support of technical assistance for the practical implementation of crime prevention policies and programmes in accordance with the United Nations guidelines for the prevention of crime. With a focus on stopping violence against women, the Office has supported the development of Model Strategies and Practical Measures in the field of crime prevention and criminal justice, which were adopted by the United Nations General Assembly.

Finally, I would like to thank everyone who helped in the preparation of this study. The 2011 *Global Study on Homicide* is vital to our understanding of the nature of homicide and will help in the development of strategies to reduce homicides everywhere. In undertaking these challenges, we should never forget the stark reality behind the figures; namely the children, women and men who daily fall victim to this ultimate crime.

Yury Fedotov
Executive Director
United Nations Office on Drugs and Crime

EXPLANATORY NOTES

Regions: In various sections, this study uses a number of subregional designations. These are not official designations and they do not imply the expression of any opinion whatsoever on the part of UNODC concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The assignment of countries or areas to specific groupings is for statistical convenience and does not imply any assumption regarding political or other affiliation of countries or territories by the United Nations. The designations used in this study are based on the United Nations M.49 geographical regions for statistical use, developed, used and maintained by the United Nations Statistics Division. They are defined as follows:

- Eastern Africa: Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mozambique, Rwanda, Seychelles, Somalia, Uganda, United Republic of Tanzania, Zambia and Zimbabwe.
- Middle Africa: Angola, Cameroon, Central African Republic, Chad, Congo (Republic of), Democratic Republic of Congo, Equatorial Guinea, Gabon and Sao Tome and Principe.
- Northern Africa: Algeria, Egypt, Libyan Arab Jamahiriya, Morocco, Sudan and Tunisia.
- Southern Africa: Botswana, Lesotho, Namibia, South Africa and Swaziland.
- Western Africa: Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo.
- Caribbean: Anguilla, Antigua and Barbuda, Bahamas, Barbados, British Virgin Islands, Cayman Islands, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands and United States Virgin Islands.
- Central America: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama.
- Northern America: Bermuda, Canada and the United States of America.
- South America: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela (Bolivarian Republic of).
- Central Asia: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.
- Eastern Asia: China (including Hong Kong, Macao, and Taiwan Province of China), the Democratic People's Republic of Korea, Japan, Mongolia, and the Republic of Korea.
- South-Eastern Asia: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam.
- Southern Asia: Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Maldives, Nepal, Pakistan and Sri Lanka.
- Western Asia: Armenia, Azerbaijan, Bahrain, Cyprus, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Occupied Palestinian Territory, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, the United Arab Emirates and Yemen. Caucasus refers to a subregion which includes Armenia, Azerbaijan and Georgia.

- Eastern Europe: Belarus, Bulgaria, Czech Republic, Hungary, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia and Ukraine. Central and Eastern Europe refers to a subregion which includes Bulgaria, Czech Republic, Hungary, Poland, Republic of Moldova, Romania and Slovakia.
- Northern Europe: Denmark, Estonia, Finland, Greenland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden and the United Kingdom (sometimes disaggregated to United Kingdom (England and Wales), United Kingdom (Scotland) and United Kingdom (Northern Ireland)). Baltic countries refer to a subregion which includes Estonia, Latvia and Lithuania.
- Southern Europe: Albania, Andorra, Bosnia and Herzegovina, Croatia, Greece, Italy, Malta, Montenegro, Portugal, Serbia, Slovenia, Spain and the former Yugoslav Republic of Macedonia.
- Western Europe: Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, the Netherlands and Switzerland.
- Australia and New Zealand: Australia and New Zealand.
- Melanesia: Fiji, Papua New Guinea, Solomon Islands and Vanuatu.
- Micronesia: Guam, Kiribati, Micronesia (Federal States of), Nauru and Palau.
- Polynesia: French Polynesia, Samoa and Tonga.

Maps: The boundaries and names shown and the designations used on maps do not imply official endorsement or acceptance by the United Nations. A dotted line represents approximately the line of control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Disputed boundaries (China/India) are represented by cross hatch due to the difficulty of showing sufficient detail.

Population data: The data on population used in this study come from: United Nations, Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2010 Revision* (2011).

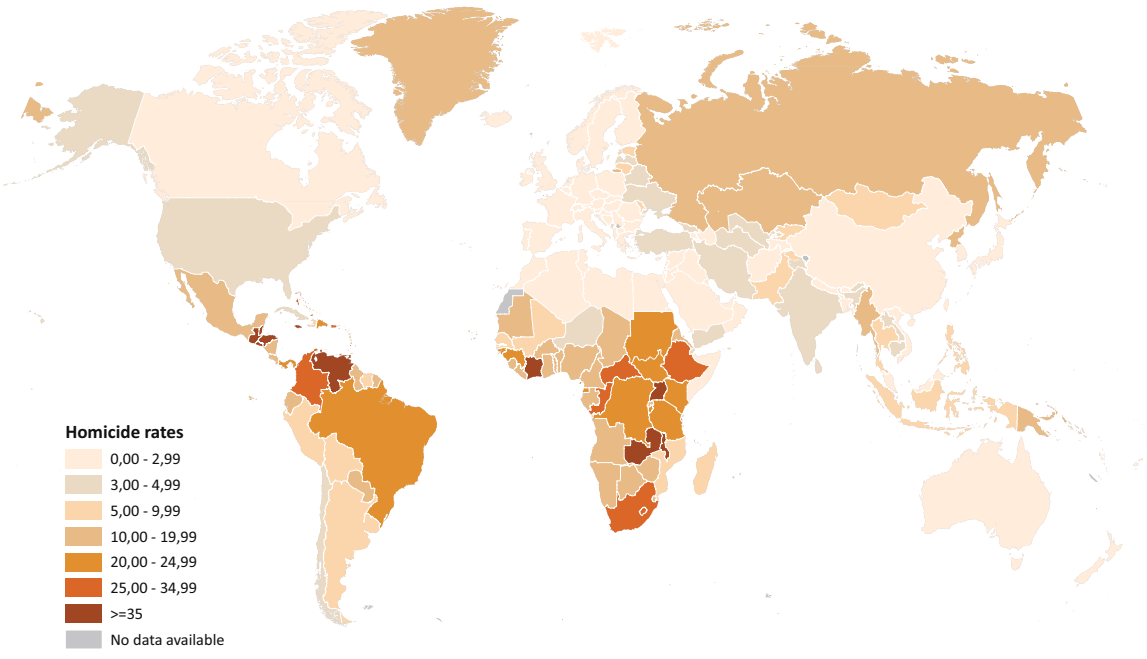
EXECUTIVE SUMMARY

The intentional killing of a human being by another is the ultimate crime. Its indisputable physical consequences manifested in the form of a dead body also make it the most categorical and calculable.

Globally, the total number of annual deaths estimated by UNODC to be homicides in 2010 was 468,000. More than a third (36 per cent) of those are estimated to have occurred in Africa, 31 per cent in the Americas, 27 per cent in Asia, 5 per cent in Europe and 1 per cent in Oceania. When relating these figures to the population size of each particular region a slightly different picture emerges showing that the homicide rate in Africa and the Americas (at 17 and 16 per 100,000 population, respectively) is more than double the global average (6.9 per 100,000), whereas in Asia, Europe and Oceania (between 3 and 4 per 100,000) it is roughly half.

Some 40 per cent of countries have homicide rates under 3 per 100,000 population, while in 17 per cent of countries it is greater than 20 per 100,000, reaching 50 per 100,000 in some countries and as high as 80 per 100,000 in others. Since 1995, the homicide rate has decreased in many countries, mainly in Asia, Europe and Northern America, to the extent that it can be a relatively rare occurrence. Yet it has increased in others, particularly

Homicide rates by country (2010 or latest available year)



Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Source: UNODC Homicide Statistics.

Central America and the Caribbean, where today it can be seen to be nearing crisis point.

Disparities not only exist in how homicide is distributed around the world but also between its typologies, which show varying degrees of prevalence in different regions. Among the different contexts in which homicide can occur, including homicide related to robbery, gangs, fights, sexual motives, and familial disputes, this study looks at two forms in depth—organized crime/gang-related homicide, and intimate partner/family-related homicide. It not only analyses their levels, trends and impact but also looks at who is most at risk from them, both demographically and geographically.

The degree to which different societies apportion the level of culpability to acts resulting in death is also subject to variation. Consequently, the comparison between countries and regions of "intentional homicide", or unlawful death purposefully inflicted on a person by another person, is also a comparison of the extent to which different countries deem that a killing be classified as such, as well as the capacity of their legal systems to record it. Caution should therefore be applied when evaluating and comparing homicide data.

Homicide and development

There are many reasons why people kill each other and multiple driving forces often interact when they do, but homicide levels and trends indicate that the link between homicide and development is one of the clearest. Higher levels of homicide are associated with low human and economic development. The largest shares of homicides occur in countries with low levels of human development, and countries with high levels of income inequality are afflicted by homicide rates almost four times higher than more equal societies.

Homicide and property crime were affected by the global financial crisis of 2008/2009, with increases in homicides coinciding with drops in Gross Domestic Product (GDP) and rises in the Consumer Price index (CPI) in a sample of countries affected by the crisis. Likewise, levels of economic performance also have an affect on homicide. Homicide rates in South America, for example, have decreased during periods of economic growth in the last 15 years. Homicide trends also followed the economic fluctuations in many of the countries that once formed part of the Soviet Union, by increasing when GDP dropped in the aftermath of its break up, before decreasing once their economies had recovered.

Long-term, sustainable economic and social development also requires governance based on the rule of law. Indeed, in all countries where there has been a strengthening of the rule of law in the last 15 years there has also been a decline in the homicide rate, while most countries where homicide has increased have a relatively weak rule of law.

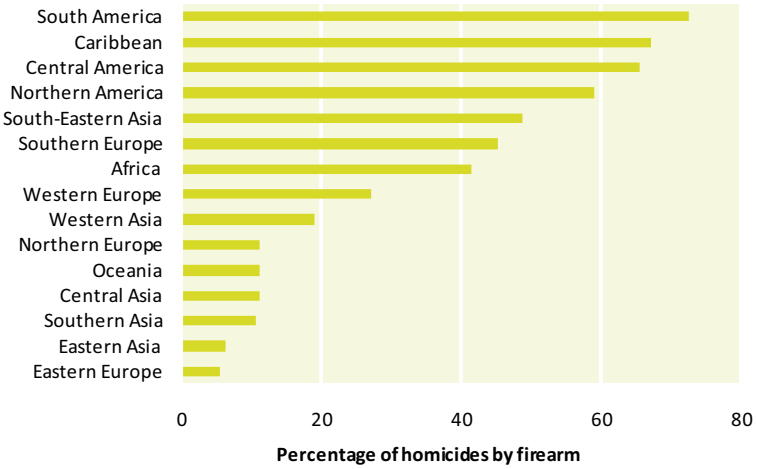
Firearms, trafficking and organized crime

Not all homicides involve a weapon. But while killers can prove to be particularly ingenious regarding the manner in which they dispose of other people, 42 per cent of global homicides are actually committed by firearm. Homicides in the Americas are more than three and a half times as likely to be perpetrated with a firearm than in Europe (74 per cent vs. 21 per cent), whereas sharp objects are more than twice as likely to be murder weapons in Europe, where they predominate, than in the Americas (36 per cent vs. 16 per cent).

The role played by firearms in homicide is fundamental and, while the specific relationship between firearm availability and homicide is complex, it appears that a vicious circle connects firearm availability and higher homicide levels. Firearms undoubtedly drive homicide increases in certain regions and where they do members of organized criminal groups are often those who pull the trigger.

In the Americas, more than 25 per cent of homicides are related to organized crime and the activi-

Percentage of homicides by firearm in subregions (2010 or latest available year)



Source: UNODC Homicide Statistics.

ties of criminal gangs, while the same is only true of some 5 per cent of homicides in the Asian and European countries for which data are available. This does not mean, however, that organized criminal groups are not as active in those two regions, but rather that they may resort to means other than visible extreme violence in the pursuit of their illicit activities.

In many countries with high homicide rates the share of firearm homicides is also greater and is often associated with the illicit activities of organized criminal groups, which are often linked to drug trafficking, the root cause of the surge in homicides in Central America in recent years. In the last five years, homicide rates have increased in five out of eight countries in Central America, with some countries seeing their rate more than double in the same period. These trends are largely attributable to fluctuations in cocaine trafficking in Central America, which can lead to criminal conflicts as a result of both increases and decreases in drug flows, with the latter particularly resulting in increased competition between drug trafficking groups.

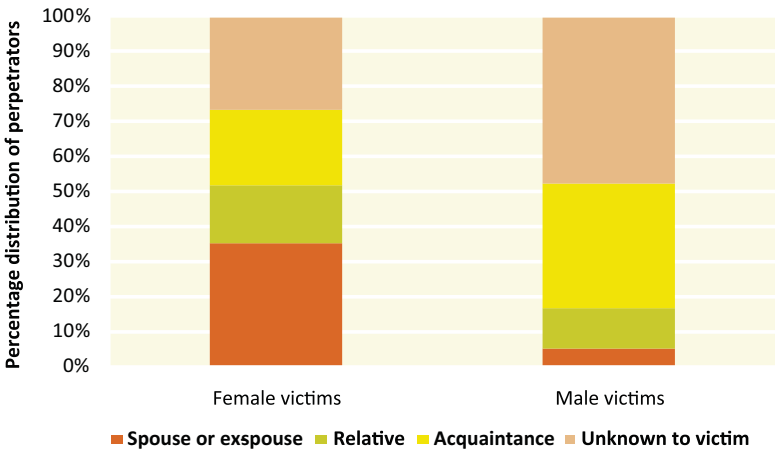
To assert their authority, mark their territory or challenge the authorities, organized criminal groups also use indiscriminate lethal violence that may not be directly attributable to drug trafficking but has resulted, in recent years, in the murders of numerous state representatives, elected officials and law enforcement officers, as well as members of the general public. Increasing violence redraws the boundaries of its own acceptability and in so doing fuels homicide yet further.

Women and intimate partner/family-related homicide

Violence against women does not limit itself to one particular form, nor does it discriminate between contexts, circumstances and locations. But its most common manifestation globally is intimate partner/family-related violence, which at its most extreme ends in homicide. Women can and do kill their loved ones, yet the vast majority of victims of intimate partner/family-related homicide are females at the hands of their male partners, be they past or present.

Indeed, in many countries intimate partner/family-related homicide is the major cause of female homicides, and female homicide rates are much more likely to be driven by this type of violence than the organized crime-related homicide typology that so affects men. For example, in 2008 more than a third (35 per cent) of female homicide victims in countries of Europe were murdered by spouses or ex-spouses and 17 per cent by relatives, while women account for more than three quarters (77 per cent) of all the victims of intimate partner/family-related homicide in the region. It is for this reason that in many countries the home is the place where a woman is most likely to be murdered, whereas men are more likely to be murdered in the street.

Percentage distribution of homicide perpetrators by sex of victim, selected European countries (2008 or latest available year)



Source: UNECE Statistical Division Database.

Available time-series data show that over time intimate partner/family-related homicide levels have a tendency to remain fairly stable, meaning that in contexts of decreasing homicide rates the share of this type of homicide increases in proportion to others. In Italy, for example, intimate partner/family-related homicides, and its female victims in particular, now account for more homicides than the victims of mafia groups. On a far greater scale, in Asia dowry-related deaths still cost many thousands of women's lives every year.

The demographics of homicide: who is at risk?

Women may make up the majority of victims of intimate partner/family-related homicide, but the bigger picture reveals that men are those most often involved in homicide in general, accounting for some 80 per cent of homicide victims and perpetrators. Data from the United States of America indicate that the typical homicide pattern is a man killing another man (69 per cent of cases), while in less than 3 per cent of cases a woman

murders another woman. This translates into a much higher risk of men being murdered than women, with global homicide rates of 11.9 and 2.6 per 100,000, respectively.

Young males in particular are those most at risk due to their more likely participation in violence-prone activities such as street crime, gang membership, drug consumption, possession of weapons, street fighting, etc. In countries characterized by high levels of homicide related to organized crime, the risk of a 20-year-old man being murdered before the age of 31 can be as high as 2 per cent, meaning that 1 in 50 males in those countries is murdered by that age. The risk in countries with a low homicide rate is 400 times lower.

The age and sex composition of homicide victims also varies considerably between regions. For example, the share of female homicide victims ranges from 10 per cent in the Americas to 27 per cent in Europe; another clear indicator of the different homicide typologies prevalent in those two regions. Almost twice that in the Americas, the highest homicide rate among females globally is in Africa (6.2 per 100,000), where homicide rates are not driven by organized crime to the same extent, but street crime, non-specific lethal violence and intimate partner/family-related homicide all play an important role.

The local picture

Geographical differences in homicide trends are significant not only at the macro level but also further down the territorial scale. A victim, an offender and a specific act have to intersect at a particular time and place in order to produce a crime, and different geographical characteristics can either heighten or lower the risk of this happening. Homicide levels can vary greatly within a country and certain areas, for example those near national borders or in the vicinity of drug production or trafficking hubs are often affected by higher homicide rates, as is the case in some Central American countries.

Big cities represent another possible risk area for violent crime. While urban environments can offer protective elements such as better policing and faster access to medical facilities, in many countries, homicide rates in very populous cities are higher than in the rest of the country. This can be a consequence of a number of factors, both of a social (inequality, segregation, poverty) and criminological nature (more targets, drug markets, anonymity). For example, in some cities homicides tend to cluster in the most disadvantaged neighbourhoods and the impact of social inequality and poverty can be compounded by social and physical signs of degradation (prostitution, drug dealing) resulting in an increase in homicide risks. However, the dramatic decrease in homicides in Brazil's most populous city, Sao Paolo, shows that much can be done about this by targeting specific risk factors through preventive and repressive measures.

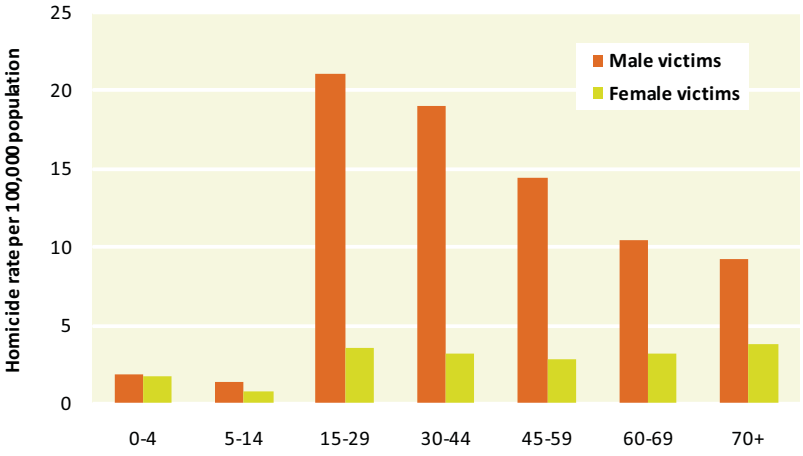
Data challenges

A variety of national and international sources relating to homicide have been used to compile the UNODC Homicide Statistics dataset, which includes homicide data for 207 countries and represents the backbone of the 2011 *Global Study on Homicide*.

All existing data sources on intentional homicides are derived from either criminal justice or public health systems. In the former case, data are generated by law enforcement or criminal justice authorities during the process of recording and investigating a crime event while, in the latter, data are produced by health authorities certifying the cause of death of an individual. Data from both sources are different in terms of validity, accuracy, international comparability and coverage, but this study has attempted to emphasise strengths of both sources.

Many challenges need to be addressed to improve accuracy, completeness and international comparability of homicide data: common statistical standards should be promoted (concepts, defini-

Global homicide rate by sex and age group (2008)



Source: WHO, Causes of Death 2008 dataset (2011).

tions, classifications, etc.) but existing data gaps convey the message that national capacities to improve recording systems need to be strengthened in many instances, especially in developing countries. Finally, international data collection mechanisms should be enhanced, also through increased collaboration among different international and regional agencies.

Better data, deeper analysis, improved policies, less homicide.

INTRODUCTION

Conceived to highlight the efforts made by many countries to improve the collection and reporting of homicide data, the 2011 *Global Study on Homicide* employs a comprehensive collection of cross-national and time-series homicide statistics to provide a global overview of this phenomenon.[1] By painting a picture of homicide at global, national and even subnational level, the statistical evidence and analyses in this study are designed to enhance knowledge of trends and patterns of homicide and aid the development of effective policies aimed at curbing lethal violence and its malignant side effects.[2]

Due to its sheer gravity, homicide is one of the most scrupulously recorded crimes and homicide data are considered among the most representative and comparable crime indicators. In some circumstances, as explained below, homicide also represents a reasonable proxy for violent crime in general, and due to the "invisible" nature of much violent crime in terms of the failure to record it, homicide can be considered the tip of the violence "iceberg". Thus, homicide data can also provide valuable insights into the nature and extent of this wider concern.

In order to do so, this study analyses levels and trends in homicide and its complex relationship with, and impact on, human development. It also examines the links between homicide and organized crime, including drug trafficking and the role of firearms, the characteristics of intimate partner/family-related killings, demographic factors and the importance of local contexts in homicide. The clarification of a number of points is, however, fundamental to an understanding of the analysis that follows.

What is homicide?

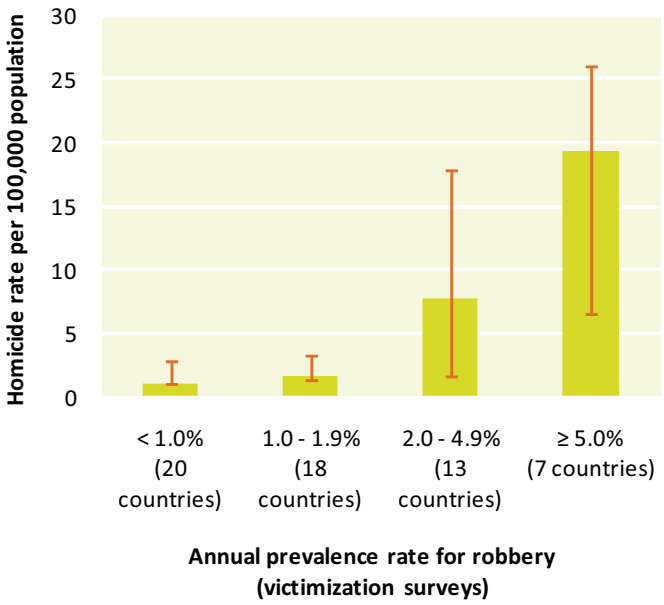
Further discussion of the definition of acts falling within the broad label of "homicide" is contained in chapter 7, but at this stage it is sufficient to note that this study is concerned with "intentional homicide". It concerns itself, therefore, only with those acts in which the perpetrator intended to cause death or serious injury by his or her actions. This excludes deaths related to conflicts, deaths caused when the perpetrator was reckless or negligent, as well as killings that are usually considered justifiable according to penal law, such as those by law enforcement agents in the line of duty or in self-defence. According to the definition adopted in this study, intentional homicide is thus "unlawful death purposefully inflicted on a person by another person".[3] For the sake of simplicity, however, the terms "homicide" and "murder" are used throughout this study as shorthand for "intentional homicide". Within the broad range of events leading to the death of a person that involve other people, the question of whether a person should carry some form of culpability constitutes the basic principle that qualifies homicides. This is a complex process and the historical development of the law of homicide shows that, in effect, criteria on

1 Previous publications that present an overview of homicides at global level include WHO, *World Report on Violence and Health* (2002) and the Geneva Declaration, *Global Burden of Armed Violence* (2008).

2 UNODC has a long-standing mandate to collect and analysis crime data. Recently, the Economic and Social Council has requested UNODC to improve the collection, reporting and analysis of data to enhance knowledge of trends in specific areas of crime (ECOSOC resolution 2009/25). Moreover, the Commission on Crime Prevention and Criminal Justice requested: "the United Nations Office on Drugs and Crime, in consultation with Member States… to strengthen the collection, analysis and reporting of accurate, reliable and comparable data on world crime trends and patterns" (Resolution 19/2).

3 UNODC Homicide Statistics (2011).

Homicide rate by robbery level, selected countries (2010 or latest available year)



Source: UNODC Homicide Statistics (2011), ICVS, WODC (Criminal Victimisation in International Perspective (2007)), Organization of American States Report on Citizen Security in the Americas (2011), UNODC (Corruption in the western Balkans (2011) and Data for Africa surveys). Bars represent median, 1st and 3rd quartiles of homicide rate.

assigning responsibility for the violent death of a person have evolved considerably yet can still be surprisingly different from country to country. Any comparison of homicide between countries and regions also needs to take this into account.[4]

Furthermore, final legal findings may take many months or even years to determine the true nature of an event that resulted in death. Nonetheless, prima facie determinations as to whether a person was killed intentionally by the acts of another are made on a day-to-day basis by both police officers called to a crime scene and medical practitioners required to make an initial certification of cause of death. Different techniques and procedures may also be used to classify the nature of a homicide, depending on whether it is, for example, related to organized crime or conflict within the family. It is such information that forms the basis of the statistics presented in this study.

Homicide as a proxy for violent crime

Whilst the situational context can differ significantly, all homicides involve the use of force or harm directed against a person and, as such, do have something of a common thread from the criminological perspective. Indeed, from a purely practical perspective, the line between life and death can be an incredibly thin one and the subsequent turn of events, including the success or failure of medical intervention, may transform a crime such as robbery or serious assault into homicide. This study does not, therefore, aim to examine the crime of homicide in isolation. It attempts rather to examine the phenomenon in context, be it between family or intimate partners, between gangs or related to organized crime, at work or at home, in the street, or in the course of a robbery. The links between homicide, the situational context and other crimes vary significantly between countries and over time, and there are countries in which there is an abundance of violent crime that does not result in homicide and others where homicide appears high in comparison to general levels of non-lethal violence. Yet in several circumstances homicide may be considered not only as a single phenomenon in isolation, but also as a reasonable proxy for violent crime in general.

A relationship between levels of different crime types can be seen in the figure, which shows the association between homicide and robbery rates for 58 countries around the world. While the distribution is broad, in general, many countries that show higher robbery rates (as reported by the general public in crime victimization surveys) also have a tendency to show higher homicide rates. The comparison is particularly significant as it makes use of victimization survey data for national robbery rates, removing, to some extent, the challenge created by the underreporting of robbery to police and law enforcement authorities, as while homicide is one of the crimes most often effectively identified and recorded by police, the same is not necessarily true of robbery. Thus, the analysis of homicide trends and patterns is also important as a starting point for more extensive research into other forms of violent crime.

Data sources and data quality

The majority of data and analysis presented in this study are based on the dataset UNODC Homicide Statistics 2011,[5] which was created by collecting data on intentional homicide at national and international level from two different sources: criminal justice and public health records. Due to its nature, homicide is an event recorded by both the criminal justice and public health systems, but while data from both sources can be expected to show reasonable correspondence, they are unlikely to be identi-

4 Geneva Declaration Secretariat, *The Global Burden of Armed Violence* (2008).

5 http://www.unodc.org/unodc/en/data-and-analysis/homicide.html

cal. This is due, not least, to the fact that law enforcement and public health systems have slightly different perspectives: the main goal of the former is to detect whether and how a crime was committed; that of the latter is to identify the complete series of factors that caused the death of an individual. Law enforcement officers will tend to use all available information from the crime scene, including forensic information, witness testimony and the surrounding context of a violent death to make an initial finding of intentional homicide. In contrast, correct public health system classification requires that certifying physicians, from the medical evidence before them, correctly judge if another person inflicted the injury and whether the culprit intended to injure or kill the victim.

Homicide tends to be recorded effectively by law enforcement and criminal justice institutions and thus police homicide data are relatively accurate in comparison to that of other crime types, such as assault or rape, for which the "dark figure" (number of unreported crimes) tends to be higher. Moreover, with respect to its work on crime prevention and criminal justice, UNODC works primarily with law enforcement and criminal justice institutions and has a clear mandate concerning the collection of data on crime trends from state bodies of that nature.[6]

However, criminal justice information on homicide is not available at international level for all countries. UNODC Homicide Statistics 2011 include criminal justice data for 177, representing 86 per cent of the 207 countries or territories included in the dataset as a whole. These data were provided to UNODC by Member States through established reporting procedures, or were made publicly available by institutions such as national police forces, ministries of justice or the interior, or by national statistical offices. Many of those countries where criminal justice homicide data are not reported at international level are in Africa or the Pacific islands.

When criminal justice data were unavailable, or were assessed by UNODC to suffer from a significant degree of undercounting, public health data on homicide levels were used as the preferred country source, which is the case, for example, for 64 countries (31 per cent of the total) in map 1.1 on page 20. Likewise, data derived from criminal justice sources were not always available for analysing time trends or other features, such as victim characteristics and homicide mechanisms. In those cases, as elsewhere in this study, public health data derived from two main sources, the World Health Organization (WHO) and the Global Burden of Injuries Project, were used.[7] When UNODC Homicide Statistics 2011 is listed as a source in this study, it indicates the data series compiled by UNODC based on data provided by national authorities, WHO and other regional/international organizations.[8]

A number of limitations affect the comparability of homicide data based on criminal justice and public health statistics.[9] For example, while homicide is probably the best recorded crime, differences in homicide rates between countries and regions can be affected by different levels of crime reporting and recording, as well as from existing legislation that may treat and record the same lethal act in different ways.[10]

In addition, countries may have different capacities or approaches for differentiating intentional homicide from all other forms of lethal violence and some homicides may also be recorded in criminal justice records with different levels of detail. Some countries, for example, differentiate homicides related to organized crime in their recording system, others lack the legal and technical framework for doing so. The simple comparison of criminal justice statistics based on these different circumstances may, therefore, lead to misinterpretation. Meanwhile, data based on public health sources are also of varying levels of quality in different regions as some countries, especially developing countries, do not maintain death registers. For this reason, public health data for some countries, particularly in Africa, are estimated on the basis of statistical models.

Caution should therefore be applied when using an amalgamated dataset of this nature, but it is a dataset that can nonetheless provide vital support in the struggle to contain lethal violence.

6 UNODC has been mandated to collect information on crime and criminal justice through the United Nations Survey of Crime Trends and Criminal Justice (UN-CTS) since the late 1970s (ECOSOC resolution E/1984/84 and General Assembly resolutions A/RES/46/152 and A/RES/60/177).

7 The Global Burden of Injuries project is an academic consortium that essentially uses WHO data as the basis for its analysis and data elaboration (see www.globalburdenofinjuries.org).

8 Such as Eurostat, the Organization of American States, UNICEF and Interpol.

9 A review of data sources is provided in chapter 7.

10 In some countries, for example, "honour killing" is treated differently to other forms of homicide.

1. THE GLOBAL PICTURE

This initial chapter sketches the outline of a phenomenon that is decreasing in many countries and subregions to the extent that it is a relatively rare occurrence, yet is nearing crisis point in others. Subsequent chapters explain the reasons behind such disparities and their different dynamics. This chapter presents an overview of homicide totals, rates and trends from a global, regional, subregional and national perspective.

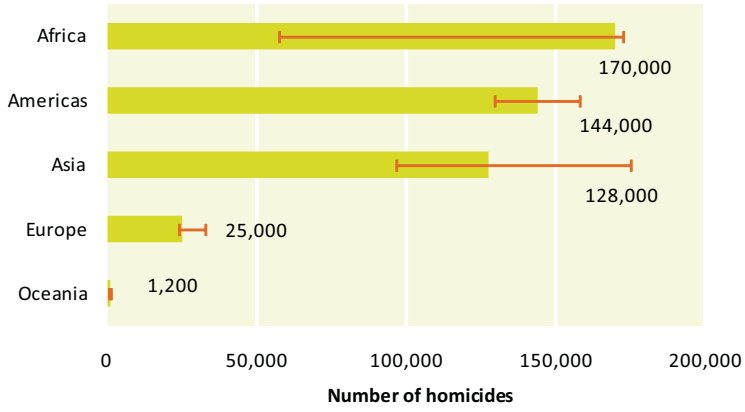
Global and regional totals

Globally, UNODC estimates that the total number of annual homicides in 2010 was 468,000.[1] An initial disparity in homicide distribution around the globe can be seen when disaggregating that figure by region, with the largest proportion, some 36 per cent or 170,000 homicides, estimated to occur in Africa, 31 per cent, or approximately 144,000, in the Americas and 27 per cent, or 128,000, in Asia. Europe and Oceania account for significantly less at 5 per cent, or 25,000, and under 1 per cent, or 1,200 homicides, respectively.[2]

Regional distribution by population

The absolute number of homicides in a region is not only dependent upon the level of violence in that particular region, but also upon its population size. It is by comparison of the estimated number of homicides by region with the population of each region, as in figure 1.2, that the real regional disparity in homicide distribution can be seen. For instance, the estimated number of homicides in Africa and the Americas are relatively high given the size of their respective populations, whereas the share of homicides in Asia and Europe are relatively low.

Fig. 1.1: Total number of homicides by region (2010 or latest available year)



Source: UNODC Homicide Statistics (2011). Bars represent the sum of total homicide counts based on the source selected at country level, with high and low estimates.

Global and regional averages

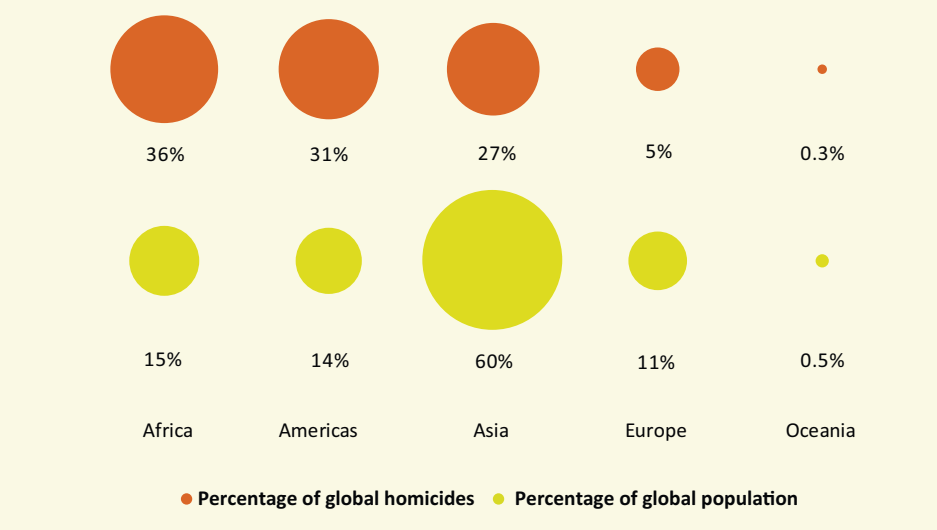
The total number of 468,000 homicides results in a global average homicide rate of 6.9 per 100,000 population. Map 1.1 highlights the disparity in average homicide rates around the world by country,[3] with the distribution of darkest shading showing that homicide rates are highest in parts of

1 With an estimated range between 308,000 and 539,000, this figure is based on country data for 2010 or latest available year. This figure is broadly in line with global estimates on homicides provided by other organizations, though differences in definitions, data sources and statistical methodologies prevent a direct comparison of available estimates. For example, WHO, *World Report on Violence and Health* (2002) has produced an estimate of 520,000 deaths in 2000 through interpersonal violence. In a similar range, Geneva Declaration Secretariat, *The Global Burden of Armed Violence* (2008) estimated that approximately 490,000 deaths from homicide occurred in 2004.

2 The error bars in figure 1.1 are derived from maximum and minimum total annual homicides for each region, according to different data sources (see chapter 8). The overall estimate for Africa is at the higher end of the range due to the preferred use of public health sources in this region, which tend to report higher homicide counts than police sources.

3 Data for 90 per cent of countries in map 1.1 correspond to 2008, 2009 or 2010, enabling the presentation of a unique up-to-date portrayal of global violence levels.

Fig. 1.2: Homicide and population distribution by region (2010 or latest available year)

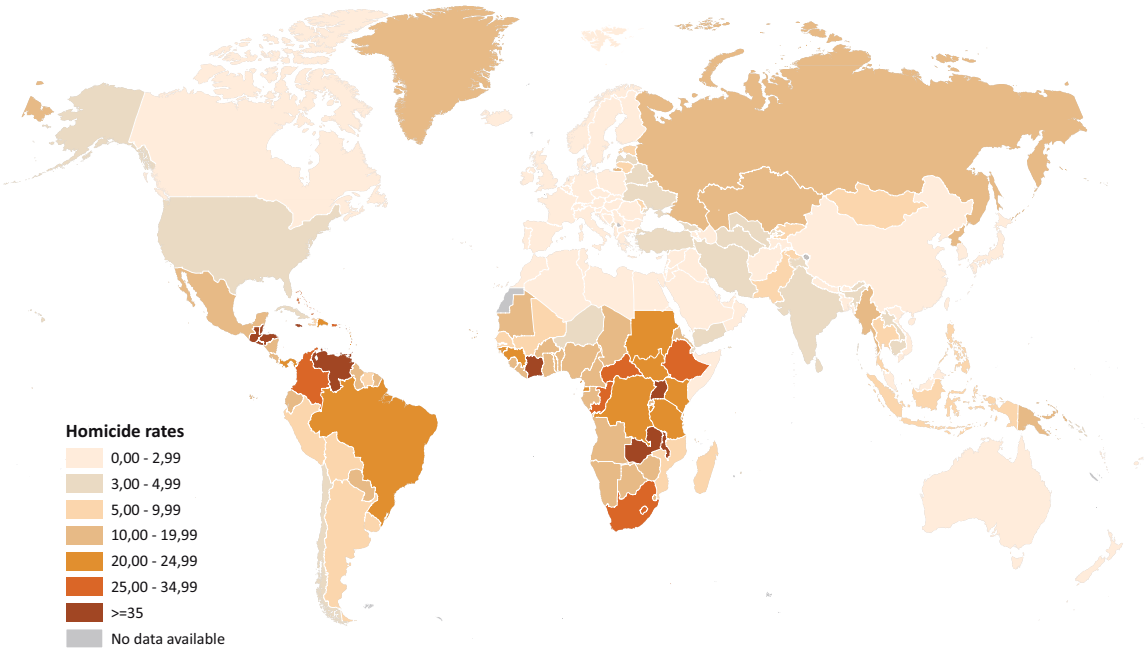


Source: UNODC Homicide Statistics (2011) and United Nations World Population Prospects, 2010 Revision (2011).
Bubble size is proportional to percentage of total.

Central and South America, the Caribbean and Southern and Middle Africa; the lighter shading showing that they are lowest in parts of Europe, Northern America, Northern Africa, Eastern Asia and all of Oceania.

Some 80 countries (approximately 40 per cent of the total) show low homicide rates of less than 3 homicides per 100,000 population per year, a third of which show rates of under 1 homicide per 100,000. In contrast, 35 countries (approximately 17 per cent of the total) show high homicide rates of more than 20 homicides per 100,000 population, some going beyond 50 and others as high as 80 per 100,000 population. The remainder (44 per cent of the total) show medium homicide rates between 3 and 20 per 100,000 population.

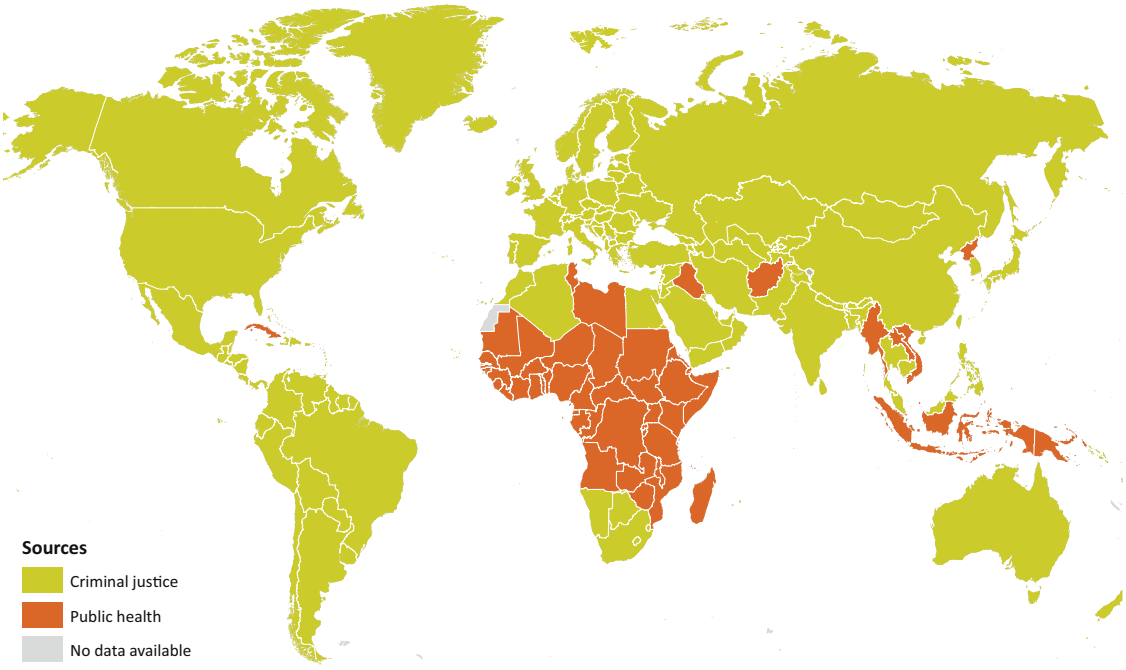
Map 1.1: Homicide rates by country (2010 or latest available year)



Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Source: UNODC Homicide Statistics (2011).

Map 1.2: Source of homicide statistics by country (2010 or latest available year)

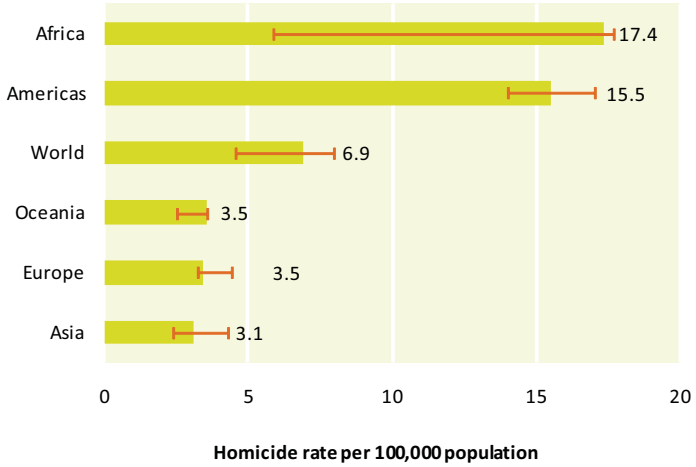


Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Source: UNODC Homicide Statistics (2011).

The homicide rate in the Americas is, at 15.6 per 100,000, more than double the world average (figure 1.3), while, at 17.4 per 100,000, Africa has the highest rate among all regions, although it also has the largest uncertainty range due to large discrepancies between criminal justice and public health data.[4] Asia falls between 2.4 and 4.3 per 100,000, and both Europe and Oceania also fall below the global average at 3.5 per 100,000, respectively.

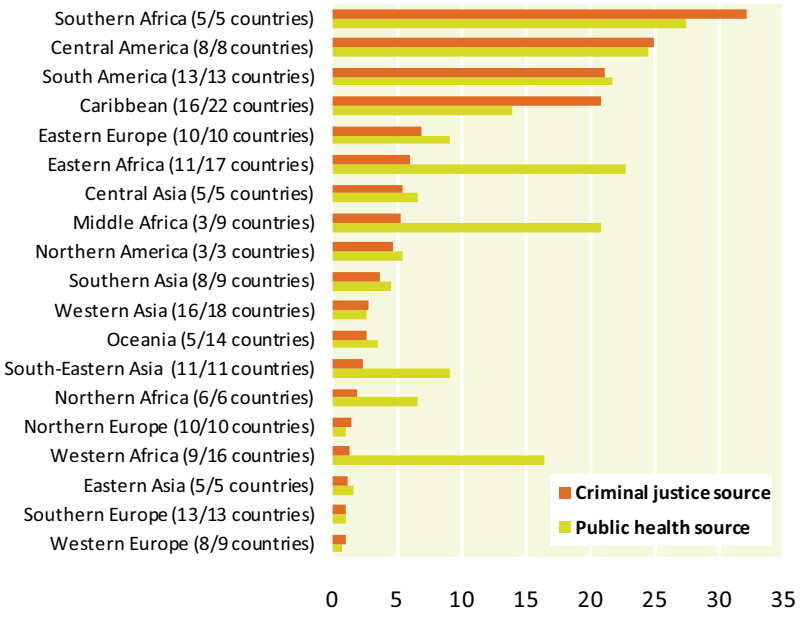
Fig. 1.3: Homicide rates by region (2010 or latest available year)



Source: UNODC Homicide Statistics (2011). Bars represent population weighted average homicide rate, with high and low estimates.

4 Whilst a lowest possible estimate would place Africa within the range of the world average, on the basis of available data, it can be estimated that the region sits at a level somewhere above, rather than below, the global average.

Fig. 1.4: Homicide rates per 100,000 population by subregion (2010 or latest available year)



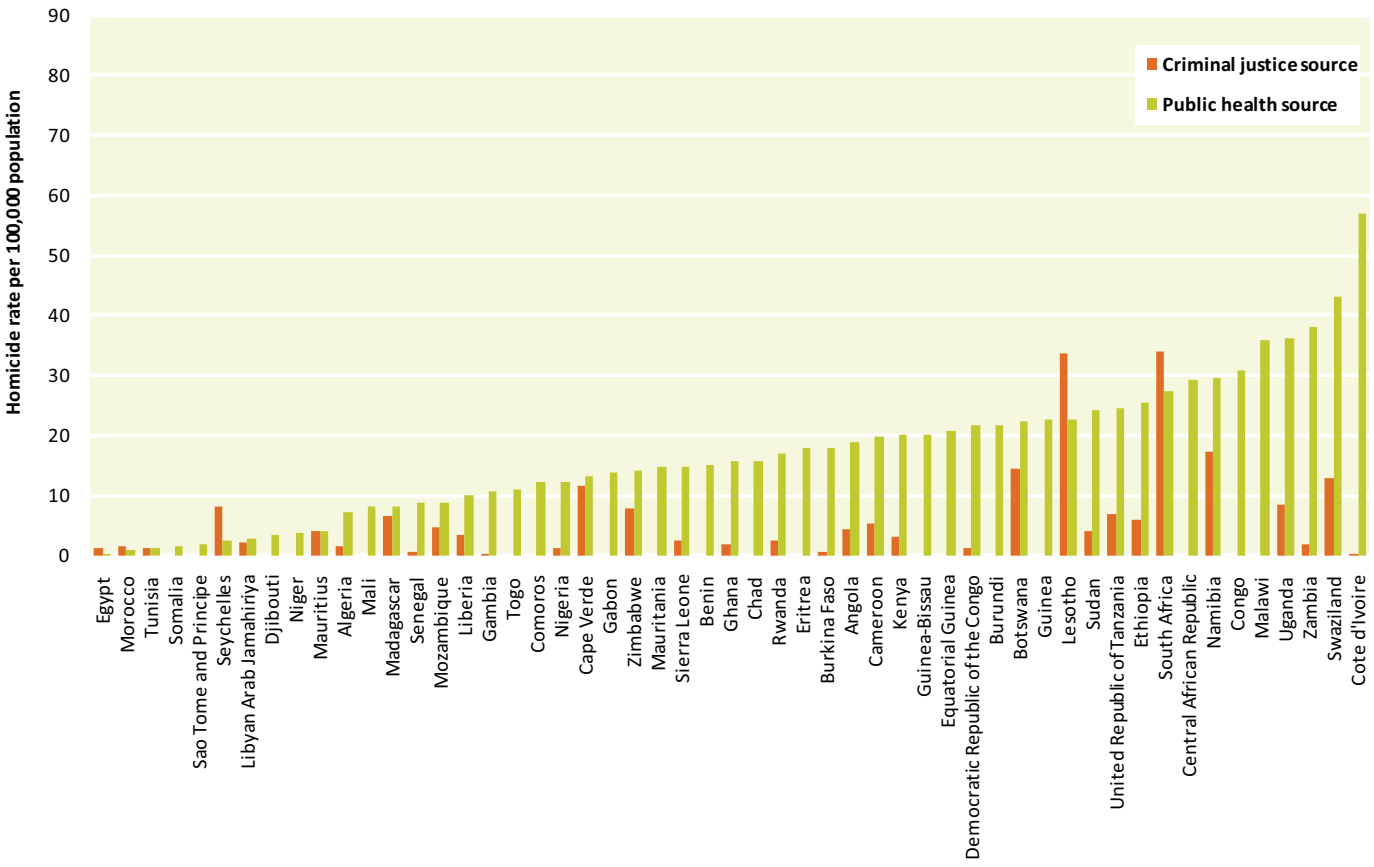
Source: UNODC Homicide Statistics (2011). Bars represent population weighted average homicide rate, by source category.

Subregional and national averages

As figure 1.4 clearly shows, Southern Africa and Central America, South America and the Caribbean have considerably higher homicide rates than other subregions, while, at the opposite end of the scale, Western, Northern and Southern Europe, and Eastern Asia have the lowest homicide rates. Data show that homicide rates tend to be higher in developing countries, an initial indication that development has a link with homicide levels. This relationship is explored in detail in chapter 2.

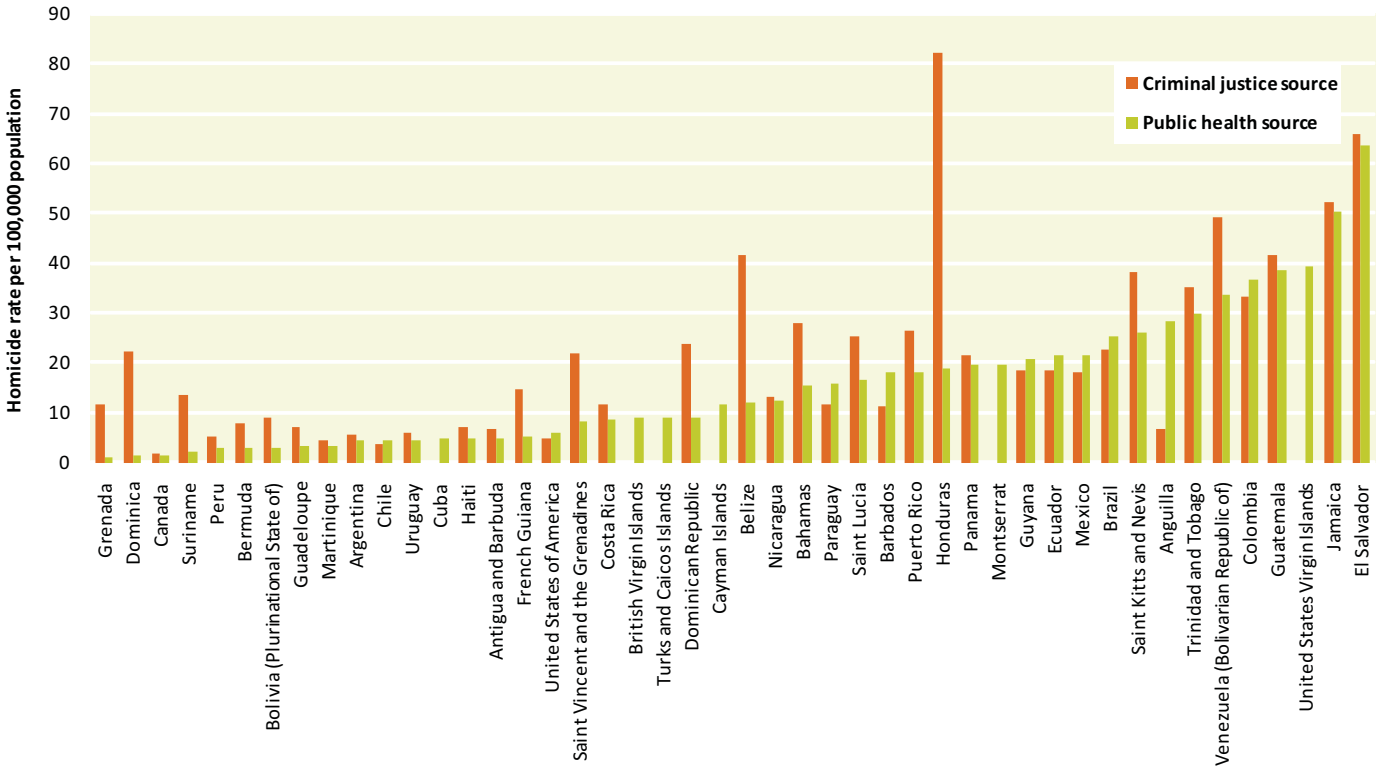
Figure 1.4 also highlights the problems associated with data availability and quality that can hinder the understanding of patterns of violence. It shows that it is in several developing regions often characterized by high homicide levels where large variations between criminal justice and public health data remain. By contrast, there is greater consistency in high and middle income countries. The relationship between data differences, data agreement and overall homicide rate become even clearer when data are visualized at country level, as in figures 1.5 to 1.9.

Fig. 1.5: Homicide rates by country/territory, Africa (2010 or latest available year)



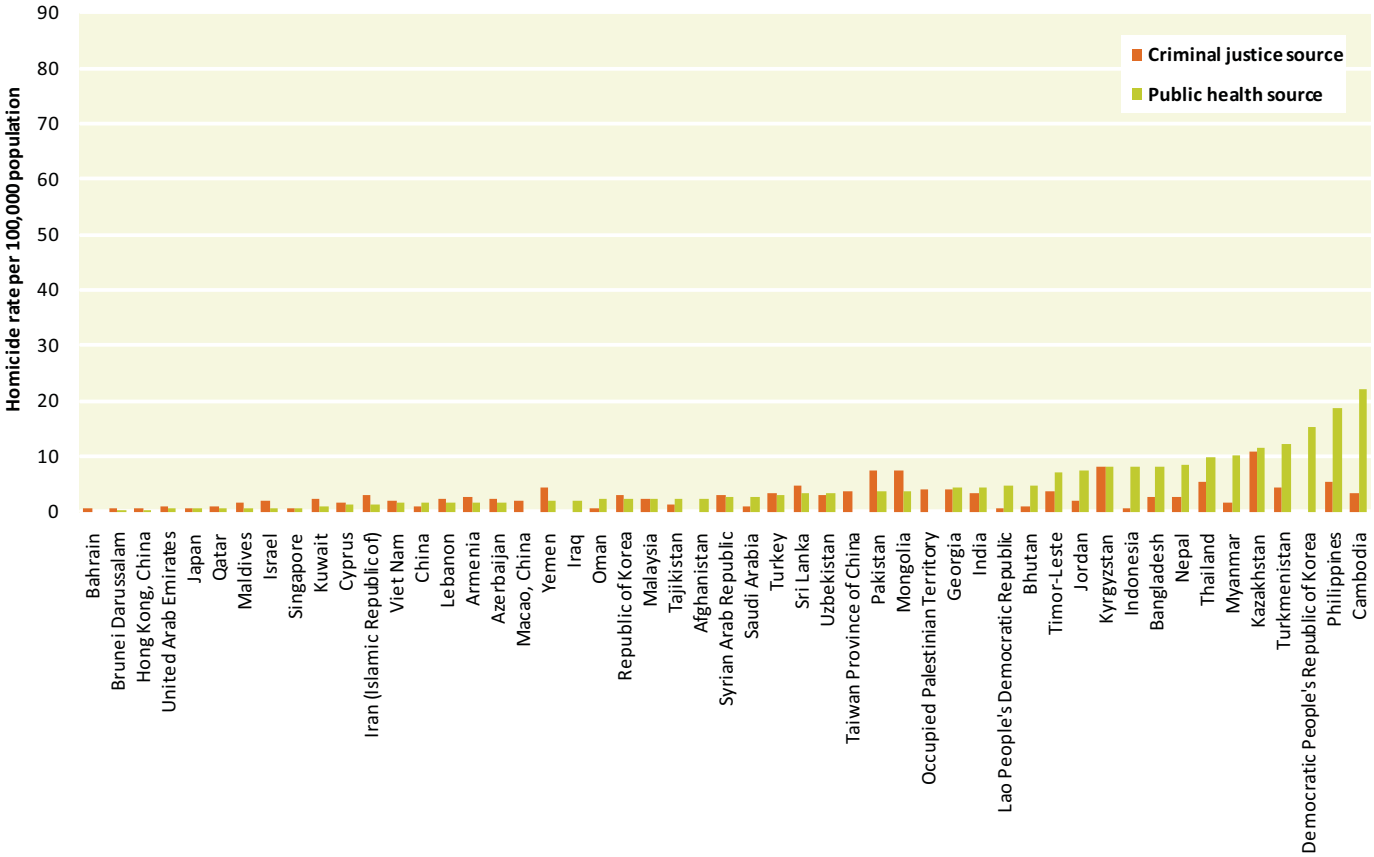
Source: UNODC Homicide Statistics (2011).

Fig. 1.6: Homicide rates by country/territory, the Americas (2010 or latest available year)



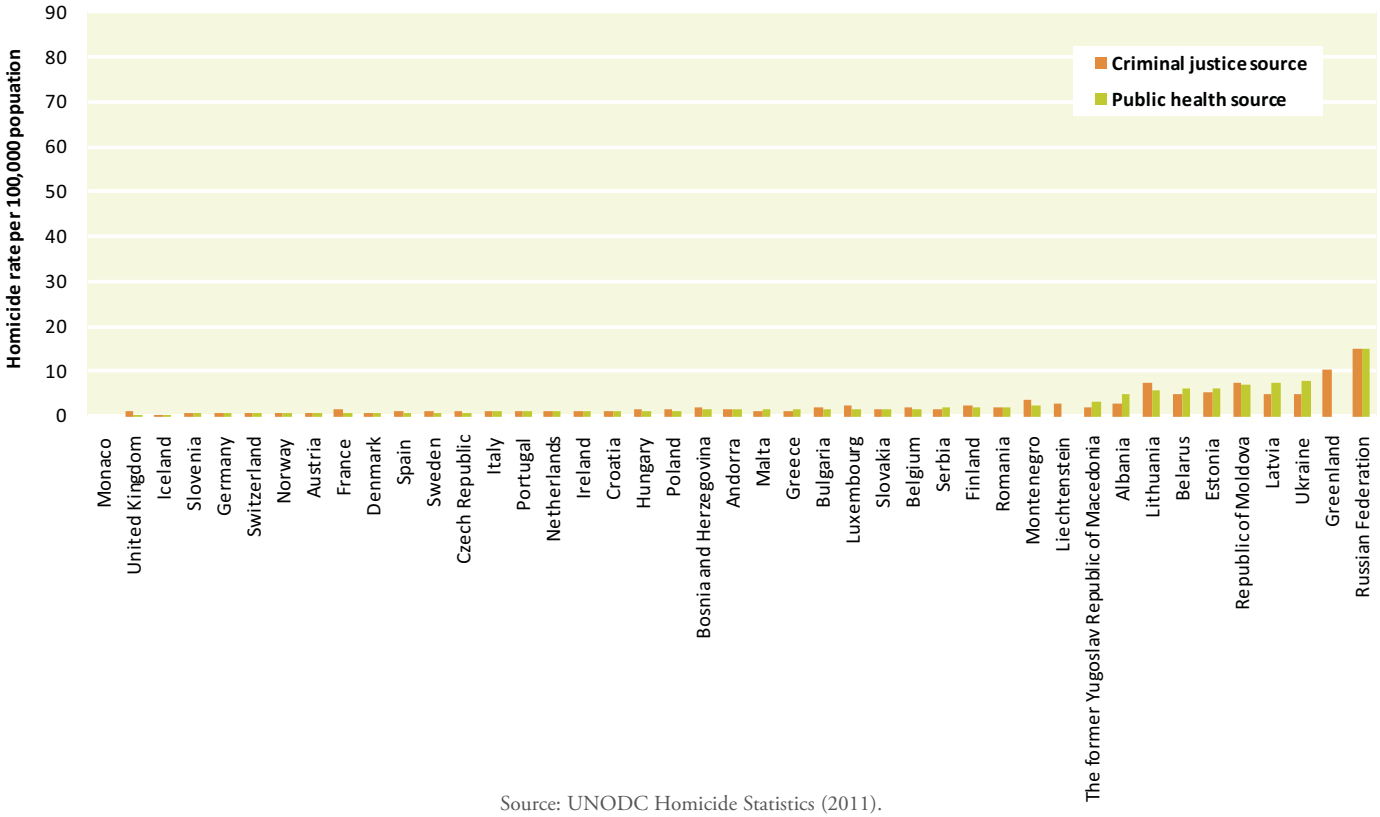
Source: UNODC Homicide Statistics (2011).

Fig. 1.7: Homicide rates by country/territory, Asia (2010 or latest available year)



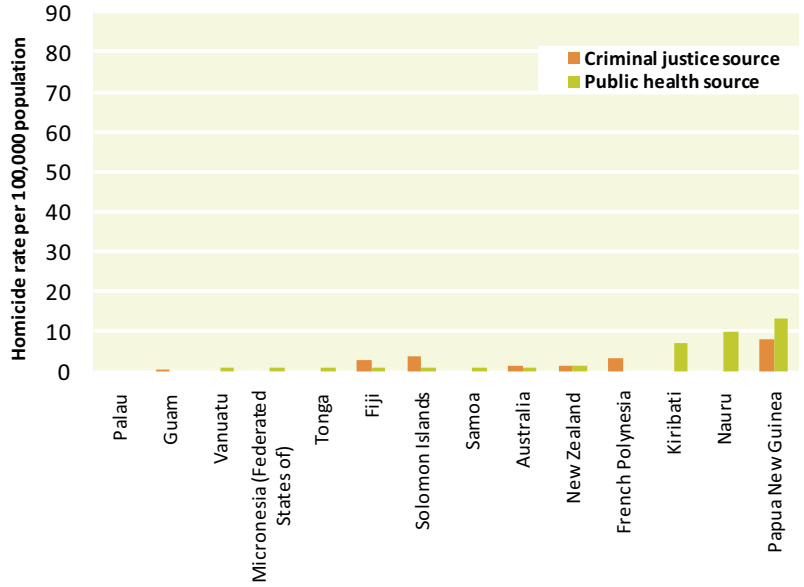
Source: UNODC Homicide Statistics (2011).

Fig. 1.8: Homicide rates by country/territory, Europe (2010 or latest available year)



Source: UNODC Homicide Statistics (2011).

Fig. 1.9: Homicide rates by country/territory, Oceania (2010 or latest available year)



Source: UNODC Homicide Statistics (2011).

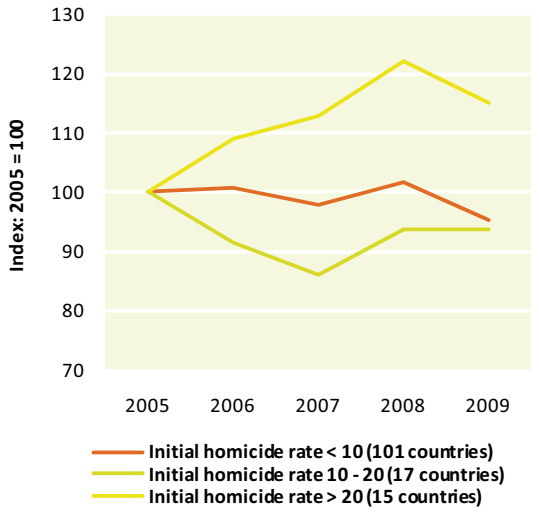
Homicide trends

The analysis of global trends in homicide rates is hampered by the lack of time-series data in many countries, especially in Africa. However, as discussed in the subregional analysis below, available data indicate that the homicide rate decreased in 8 subregions from 1995 to 2010, while Central America and the Caribbean are the only two subregions where the homicide rate has increased since 1995 (no regional or subregional trends are available for Africa). Between 2005 and 2009 (figure 1.10), homicide rates, on average, only increased in those countries where they were already at a high level, whereas in 101 countries with low homicide rates—mainly located in Europe and Asia—and in 17 countries with medium homicide rates, they decreased in the same period.

The Americas

In the Americas, homicide rates in the Caribbean and Central America have risen since 1995, whereas elsewhere in the region they have decreased or remained stable. Although the United States of America has a relatively high homicide rate compared to other countries with a similar socio-economic level, US crime rates in general have been declining since the mid 1990s, resulting in the steady downward trend of the Northern American homicide rate. Homicide rates have fluctuated in

Fig. 1.10: Five-year trends in homicide rates for countries with low, medium and high homicide levels in 2005



Source: UNODC Homicide Statistics (2011). Lines represent mean percentage change.

South America but have now returned to a level similar to those observed in 1995, one notable exception to the latter trend being Columbia, which, although it still has one of the world's highest, has seen a massive drop in its homicide rate from 72 to 33 per 100,000.

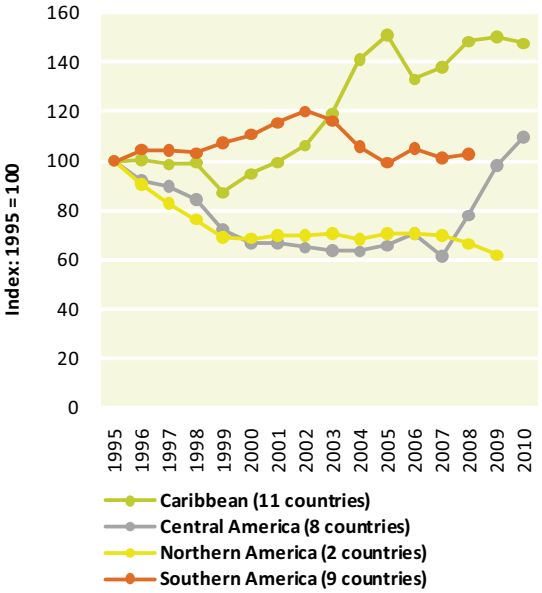
While there was a steady decline in homicide rates in Central America from 1995 to 2005, the subregion has experienced a sharp increase in the homicide rate since 2007. The Caribbean has, with the exception of a temporary drop in 2006, experienced a steady increase over the past decade.

As discussed in greater depth in chapter 3 of this study, drug trafficking is both an important driver of homicide rates in Central America and one of the principal factors behind rising violence levels in the subregion, as are the illicit activities of organized crime in general and the legacy of political violence.[5]

Asia

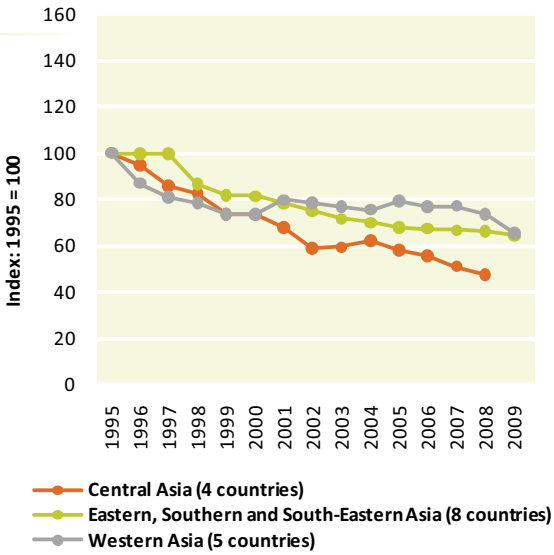
The homicide rate in Asia shows a steady downward trend from 1995 to 2009, although in the Western Asia subregion, where Armenia, Azerbaijan and Georgia have also seen steep declines, the homicide rate stabilized during most of the first decade of the 21st century. It should be noted that complete time-series data do not cover a number of very populous Asian countries, such as Bangladesh, China, Indonesia and Turkey, but available data for the past decade suggest that the homicide rate in these and several other Asian countries has also declined.[6] At the same time, homicide trends are fairly unclear in post-conflict countries (such as Afghanistan and Iraq) for which no time-series data are available. In other countries, complete time series are available and indicate mostly a downward trend.

Fig. 1.11: Subregional trends in homicide rates, the Americas (1995-2010)



Source: UNODC Homicide Statistics (2011). Lines represent percentage change in population weighted homicide rate based on a starting point of 100 for 1995.

Fig. 1.12: Subregional trends in homicide rates, Asia (1995-2009)



Source: UNODC Homicide Statistics (2011). Lines represent percentage change in population weighted homicide rate based on a starting point of 100 for 1995.

5 World Bank *Crime and Violence in Central America – A Development Challenge* (2011).

6 Official data for China indicate, for example, that the homicide rate declined by 45 per cent between 2002 and 2008 to a rate of 1.1 per 100,000 population.

In the Eastern and South-Eastern Asia subregions, Hong Kong Special Administrative Region of China, Japan and Singapore have all seen a long-term decline in their homicide rates and currently occupy three of the bottom six positions in the world, at 0.5 homicides per 100,000 each.[7] In Southern Asia, India has seen its homicide rate decline by 23 per cent over the last 15 years, while Pakistan and Nepal have both seen slight increases in their homicide rates. And in Central Asian countries, homicide rates have declined by between one and two thirds from comparatively high levels.

Europe

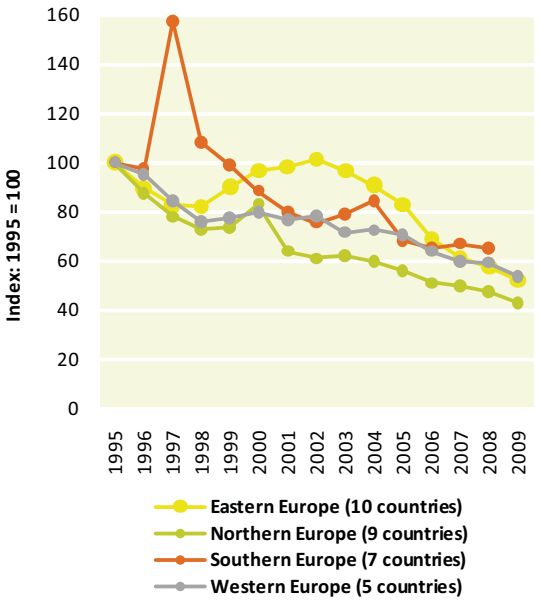
Despite some dramatic fluctuations such as those seen in Albania, which experienced an alarming rises in the homicide rate during the civil unrest following the collapse of a pyramid scheme in 1997, homicide rates have decreased or remained more or less stable in the vast majority of European countries since 1995, following the peaks of 1991-1993. An improvement in socio-economic conditions in many Central and Eastern European countries, as well as an improvement in security measures may have contributed to this.

Most Western and Northern European countries have long been among those with the lowest homicide rates in the world, yet, paradoxically, violent crimes and drug offences have increased in many European countries since the early 1990s.[8] This may be partly due to changes in the lifestyles of European youths, including changes in their consumption patterns of drugs and alcohol (heavy episodic or "binge" drinking, for, example) and the emergence of new street gangs based on ethnic minority or immigrant group affiliations.[9] There are indications that these developments have an impact on increased street violence and hospital admissions.[10]

Such a discrepancy between violent crimes and homicide could be due, in part, to the lack of availability of firearms[11] (only 27 per cent of homicides are committed with a firearm in Western Europe as opposed to 65 per cent in Central America) as well as to an improvement in the quality of health services reducing the lethality of violent assaults and homicide attempts.[12] Some researchers have also postulated that decreases in homicide rates in Europe may be explained by greater levels of economic equality and an absence of major social conflicts.[13]

The factors underlying the significant differences in homicide rate by subregion are multiple, complex and interlinked. Research on the high levels of interpersonal violence in Central and South America, for example, often refer to factors that originate, foment or facilitate violence such as "social inequality due to an increase in wealth versus poverty", "the paradox of more schooling with fewer employment opportunities", "increasing expectations and the impossibility of meeting them", "changes in family structure" and "loss of impor-

Fig. 1.13: Subregional trends in homicide rates, Europe (1995-2009)



Source: UNODC Homicide Statistics (2011). Lines represent percentage change in population weighted homicide rate based on a starting point of 100 for 1995.

7 In the case of Japan, the homicide rate has declined at an almost unparalleled rate to less than a third of that recorded in 1955, which is due, in part, to a dramatic drop in the number of young male perpetrators of homicide, see: Johnson, D.T., *The Homicide Drop in Postwar Japan* (2008).

8 Aebi, M. and Linde, A., *Is There a Crime Drop in Western Europe?*, European Journal on Criminal Policy and Research (2010).

9 Ibid.

10 In England and Wales, for example, hospital admissions for assault by a knife or sharp instrument increased by 34 per cent between 2002 and 2007. See: WHO, *European Report on Preventing Violence and Knife Crime among Young People* (2010).

11 Geneva Declaration Secretariat, *The Global Burden of Armed Violence* (2008).

12 In 1990, completed (as opposed to attempted) homicides in Europe represented 33.6 per cent of total homicide rates; in 2007, they represented 31 per cent. Source: Aebi, M. and Linde, A., *Is There a Crime Drop in Western Europe?* European Journal on Criminal Policy and Research (2010).

13 Garland, D., The Culture of Control: Crime and Social Order in Contemporary Society (2001).

tance of religion in daily life", "increased density in poor areas and urban segregation", "a masculinity cult", "changes in drug markets", "increases in the number of firearms", "alcohol consumption" and "difficulties in verbal expression feelings" are also highlighted.[14] Some of these factors are examined in depth in chapters 2 and 3 of this study, which examine the interrelationship between homicide and development and the impact of the use of firearms and the existence of gangs and organized crime.

14 Briceño-León, R., *Urban violence and public health in Latin America: a sociological explanatory framework,* Cadernos de Saúde Pública (2005).

2. HOMICIDE AND DEVELOPMENT

People commit intentional homicide for many reasons and it is apparent that numerous different driving forces are at work when they do. But there is something of a consensus, both among scholars[1] and the international community, that lethal violence is often rooted in contexts of paucity and deprivation, inequality and injustice, social marginalization, low levels of education and a weak rule of law.

Several initiatives and reports have addressed the link between development and the broad issue of armed violence, which includes both conflict and non-conflict violence.[2] Increasing awareness of that nature has succeeded in placing the link between armed violence and development near the top of the international agenda: the Geneva Declaration on Armed Violence and Development (2006) and the United Nations Report of the Secretary-General, Promoting Development through the Reduction and Prevention of Armed Violence (2009), can be seen as the first emerging manifestations of a growing international resolve to address armed violence as a major obstacle to human, social and economic development.

The availability of a comprehensive dataset on homicide rates at global level has allowed an initial analysis, in this chapter, using cross-national and time-series data to explore the relationship between homicide and indicators of social and economic progress, the rule of law, economic trends and the impact of the recent economic crisis on crime. Whilst the relationship between homicide and such factors is broad and complex to illustrate, multi-country exploration of available data can nonetheless provide a greater understanding of the role that crime prevention can play in enhancing development.

It is not the objective of this study to identify causal relationships between homicide and development, in either direction. It aims rather to demonstrate that crime, development, macroeconomic and income equality are interconnected and, therefore, that development and economic policies cannot be successful if they do not integrate crime prevention strategies that should be consistently designed and implemented taking into account the particular socio-economic context.

Homicide levels and development indicators

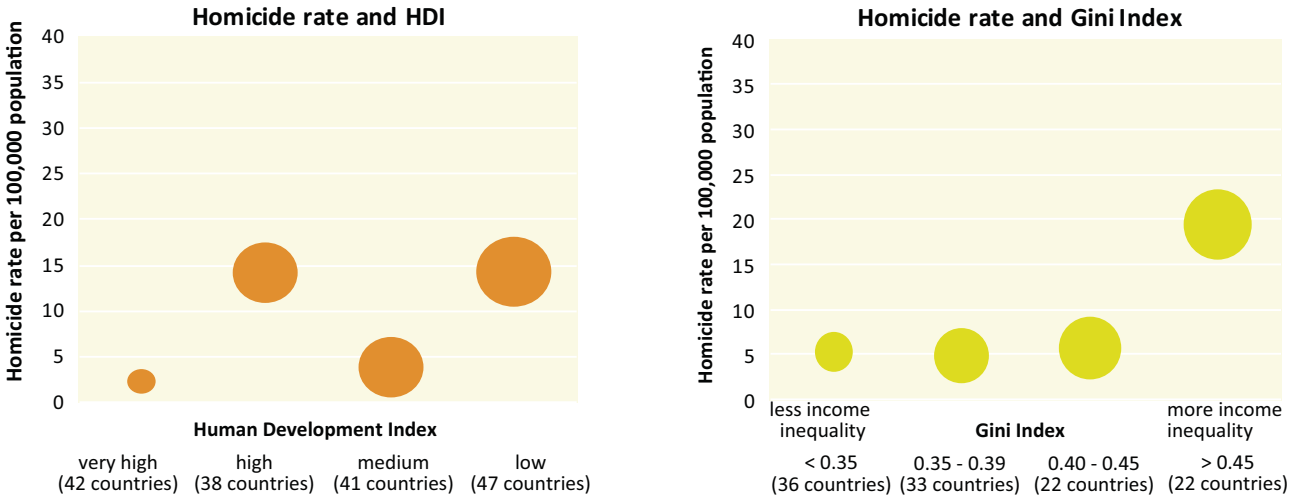
One way of exploring the relationship between homicide and development is to see if homicide rates are associated with a number of different development indicators: for example, if higher levels of homicide are coupled with lower levels of development.

When looking at homicide rates against the development indicators in figure 2.1, quite a consistent pattern emerges: at global level, low levels of violent crime are related to higher stages of development and income equality. This is a fairly robust relationship given the variety of different measures presented.

1 The importance of economic and social development in explaining patterns and levels of homicide has long been stressed by criminological research. See Land, K., McCall, P.L. and Cohen, L.E., *Structural Covariates of Homicide Rates: Are There Any Invariances Across Time and Social Space?*, American Journal of Sociology (1990); Tcherni, M., *Structural Determinants of Homicide: The Big Three,* Journal of Quantitative Criminology (2011) and Bourguignon, F., *Crime As a Social Cost of Poverty and Inequality: A Review Focusing on Developing Countries*, Revista Desarrollo y Sociedad (2009).

2 See for example, Geneva Declaration, *More Violence, Less Development: Examining the relationship between armed violence and MDG achievement* (2010) and the World Bank, *World Development Report* (2011).

Fig. 2.1: Homicide rates and development indicators, global level (2010 or latest available year)



Source: UNODC Homicide Statistics (2011), UNDP Human Development Index and World Bank Data Gini Index. Bubble size is proportional to the percentage of homicides at global level in countries with HDI or Gini value.

When considering the different levels of the Human Development Index (HDI),[3] "low", "medium", "high" and "very high", the homicide rate usually increases when countries move from very high to lower levels of development. The largest share of homicides (38 per cent of global homicides, 18 per cent of global population) occurs in countries with low levels of human development: "low" HDI countries (mainly located in Africa) experience homicide rates some three to four times higher than the "very high" and "medium" HDI countries. The only exception to this pattern are "high" HDI countries, many of which are in Central and South America, where other factors such as organized crime and inequality play a more important role than average human development levels.

Inequality is also a driver of high levels of homicide. Homicide rates plotted against the Gini Index, an important measure of inequality,[4] show that at global level countries with large income disparities (Gini Index higher than 0.45) have a homicide rate almost four times higher than more equal societies. Accounting for 36 per cent of homicides but only 19 per cent of the population, this group consists mostly of countries in the Americas and Africa.

The link between high levels of violent crime and lower levels of development is also apparent when homicides are analysed together with GDP and the under-five mortality rate. The peak homicide rate occurs in the group of countries with lower GDP per capita (less than USD-PPP 2,500),[5] while a surge for countries with GDP between USD-PPP 10,000 and 25,000 is associated with countries in the Americas; a pattern similar to that observed in "high" HDI countries.

Countries with a high under-five mortality rate (above 75 per 100,000) have a high homicide rate (above 15 per 100,000), while the homicide rate is three times lower in those countries where the under-five mortality rate is below the 75 per 100,000 threshold.

Regional close-ups

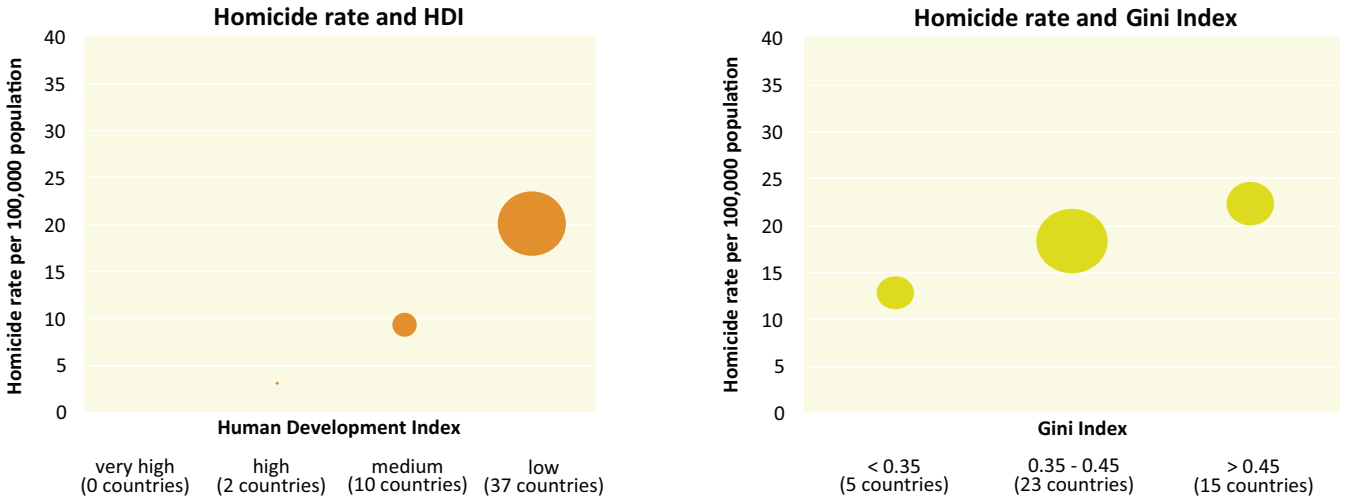
At global level, the relationship between development indicators and homicide rates is sometimes blurred because of other factors associated with homicide levels, which have diverging trends in different parts of the world. This applies, for example, to the role of organized crime or the impact of crime prevention policies. It is, however, the analysis of the relationship between development and homicide at regional level—where patterns relating to such factors are more likely to be similar—that can provide a clearer picture of the role of development on crime levels.

3 HDI measures the average achievements in a country in three basic dimensions of human development: a long and healthy life, as measured by life expectancy at birth; knowledge, as measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio; a decent standard of living, as measured by Gross Domestic Product per capita.

4 Lower values equate to a more even distribution of income: 0 equals total equality; 1 represents maximum inequality.

5 Purchasing power parities (PPPs) adjust for differences in price levels between economies, thus enabling cross-country comparisons. For detailed information on PPPs see World Bank, *Global Purchasing Power parities and Real Expenditures. 2005 International Comparison Program* (2008).

Fig. 2.2: Homicide rates and development indicators, Africa (2010 or latest available year)



Source: UNODC Homicide Statistics (2011), UNDP Human Development Index and World Bank Data Gini Index. Bubble size is proportional to the percentage of homicides in countries with HDI or Gini value.

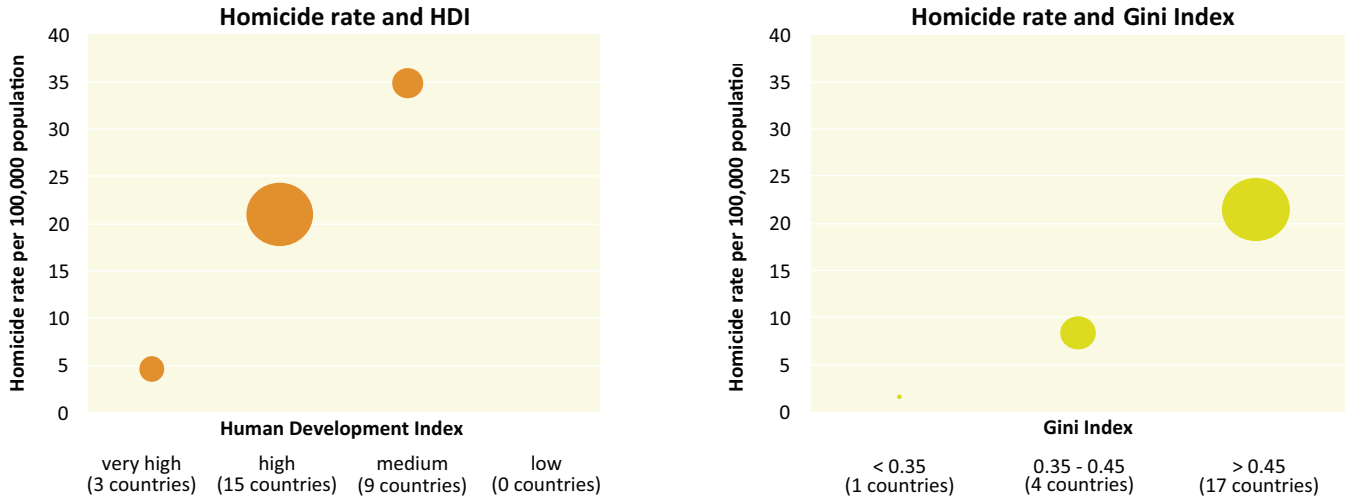
Africa

As figure 2.2 indicates, in Africa a clear association exists between crime, development and income distribution, although those conclusions should be interpreted with caution since homicide data from some African countries have been estimated using statistical models that extrapolate homicide data also on the basis of socio-economic variables. "Low" HDI African countries have, on average, a homicide rate above 20 per 100,000, which is more than twice the value estimated for African countries with "medium" HDI, and one in three of the world's intentional homicides occur in African low development countries. A similar indication is derived from the Gini Index, which shows that African countries with higher income inequality (Gini Index higher than 0.45) have higher homicide rates (approximately 22 per 100,000).

Americas

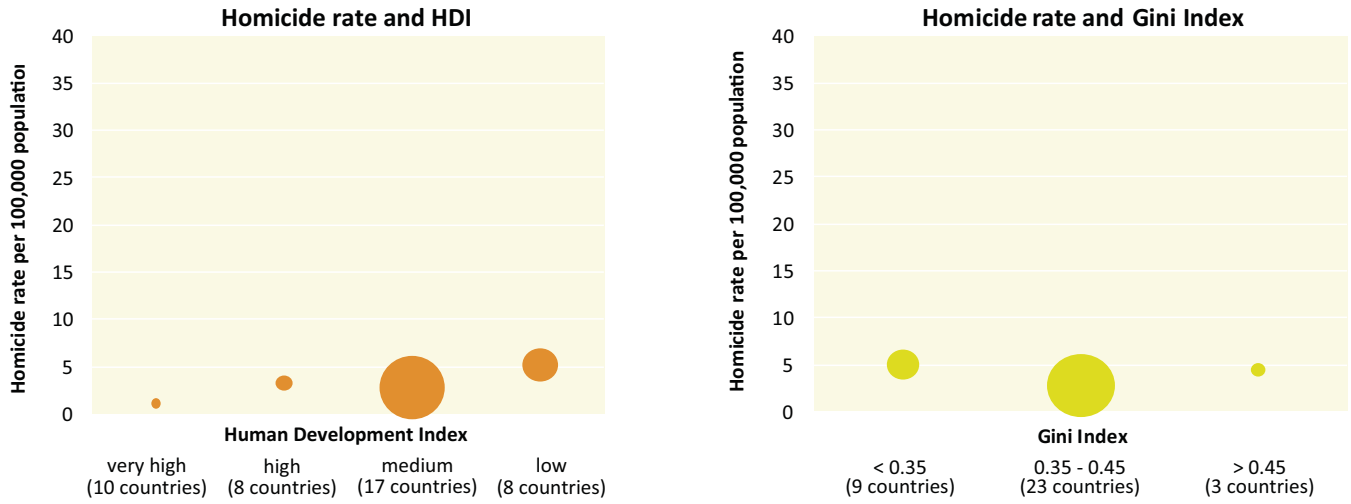
In comparison to countries in other regions, countries in the Americas have, on average, high homicide rates associated with relatively high levels of development, suggesting that factors other than development, such as organized crime, play a disproportionate role in driving homicide levels. Within the region, however, human development and income inequality are factors that can explain

Fig. 2.3: Homicide rates and development indicators, the Americas (2010 or latest available year)



Source: UNODC Homicide Statistics (2011), UNDP Human Development Index and World Bank Data Gini Index. Bubble size is proportional to the percentage of homicides in countries with HDI or Gini value.

Fig. 2.4: Homicide rates and development indicators, Asia (2010 or latest available year)



Source: UNODC Homicide Statistics (2011), UNDP Human Development Index and World Bank Data Gini Index. Bubble size is proportional to the percentage of homicides in countries with HDI or Gini value.

at least some variability in levels of violent crime across the region (figure 2.3).

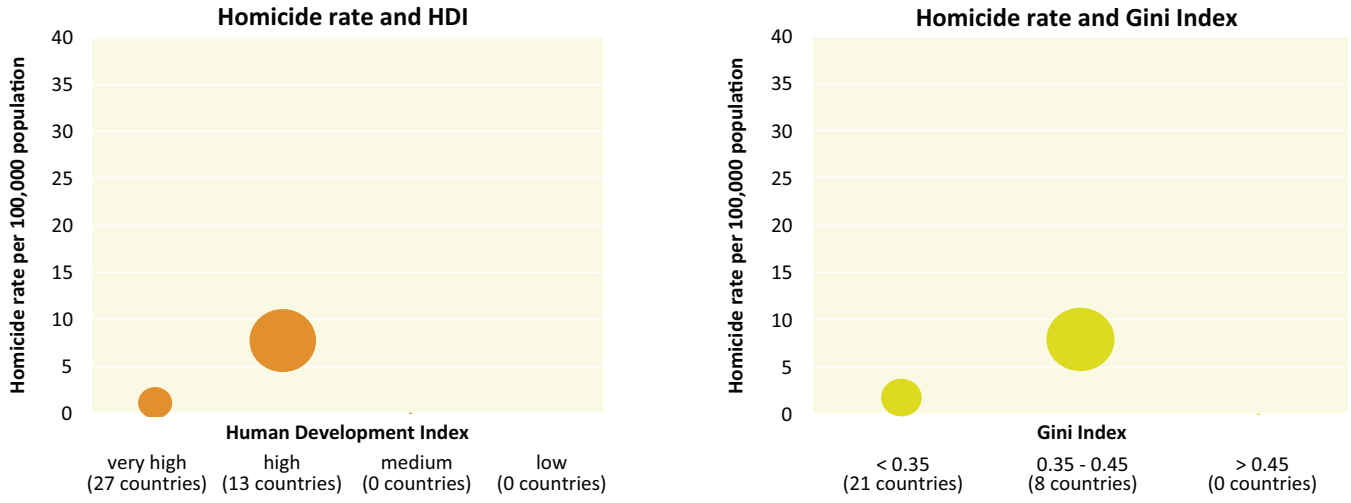
Asia

In Asia, higher rates of homicide are generally associated with lower levels of development but, in contrast to other regions, there does not seem to be a relationship between violent crime and inequality when looking at national data (figure 2.4). As Asia is host to some of the world's most populous countries, national data can only measure large aggregations and a better analysis of crime and inequality in the region would require subnational statistics. It should be noted that the four most populated countries in the region (China, India, Indonesia and Pakistan) all have a relatively similar level of income equality (Gini index between 0.32 and 0.42), while experiencing different homicide rates: from 1 per 100,000 in China to 7 per 100,00 in Pakistan. These rates remain very low in comparison to other regions, but show quite high variability within the region itself.

Europe

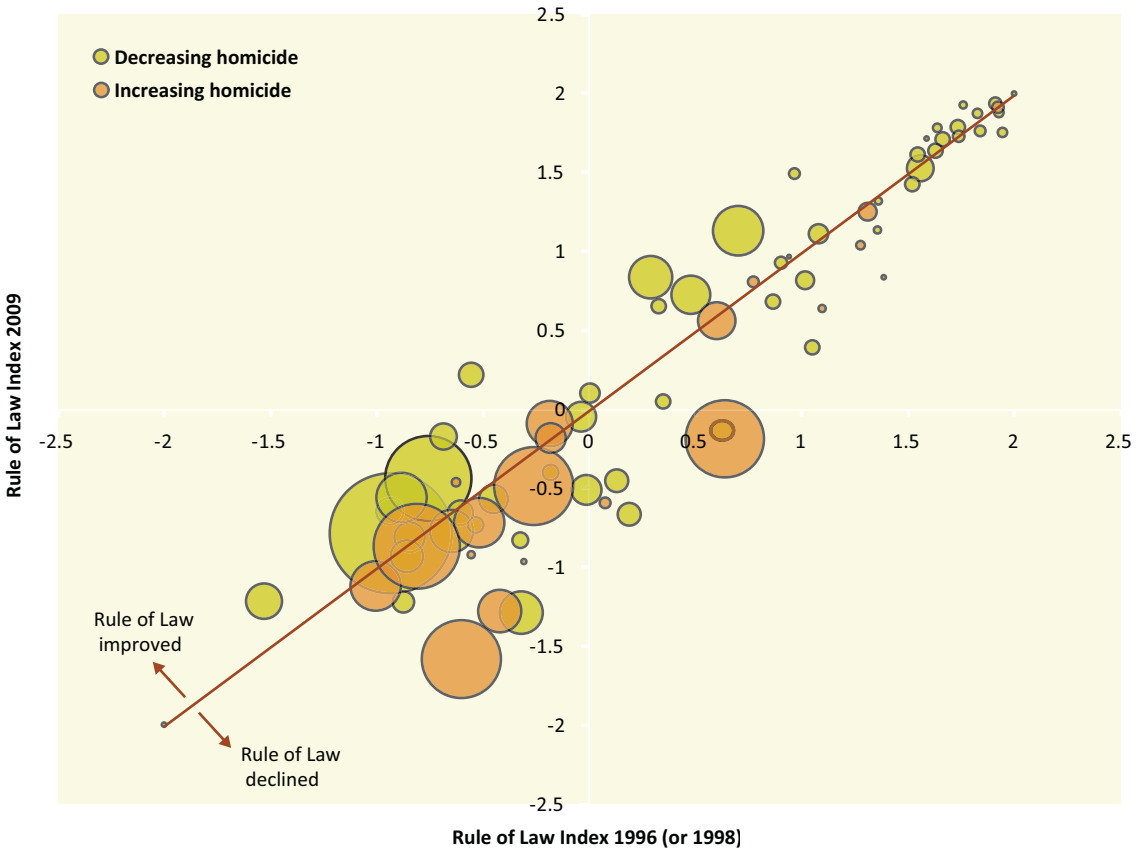
Higher homicide rates are associated with lower levels of human development in Europe and, as in the case of all regions except Asia, the highest homicide rates are observed in European countries with the highest levels of income inequality (figure 2.5).

Fig. 2.5: Homicide rates and development indicators, Europe (2010 or latest available year)



Source: UNODC Homicide Statistics (2011), UNDP Human Development Index and World Bank Data Gini Index. Bubble size is proportional to the percentage of homicides in countries with HDI or Gini value.

Fig. 2.6: Position of countries according to changes in Rule of Law Index and homicide rate, mid-1990s to 2009



Source: World Bank Data Rule of Law Index (1996 and 2009) and UNODC Homicide Statistics (2011). Colour of dots represent trend in homicides (decreasing or increasing homicides from 1995 to 2009). Bubble size is proportional to the change in homicide rate (from 1995 to 2009).

Homicide and the rule of law

Fundamental in establishing effective governance and thus a vital piece in the human development puzzle, the rule of law is the principle that everyone is accountable to laws that are publicly promulgated, equally enforced and independently adjudicated, and which are consistent with international human rights norms and standards. Long-term, sustainable economic and social development itself requires democratic governance rooted in the rule of law. For historical, political and economic reasons, respect for the rule of law varies significantly across countries. An investigation of the possible impact of such variation on homicide levels is of interest with a view to examining whether effective governance and strong rule of law is a prequisite for achieving declines in homicide rates.[6]

Measuring the effectiveness of the rule of law in a given country poses several methodological challenges[7] and for the purpose of this exercise the World Bank Rule of Law Index (ROLI)[8] has been used. Changes in the value of the ROLI between the mid-1990s and 2009 are presented in figure 2.6 together with the absolute change in the homicide rate in the same period.[9]

Figure 2.6 indicates that virtually all countries where there has been a strengthening of the rule of law (those above the diagonal line) have also experienced a decline in the homicide rate (green bub-

6 The principle of the rule of law is receiving growing attention because of its inherent importance in ensuring that human rights are promoted, as well as for its role in ensuring that development efforts are carried out on a sustainable basis (see United Nations Millennium Declaration and successive resolutions of the General Assembly. (A/RES/62/70, A/RES/63/128).

7 See The United Nations, *Rule of Law Indicators. Implementation guide and Project Tools* (2011).

8 The Rule of Law Indicator is one of the Worldwide Governance Indicators prepared by the World Bank. It "captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence." The indicator ranges between -2.5 and 2.5, with negative values corresponding to countries with a relatively weak rule of law: the higher the value, the greater the perception of the rule of law.

9 Countries with a population below 350,000 have been excluded because rates in these cases are less stable.

bles), while, conversely, almost all countries that have experienced an increase in homicide rates (red bubbles) have also experienced a weakening in the rule of law (being below the line). At the same time, most countries with increasing homicide rates are associated with a relatively weak rule of law (they are in the bottom left quarter of the chart), while, conversely, countries with a relatively strong rule of law (top-right quarter) have not generally experienced increasing homicide rates.[10]

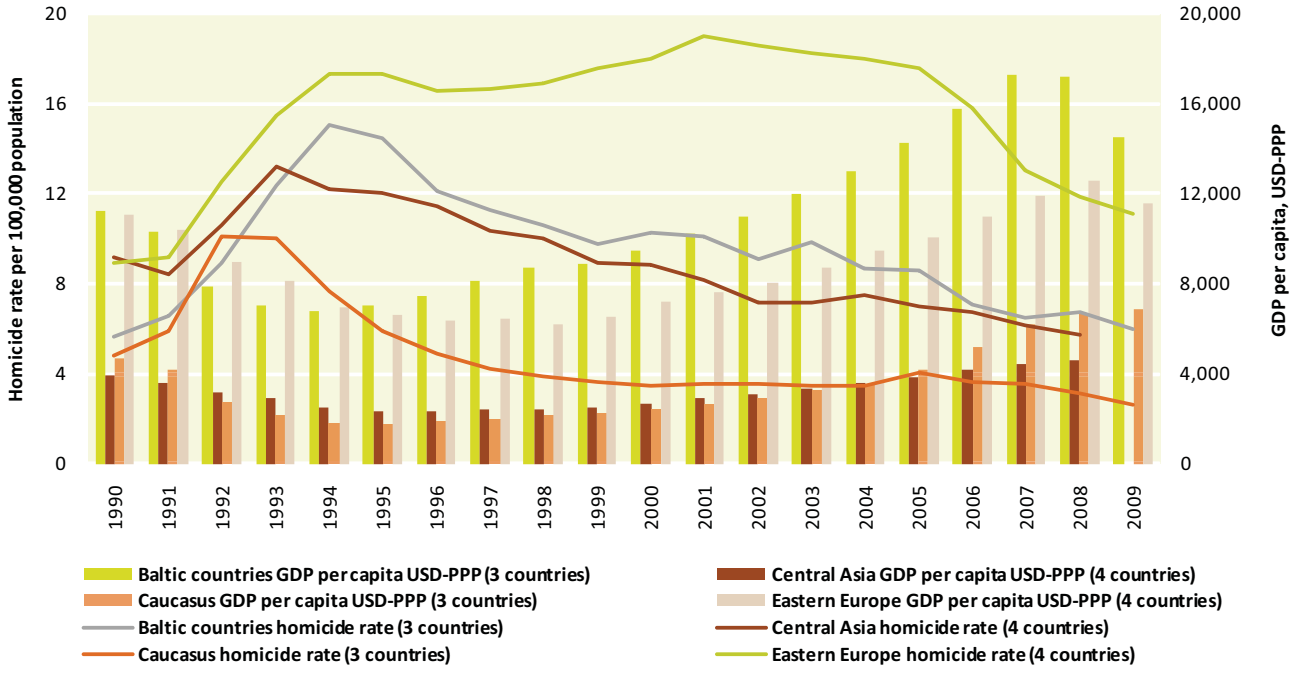
The biggest changes in homicide rates occur in countries with a relatively weak rule of law, which partly reflects that countries with a relatively weak rule of law also have higher homicide rates in the first place and therefore have greater potential for change. However, a small group of countries (Estonia, Latvia and Lithuania) that have shown historically strong rule of law, are also seen to experience relatively large decreases in homicide rate upon further improvement in the rule of law. Conversely, various countries in the Caribbean, Central and South America recorded a decline in an already weak rule of law, as measured by this indicator, and they have also experienced some of the greatest increases in homicide rates.

Economic trends and homicide

Another relevant way in which to look at the relationship between socio-economic development variables and homicide rates is through the analysis of changes in economic variables with changes in crime indicators.[11] For example, the relationship between GDP and homicides was particularly evident in the countries that were once part of the Soviet Union in the aftermath of its break up: the GDP decrease of the first half of the 1990s coincided with a surge in homicide levels, while the slow improvement in economic conditions was mirrored by a steady decrease in intentional killings (figure 2.7). This trend is visible in all those countries, though changes in homicides and GDP did not always happen simultaneously.

The average level of economic performance also seems to be associated with homicide trends in other contexts: homicide rates in South America decreased during periods of economic growth,

Fig. 2.7: Homicide rates and GDP/capita in countries that were part of the former Soviet Union (1990-2009)



Source: UNODC Homicide Statistics (2011) and World Bank Data (GDP).

10 In so far as the ROLI is also partly constructed from measures of crime and violence, the results may be influenced by a slight amount of autocorrelation of the ROLI with measured homicide rates. However, violent crime represents only one of several dozens of sub-indicators that are compiled for the ROLI. See: http://info.worldbank.org/governance/wgi/pdf/rl.pdf.

11 In such cases a relationship is apparent when changes in one variable have a "value and time relationship" with changes in another variable, e.g. they move in the same (or opposite) direction and they are simultaneous (or have a fixed time-lag). A major limitation in this case is the scarcity of country time series for several socio-economic variables, with the exception of GDP per capita, for which time series data are available for a large number of countries.

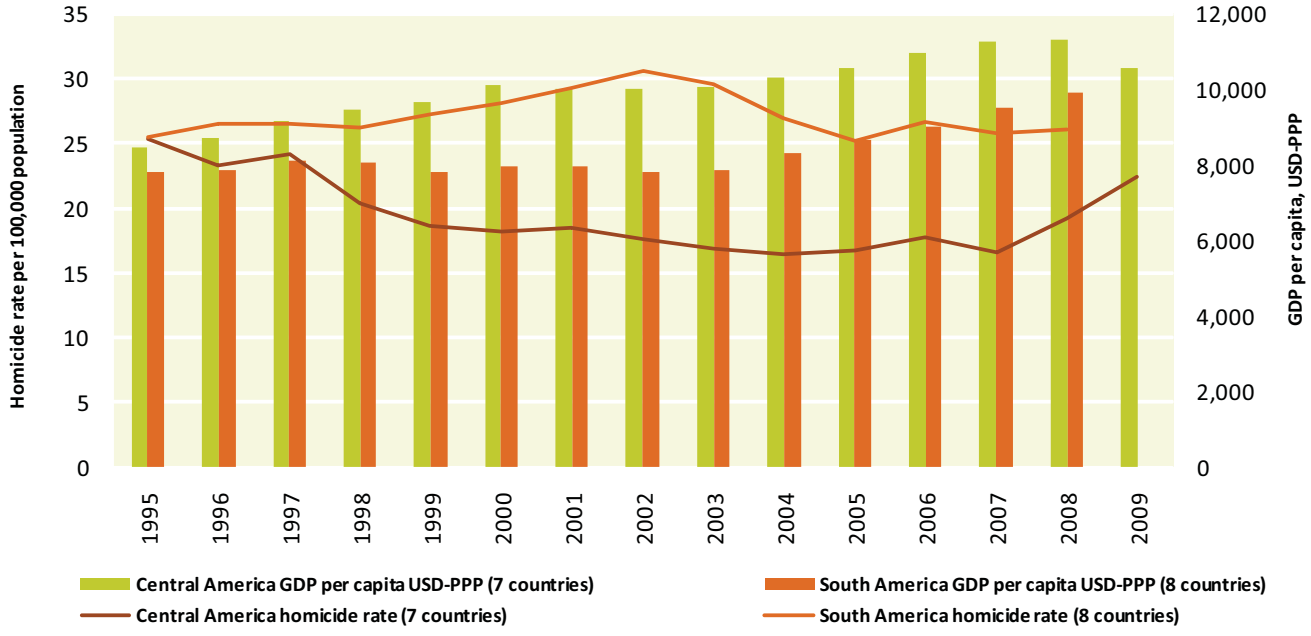
though they started to decrease somewhat earlier than GDP per capita began to rise (2002-2004). In Central America, the homicide rate declined slowly during a period of steady economic growth (the decade after 1995), while the sudden rise in homicides after 2007 came at a time when GDP growth also slowed down significantly (2008 and 2009) (figure 2.8).

The impact of economic crisis on crime

Besides considering long-term trends in socio-economic variables and their relationship with homicide, an additional research question is posed by the possible impact of short-term economic changes on crime and homicide. The strong link between crime and economic development can also be seen in the changing levels of homicides and property crime that followed the recent global economic crisis. A study carried out by UNODC on the impact of economic crisis on crime[12] found that, in a number of countries, homicide levels can be affected by sudden pronounced changes in the economy. Models developed to simulate and describe the changes in homicide levels over time incorporate statistically significant economic predictors in many cases, suggesting some overall association between economic factors and homicides. An explorative analysis of the search for a causality link between economic trends and homicides suggests that economic changes are associated with homicide rates, although sometimes with a time lag.

On a purely visual basis, it can be seen that changes in economic conditions corresponding to the financial crisis of 2008/2009 were associated with increases in homicide levels in a number of countries. In Jamaica, for example, a country with a generally high homicide rate and a high level of violence, some of the increases in homicide levels occurred during the economic crisis (figure 2.9). Increasing prices, measured as an increase in the Consumer Price Index (CPI), and a decline in GDP mark the 2008/2009 economic crisis. An increase in levels of homicide can be noted in the same period, with a relationship between percentage change in CPI, GDP and homicides being visibly evident over the whole time series, not only

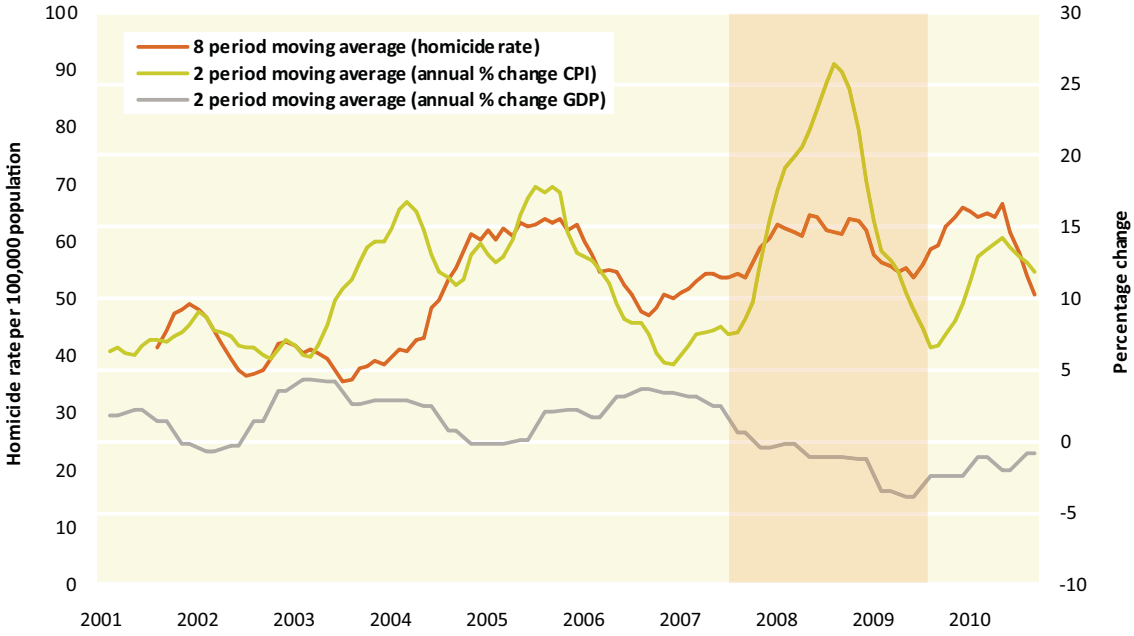
Fig. 2.8: Homicide rates and GDP/capita, Central and South America (1995-2009)



Source: UNODC Homicide Statistics (2011) and World Bank Data (GDP).

12 The study was conducted as part of the United Nations Global Pulse initiative to establish if a relationship exists between economic factors, particularly changes in economic conditions that occurred during the global financial crisis of 2008/2009, and changes in crime levels, including intentional homicides. High frequency (monthly) time series data from 15 countries or cities across the world were included in the study.

Fig. 2.9: Homicide rate and selected economic variables, Jamaica (2001-2010)



Source: Jamaica Police Constabulary and IMF IFS data base.

during the financial crisis. Similar trends in GDP, CPI and homicides can be identified in Costa Rica, another country affected by the financial crisis (figure 2.10). The recent financial crisis affected not only homicides but also other crimes, particularly property-related crimes: an example being the relationship between the unemployment rate, CPI and car theft found in Thailand (figure 2.11).

An analysis conducted through an ARIMA model found that in 8 out of 15 monitored countries changes in economic factors were associated with changes in various crime types.[13] In each case, the country was affected by a decrease in GDP during 2008/2009 and an increase in CPI or unemployment rate. This coincided with an increase in the type of crime examined, suggesting that economic stress may be associated with increases in violent crime as well as in property crime, depending on the specific country situations.

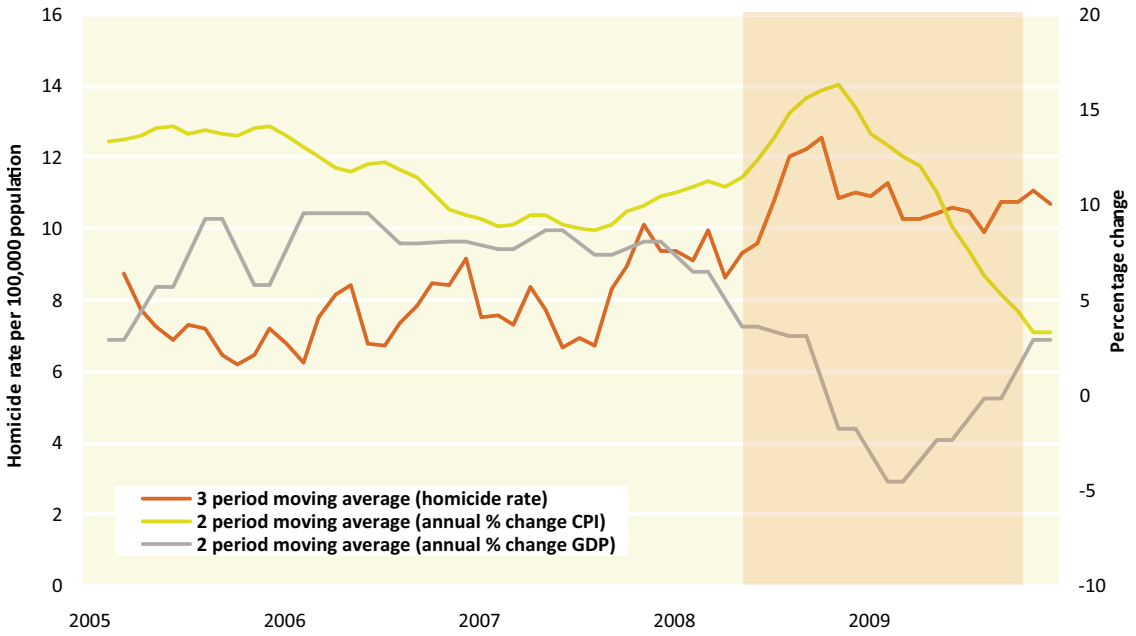
The economic and developmental factors analysed in this chapter are not alone in affecting the level of violence in a society. Homicide studies have shown that an important role is also played by other factors, including social norms and values, gender roles, abuse of alcohol and illicit drugs, drug trafficking, political violence and the presence of organized crime, while the State can also play a role, whether positive or negative, depending on the efficiency of its crime prevention policies. Thus, when looking at the relationship between homicide and development it should be understood that, while for the purposes of this chapter certain measures of development have been analysed in isolation from these other factors, development factors alone are not sufficient to account for variations in homicide rates between countries.

Nor do they take into account that the relationship between homicide and development is not necessarily a unidirectional one. By dint of its sheer extremity, the impact of lethal violence on social, human and even economic development can hardly be a positive one, and a convincing case can be made that homicide has an impact far beyond the immediate and direct loss of life that it engenders. When the quantity and frequency of homicides surpass a certain threshold, States can become caught in a "violence trap",[14] resulting in

13 The analytical approach adopted was to develop (seasonal) autoregressive integrated moving average (ARIMA) models, extended with the possible inclusion of statistically significant economic predictors. The ARIMA methodology generates a model that describes the time series in homicides based on past observations in the homicide series itself as well as past random errors. The model is extended to allow for current and past observations in economic time series to be included in the model if they significantly contribute to the ability of the model to describe the variability of monthly fluctuations in homicides.

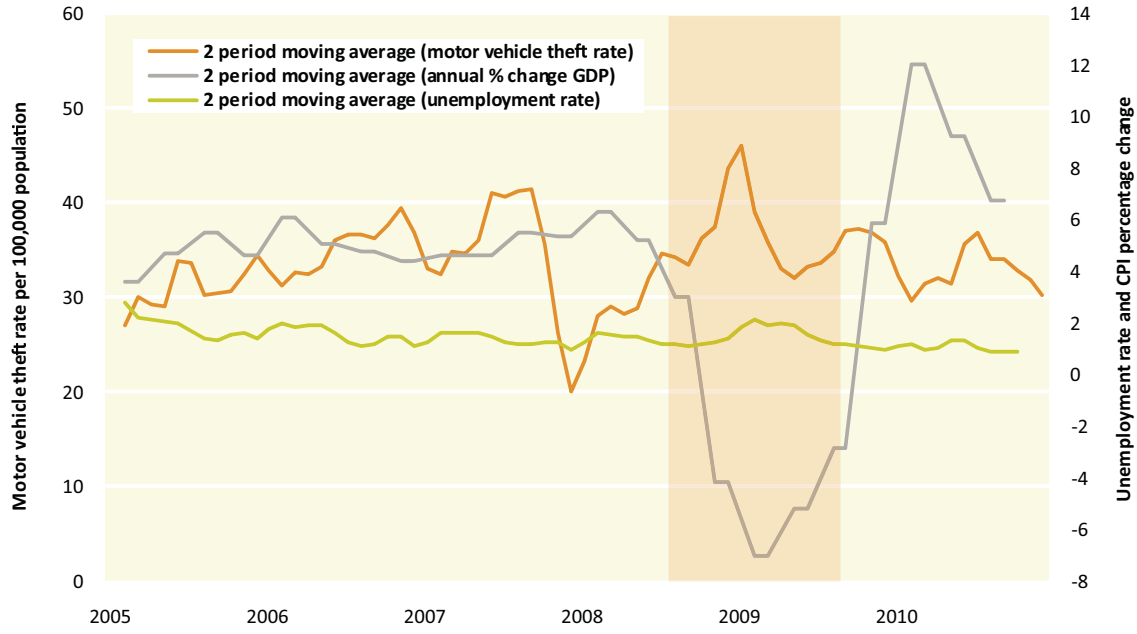
14 United Nations General Assembly Report of the Secretary-General, *Promoting development through the reduction and prevention of armed violence* (2009).

Fig. 2.10: Homicide rate and selected economic variables, Costa Rica (2005-2009)



Source: Observatorio de la Violencia of Costa Rica and IMF IFS database.

Fig. 2.11: Motor vehicle theft and selected economic variables, Thailand (2005-2010)



Source: Royal Thai Police and IMF IFS database.

widespread fear and insecurity and a loss of trust in State institutions, which can trigger the shrinking of economic activities and even foreign investment. Contexts such as these come under detailed scrutiny in the following chapter, *Firearms, trafficking and organized crime.*

3. FIREARMS, TRAFFICKING AND ORGANIZED CRIME

The impact of firearm availability on homicide, the interconnections between the use of firearms to commit homicide and the perpetration of violence by "gangs" and organized criminal groups are often studied separately. In this chapter they are brought together with a view to highlighting cross-national and subregional connections between levels of violence, firearms and the links between violence, organized crime and the illicit markets in drugs. The latter is explored here in depth with particular reference to the situation in Central America.

Use of weapons in homicide

Not all homicides involve a weapon. The international classification of disease coding system (ICD-10), for example, in its category of death by assault (X85-Y09) includes only 6 codes out of 25 that may commonly be thought of as weapons (handgun, rifle/shotgun/large firearm, unspecified firearm, explosive material, sharp object and blunt object). Despite that and the wide range of possible "non-weapon" causes of death by assault recognized by international classifications,[1] available data suggest that weapons – particularly firearms – play a very significant role in homicide.

Calculations from UNODC homicide statistics based on 108 countries (covering just over 50 per cent of the world's homicides) suggest that around 199,000 homicides of the estimated 468,000 total homicides were committed in 2010 by firearm, representing a share of 42 per cent.[2]

Like homicide itself, the use of firearms in homicide is not equally distributed around the world. Data based on criminal justice and public health sources provide different breakdowns of homicide mechanism committed in different regions. Using public health sources, it can be estimated that 74 per cent of homicides are committed by firearm in the Americas (based on 30 countries), as compared to 21 per cent in Europe (based on 32 countries). In contrast, sharp objects such as knives account for a greater proportion of violent deaths in European countries (36 per cent) than the Americas (16 per cent), while the use of any weapon accounts for 90 per cent of homicides in the Americas but for only 57 per cent of homicides in Europe (figure 3.1).

As discussed in this and chapter 5, this pattern is likely to be closely tied to the different distribution of homicide typologies in the Americas and Europe; a larger proportion of homicides in the Americas being linked to organized crime and gangs as compared to a large proportion of homicides in Europe being linked to intimate partner/family-related causes. In particular, the 43 per cent of homicides linked to "other" mechanisms in Europe is largely reflective of assault by bodily force, blunt objects and strangulation, which are often seen in intimate partner or family-related homicide.[3]

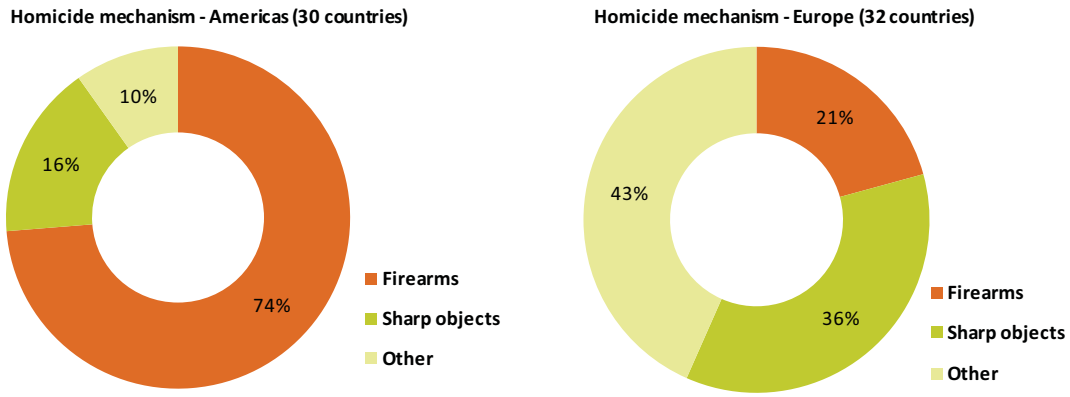
More detailed data from criminal justice sources confirm the different patterns in the Americas and

1 The other "non-weapon" ICD-10 codes for death by assault include assault by drugs, medicaments, biological substances, corrosive substances, pesticides, gases and vapours, chemicals, drowning and submersion, smoke, fire and flames, steam, hot vapours and hot objects, pushing from a high place, pushing before a moving object, bodily force, deliberately hitting or running over with a motor vehicle, and by neglect or abandonment. Source: WHO, *International Classification of Diseases* (ICD-10) (2007).

2 Based on country data related to 2010 or latest available year, this estimate, based largely on criminal justice data, falls within the range of 196,000 to 229,000, previously estimated and published as the global burden of non-conflict -related firearm mortality from WHO public health sources. Source: Richmond, T.S., Cheney, R., Schwab, C.W, *The global burden of non-conflict-related firearm mortality, Injury Prevention* (2005).

3 Aldridge M. and Browne, K.D., *Perpetrators of Spousal Homicide*, Trauma Violence Abuse (2003).

Fig. 3.1: Homicide mechanism, the Americas and Europe (2008 or latest available year)

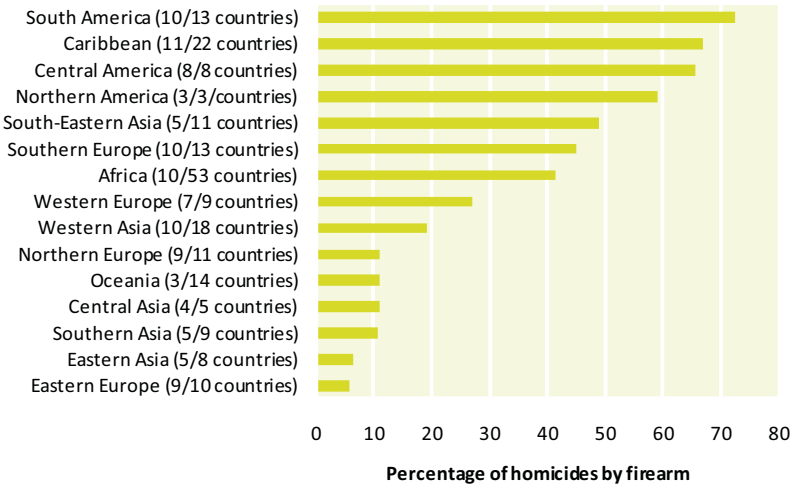


Source: Global Burden of Injuries, *Injury Mortality Data Collection* (2011).

Europe and show that the percentage of homicides by firearm also varies significantly at subregional level. Figure 3.2 demonstrates that the average percentage of homicides committed by firearm varies from over 70 per cent of total homicides in South America, to under 6 per cent of total homicides in Eastern Europe, with the four subregions with the highest percentage of homicides by firearm all located in the Americas.

Disaggregating data on victims killed with different weapons by sex and age reveals further interesting patterns. Murders of young males aged 10 to 34, by five-year age groups, in the Americas, Asia and Europe show a markedly different distribution by region and subregion.

Fig. 3.2: Percentage of homicides by firearm in subregions (2010 or latest available year)



Source: UNODC Homicide Statistics (2011).

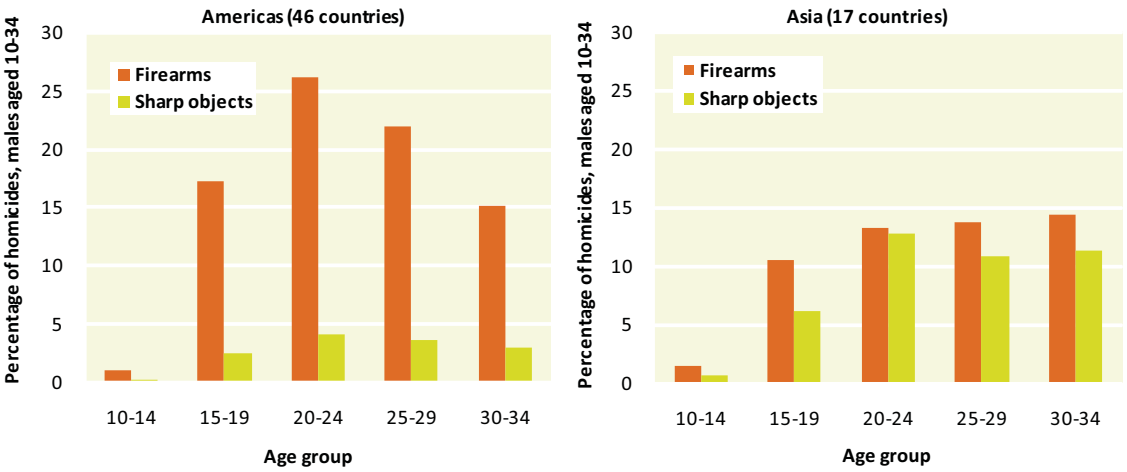
Figure 3.3 demonstrates that whilst the proportion of homicides of males in all age groups from 15 to 34 killed by sharp objects in the Americas stays reasonably constant, and low, the proportion of firearm deaths is significantly higher and concentrated in the 20 to 29 age range. In the 46 countries in the Americas for which data are available, over 25 per cent of all male homicides in the age groups between 10 and 34 correspond to males aged 20-24 killed by firearm. Over the whole age range, a male in the Americas is around six times more likely to be killed by a firearm than a knife. In contrast, in 17 countries in Asia, firearm and sharp object homicides are much more equally distributed in the 15 to 34 age group: while a slightly higher proportion of violent deaths are caused by firearm in each group, a male in the countries examined in Asia is almost as likely to be killed by a knife as a firearm.

In Europe, the overall pattern is more similar to that of Asia than of the Americas: violent deaths in males aged 10 to 34 are more equally distributed between firearm and sharp object deaths (figure 3.4). Overall, the proportion of deaths in the 15-19 age group in countries for which data are available in Europe is also somewhat lower than for the Americas and Asia.

It is interesting to note that sharp objects are predominantly the cause of violent deaths in Northern and Western Europe in contrast to Southern and Eastern Europe, where deaths by firearm and sharp objects are equally distributed.

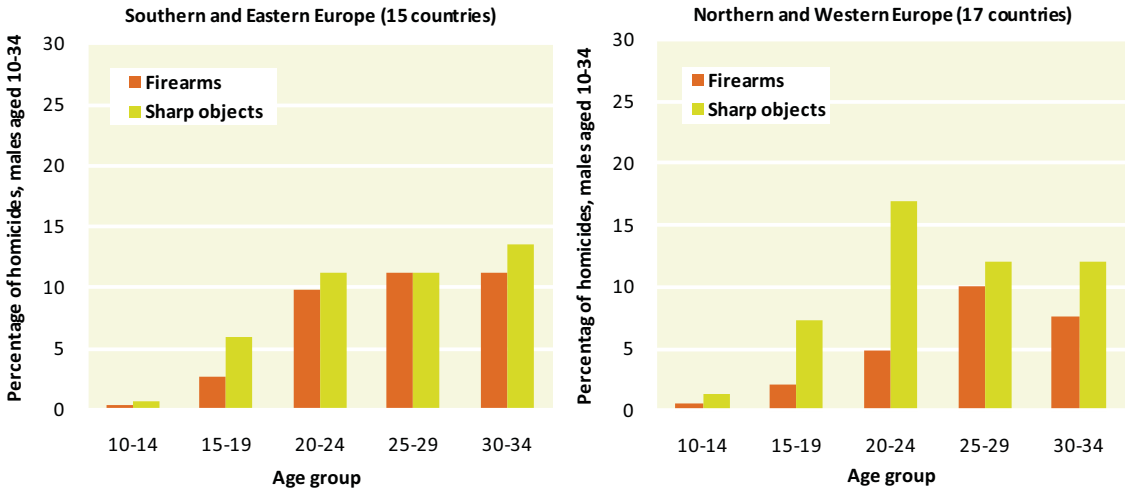
Such different modes of committing homicide demonstrate the qualitatively different challenges

Fig. 3.3: Distribution of firearm and sharp object homicides, young males by age, the Americas and Asia (2008 or latest available year)



Source: Global Burden of Injuries, *Injury Mortality Data Collection* (2011). Bars represent percentage distribution of male homicides in the 10-34 age group.

Fig. 3.4: Distribution of firearm and sharp object homicides, young males by age, Europe, (2008 or latest available year)



Source: Global Burden of Injuries, *Injury Mortality Data Collection* (2011). Bars represent percentage distribution of male homicides in the 10-34 age group.

when it comes to preventing and reducing violence in different regions. Some crime prevention principles—such as the need to address the root causes of violence through interventions on parenting, life skills, access to alcohol, modifying public environments, and addressing cultural norms, deprivation and inequality—are clearly common. Responding, however, to the predominant use of firearms in homicide may require different policy and practical approaches to that of knife use, including control legislation and measures that address access to firearms and underlying reasons for gun ownership (see box on firearm legislation).

Firearm availability and homicide

Patterns related to homicides committed with firearms raise the natural question of the relationship, or non-relationship, between firearm availability and levels of homicide, and whether increased firearm availability is associated with increased overall levels of homicide, in particular. From a theoretical perspective, no dominant theory exists that explains the relationship between gun ownership and homicide, or indeed crime in general, as guns can confer both power to a potential aggressor and to a potential victim seeking to resist aggression.[4]

4 Kleck G., *Targeting guns: Firearms and their Control* (1997).

Knife-carrying in young people

Young people may begin knife-carrying as a result of victimization or fear of violence or bullying, due to involvement in street gangs, or engagement in other forms of delinquency and risky behaviour. Carrying a weapon may give young people the courage to go to places that they may otherwise avoid, or embolden them to fight. Indeed, knife-carrying in young people is associated with increased involvement in physical fighting and a greater likelihood of being seriously injured among those who do fight. Such a wide range of factors can increase the risk of violence among young people and violence using knives.[1]

Knives are freely available and restricting the ownership and carrying of knives is more difficult than restricting firearms. There are no large-scale data on knife carrying and it is not possible to estimate the extent of knife availability among the population. As an illustrative example, a study of 16 to 20-year-old school attendees in Switzerland showed weapon-carrying among 20 per cent of men and 6 per cent of women. Knives accounted for 11.5 per cent and 1.5 per cent of those, respectively, and of those who carried a knife, 8 per cent of men and 4 per cent of women reported using it in a fight.[2] Meanwhile, levels of knife crime amongst young people in Northern European countries such as the United Kingdom have made headlines in recent years.[3]

Deaths by sharp object are especially noticeable amongst the 15-19 and 20-24 age groups in countries of Northern and Western Europe (figure 3.4), where the proportion of knife deaths, in particular, is some three times greater than firearm deaths for the 20-24 age group.

1. WHO, *European Report on Preventing Violence and Knife Crime among Young People* (2010).
2. Ibid.
3. In England and Wales, for example, hospital admissions for assault by a knife or sharp instrument increased by 34 per cent between 2002 and 2007 although they declined by 14 per cent by 2008/2009 (ibid.).

On the one hand, the availability of guns can increase the level of a crime or it can make it more lethal: the "facilitation" hypothesis suggests that having access to a gun can empower potential offenders who, without a gun, would not commit a crime such as assault or robbery, and accessibility to a gun can transform "simple" family or community disputes into tragedies. The "weapon instrumentality" hypothesis suggests that, besides raising the crime level, gun availability increases the likelihood of a crime having a violent outcome. For example, use of a gun during an assault or robbery will increase the likelihood of death or serious injury because it provides perpetrators with the opportunity to inflict injury or death at long distances and it makes it easier to assault multiple victims than the use of other weapons such as a knife or blunt object.[5]

On the other hand, a "deterrence" hypothesis suggests that gun availability can disrupt or deter criminal aggression and prevent the completion of a crime by neutralizing the power of an armed perpetrator or by shifting the balance of power in favour of the victim when confronted by an unarmed perpetrator.[6] An axiom of this hypothesis is that gun availability does not represent a major driving force for offenders per se: they are already determined to commit a crime and they get hold

Firearm legislation

Comprehensive firearm control legislation provides a framework to regulate "objects" (state-owned firearms and firearms in the hands of civilians), "access to firearms" (establishing terms, conditions, restrictions and requirements for the legitimate possession and use of firearms), and "users of firearms" (manufacturers, dealers, gunsmiths, brokers, owners, users, etc.).

Although most countries have a normative framework addressing most of the above indicated areas, firearm control legislation can be highly varied from country to country. Firearm ownership often requires a licence or authorisation, issued by a competent authority, and subject to a set of criteria and requirements, including firearm training, competency certificates or criminal background checks, etc.

National legislations are also extremely varied as far as other aspects of the firearms control regime are concerned, such as record keeping, marking and transfer regulations. Most countries have established a licensing system for the manufacturing and transfer of firearms, but these laws are often outdated, inadequate or lack the necessary practical and administrative procedures to be effectively implemented.

In addition to any national legislation on private firearm purchase and ownership, States parties to the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition, supplementing the United Nations Convention against Transnational Organized Crime, are obliged to establish strict transfer control measures and enforcement provisions, and to introduce as criminal offences, the intentional illicit manufacturing and trafficking of firearms, their parts and components and ammunition, as well as falsifying or illicitly obliterating, removing or altering the marking(s) on firearms.

Identifying the effect of legislation on access to firearms requires some caution: stricter legislation may not in fact reduce firearm access in the absence of enforcement.[1] Often, it is the lack of adequate human and financial resources and technical capacities that can seriously hamper the effective implementation of a comprehensive firearms control regime, and which needs to be taken into account when planning to amend or modernize national firearms legislation.

1. Leigh, A. and Neill, C., *Do gun buybacks save lives? Evidence from panel data*, American Law and Economics Review (2010).

5. Cook P. J., *The technology of personal violence*, Crime and Justice (1991).
6. Kleck G., *The Impact of gun control and gun ownership levels on violence rates*, Journal of Quantitative Criminology (1993).

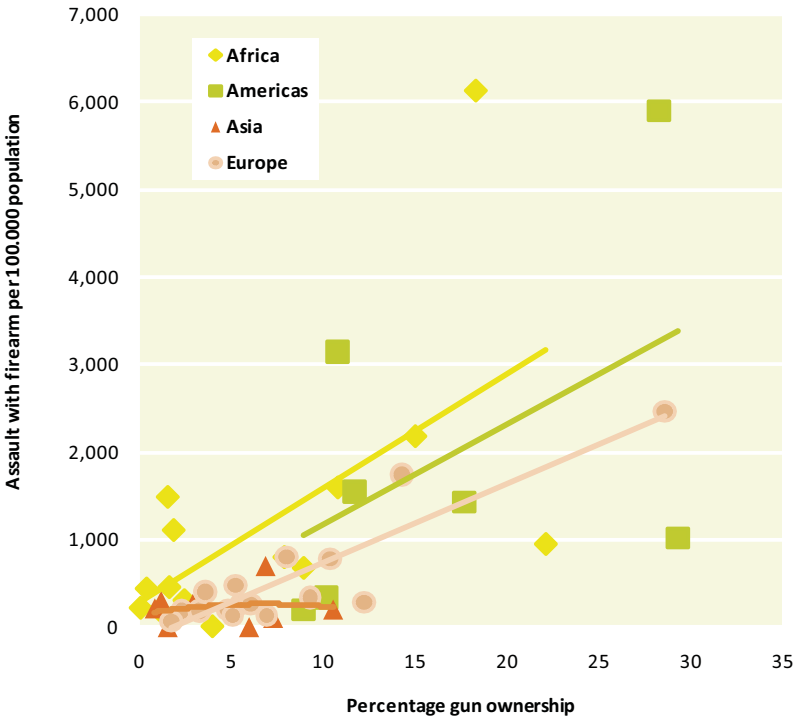
of guns, through well established and hidden channels, to achieve their criminal goals.

The provision of reliable quantitative support to either of these hypotheses is one of the most difficult areas of homicide research, with a number of methodological problems, including: identifying reliable measures of gun ownership, availability, accessibility and use; the need to differentiate between different owners of guns (households, individuals, affiliates to organized crime groups or gangs, etc.) and different type of guns (handguns, shotguns, rifles, etc.); accounting for correlations that arise between firearm availability and homicide rates that may be caused by a third factor (such as a rise in homicides due to increased presence of organized crime); the difficulty in establishing causal relationships between changes in gun availability and corresponding changes in homicide levels (what comes first?); the difficulty of taking into account different legislative frameworks on firearms and state capacity to enforce them when conducting comparative studies.[7]

Notwithstanding such challenges, a significant body of literature tends to suggest that firearm availability predominantly represents a risk factor rather than a protective factor for homicide. In particular, a number of quantitative studies tend towards demonstrating a firearm prevalence-homicide association.[8]

In figure 3.5, analysis of data from 45 cities and urban areas located in developing countries or in countries in transition collected between 1996 and 2008 shows that gun availability (as asked about in victimization surveys) is significantly associated with rates of assault with firearms:[9] the more individuals in possession of weapons, the more frequent armed assaults take place (similar associations were found between percentage of gun ownership and prevalence of assault, robbery and gun robbery rates). Due to lack of data on homicide rates in the same cities, it is not possible to directly relate gun availability with murders. However, it can be assumed that assaults and robberies that occur in cities with high levels of gun availability may be more serious or deadlier than assaults or robberies

Fig. 3.5: Gun ownership and assault rate by firearm in 45 cities/ urban areas, selected countries (1996-2008)



Source: ICVS and UNODC *Data for Africa* surveys.

carried out in cities with lower levels of gun availability.[10] These data do not prove a causal relationship between firearm availability and gun assaults (in theory, higher gun ownership could also be a consequence of higher assault rates, i.e. a defensive strategy of citizens to deter potential aggressors). At the very least, however, the relationship between gun availability and violent crime, including homicides, does appear to be something of a vicious circle.

The relationship between overall homicide rates and the proportion of homicides committed by firearm is shown in figure 3.6 where the data again emphasize strong regional patterns. Countries in the Americas tend to show a strong correlation between homicide rates and the percentage of homicides by firearm. In contrast, in countries in Asia, Europe and Oceania there appears to be a looser relationship between homicide level and percentage of killings perpetrated with a gun: homicide rates tend to cluster at under 10 per 100,000 population but they show a broader distribution in terms of percentage of homicides by firearms, which ranges from values close to zero up to 70 per cent. (figure 3.6 does not include coun-

7 Kleck G., *Measures of Gun Ownership Levels for Macro-Level Crime and Violence Research*, Journal of Research in Crime and Delinquency (2004).

8 Hepburn, L.M., Hemenway, D., *Firearm availability and homicide: A review of the literature*, Aggression and Violent Behaviour (2004).

9 Data collected through the International Crime Victimization Survey (ICVS) program and UNODC Program "Data for Africa" using the same standardized core questionnaire.

10 Altheimer I., *An Exploratory Analysis of Guns and Violent Crime in a Cross-National Sample of Cities*, Southwest Journal of Criminal Justice (2010).

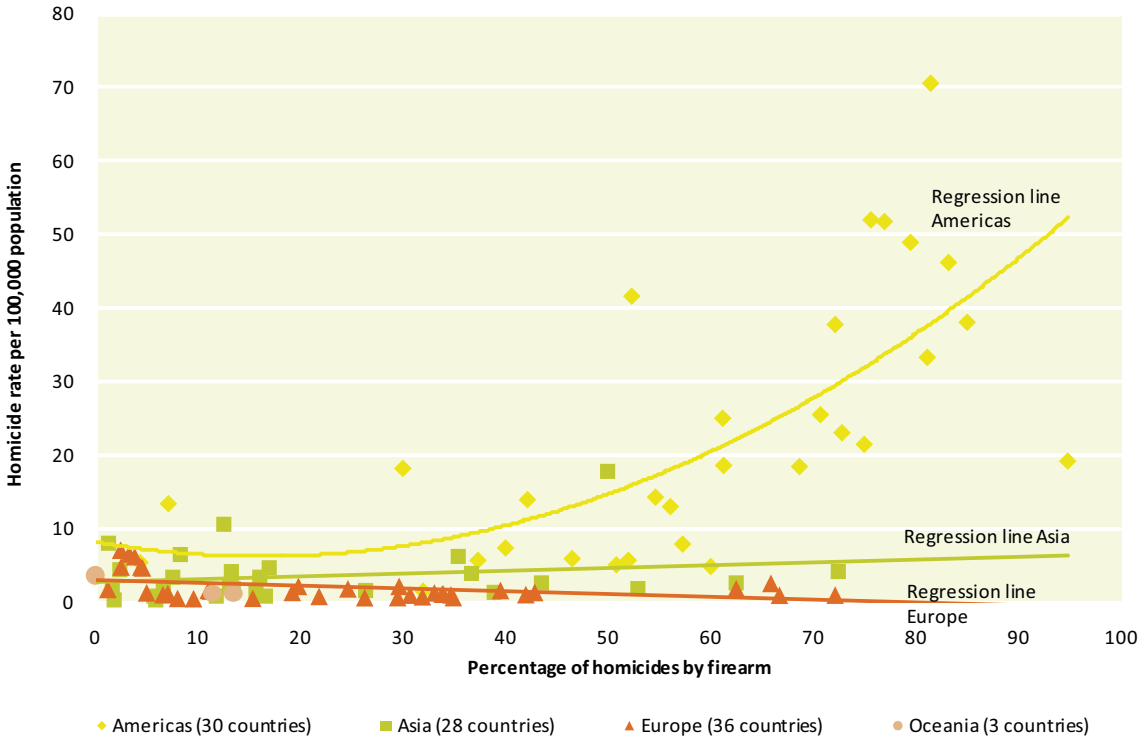
tries in Africa due to data availability limitations in this region).

It should be stressed that the percentage of homicides by firearm is the compound outcome of at least three aspects: availability of guns; preference of crime perpetrators to use guns in crime; and their willingness to inflict fatal injury.[11] In addition, from a global perspective, the significant order of magnitude difference between global estimates of civilian firearm ownership (hundreds of millions, according to estimates by Small Arms Survey, 2007)[12] and annual firearm homicides (hundreds of thousands) indicates that the majority of civilian firearms are not misused and are owned for legitimate purposes.

Nonetheless, the high overall homicide rates combined with a very high proportion (more than 60 per cent) of homicides by firearm seen in regions such as Central and South America shows that, depending on the context, the availability of firearms and therefore easy access to guns can play a significant role in influencing homicide rates. In such contexts, a certain proportion of civilian firearms (utilized by a certain proportion of the population) may be considered a major "enabler" of homicide events.

Examination of homicide trend data disaggregated by homicide by firearm and homicide by other means provides a further perspective on the role of firearms in driving overall homicide rates. As figure 3.7 shows, changes in homicide rates in the various subregions of the Americas are mainly driven by firearm homicides, while the rates of homicides perpetrated by other means remain rather constant in the period examined: the surge in homicides in Central America over the last three years has been entirely driven by firearm homicides, and changes in homicide rates in the Caribbean and South America are also explained by trends in firearm homicides, as is the slow decline in homicides in Northern America.

Fig. 3.6: Homicide rates and percentage of homicides by firearm, selected countries (2010 or latest available year)

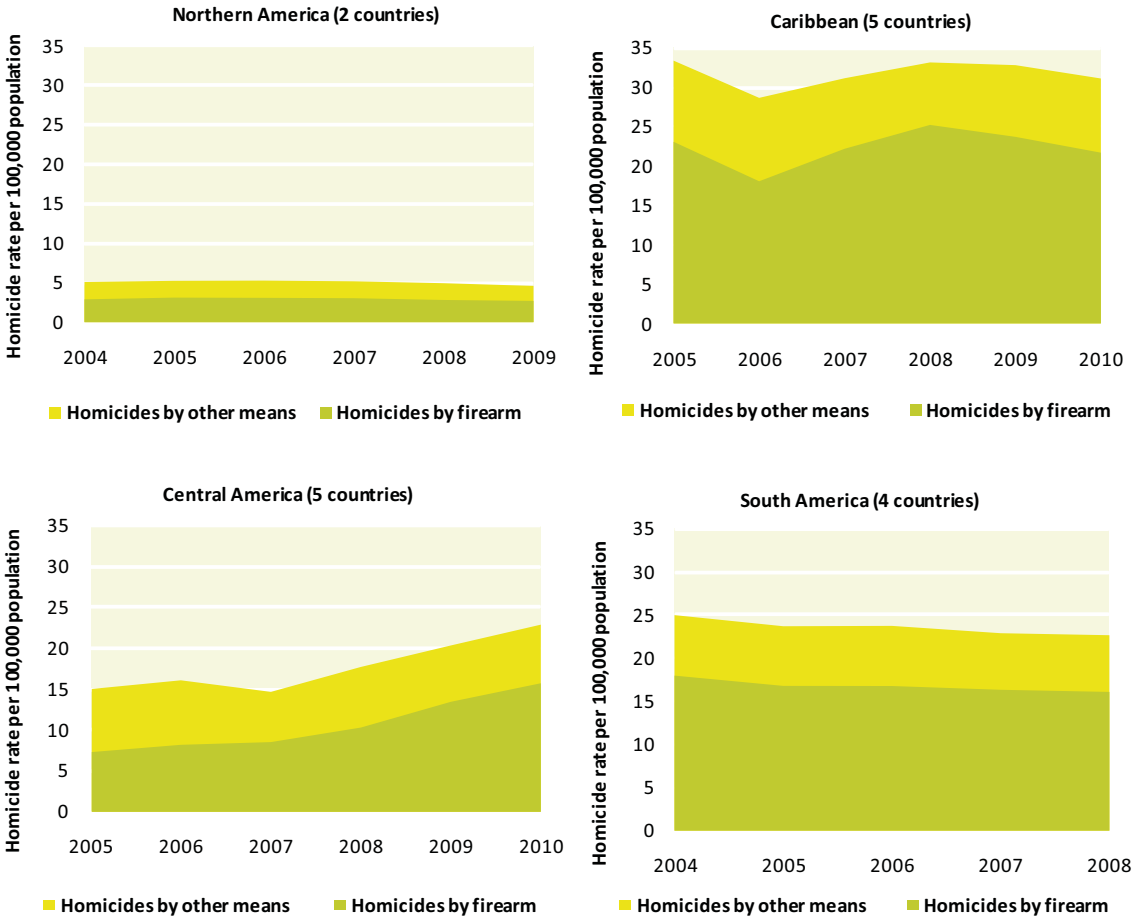


Source: UNODC Homicide Statistics (2011).

11 Kleck G., *City-Level Characteristics and Individual Handgun Ownership*, journal of Contemporary Criminal Justice (2009).

12 According to this estimate approximately 650 million small firearms are in civilian hands, against around 200 million military small arms and about 25 million among law enforcement agencies in government-owned inventories. See Small Arms Survey (2007).

Fig. 3.7: Firearm and non-firearm homicide rates, the Americas (latest available time period)



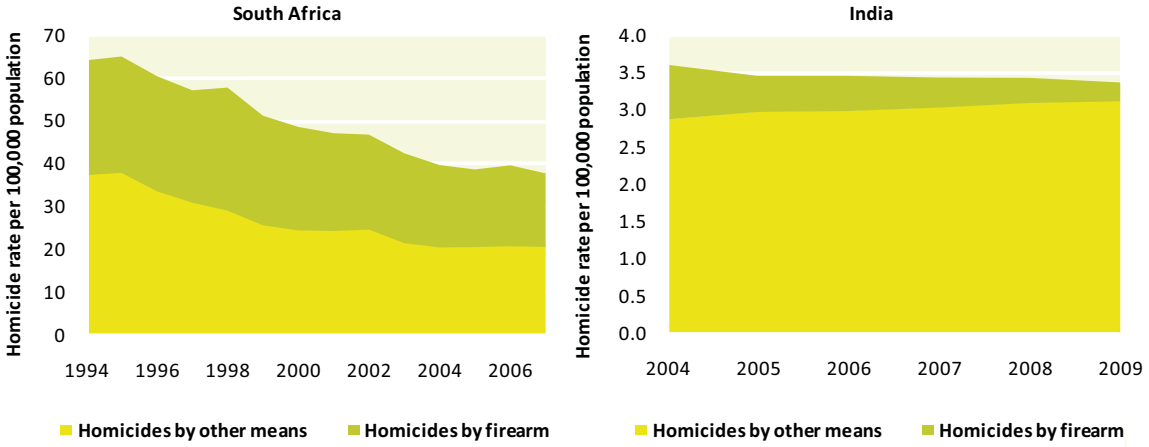
Source: UNODC Homicide Statistics (2011).

If firearms appear to be a major enabling factor influencing homicide trends in the Americas, the pattern can be quite different in other parts of the world: recent patterns in South Africa and India are two interesting examples.

In South Africa, homicide rates have shown a significant decrease in recent years (from over 60 per 100,000 population in 1994 to under 40 per 100,000 in 2007): a decrease related to a decline in both firearm and non-firearm homicides. During the same period, the proportion of homicides committed by firearm stayed within the range of 41 to 50 per cent of total homicides, stabilising at around 45 per cent in 2007. The homicide drop does not seem to be driven by any specific reduction in gun violence per se, rather, underlying social changes may have resulted in lower overall homicides, both by firearm and all other means.

The experience of India represents another interesting typology: the homicide rate in the Indian subcontinent is relatively low and has remained rather stable over the last five years. Although the percentage of homicides committed with a firearm was around 20 per cent in 2004, five years later it was at less than 8 per cent. Taking into account that overall homicide rates have remained almost unchanged, this means that the decline in firearm homicides has not had a significant impact on the overall homicide level, as slightly more homicides have been committed with means other than firearms.

Fig. 3.8: Firearm and non-firearm homicide rates, South Africa and India (latest available time period)



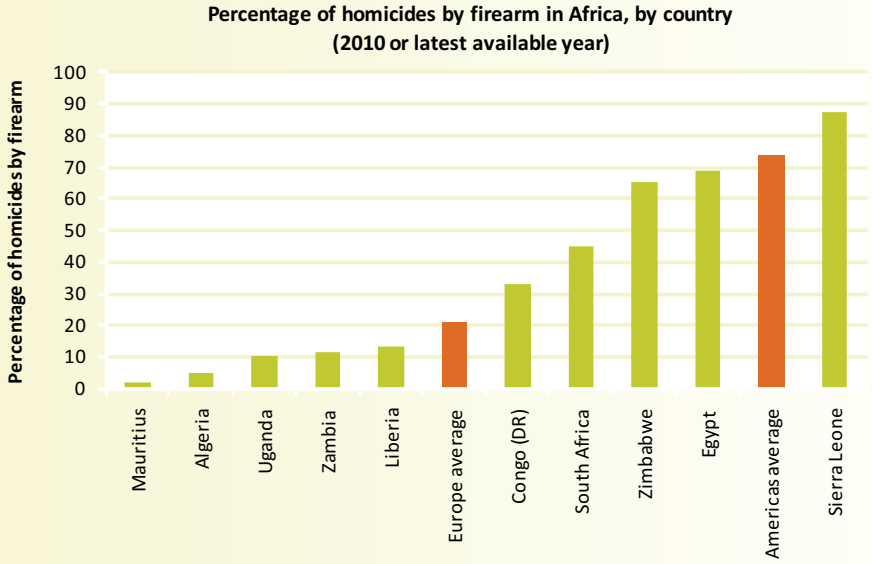
Source: UNODC Homicide Statistics (2011).

Firearm homicide in countries in Africa

In Africa, there are large gaps in the availability and quality of data on the total number of homicides in general and the gaps are even wider for the number of homicides by firearm. Accurate data on homicides require either effective cause of death registration data or police homicide statistics with sufficiently disaggregated detail. As discussed in the introduction to this study, very few countries in Africa produce accurate data from either source or make them available at the international level.

Nevertheless, looking at percentages of firearm deaths can be less demanding because, even if police homicide statistics represent only a proportion of the overall violent deaths in a country, if there is no particular bias in the deaths recorded the percentage of homicides by firearm may be representative of the national picture. This is an assumption that cannot yet be tested but, despite these limitations, it can be useful to consider these data.

The figure is noticeable for the wide range in percentages of homicide by firearm in those African countries for which data are available, with African countries falling either side of and in between the Europe and Americas average for percentage homicide by firearm. In particular, there appears to be no clear relationship between recent conflict and percentage of homicide by firearm. While the percentage is reported by the police as almost 90 per cent in Sierra Leone, for example, Liberia shows a much lower percentage of homicides by firearm, at around 10 per cent.



Source: UNODC Homicide Statistics (2011) and Global Burden of Injuries, *Injury Mortality Data Collection* (2011).

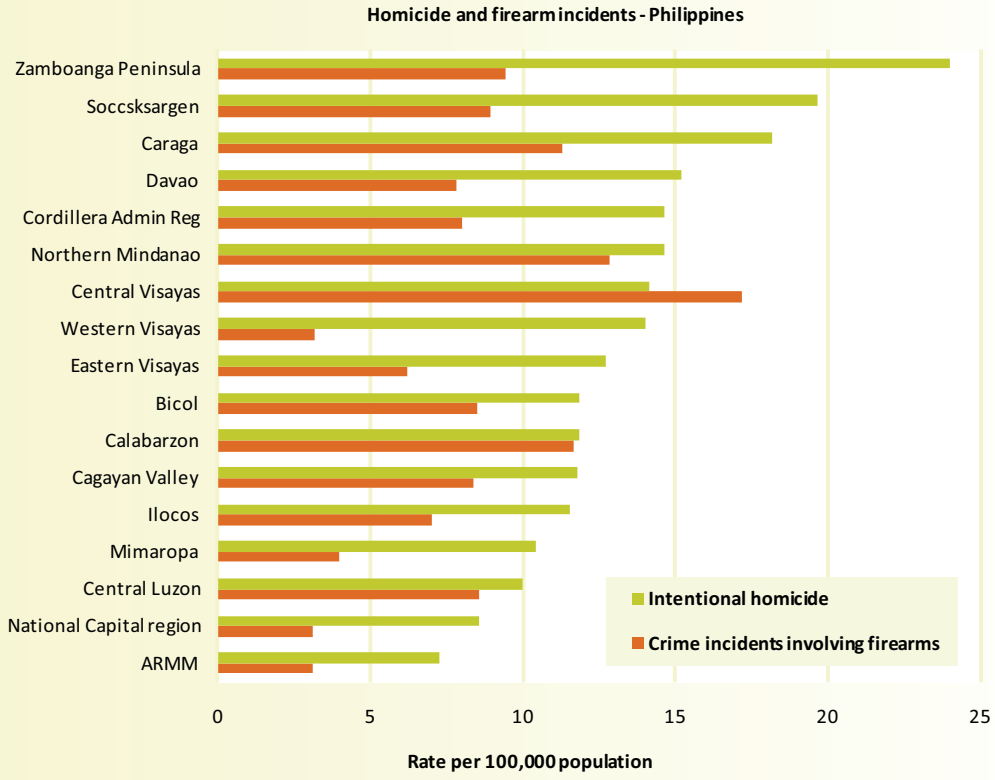
Firearms and homicide in the Philippines

In the Philippines it is illegal to own or possess firearms, including ammunition, without the necessary license or permit,[1] yet official estimates place the number of firearms at some 360,000 registered and approximately 1.1 million "loose" (never registered or with expired licences) firearms.[2]

Philippines National Police (PNP) records show that from 2004 to 2009, the proliferation of loose firearms increased by 46 per cent, a figure that is close to the 47 per cent increase in recorded crimes using firearms in the same period.[3] During a gun ban enforced for the election period during the first six months of 2010, the PNP claimed a 67 per cent drop in index crime (murder, homicide, physical injury, robbery, theft and rape) compared with the equivalent period in 2009, and linked this with the gun ban.

The figure below represents the relationship between intentional homicide and crime incidents involving firearms in the different provinces of the Philippines during the gun ban between January and June 2006. While a clear pattern cannot be seen between the two variables in all provinces, some provinces show low homicide rates associated with the lowest rate of crimes involving firearms.

PNP data available on the firearms used in such incidents from January to September 2010 show only 40 weapons out of 6,075 used in the recorded offences were identified as licensed, with the rest recorded as 'loose' firearms.[4]



Source: Philippines National Police.

1 House of Representatives, Republic of the Philippines, *Fifteenth Congress, First Regular Session, House Bill No. 2898, Explanatory Note* (2010).

2 United Nations Crime Prevention and Criminal Justice Division, *Analysis of Country Responses. United Nations International Study on Firearm Regulation*, 1999 and House of Representatives, Republic of the Philippines. *Fifteenth Congress, First Regular Session, House Bill No. 2898, Explanatory Note* (2010).

3 Philippines National Police, *Statistical Report on crime incidents involving the use of firearms. 01 January to 30 September 2010* (2010).

4 House of Representatives, Republic of the Philippines, *Fifteenth Congress, First Regular Session, House Bill No. 2898* (2010).

Organized crime and gang-related homicide

Among the numerous contexts in which homicides are committed, those perpetrated under the auspices of organized crime are among the most alarming. There are several reasons why organized criminal groups kill people: while committing other crimes such as robberies or kidnappings; the elimination of members of rival groups in turf wars relating to the control of illicit dealings; the assassination of state officials, such as police officers or judges, in their struggle with the authorities; or even the slaughter of civilians in order to intimidate the population or mark their territory.

The primary interest of organized criminal groups is to profit from a wide range of illicit activities (such as illicit drug and people trafficking, counterfeiting, extortion, money laundering, etc.), and in most cases the use of violence is instrumental in the achievement of their primary goals. However, the activities of criminal groups are not necessarily reflected in higher levels of violence and homicides: in some instances they might prefer to maintain a low profile so as to not draw the attention of the authorities and not be put under pressure by law enforcement agencies. This is often referred to as "pax mafiosa", a situation when organized criminal groups contrive to exercise their power and conduct their profitable illegal activities without visible violence. In other cases, however, particularly when confrontation with the authorities esca-

Organized criminal groups, drug trafficking groups and gangs

From a theoretical perspective, drawing distinctions between organized criminal groups, gangs and drug cartels or drug trafficking organizations is extremely challenging. The United Nations Convention against Transnational Organized Crime defines an "organized 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 other material benefit". The Convention clarifies that a "structured" group is one that is not randomly formed for immediately committing an offence, and that a "serious crime" means an offence punishable by deprivation of liberty of at least four years or a more serious penalty.[1] While this constitutes the definition adopted in the context of the UN Convention against Transnational Organized Crime, it is clear that national practices and legislation vary to a large extent.

Criminal groups specifically engaged in drug trafficking are often characterized by high levels of sophistication, with centralized leadership and are driven by profit-making. Although no standard definition of drug trafficking organization exists, countries may have their own, for example, the United States Department of Justice defines "drug trafficking organizations (DTOs) as complex organizations with highly defined command-and-control structures that produce, transport and/or distribute large quantities of one or more illicit drugs".[2] As such, a feature of DTOs (as so defined) is that they are involved with the whole chain of drug production, trafficking and distribution. The US Department of Justice continues to define a 'drug cartel' as an organization composed of multiple DTOs.

In contrast, the definition of "gang" allows for inclusion of a much broader range of groups, ranging from street gangs, to prison gangs, to youth gangs, and motorcycle gangs. Much of the debate about gang definitions centres on whether "degree of organization" and involvement in "illegal activities" should be included in the definition of a gang. Some research argues that involvement in illegal activities is central to gang identity, whereas others claim that this creates a tautological definition.[3] In operational terms, a gang can be defined as a group of persons who are members of, or identify with, any durable, street-oriented (youth) (armed) (male) group whose identity includes involvement in illegal activity.[4] The terms in brackets represent common features of a gang but are not central to the definition. It is worth noting that not all gangs may meet the definition of an organized criminal group, although some may do so.

Whilst the concept of an organized criminal group and a gang may overlap to a certain extent, for the most part it is likely—particularly in the case of drug trafficking organizations—that a fairly clear distinction could be drawn. Nonetheless, when it comes to data collection on homicide, very few countries provide sufficient detail in publicly available statistics to allow sufficient distinction and cross-national comparison of homicides related to the two phenomena as separate cases.

1 United Nations, *United Nations Convention against Transnational Organized Crime*. Adopted by General Assembly resolution 52/55 of 15 November 2000.

2 United States Department of Justice, *National Drug Threat Assessment 2010. "Drug Trafficking Organizations"* (2010).

3 Decker, S.H. and Pyrooz, D.C., *On the validity and reliability of gang homicide: A comparison of disparate sources,* Homicide Studies (2010).

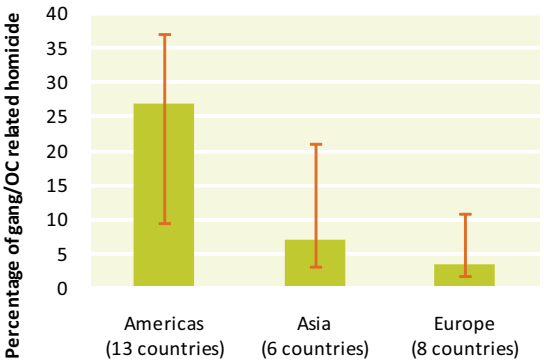
4 Definition based on *Small Arms Survey, Small Arms Survey Yearbook 2010: Gangs, Groups and Guns* (2010).

lates or when competition between rival groups increases, the presence of organized criminal groups can provoke a surge in violence and homicides. This has been the case in several subregions of the world in recent years, namely Central America and the Caribbean, as well as Italy in the early 1990s, and it is evident not only in the increase of total homicides, but also from the analysis of additional characteristics of such killings. It can be concluded that while organized crime may become visible through rising levels of homicide, it should not be assumed that organized crime does not operate in countries with low homicide levels.

Figure 3.9 shows the average proportion of homicides related to gangs or organized crime, as recorded in national police statistics, for a number of countries in the Americas, Asia and Europe. In spite of the limited number of countries for which data are available and a reasonably large range between different countries (quartiles are shown by the thin line bars in the chart), the pattern is comparatively clear: the average proportion of gang or organized crime-related homicides is significantly higher (greater than 25 per cent) in the Americas than in Asia or Europe.[13] These results should not be interpreted as an indication that organized crime is necessarily more extensive in the Americas than in other regions of the world. Homicide figures alone cannot be relied upon as a direct proxy for the activity or threat of organized crime. Some of the areas most afflicted by organized crime have very low violence levels. Typically, the better organized the crime, the less violence may be associated with it, as criminal groups pay off officials, resolve intra- and inter-group tensions and intimidate general populations to the extent that little additional violence is required.[14]

Data on overall homicide rates—and homicide by firearm rates in particular—nonetheless confirm the greater involvement of gangs and organized crime in homicides in the Americas than in other regions (figure 3.10). The match between a high proportion of homicides by firearm in the Americas and a high proportion of gang/organized

Fig. 3.9: Proportion of gang/organized crime-related homicides by region (2010 or latest available year)



Source: UNODC elaboration of national police data. Bars represent median, 1st and 3rd quartiles of percentage of gang/organized crime-related homicides.

crime-related homicides suggests that in those countries where there is a higher homicide rate, the percentage of firearm homicides is also higher and is often associated with higher shares of homicides committed by organized crime/gangs,[15] as reported by the police. However, this assumption cannot be extrapolated to Africa, where the lack of data prevents a proper study of different homicide typologies.

Homicide in Central America and the Caribbean

As elsewhere, homicide trends in Central America and the Caribbean are influenced by numerous factors. A 2007 UNODC study pointed out that many countries in the region were vulnerable to crime and violence for a number of reasons, including their legacy of armed conflicts and violence, the easy availability of guns, chaotic urbanization, high income inequality, a high proportion of youth, local gang structures, as well as organized crime and drug trafficking.[16]

In light of the role played by gangs and organized criminal groups in homicides in selected areas of the Americas, it is important to study trends in homicide rates at national level in the region with a view to considering whether these can be linked to changes in levels of organized crime, drug trafficking or gang activity.

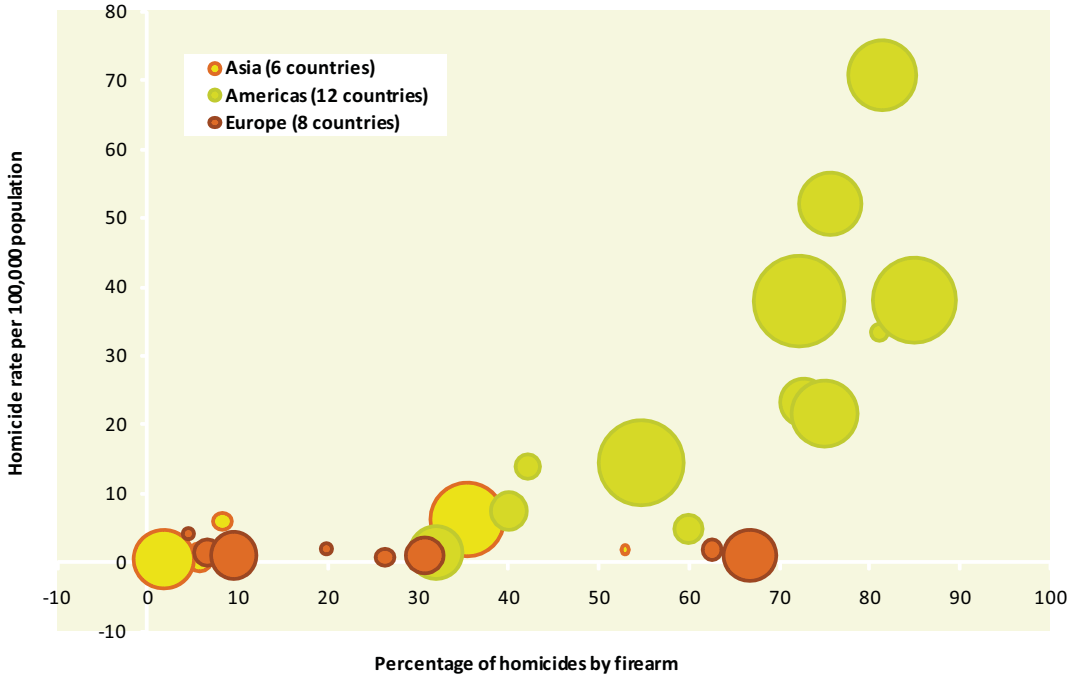
13 Results from figure 3.9 should be interpreted with caution since the classification of homicide by typology is not yet consolidated. Labelling a homicide as related to "organized crime/gang" depends on national penal legislation, practices by law enforcement agencies and accuracy in compiling statistics. For example, in one country a homicide can be defined as gang-related if the suspect is known to be a gang member, while in another country the classification can be related to "crime scene" criteria: modalities of killing, weapon used, number of perpetrators, etc.

14 UNODC, *The Globalization of Crime: A Transnational Organized Crime Threat Assessment* (2010).

15 While gangs are a key risk factor for violence and victimization, gang violence, including homicide, is most often directed against other gang members. According to the Small Arms Survey 2010, gang homicide rates are estimated at up to 100 times those of the broader population. See Small Arms Survey (2010).

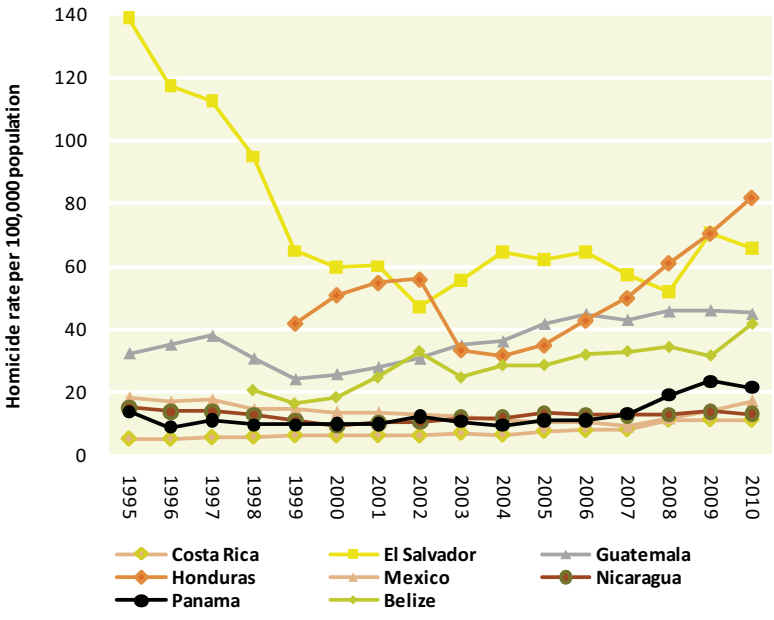
16 UNODC, *Crime and Development in Central America. Caught in the Crossfire* (2007).

Fig. 3.10: Homicide rate, percentage of homicides by firearm and percentage of gang/organized crime-related homicides, selected countries (2010 or latest available year)



Source: UNODC Homicide Statistics (2011) and national police data. Bubble size is proportional to the percentage of gang/organized crime-related homicides.

Fig. 3.11: Homicide rates by country, Central America (1995-2010)



Source: UNODC Homicide Statistics (2011).

Countries in Central America and the Caribbean have shown significant changes in homicide rates in recent years. In Central America, homicide rates have increased in five out of eight countries in the last five years, with Honduras in particular seeing homicide rates more than double between 2005 and 2010, while Mexico saw an increase of 65 per cent in the same period (figure 3.11). In a number of cases, these have come in the context of a previous decrease in homicide rates following very high homicide rates—particularly in El Salvador and Guatemala—in the aftermath of periods of conflict.

Although they involve a large number of countries in Central America, these increases also have a strong territorial connotation, often being concentrated in specific areas of the countries concerned. In Mexico, for example, homicides are concentrated in a small number of states: Chihuahua, Sinaloa, Guerrero and Baja California, which account for some 11 per cent of the population but recorded 41 per cent of the country's total intentional homicides in 2010. Moreover, within those states there are further concentrations: two thirds of murders in Chihuahua State occurred in Ciudad Juarez, which is home to 40 per cent of the state population, while almost three quarters of murders recorded in Baja California took place in Tijuana, both of which are located close to the US border[17] (map 3.1).

Fifteen years ago, homicide rates in the Caribbean

17 Escalante Gonzalbo F., *Homicidios 2008-2009 La muerte tiene permiso*, Nexus (2011).

were significantly lower than in Central America. However, in recent years, they have also increased, most notably in Jamaica, Trinidad and Tobago, and the Dominican Republic (figure 3.12).

Homicide trends and drug trafficking in Central America

A major cause of violent crime in Central America is also the region's strategic location between the lucrative cocaine consumer market in Northern America (although the European market is increasingly important) and the main areas of coca cultivation in Colombia, Peru and the Plurinational State of Bolivia.[18]

While all Central American and Caribbean countries have been affected by drug trafficking to varying degrees at different points in time, the effects of this trade on violent crime have been far from uniform and linear. Organized criminal groups involved in drug trafficking do not necessarily make themselves visible through violent and lethal crime. For example, in situations when areas of influence and/or illegal activities are clearly distributed among different criminal groups they may prefer to maintain a low profile and not to attract the attention of state authorities. Violence often escalates when an existing status quo is broken, as a result, for example, of changes in the structure of the drug market, the emergence of new protagonists or the "threat" posed by police repression.

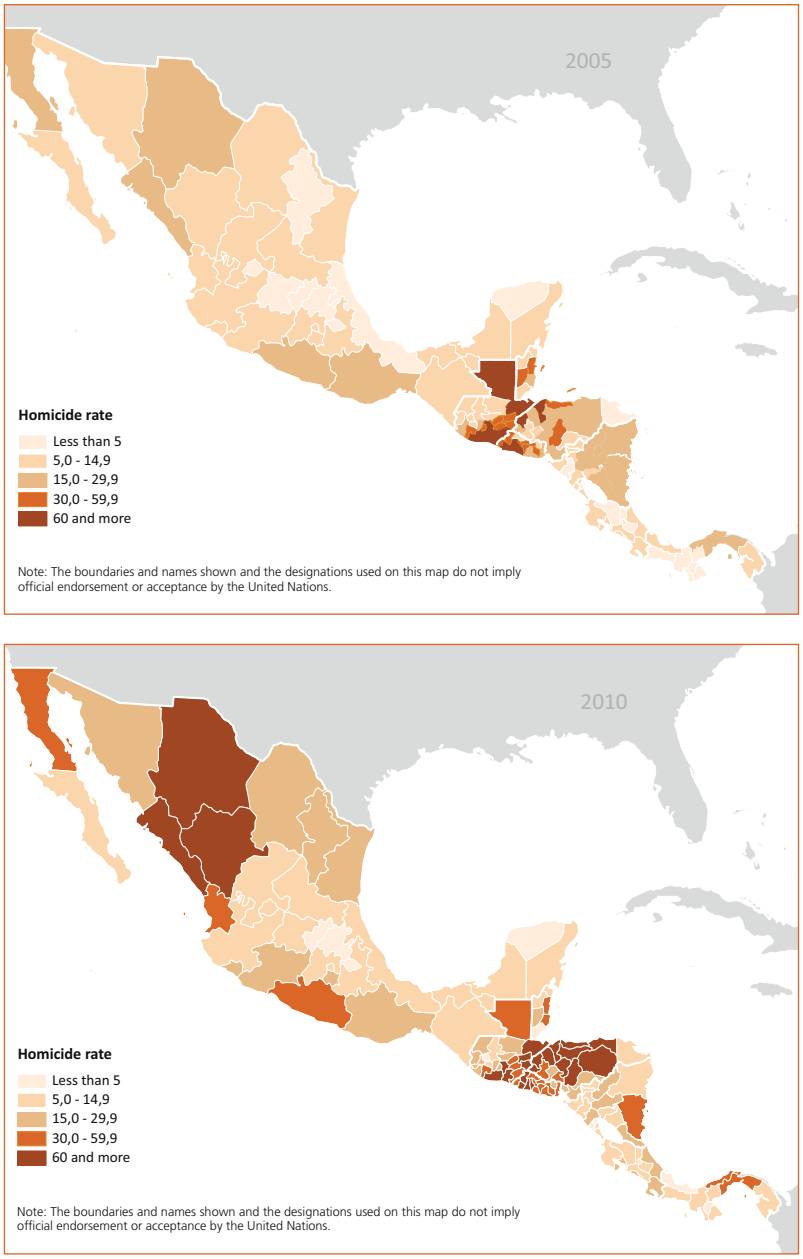
When looking at increases in homicide rates in Central America, it appears that at least part of the pattern of homicide trends in the region is attributable to changes in cocaine trafficking flows and increased competition and conflict relating to drug markets. From available evidence it appears that higher levels of violence and homicides are not only associated with increases in drug trafficking flows, but also with decreases in drug flows that lead to turbulence in established markets, more competition between criminal groups and more killings. It is therefore likely that changes in drug markets drive lethal violence, not overall levels of trafficking flows per se.[19]

This hypothesis finds some support when considering homicide trends against the backdrop of cocaine seizures. With respect to Central America,

18 UNODC, World Drug Report (2011).

19 See also: United Nations, Commission on Crime Prevention and Criminal Justice, Twentieth Session, *Note by the Secretariat on world crime trends and emerging issues and responses in the field of crime prevention and criminal justice* (2011).

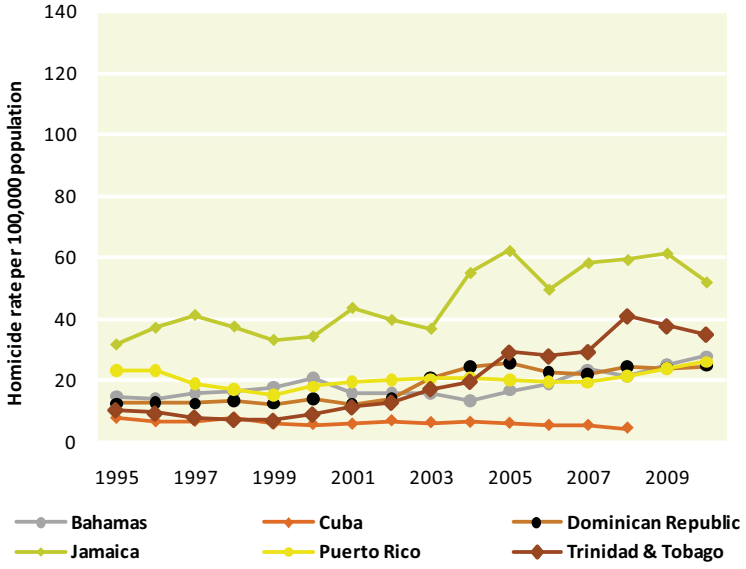
Map 3.1: Homicide rates at subnational level, Central America (2005 and 2010)



Source: National police, statistical offices and criminal justice institutions.

figure 3.13 shows how different changes in drug seizures are associated with different trends in homicide rates. Cocaine seizures by law enforcement agencies rose almost constantly until 2007 in Mexico before dropping abruptly, while they increased and remained at an elevated level in other countries of the region, such as Panama and Costa Rica (homicide rates in both countries have more than doubled from their already high 1997 levels to some of the highest rates worldwide), indicating the increased importance of Central America over the Caribbean as the preferred drug-trafficking route from South to Northern America.

Fig. 3.12: Homicide rates by country, the Caribbean (1995-2010)

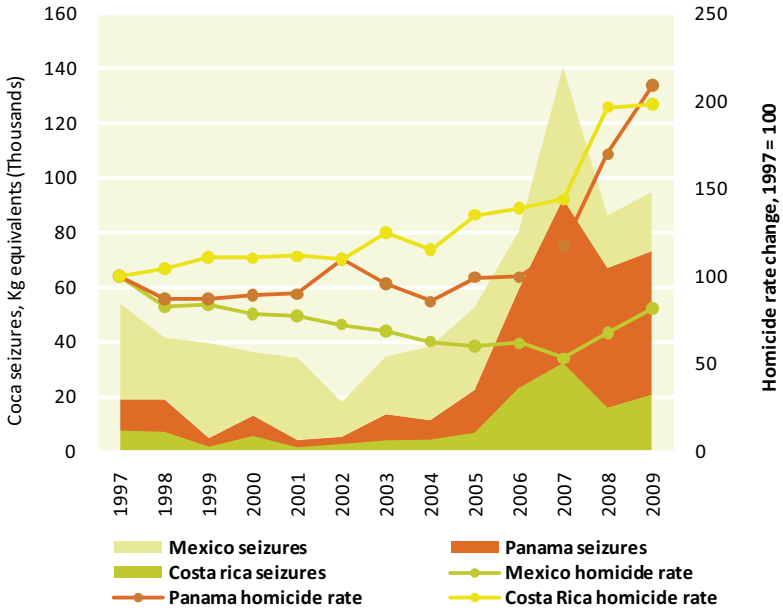


Source: UNODC Homicide Statistics (2011).

As drug trafficking through Central America increased—as measured by seizure data and confirmed by intelligence reports—the homicide rate also climbed. In Mexico, the dynamics between drug trafficking and homicides differed from other Central American countries, particularly after 2007 when homicides started to climb as cocaine seizures decreased sharply. This turn of events occurred when the Mexican Government took on the country's drug trafficking groups with the full force of its law enforcement capacity and the subsequent pressure placed on drug trafficking caused a reduction in cocaine smuggling through Mexico and the diversion of drug flows through other Central American countries. Mounting pressure on the operations of organized criminal groups spurred further violence and killings between them and led to territorial disputes and turf wars regarding control of the most lucrative drug routes and markets. In addition, drug trafficking groups are increasingly engaging in other organized criminal activities, including people trafficking, kidnapping and extortion, leading to further killings.[20]

To assert their power and dominance today, these organized criminal groups use indiscriminate violence and killings not only for controlling drug routes and markets but also the territory itself, something also reflected in the numbers of victims among representatives of state institutions such as elected officials. According to one recent study, 14 of Mexico's approximately 2,450 mayors were assassinated in 2010 alone, while 27 were murdered between 2004 and 2010. Most of those killings can be attributed to drug trafficking groups, although their exact circumstances are not always clear.[21]

Fig. 3.13: Cocaine seizures and trends of homicide rates, selected countries in Central America (1997-2009)



Source: UNODC Homicide Statistics (2011) and ARQ. Area is proportional to cocaine seizures in kg equivalents. Lines represent percentage change in homicide rate based on a starting point of 100 for 1997.

Homicide trends and drug trafficking in the Caribbean

While drug trafficking through Central America has increased, advances in interception techniques have led to a significant decline in the amount of cocaine trafficked via the Caribbean. Cocaine seizures have progressively decreased over the past 15 years in the Caribbean, spurring the growing importance of Central American trafficking routes. Between 1997 and 2009, drug seizures in the Caribbean decreased by 71 per cent, and whereas some 30 per cent of cocaine bound for the United States was trafficked via the Caribbean in 1997, by 2009 this had been reduced to under 10 per cent. However, while drug trafficking flows were diminishing, as indicated by declining quantities of drug seizures, homicide rates increased in 10 out of 11 Caribbean countries for which data are available.[22] Part of the reason for this increase in lethal violence can be traced to increased competition

20 UNODC, *The Globalization of Crime: A Transnational Organized Crime Threat Assessment* (2010).

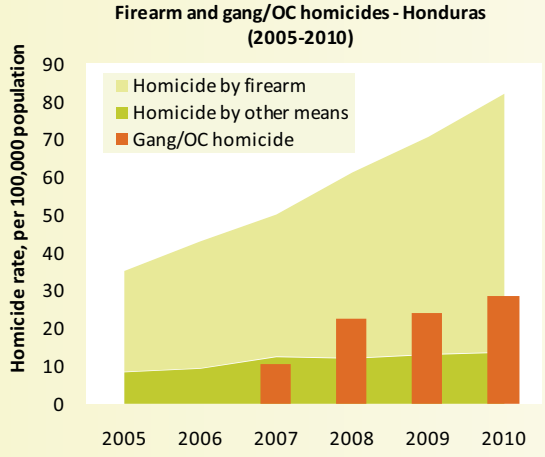
21 Trans-Border Institute - University of San Diego, *Drug Violence in Mexico. Data and Analysis Through 2010* (2011).

22 Over the past decade, Cuba has recorded both falling homicide rates.

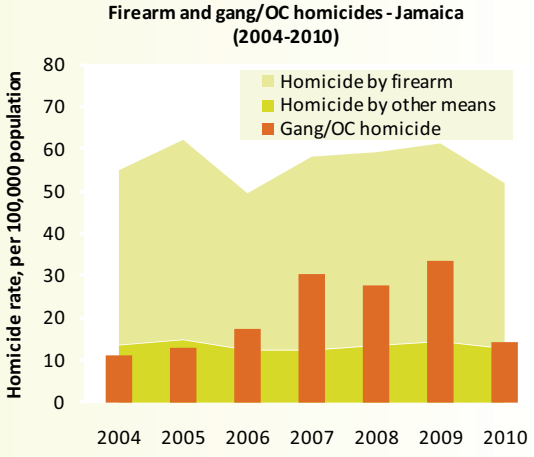
Gangs and drug trafficking groups in Central America and the Caribbean

Increases in the activities of drug trafficking groups have no doubt played a role in the escalation of homicide, but in some Central American countries there are other important contributing factors such as the lethal violence perpetrated by gangs, the best known of which are probably the *maras*. *Mara* gangs and drug trafficking groups have traditionally been quite distinct, although the former may also sometimes act as local drug distributors and possibly as contract killers for some of the latter. *Mara* gangs, including the Mara Salvatrucha 13 (or MS-13) and the Barrio 18 (or M-18), emerged in Los Angeles in the late 1980s and early 1990s. Comprising many Salvadorans, the *maras* became established throughout Central America, and while their activities are sometimes transnational in nature, in light of their permanent presence in the United States they lack any central command and only have minimal connections to large drug trafficking organizations. However, gangs such as the *maras* (and *pandillas* in Nicaragua and Costa Rica) are extremely violent and responsible for a significant share of homicides in several of the region's countries, where they are increasingly involved in extortion, intimidation and protection rackets.

Caribbean countries are also affected by violent crime driven by organized drug trafficking, which partially overlaps with the illicit activities of gangs, as in Jamaica, for example, where street gangs became progressively involved when the Caribbean became a trafficking route from Colombia in the 1980s. Such shifts in the structure and focus of criminal groups and the reaction of law enforcement bodies have profoundly influenced the nature and pattern of (lethal) violence in the Caribbean over the past decade.



Source: National police.



Source: National police.

between drug trafficking organizations fighting for their share of a diminished market.

The pattern of declining cocaine seizures was almost universal in the 25 Caribbean countries for which drug seizure data are available, with one major exception: after a decrease in the first few years of the century, the Dominican Republic recorded an increase in cocaine seizures between 2005 and 2010 and its importance as a transit route for cocaine from South to Northern America, as well as to European markets, has been somewhat restored.[23] In the process, the drug trade in the Dominican Republic has become more volatile and has been associated with increasing levels of homicide.[24]

Despite the importance of the drug trade in generating and sustaining extremely high levels of lethal violence, the surge in homicides in the Americas cannot be explained by a single factor alone (i.e. shifts in cocaine trafficking routes), and numerous other interrelated variables discussed in this and other chapters of this study need to be taken into consideration.

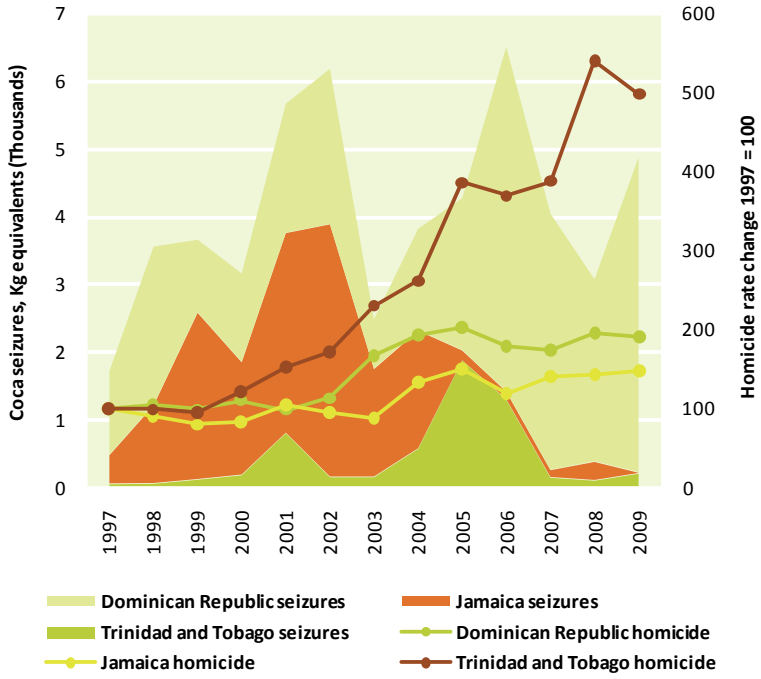
Homicide trends and drug trafficking in South America

In Central America and the Caribbean, changes in drug trafficking markets have, in one way or another, contributed to rising levels of homicide. Looking at the countries immediately to the south of Central America, Colombia provides an example of a country that has succeeded in reversing escalating levels of lethal violence through strict law enforcement measures, reducing both drug trafficking and the homicide rate.

23 UNODC, World Drug Report (2011).

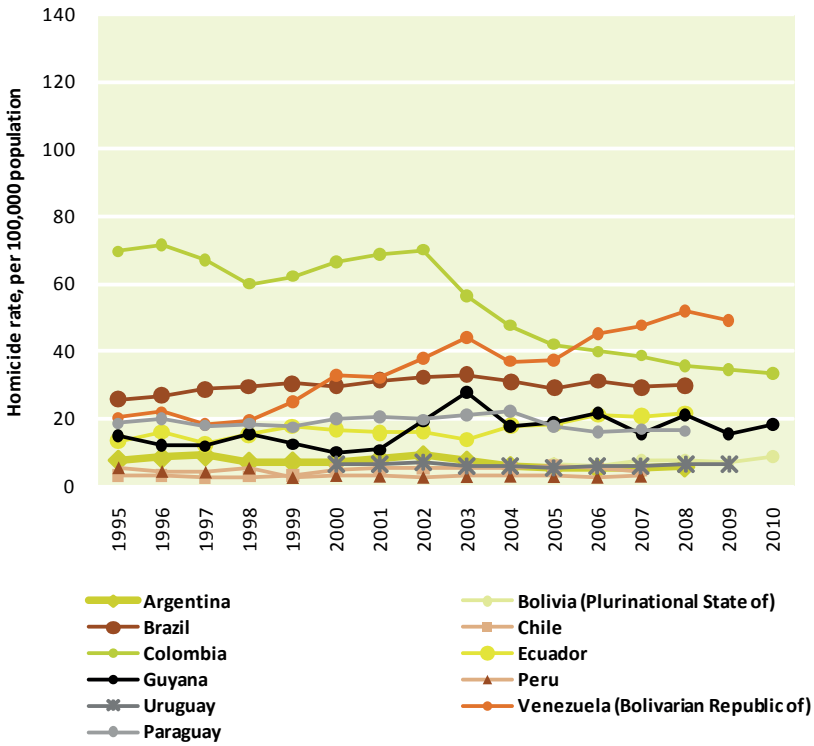
24 UNODC, World Drug Report (2010).

Fig. 3.14: Cocaine seizures and homicide rates, selected countries in the Caribbean (1997-2009)



Source: UNODC Homicide Statistics (2011) and ARQ. Area is proportional to cocaine seizures in kg equivalents. Lines represent percentage change in homicide rate based on a starting point of 100 for 1997.

Fig. 3.15: Homicide rates, selected countries in South America (1995-2010)



Source: UNODC Homicide Statistics (2011).

Most of the cocaine trafficked to the United States through Central America and the Caribbean originates in Colombia, with smaller amounts also originating in Peru.[25] It is notable that drug seizures in Colombia itself have progressively increased over the past decade, reflecting the increased efforts of the Colombian authorities to confront all organized criminal groups involved in drug production and trafficking. Over the same period, while some cities have seen large increases in homicides, overall Colombia has seen a decline in its homicide rate of more than a half, from over 70 per 100,000 at the beginning of the decade to 33 in 2010 (see box in chapter 6).

On the other hand, the Bolivarian Republic of Venezuela has experienced the opposite, with significant declines in cocaine seizures while the homicide rate increased steadily to 49 per 100,000 population. Whilst the activities of drug trafficking organizations certainly play a significant role in Venezuela, the increase in homicide in this case may also be linked to other factors including general conventional crimes. Ecuador also saw a steady increase in its homicide rate up to over 21 in 2008, as the country became an alternative route for drug trafficking to North America and has recently reported increasing seizures of cocaine. The Plurinational State of Bolivia and Peru have homicide rates well below those three countries, albeit with some fluctuations, and seizures of cocaine were relatively high in both countries and increased further in 2009-2010[26] (see Bolivia box page 55).

In spite of the large variations between homicide patterns and trends throughout the Americas it is clear that the changing patterns of drug trafficking, inter-gang competition and violence, as well as the on-going battle with law enforcement agencies, have driven an increase in lethal violence to alarmingly high levels. When the rule of law is severely challenged by organized crime, it is difficult for weakened States to re-establish the monopoly of law enforcement. The example of Colombia shows that it can take many years to reverse a progressively rising homicide rate and re-establish basic security long after political conflicts have ended. Violence begets violence and in so doing it can redraw the boundaries of acceptability and tolerance towards it within a given society, not

25 UNODC, *The Globalization of Crime: A Transnational Organized Crime Threat Assessment* (2010).

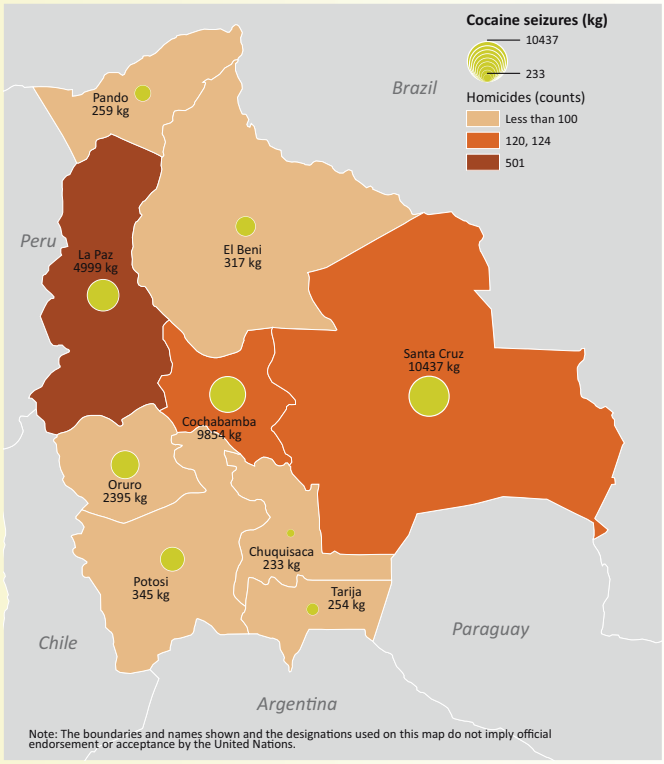
26 All data on drug seizures are from UNODC, *World Drug Report* (2011).

least because lethal violence may be employed by criminal groups for a variety of specific objectives, such as settling disputes, asserting control and status, sending a message of intent to other criminal groups and challenging the authorities. Its overspill can have long-lasting, knock-on effects on society as a whole.

Number of homicides and cocaine seizures in kilogram equivalents

In Bolivia, the level of homicides is relatively low compared to other South American countries. However, the homicide rate has increased over the last five years, passing from 6.5 per 100,000 in 2005 to 8.9 in 2010. No additional data on homicide typology or percentage of homicides by firearm are available for Bolivia. The number of homicides recorded in the different areas of the country show a pattern somewhat associated with cocaine seizures data, an important indicator of drug trafficking routes and hubs: homicides are more frequent in departments with higher amounts of cocaine seized, such as La Paz, Cochabamba and Santa Cruz. The first two of which (La Paz and Cochabamba) also constitute the two main cultivation areas for coca.[1]

Number of homicides and cocaine seizures by region, Bolivia (2010)



Source: UNODC Individual Seizure Database and National police.

1 UNODC, *Estado Plurinacional de Bolivia - Monitoreo de Cultivos de Coca 2010* (2011)

4. WOMEN AND INTIMATE PARTNER/ FAMILY-RELATED HOMICIDE

The previous chapter focused on a relatively modern homicide typology mainly affecting young men and, for the most part, only in selected sub-regions of the world. This chapter explores another that has affected women of all ages all over the world since the dawn of civilization.

From physical and sexual to psychological and economic abuse, violence against women is not restricted to one particular form. Nor, as reported in a 2006 United Nations Report of the Secretary-General,[1] is it confined to a particular culture, region, country or specific groups of women within a given society. Rather, violence against women is global, systemic, and often rooted in power imbalances and structural inequalities between men and women. As stated in a recent report by UN Women: "Violence against women and girls is both an extreme manifestation of gender inequality and discrimination, and a deadly tool used to maintain women's subordinate status".[2] In contexts across the globe, women, to a greater or lesser extent, remain vulnerable to both lethal and non-lethal violence, in part due to entrenched discrimination in relation to property, the family, access to health, employment and citizenship.

Violence against women can occur at home, in the street or in the workplace, and be perpetrated both by persons known and unknown to the victim. Its most common manifestation globally, however, is in the form of intimate partner/family-related violence.[3] At its most extreme, violence perpetrated by a family member, an intimate or a former intimate partner can lead to death. Whilst such lethal violence against family members and partners shares a number of common features, or risk factors, around the world, including a history of domestic violence, (male) domination and abuse, it is also characterised by important differences, including social and economic factors, culture and tradition, and the place of women in society.[4] While, in principle, lethal intimate partner/family-related violence can affect both men and women, victims of this form of violence are most likely to be women at the hands of their current or former male partners. In a large number of countries, intimate partner/family-related violence is a major cause of female homicides, with the result that homicide trends affecting women overall are driven by levels of intimate partner/family-related violence, rather than by firearm and organized crime/gang-related violence, as they are for men (as described in the previous chapter).

Globally, high quality data on lethal forms of violence against women are limited and such patterns may not necessarily hold true in all contexts, particularly in situations such as the immediate aftermath of a conflict, where women may be presented with greater risks outside of the home than within it. Increased understanding of violence against women, in all its manifestations, is reliant on enhanced data and trend information.[5]

1 United Nations General Assembly Report of the Secretary-General, In-depth study on all forms of violence against women (2006).

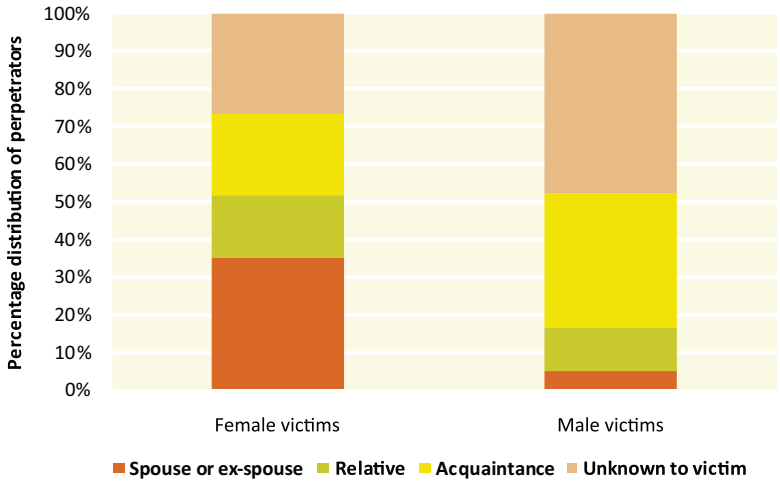
2 UN Women, *Progress of the World's Women 2011-2012: In Pursuit of Justice* (2011).

3 According to the UN Report of the Secretary-General, In-depth study on all forms of violence against women (2006), surveys undertaken in the last decade in different parts of the globe indicated that the lifetime prevalence of physical violence by an intimate partner varied widely between 10 per cent and 60 per cent.

4 See, for example, Kim, B. and Titterington, V.B., *Abused South Korean Women: A comparison of those who do and do not resort to lethal violence,* International Journal of Offender Therapy and Comparative Criminology (2008) and Brookman, F. and Maguire, M., *Reducing Homicide: A review of the possibilities,* Home Office Online Report (2003).

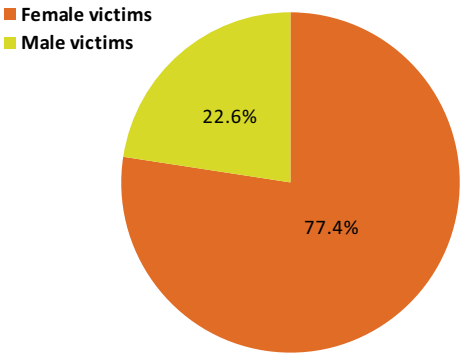
5 While better data on lethal violence affecting women can

Fig. 4.1: Percentage distribution of homicide perpetrators by sex of victim, selected European countries (2008 or latest available year)



Source: UNECE Statistical Division Database.

Fig. 4.2: Percentage distribution of homicide victims killed by their spouses or ex-spouses, by sex, selected countries in Europe (2008 or latest available year)



Source: UNECE Statistical Division Database.

Available data for Europe, for example, demonstrate the different patterns of lethal violence that affect women and men: in 2008, half of female victims were murdered by family members (35 per cent by spouses or ex-spouses and 17 per cent by relatives), while only 5 per cent of all male victims were killed by spouses or ex-spouses and some 10 per cent by other family members (see figure 4.1). Beyond Europe, studies from Australia, Canada, Israel, South Africa and the United States show similar results, with 40 to 70 per cent of female murders linked to intimate partner/family-related violence.

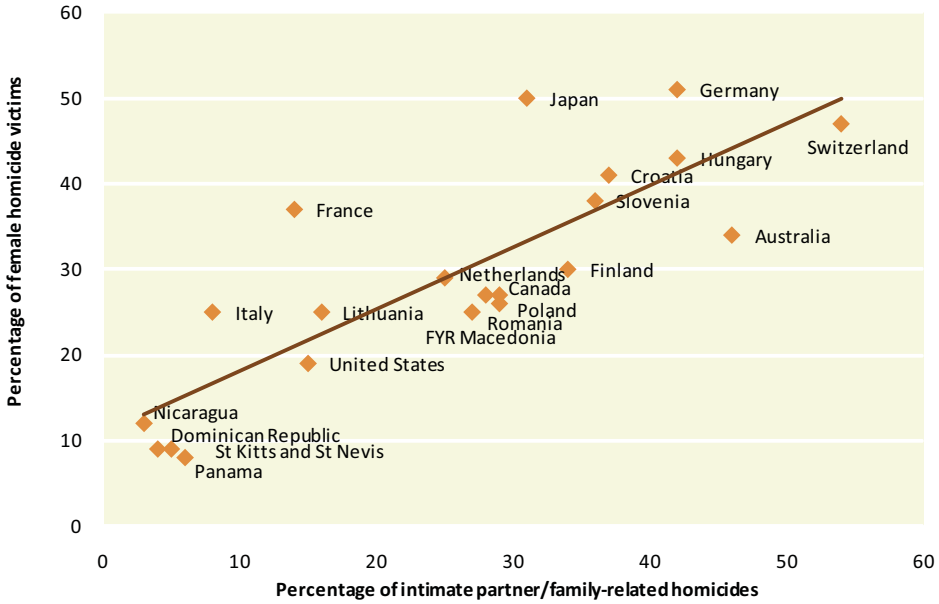
The greater impact on women of killings by spouses or former spouses means that, in the selected European countries for which data are available, women make up more than 75 per cent of all the victims of this specific homicide typology (see figure 4.2).

The proportion of violent crime related to intimate partner and family-related disputes varies according to the overall level of violent crime. Countries with higher homicide rates are often affected by high levels of "street crime" related to drug trafficking, organized crime, street fights or other forms of violent crime. This is an environment traditionally dominated by young males who both commit the great bulk of the violence and make up the greatest share of its victims. At the other end of the spectrum there are countries with a very low homicide rate where the presence of gangs and organized crime groups only accounts for a small share of all homicides. The relative share (but not the absolute rate) of homicides related to domestic disputes and intimate partner/family-related violence is therefore higher in those countries and the profile of the victim changes accordingly as women become more predominant among all homicide victims (figure 4.3).

Because these two different types of homicides have different impacts on the two sexes, the home is the most likely place for a woman to become a victim of homicide, while men are more likely to be murdered in the street or in public places. Data presented in figure 4.4 show that a high proportion of homicides are committed in the home in countries where the percentage of female victims is higher and homicide rates are lower. The relationship between the sex of the victim and the place in which a homicide occurs shows that typical homicide typologies differ between homicides committed in the home, in public places such as commercial or recreational facilities, and homicides committed on the street. Homicides taking place in the home may be more likely to involve a known perpetrator such as a family member or intimate partner, whereas homicides taking place in the street may be more likely to involve a perpetrator unknown to the victim.

be produced through the collection of contextual information about homicides, more accurate data about the extent and impact of non-lethal forms of violence can be collected through population-based surveys (general victimization surveys or dedicated violence against women surveys). The production of improved data both on lethal and non-lethal violence on women is fundamental for raising awareness and formulating evidence-based policy responses, not least in the field of criminal justice.

Fig. 4.3: Percentage of female victims and victims of intimate partner/family-related homicide, selected countries (2009 or latest available year)

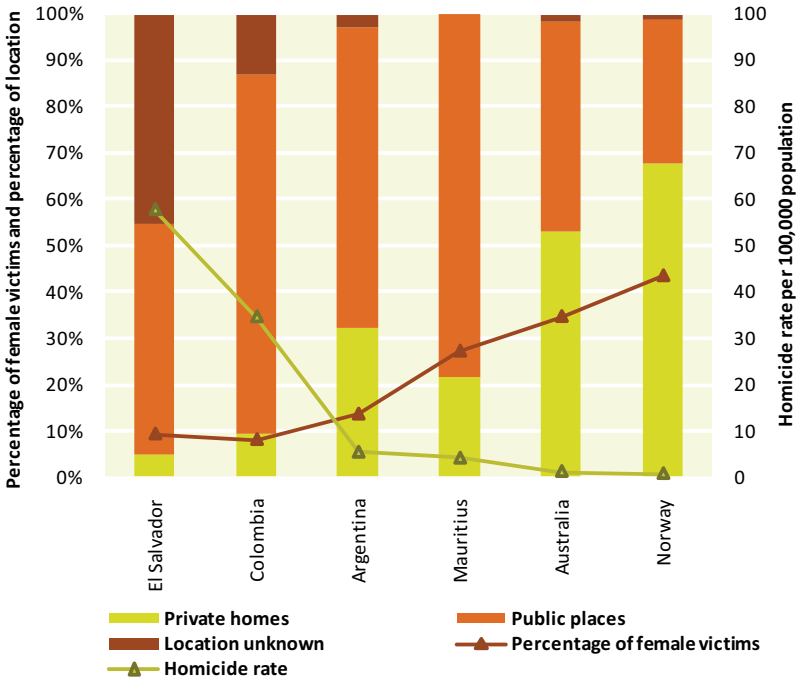


Source: UN-CTS and national police data.

Countries with higher homicide rates, such as Columbia and El Salvador, show a higher percentage of homicides carried out in public places, which is due to higher levels of organized crime and street violence-related homicide, which mostly affect men. By contrast, lower homicide rates, such as those in Australia and Norway, point to the fact that more homicides take place in the home, be it the victim's or perpetrator's, which implies the relatively increased significance of intimate partner/family-related homicides in those countries and, accordingly, a higher percentage of female homicide victims.

Available time-series data indicate that there is a certain stability over time in the level of homicide related to intimate partner/family-related violence. This has been associated with levels of underlying tension in society and the fact that several enduring risk factors of intimate partner/family-related violence—linking it to a prior history of domestic violence, male partner unemployment, firearm ownership, drug and alcohol use, the threat of separation, sexual jealousy, extreme male dominance and other risk factors—can only be expected to change slowly over time.[6]

Fig. 4.4: Percentage distribution of homicide locations and homicide rates, selected countries (2009 or latest available year)

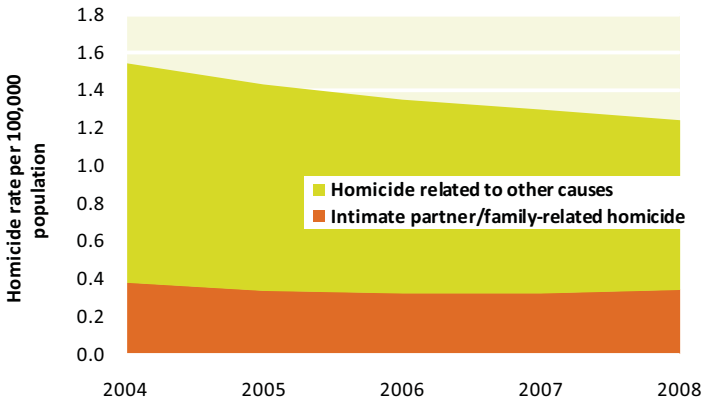


Source: UNODC elaboration of national official sources.

If the rate of intimate partner/family-related homicide remains fairly stable over time, while the rate of homicide linked to all other causes declines, as has been the case in a number of countries around the world in the last decade, the share of intimate partner/family-related homicides among all homicides inevitably increases. This is illus-

6 See, for example: Cao, L., Hou, Ch. and Huang, B., *Correlates of the Victim Offender Relationship in Homicide,* International Journal of Offender Therapy and Comparative Criminology (2007); Abrahams, N., Jewkes, R. and Mathews, Sh., *Guns and gender-based violence in South Africa,* South African Medical Journal (2010) and Roberts, D.W., Intimate Partner Homicide: Relationships to Alcohol and Firearms, Journal of Contemporary Criminal Justice (2009).

Fig. 4.5: Homicide rate by homicide typology, selected countries in Europe (2004-2008)



Source: UNODC elaboration of national police data.

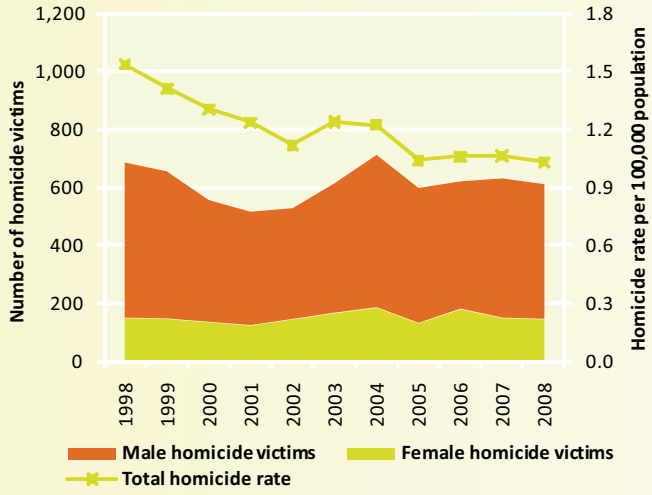
trated for selected European countries in figure 4.5, but the same phenomenon has also been observed in a number of other countries outside Europe, including Australia, Japan, the United States and Zambia. Furthermore, if there is a higher share of women among intimate partner/family-related homicides this implies that, in contexts of decreasing overall homicide levels, the share of men among all homicide victims gradually decreases over time, while the share of female victims goes up. There is evidence to suggest that this is indeed the case (see box on Italy).

The observation that homicides related to disputes between intimate partners, ex-partners or family members are fairly stable over time and are unaffected by bouts of killings triggered by external

Intimate partner/family-related murders and organized crime/gang-related homicides in Italy

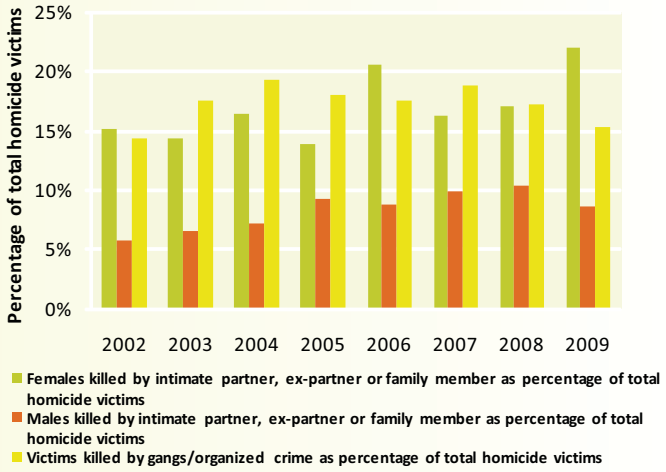
Despite a reputation for violent killings within and among rival mafia clans, as well as against law enforcement officials or citizens, over the past 20 years the overall homicide rate in Italy has shown a steady decline to a fairly low level in line with other European countries. Apart from periodic escalations of violence between rivalling members of mafia groups, homicides resulting from organized crime have decreased there, both in absolute and relative terms.[1]

Number of homicide victims by sex and total homicide rate, Italy (1998-2008)



Source: National Statistical Office.

Percentage of total homicides by typology, Italy (2002-2009)



Source: National Statistical Office.

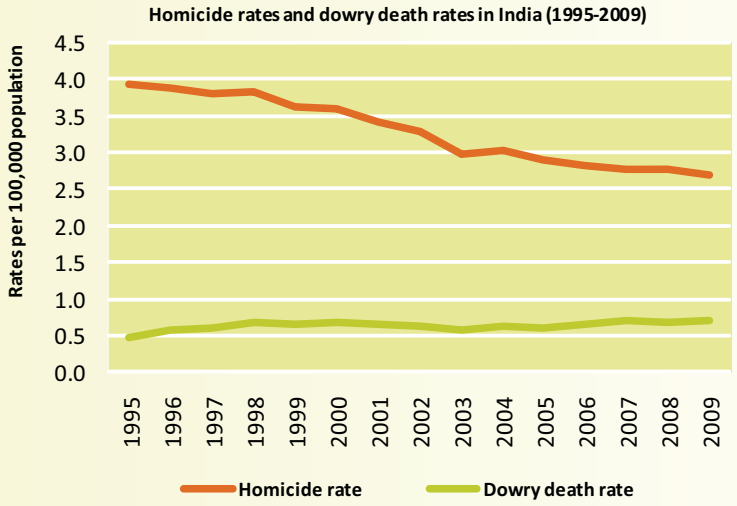
Detailed data for the years 2002-2009 indicate that since 2004 both the absolute number as well as the relative share of homicides related to gangs/organized crime has decreased. On the other hand, the absolute numbers of intimate partner/family-related homicides has increased slightly over the same period, raising the total share of its victims (male and female) to over 30 per cent of all homicide victims in 2009. The chart above shows that the relative share of female victims of intimate partner/family-related homicide surpassed the share of all victims of homicide related to gangs/organized crime for the first time in 2006 and by 2009 was actually 7 percentage points higher. Over the whole period, victims of intimate partner/family-related homicides were two to three times more likely to be women than men.

1 As already stated in chapter 3, a decrease in organized crime-related homicides is not necessarily indicative of a reduction in the activities of organized criminal groups.

Patterns of homicides and dowry deaths in India

The National Criminal Records Bureau of India keeps detailed criminal justice data on the number of homicide victims by sex, age and motive. In 2009, out of a total 33,159 recorded homicide victims in India, 8,718 (26 per cent) were female, about the same as in previous years. Some of these killings relate to disputes over dowry payments or violent demands for higher payments from the families of brides or brides-to-be. While the payment of a dowry has been illegal in India since 1961, the practice remains common. Among all female victims of recorded homicides, about 15 per cent (1,267) were recorded as dowry-related murders.

In addition to the data recorded as homicide, the police records "dowry deaths" under a separate section of the Indian Penal Code.[1] These are deaths of women within seven years of their marriage for which circumstantial evidence provides a strong suspicion of a dowry-related killing. In 2009 the police recorded 8,383 of such deaths of women and girls and it can be calculated that the total number of dowry-related killings in 2009 amounted to 9,650,[2] which corresponds to 56 per cent of all female victims of violent killings including dowry deaths (17,101). The reported number of such killings has been increasing for many years: the figure below plots time trends of dowry deaths (per 100,000 population) in India against homicide rates, for the period 1995-2009: while homicide levels have steadily decreased over the last 15 years (decrease of 31 per cent between 1995 and 2009), the rate of recorded dowry deaths has increased by more than 40 per cent in the same period. This increase might partly be due to more accurate recording by the police when suspicious deaths are notified, also because of increased awareness and determination to address the issue; on the other hand it is likely that, in addition to officially recorded dowry-related homicides and dowry deaths, an unknown number of deaths related to dowry remain undetected as they are often recorded as accidents or suicides.



Source: National Crime Records Bureau.

1 Section 304B of the Indian Penal Code specifies that "where the death of a woman is caused by any burns or bodily injury or occurs otherwise than under normal circumstances within seven years of her marriage and it is shown that soon before her death she was subjected to cruelty or harassment by her husband or any relative of her husband for, or in connection with, any demand for dowry, such death shall be called 'dowry death' and such husband or relative shall be deemed to have caused her death".

2 This is given by the sum of dowry-related killings (1,267) and dowry deaths (8,383) for 2009.

interventions does not mean that rates of intimate partner/family-related homicides are not worth targeting through broader social policies and crime prevention initiatives. In Canada, for example, it has been argued that there is a strong link between higher levels of female education, the subsequent increased labour force participation and financial independence of women and long-term decreases in intimate partner/family-related homicide.[7] Interventions aimed at curbing domestic violence against women in general, as well as both supporting and protecting women during periods when the risk of violence at the hands of their partners is particularly high (such as during and immediately after divorce) also have an impact on reducing the intimate partner/family-related homicide rate. They can also be more immediate than many broader, though fundamental, social measures and policies, which inevitably take time to have a noticeable impact on female homicide rates.

7 Dawson, M., Bunge, V. and Balde, Th., *National Trends in Intimate Partner Homicides: Explaining Declines in Canada, 1976 to 2001,* Violence Against Women (2009).

5. HOMICIDE AND DEMOGRAPHICS: WHO IS AT RISK?

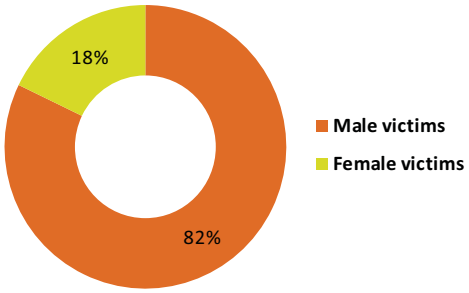
This chapter focuses on the characteristics of the individuals behind the homicide figures and rates presented so far in this study. By analysing age and sex data relating to those directly involved in homicide while taking account of regional and typological factors, those most likely to offend and those most at risk can be more easily identified and thus deterred and protected through the targeting of relevant prevention policies.

Victims by sex and age

Crime, especially violent crime, is typically a male activity and homicide is no exception. Globally, men make up the majority of violent offenders and represent over 90 per cent of prison populations in most countries. Data on homicide perpetrators show a similar pattern (see later in chapter) and men also make up 82 per cent of all victims of homicide, suggesting that the most typical homicide pattern is a case of men killing men (figure 5.1). While women represent a smaller share of homicide victims they are the predominant target of intimate partner/family-related violence, in which the typical homicide pattern is men killing women (as explained in detail in the previous chapter).

Against this overall global pattern, there are significant and crucial differences in the sex distribution of homicide victims, which represents a key indicator of the types of homicide that are relatively more or less common in a given country or region. This can be illustrated by the different sex composition of homicide victims between regions, and particularly by the marked differences in the Americas and Europe; the former a region where the homicide rate is relatively high, the latter a region where it is relatively low (figure 5.2).

Fig. 5.1: Percentage distribution of homicide victims globally by sex (2008)

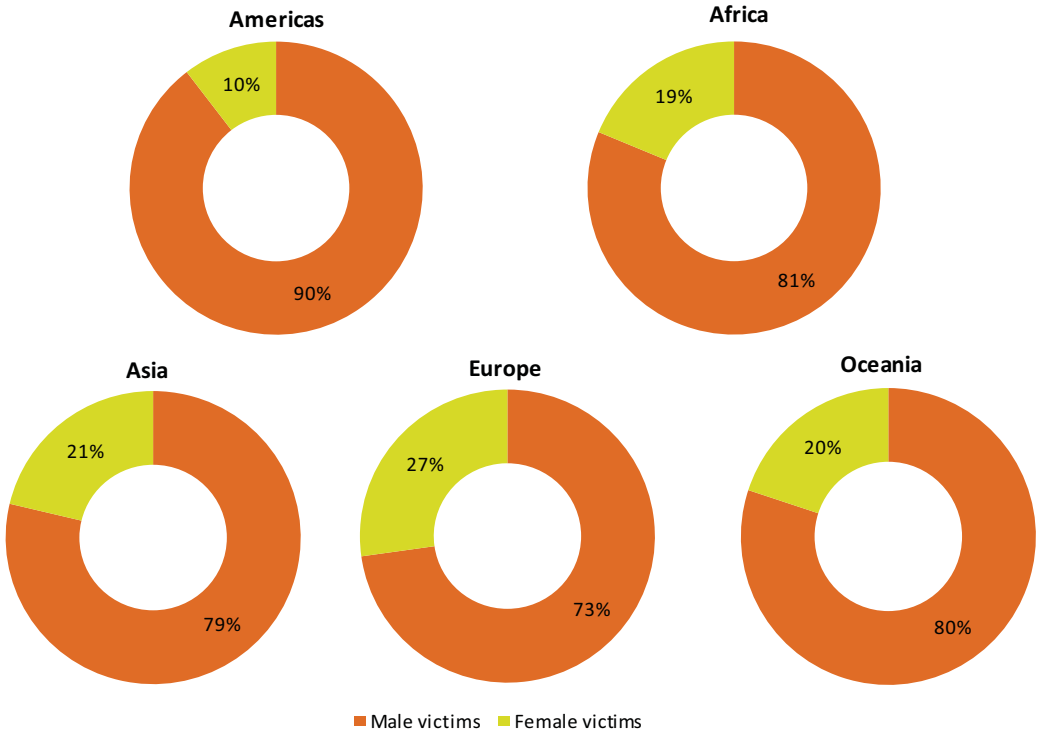


Source: UNODC Homicide Statistics (2011).

In the Americas females make up only 10 per cent of all homicide victims whereas they account for 19 per cent in Africa, 21 per cent in Asia, 20 per cent in Oceania and 27 percent in Europe. This different sex structure indicates a different typology of homicides in different parts of the world, with greater shares of male homicide victims associated with larger shares of homicides perpetrated in the context of gang/organized crime-related lethal violence. The smaller share of female victims among the total number of homicides in the Americas does not, however, equate to a lower female homicide rate there in comparison to other regions.

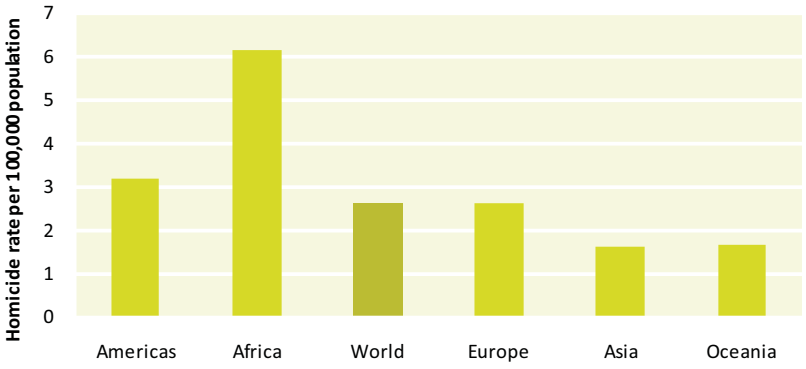
Indeed, as figure 5.3 shows, the Americas have a high female homicide victim rate. It is the exceptional number of homicides affecting males in the Americas that makes the share of female homicides particularly low in that region. Data also indicate that Africa is the region with the highest female homicide rate, showing that where high homicide rates are not driven to the same extent by organized crime, street crime, non-specific lethal violence and/or intimate partner/

Fig. 5.2: Percentage distribution of homicide victims by sex and region (2008)



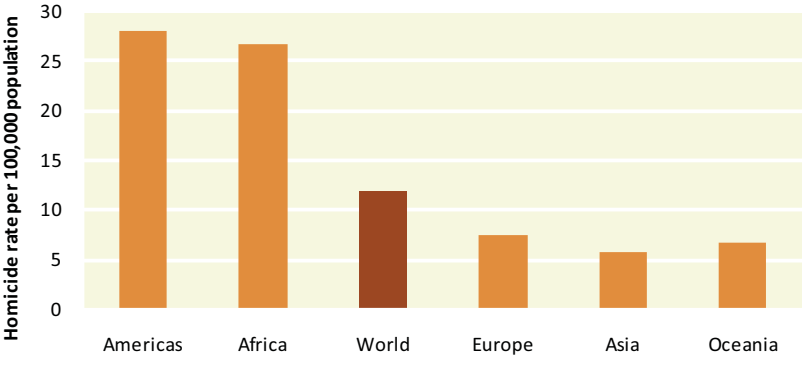
Source: UNODC Homicide Statistics (2011).

Fig. 5.3: Female homicide rates by region (2008)



Source: UNODC Homicide Statistics (2011).

Fig. 5.4: Male homicide rates by region (2008)



Source: UNODC Homicide Statistics (2011).

family-related homicide all play an important role and women evidently fall victim to all three. Unfortunately, the lack of data characterising Africa, for example on additional features of homicides, such as their contexts and the killing mechanism, makes more detailed analyses impossible. As can be expected, the patterns of male homicide rates mirror the regional patterns examined in previous chapters and the highest levels are found in the Americas and Africa.

After the sex structure of homicide victims, the next most striking pattern of homicide victimization is that globally the risk of becoming a victim of homicide is highest for young men in the 15-29 age group and declines steeply with age thereafter. In fact, the age-specific global homicide rate of 21.2 per 100,000 for young men aged 15-29 is roughly double the age-specific global homicide rate of 10.5 for men in the 60-69 age group. This overall decline in homicide risk over the course of the male lifetime is a direct reflection of the decreasing involvement, as men age, in high-risk illicit activities such as street crime, gang membership, drug consumption, possession of guns, knives and other weapons, street fighting and other violence-prone activities (figure 5.5).

In contrast, the global age-specific homicide rate for women is at a much lower level and it remains

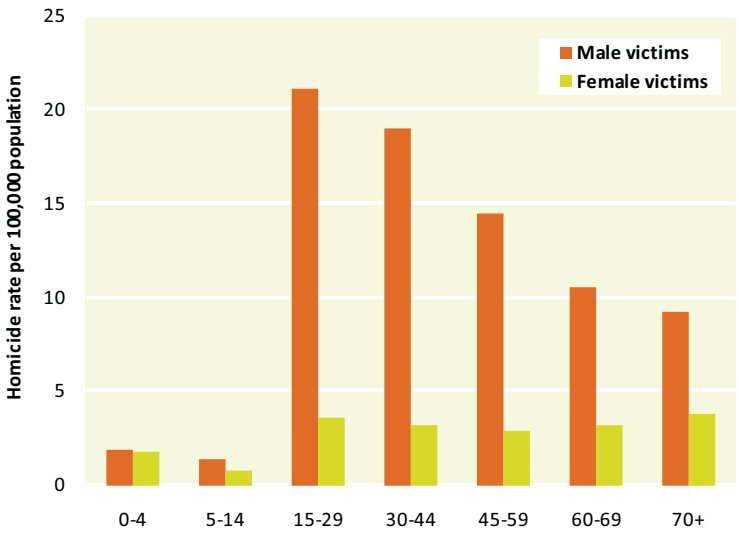
between 3 and 4 per 100,000 for all age groups after the age of 15. This reinforces the fact that female homicides are less related to the exposure of women to high-risk activities (gangs, etc.), which occurs in younger age groups, and are more often related to intimate partner/family-related disputes (see previous chapter).

This means that the difference in age and sex-specific homicide rates between men and women narrows from a factor of about six for young age groups (21.1/3.6) to about three for older age groups (10.5/3.2 for 60 to 69 year olds).

The Americas

As is the case with the sex structure of homicide victims, there are also significant and crucial differences in age structures of homicide victims in different regions of the world that again indicate the relative importance of different types of homicide. In a sample of 29 countries in the Americas, men

Fig. 5.5: Global homicide rate by sex and age group (2008)



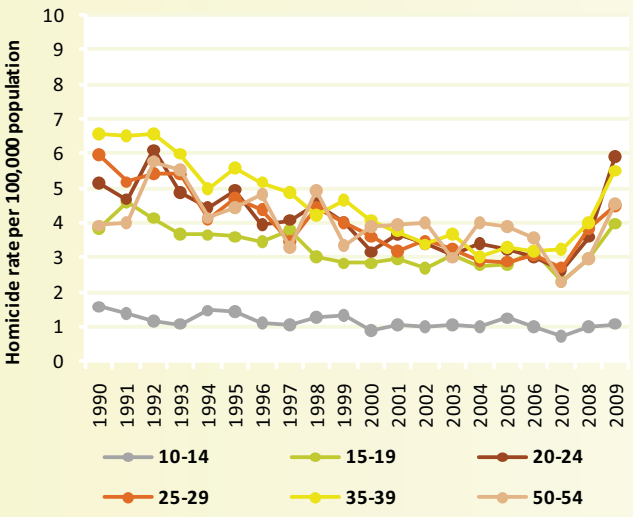
Source: WHO, Causes of Death 2008 dataset (2011).

Homicide increases in Mexico by age and sex

The result of Mexican organized crime groups' increasing dominance of cocaine trafficking between South America and the United States (as discussed in chapter 3) has been a notable increase in lethal violence that not only affects members of drug trafficking groups but also members of the security forces and innocent bystanders. The bulk of lethal violence is exercised by men against men and, as can be seen from the age-specific homicide trends below, the sudden increase in homicide rates affected all males with the exception of those under the age of 15.

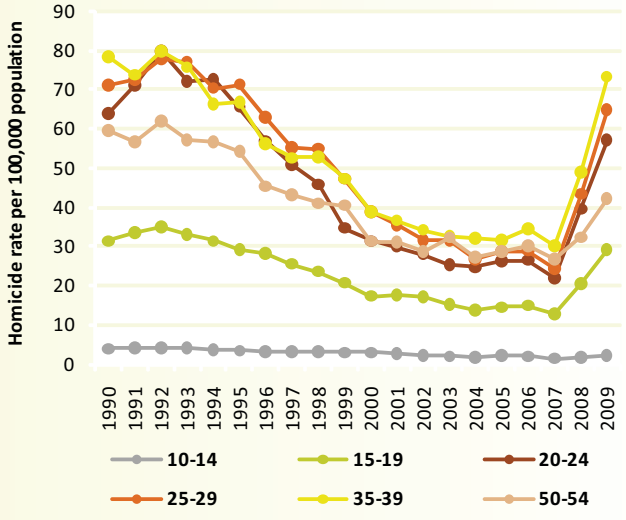
Meanwhile, the increase has also led to abrupt rises in the homicide rates of women belonging to the same age groups, albeit at a much lower level. While a sudden increase in lethal violence can thus be observed in all sexes and age groups, it is noticeable that men in the 35-39 age groups have been most affected and in 2009 showed the highest age-specific victimization rate (73), ahead even of 25-29 year olds (with a rate of 63, the second most affected group) and other younger age groups. However, the upsurge in homicide even affected the 15-19 age group, either as members of drug trafficking groups or simply because they were in the wrong place at the wrong time. And there is evidence that some organized criminal groups employ even younger boys within their ranks, which exposes them to a higher risk of being killed.

Female homicide rates by age group, Mexico (1990-2009)



Source: National statistical office.

Male homicide rates by age group, Mexico (1990-2009)



Source: National statistical office.

aged 20-24 make up the largest group of all homicide victims (16 per cent), followed by men aged 25-29 (14 per cent) and men aged 30-34 (11per cent). In contrast, the share of consecutive female age groups in total homicide victims peaks at under 2 per cent for the 20-24 age group and declines continually with age thereafter (figure 5.6).

A number of factors (such as a young population structure) contribute to this pronounced pattern in the Americas but the evidence points, in particular, to the high risks of lethal violence emanating from membership of organized crime groups and street gangs (see chapter 3).

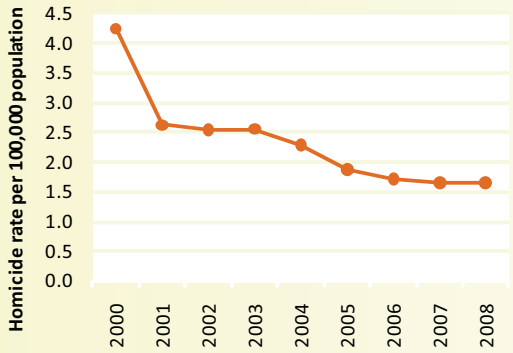
Europe

In contrast to the sex and age profile of homicide victims in the Americas, in Europe there is no early peak in the male homicide victim structure and the risk differentials for male and female homicide victims are considerably smaller. In a sample of 32 European countries, men aged 20-24 make up

Homicide decline in Central and Eastern Europe by age and sex

The marked decline in the homicide rate in many countries in Europe in the first decade of the 21st century was particularly steep in several countries in Central and Eastern Europe. The fact that most of those countries undertook great efforts to bring their social, legal and economic systems in line with international standards in that period contributed positively to that development, which in many cases accelerated during the European Union accession process.

Homicide rate in the Czech Republic, Hungary, the Republic of Moldova, Poland and Romania (2000 – 2008)

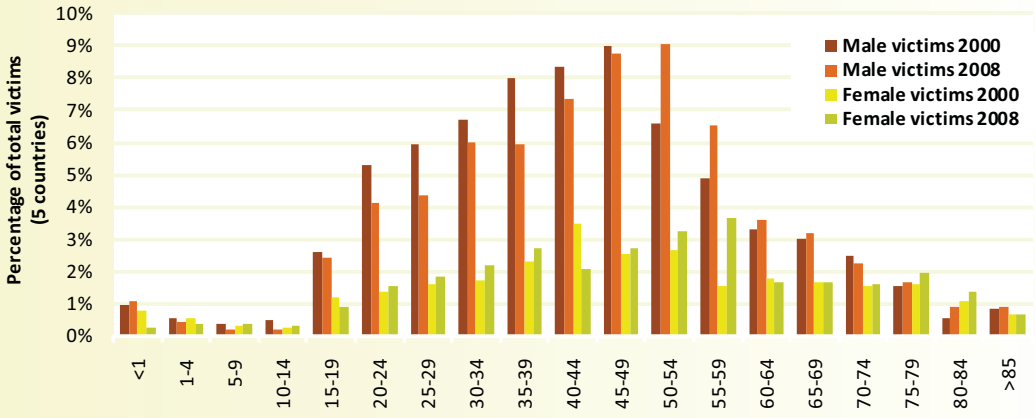


Source: UNODC Homicide Statistics (2011). Lines represents population weighted homicide rate.

The overall homicide rate in five countries in Central and Eastern Europe dropped from 4.2 to 1.6 per 100,000, a decline of 61 per cent in less than a decade. However, the decline was not uniform among sex and age groups.

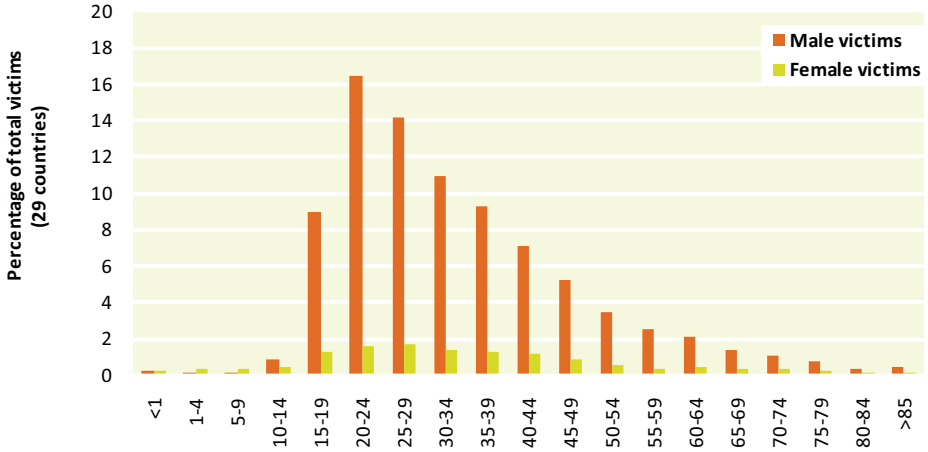
The biggest declines in the share of homicide victims were achieved between 2000 and 2008 among men in the age groups between 20 and 44, which had the highest shares of homicide victims at the beginning of the period. During the same period, the shares of female victims actually increased in the majority of age groups. As the total number of homicides decreased sharply between 2000 and 2008, this suggests that the decline was mostly driven by a decrease in homicides affecting young males. This means that the composition of homicide has changed in Central and Eastern Europe, and the relative share of intimate partner/family-related homicides has increased, moving the homicide model in those subregions closer to that seen in the other European subregions.

Distribution of homicide victims by age and sex, selected countries in Central and Eastern Europe (2000 and 2008)



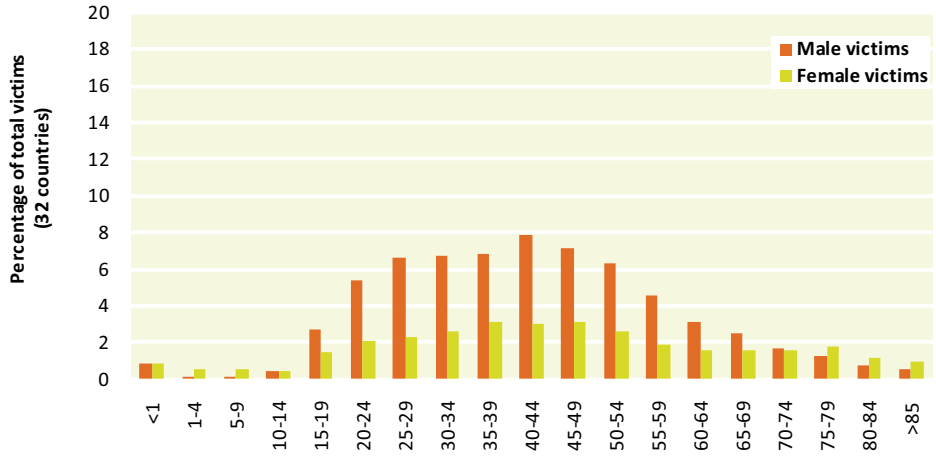
Source: Global Burden of Injuries, *Injury Mortality Data Collection* (2011).

Fig. 5.6: Distribution of homicide victims by age and sex, the Americas (2000-2008)



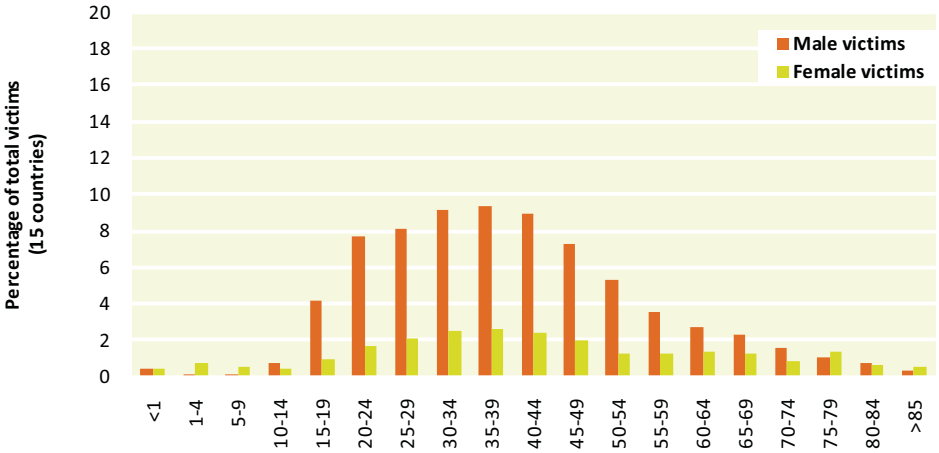
Source: Global Burden of Injuries, *Injury Mortality Data Collection* (2011).

Fig. 5.7: Distribution of homicide victims by age and sex, Europe (2000-2008)



Source: Global Burden of Injuries, *Injury Mortality Data Collection* (2011).

Fig. 5.8: Distribution of homicide victims by age and sex, Asia (2000-2008)



Source: Global Burden of Injuries, *Injury Mortality Data Collection* (2011).

only about 5 per cent of all homicide victims, increasing to 8 per cent in the 40-44 male age group and decreasing thereafter (figure 5.7). The profile of female homicide victims is similar to that of males except in the older age groups and it is important to note that, while percentages of homicides are lower for older male groups, this does not necessarily indicate a lower level of homicide risk (homicide rate) as the total population of the older age groups is considerably smaller to start with, particularly for men and women over 80 years of age.

Asia

Data for a sample of 15 countries in Asia indicate, on the one hand, that the shares of young male victim age groups in the sample are considerably lower than in countries in the Americas but higher than in European countries, while, on the other hand, that there is no pronounced peak of male homicide victims discernable at an early age. The shares of both male and female victims rise in parallel until reaching a peak for the 35-39 age group (at over 9 per cent for men and under 3 per cent for women), before declining for older age groups. This is a somewhat intermediate victimization pattern in comparison with the earlier examples (figure 5.8).

The average age patterns for the selected countries in Asia can provide some general indications of homicide patterns in Asia but hide significant differences in sex and age patterns at country level. For example, female victims make up less than 10 per cent of all homicide victims in the Philippines (total homicide rate of 5.4 per 100,000) but over 40 per cent of all victims in Japan and the Republic of Korea (0.5 and 2.9 per 100,000, respectively).

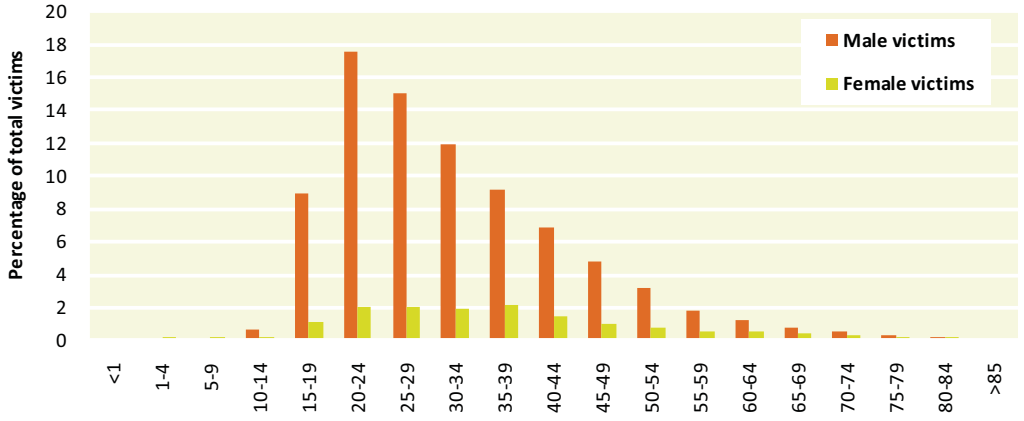
Africa

Available age and sex-specific homicide data on Africa cover only Egypt, Mauritius and South Africa. In Egypt, age-specific male homicide victim data show a preponderance of young male victims in the 20-24, 25-29 and 30-34 age groups, while the age profile of female victims seems to be more even and reaches a plateau at the ages of 30-34 and 35-39. In Mauritius, the shares of homicide victims rise until the 40-44 age group for men and until the 35-39 age group for women. Only South Africa, a country with a high homicide rate, displays a pattern of lethal male violence similar to the Americas (see figure 5.9), with highest shares of homicide victims in the age groups between 20 and 39. This is a pattern of male violence that owes much to the types of risk-seeking behaviour in which certain disadvantaged groups in South African society routinely engage.[1]

Risk differentials in homicide

The fact that there are large differences in homicide risks between men and women, between men at different stages of their lives and between countries with a varying prevalence of particular homicide typologies is already apparent from crude homicide rates when disaggregated by age and sex. However, the full implications of these country and intra-group variations in homicide rates for individuals only become fully visible when looking at the compound effect of age and sex-specific risk differentials over the course of a lifetime.

Fig. 5.9: Distribution of homicide victims by age and sex, South Africa (2000-2008)



Source: Global Burden of Injuries, *Injury Mortality Data Collection* (2011).

1 Ratele, K., *Watch your man. Young black males at risk of homicidal violence,* SA Crime Quarterly (2010).

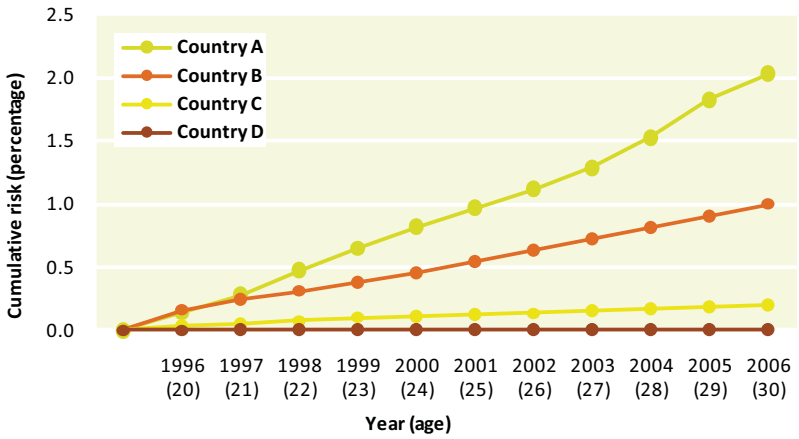
For example, using available estimates on homicides by age and sex,[2] the risk for 20-year-old males and females, in 1996, of being murdered before reaching the age of 31 is calculated for a number of countries. Each of these countries falls into one of the following categories based on the homicide rate and prevailing homicide typology found there: Country A has a high homicide rate, a high proportion of firearm homicides and is typically located in Central America; Country B has a high homicide rate, a smaller proportion of firearm homicides and is typically located in Middle, Eastern and Southern Africa; Country C has a low homicide rate, a high proportion of intimate partner/family-related homicides and is typically located in Northern, Southern and Western Europe; Country D has a very low homicide rate and is typically located in Eastern Asia. The calculation assumes the continual residence in the selected countries over the entire time period (from 1996 to 2006), which means that the calculated risk applies to those who did not emigrate or die from other causes.

At one extreme, a cohort of men who were 20 years old in 1996 in Country A had a 0.14 per cent probability of being killed when they were 20 and a somewhat higher chance in the subsequent years (for example, 0.19 per cent probability of being murdered at the age of 22; 0.30 per cent at the age of 29, in 2005). Overall, the same cohort had a 2.0 per cent probability of being murdered between 1996 and 2006. In other words, every 50th man of those who were 20 years old in Country A in 1996 was murdered before reaching the age of 31 (figure 5.10).

The high homicide rate in Country A in the period considered in this exercise provides just one extreme example of the very real risk of homicide faced by young men in many countries around the world. Another example in the graph is provided by Country B, where the risk of being murdered before the age of 31 was 1.0 per cent for the cohort of men who were 20 in 1996. These cumulative effects appear particularly alarming when compared with countries with a relatively low homicide rate. For example, a man in Country D had only an approximately 0.0005 per cent risk of being murdered at the age of 20 in 1996 and an equally low risk for every year thereafter, with the cumulative risk of being murdered before reaching 31 years of age increasing to 0.005 per cent. This means that a 20-year-old male living in Country A in 1996 faced a risk of being murdered 400 times higher than in country D.

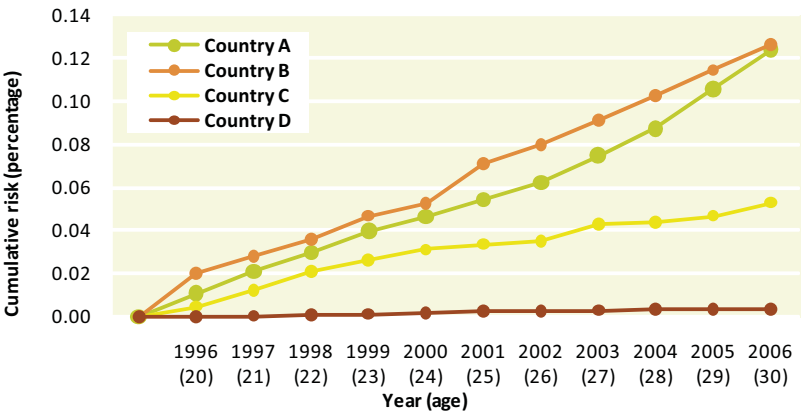
There are also considerable risk differentials for female victims of homicide between countries, although the discrepancies between countries are less marked for women than men (figure 5.11). A young woman from Country A faced a cumulative risk of 0.12 per cent of becoming a victim of homicide between the ages of 20 and 31, while a woman from Country D faced a cumulative risk of only 0.004 per cent. Thus, the homicide risk differential between women in County A and Country D for the 11-year time span is lower in comparison to the much higher risk differential for men.

Fig. 5.10: Cumulative homicide risk for males aged 20 in 1996, selected countries (1996-2006)



Source: UNODC elaboration of Global Burden of Injuries, *Injury Mortality Data Collection* (2011). Line represents percentage risk for a male aged 20 in 1996 of becoming a victim of homicide before each subsequent year until age 30 (2006).

Fig. 5.11: Cumulative homicide risk for females aged 20 in 1996, selected countries (1996-2006)



Source: UNODC elaboration of Global Burden of Injuries, *Injury Mortality Data Collection* (2011). Line represents percentage risk for a female aged 20 in 1996 of becoming a victim of homicide before each subsequent year until age 30 (2006).

2 Victims of intentional homicides by age and sex are provided by Global Burden of Injuries, *Injury Mortality Data Collection* (2011).

Who are the perpetrators?

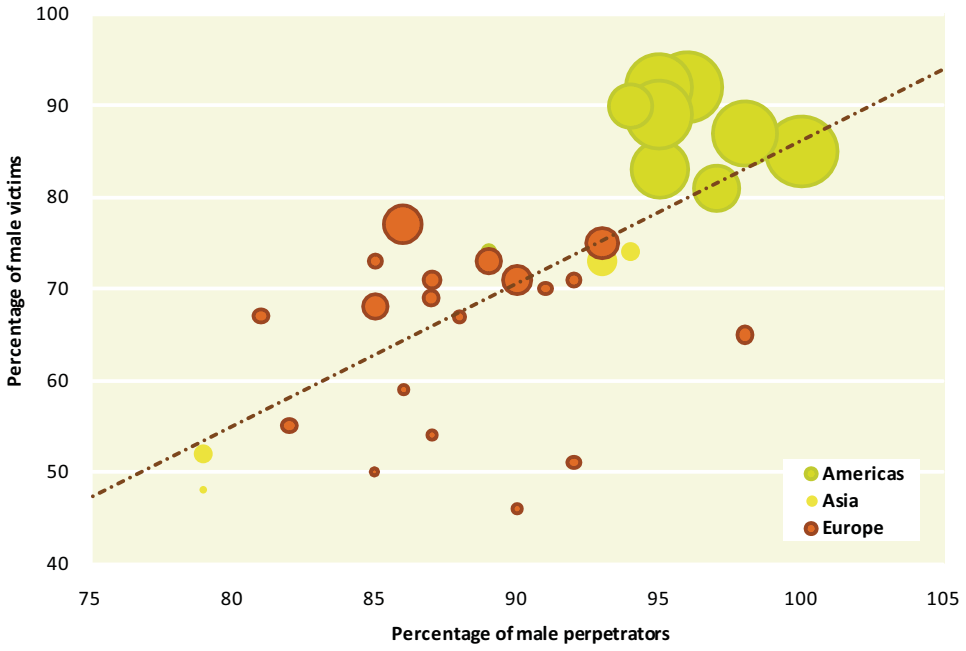
Data on suspected homicide offenders are only available for few countries but several important patterns clearly emerge.[3] Firstly, as is the case for homicide victims, most perpetrators of homicide are male. In the majority of countries, men make up over 80 per cent of homicide offenders and there is a clear link between the sex structure of homicide offenders and the overall homicide rate. Generally, the higher the homicide rate, the higher the share of men among the suspected offenders. Conversely, the lower the homicide rate, the higher the share of female homicide suspects, though females never make up the majority of homicide offenders. This sex pattern is a clear indication that the share of male homicide offenders among all homicide suspects is a good predictor of the type of homicide that is most prevalent in a country or region. Thus, men typically make up over 90 per cent of all homicide offenders in the Americas, a region with characteristically high homicide rates due to gang and organized crime-related lethal violence. However, they make up comparatively smaller shares of homicide offenders in Asian and European countries, where a larger share of the (relatively low) number of homicides is committed in the context of intimate partner/family-related violence. And while the majority of homicide victims in intimate partner/family-related murders are still women killed by their husbands, partners or ex-partners, a minority of perpetrators are also women killing men.

The sex patterns of homicide offenders within particular types of homicides (gang/organized crime-related, robbery/theft-related or intimate partner/family-related) are thus similar to the sex patterns of homicide victims, discussed earlier in this chapter. This conclusion is based on data available for Asia, the Americas and Europe but given the lack of data it cannot be tested for countries in Africa, where homicide levels are generally high.

This relationship between perpetrators and victims and total rates of homicide is illustrated in figure 5.12, which plots the share of male perpetrators against the share of male victims of homicide.

Countries with high homicide rates are clustered in the top right corner and are mostly countries in the Caribbean and South America. Data points for European countries indicate smaller shares of both male victims and male perpetrators and are consid-

Fig. 5.12: Percentage of male victims and perpetrators by country (2009 or latest year available)



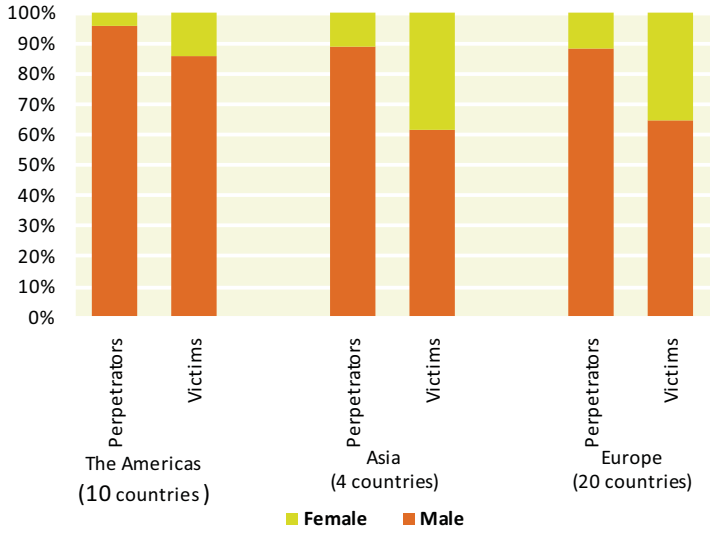
Source: UNODC elaboration of UN-CTS. Bubble size is proportional to homicide rate by country.

3 Data on suspected homicide perpetrators are available for 34 countries, on the basis of criminal justice data countries reported to UNODC through the United Nations Survey of Crime Trends and Operations of Criminal Justice Systems (UN-CTS).

erably smaller in size than for the Americas, representing lower homicide rates. Data points for the four Asian countries for which data are available fall into two groups: two countries with a relatively high share of both male victims and male perpetrators also have higher homicide rates (India and Mongolia); two countries with relatively lower shares of both male victims and male perpetrators both have low (Republic of Korea) or very low (Japan) homicide rates.

The relationship between the shares of male and female perpetrators to the shares of male and female victims at regional level is also illustrated in figure 5.13. While the average share of male perpetrators and victims is particularly high, in the sample of 10 countries in the Americas (96 per cent and 86 per cent, respectively), the corresponding figures are significantly lower in the four Asian countries mentioned above (86 per cent and 62 per cent) as well as in a sample of 20 European countries (88 per cent and 65 per cent). And although these data provide some indirect evidence on victim-offender relationships by sex around the world, they do not directly say who kills whom. For that, detailed records on the relationship between the victim and the offender in each individual case are needed, but unfortunately very few countries can provide data relating to this direct relationship. An example is, however, provided for the United States in the box above.

Fig. 5.13: Distribution of victims and perpetrators of homicide by sex and region (2009 or latest year available)



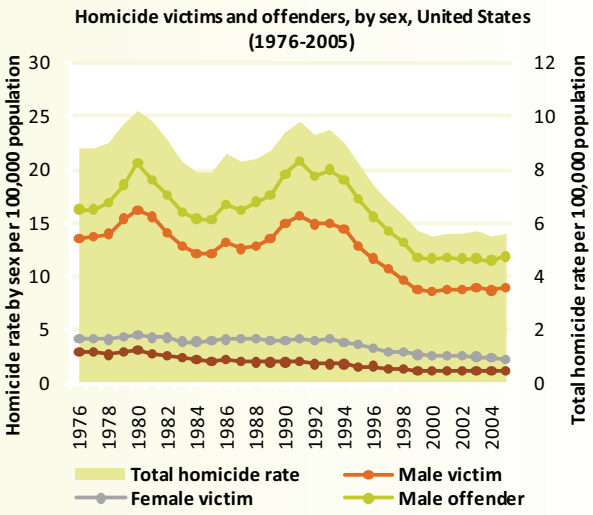
Source: UNODC elaboration of UN-CTS.

Patterns of victim-offender relationships by sex, United States (1)

Over the past two decades homicide rates in the United States have declined to levels last experienced in the 1960s after nearly doubling to reach peaks in 1980 and 1991. A number of factors are commonly cited as driving this decline, as well as declines in other crime types in the United States from the early 1990s onwards.

A common argument relates to the changing age structure of the population, with fewer young people committing fewer crimes, but this effect may be limited in the case of the US.[1] Other factors relate to the decline in the use of crack cocaine[2] and the success of policing in troubled urban environments,[3] as well as to increases in police numbers, the rising prison population and other factors.[4]

Available data show that changes in total homicide rates from 1976 were driven almost exclusively by changes in male victim and male offender rates, which accounted for almost all increases and decreases. The female victimization rate was at a much lower level and remained stable over the whole period.



Source: US Bureau of Justice Statistics.

1 Levit, S., *The exaggerated role of changing age structure in explaining aggregate crime changes,* Criminology (1999).

2 Ousey, G.and Lee, M., *Examining the conditional nature of the illicit drug market-homicide relationship: a partial test of the theory of contingent causation,* Criminology (2002).

3 See Messner, S.F. et al., *Policing, drugs, and the homicide decline in New York City in the 1990s,* Criminology (2007) and Blumstein, A. and Waldman, J., *The crime drop in America. Revised edition* (2006).

4 See, for example: LaFree, G., *Declining Violent Crime Rates in the 1990s: Predicting Crime Booms and Busts,* Annual Review of Sociology (1999); Blumstein, A., Rivara, F.P. and Rosenfeld, R., *The Rise and Decline of Homicide—and Why,* Annual Review of Public Health (2000) and Levitt, S.D., *Understanding why crime fell in the 1990s: four factors that explain the decline and six that do not,* The Journal of Economic Perspectives (2004).

Patterns of victim-offender relationships by sex, United States (2)

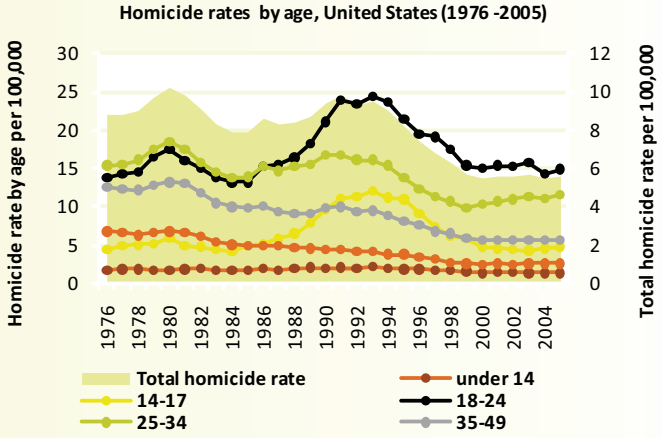
The predominance of males murdered by males is confirmed by detailed records on offender-victim relationships for individual homicides. Over the past 10 years, nearly two out of every three homicides for which such records are available[1] have been committed by a male against another male, and 1 in 4 by a male against a female. In contrast, only approximately 1 in 40 homicides have been committed by females against other females. Despite the general decline in the homicide rate, the breakdown in the victim-offender gender relationship has changed very little and is almost the same as in 1995.

Examining the age of homicide victims shows that peaks in homicide rates are mainly linked to young homicide victims in the 14-17 and 18-24 age groups. Additional data indicate that the age profile of offenders has a similar pattern and the higher rates during the homicide peaks in the early 1980s and 1990s were observed particularly in larger cities.[2]

The decline in homicide levels in the US is, to a large extent, due to a reduction in the number of murders in those population groups characterized by high levels of lethal violence in the first half of the 1990s.

Offender-victim sex relationship in homicide (%) in the USA; 2000-2009		Offender		
		Male	Female	Total
Victim	Male	64.3	7.4	71.7
	Female	25.7	2.6	28.3
	Total	90.0	10.0	100.0

Source: UNODC elaboration of United States Department of Justice, Federal Bureau of Investigation. Crime in the United States, various years. The data refer to the gender relationship between victims and offenders for the years 2000-2009, for the cases where sex of both victim and offender was known.



Source: US Bureau of Justice Statistics (2007).

1 The data cover around 40 per cent of all homicides and only cases of one-to-one homicides where the sex of both the victim and the perpetrator is known.

2 Lattimore, P., et al., *Homicide in Eight U.S. Cities: Trends, Context, and Policy Implications,* National Institute of Justice Paper NCJ 167262 (1997).

Homicide and socio-economic characteristics of offenders and victims

The analysis of offender and victim characteristics, and the relationship between the two, is clearly limited by a lack of comprehensive and comparable data at global and regional levels. More detailed data are usually available at national and local levels and a number of studies of homicide patterns and trends in the national and local context exist. However, the availability of data depends on the design and content of national crime recording systems, which are contingent on the concrete needs and capacities of national criminal justice systems to produce and make use of such data. For example, data on certain types or motives of homicide (such as dowry murders or honour killings) will only be collected if they are considered relevant within the national context. Likewise, more detailed data on offender and victim characteristics generally reflect the fact that these characteristics are considered relevant in a certain context.

Producing and using such detailed data on offender and victim characteristics are fundamental requirements for furthering the analysis and understanding of homicide patterns and trends. For example, studies at national level linking homicide to employment status and income demonstrate that the key offending and victimized groups alike are often marginalized unemployed males. In different contexts around the world, membership of certain racial or ethnic minority groups is often strongly associated with above average risks of becoming either a homicide offender or a homicide victim, and in many cases both.[4] More detailed analyses reveal that the underlying reasons for such apparent ethnic or racial patterns in homicide can be found in their correlation with low-income levels,

4 For example, in South African cities, black males between the ages 20 and 40 are roughly 17 times as likely as white males in the same age group to die from homicidal violence. See: Ratele, K., *Watch your man. Young black males at risk of homicidal violence*, SA Crime Quarterly (2010).

poverty and low socio-economic status.[5] Similarly, data on offenders with a history of violence or previous conviction (recidivists) can also provide further insights in offending patterns and high risk groups.[6]

Going beyond the mere disaggregation of homicide offenders and victims by age and sex, and taking account of the most relevant characteristics of both perpetrators and victims is thus a necessary requirement for a better understanding of homicide trends and context and for the formulation of better, evidence-based policies and crime prevention strategies. To enable this type of analysis on a global and regional level, more and better data are needed for the majority of countries worldwide.

5 See, for example: Brookman, F. and Maguire, M., *Reducing Homicide: A review of the possibilities*, Home Office Online Report, 2003 and Ceccato, V., *Crime in a city in transition: The case of Tallinn, Estonia*, Urban Studies (2009).

6 See, for example: Cao, L., Hou, Ch. and Huang, B., *Correlates of the Victim Offender Relationship in Homicide,* International Journal of Offender Therapy and Comparative Criminology (2007) and Miller, J. and Hendricks, N.J., *Applying the Problem-Solving Model to a Developing World Context: The Case of Murder in Trinidad and Tobago*, Crime Prevention and Community Safety (2007).

6. THE LOCAL PICTURE

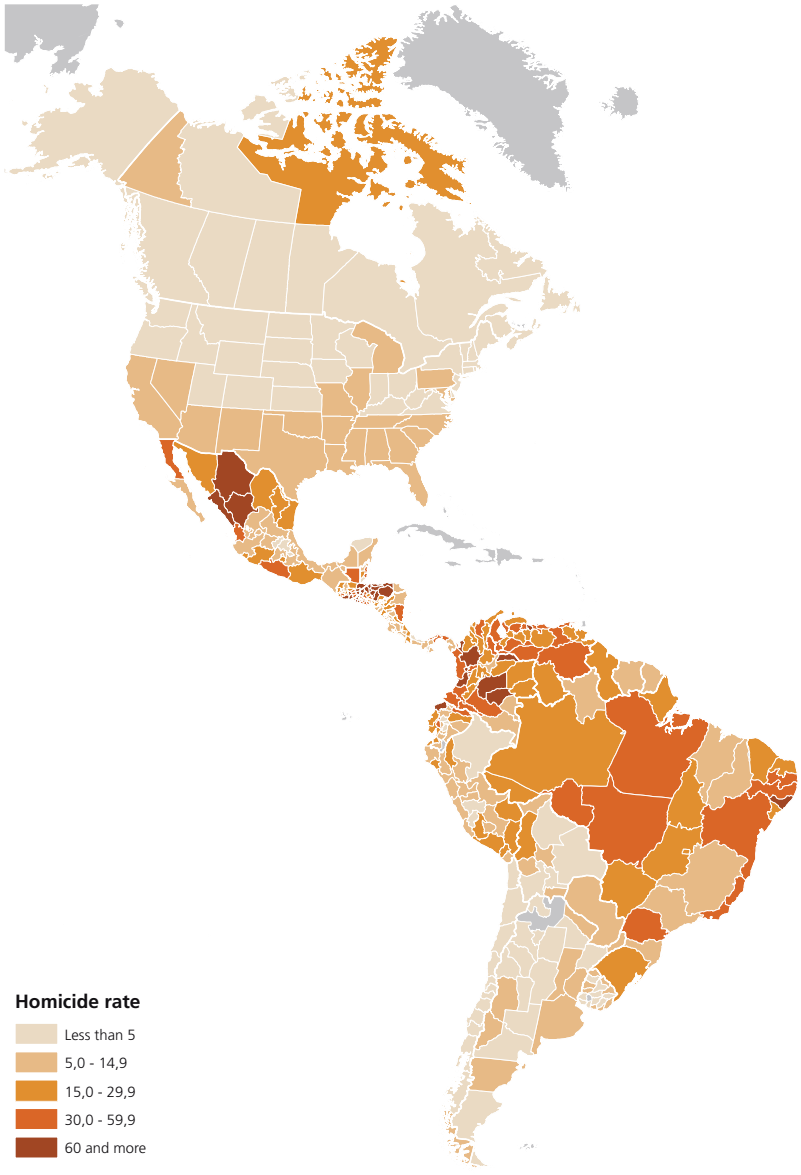
Data aggregated at national level often conceal geographical patterns that can prove particularly important in understanding the nature of homicides. Indeed, an "environmental criminology" approach emphasizes that a victim, an offender and a specific act must intersect at a particular time and place, in order to produce a crime.[1] This chapter looks at homicide from within national borders to show that homicide rates and, to some extent, different homicide typologies, exist in different areas of the same country and even within the same city. It also examines how environmental cues related to the relative risk and crime opportunity, as well as population density, may correlate with homicide and crime in general. Whilst big cities tend to show higher levels of homicide than less densely populated areas, this pattern is not absolute as large urban areas can offer both protective and risk factors for violent crime events.

Homicides at subnational level

Data at subnational level make apparent the diversity of homicide levels that can exist within the same country. Map 6.1 shows that this applies to all countries in the Americas, with the greatest differences recorded in those of Central and South America. For example, in Mexico the state of Chihuahua has a homicide rate 80 times higher than Yucatan. Other large countries such as Brazil, Colombia and Peru also show big differentials between subnational areas, while large differences are also to be found in smaller countries such as Panama and Guatemala.

Although average homicide rates are considerably lower in Europe than in the Americas, differences can still be seen when looking at the different sub-

Map 6.1: Homicide rate at subnational level, the Americas (2010)

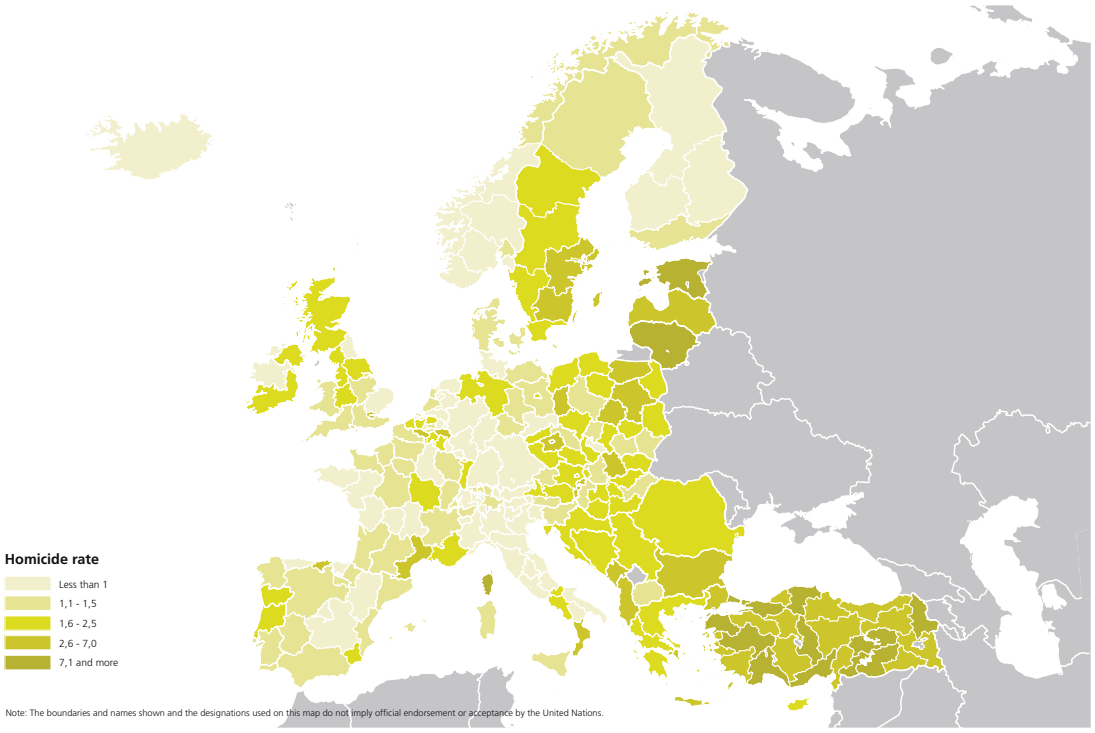


Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Source: National official sources.

1 Brantingham, P.J. and Brantingham P.L., *Environmental Criminology* (1981).

Map 6.2: Homicide rate at subnational level, Europe (2005)



Source: European Commission, Investing in Europe's Future. *Fifth report on economic, social and territorial cohesion* (2010).

national regions within each country (map 6.2). In the United Kingdom, for example, the North West of England and Greater London have homicide rates more than double those of East Anglia and the North East. Likewise, in France, the Provence-Alpes-Côte d'Azur and Languedoc-Roussillon regions in the south have homicide rates more than double those of Pays-de-Loire and Poitou-Charentes in the west of the country.

In addition, such data can identify patterns across national borders that can be hidden when only country level data or subnational data for one single country are used. For example, a transnational macro-area with low levels of homicides consisting of the centre and south of Germany, most of Switzerland, western Austria and the centre and north of Italy emerges. On the other hand, higher homicides rates are recorded in several areas that border the southern part of the Baltic Sea, including Estonia, Latvia, Lithuania, the north-east of Poland and the south-east of Sweden.

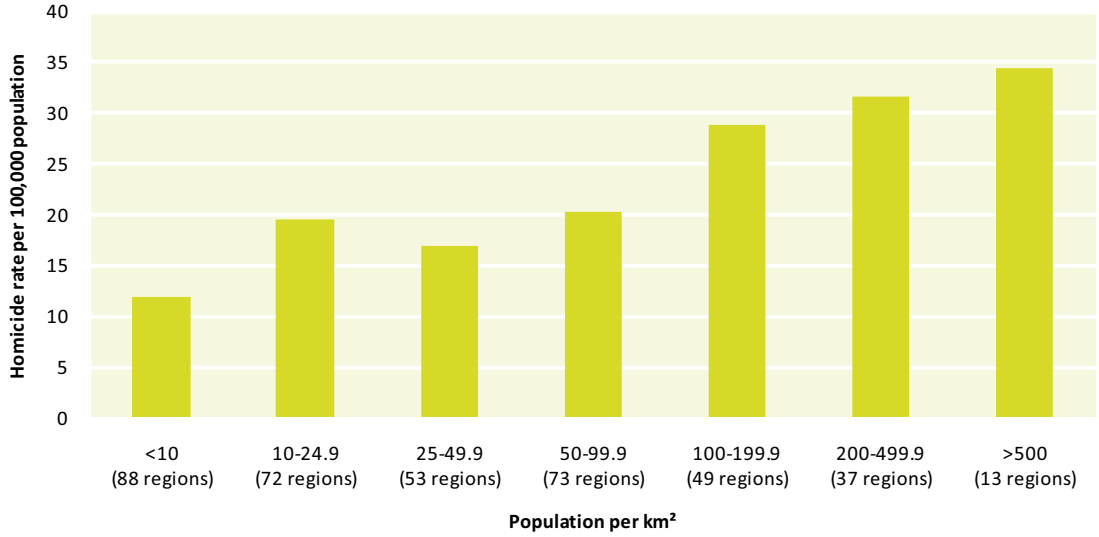
Homicide, population density and the urban dimension

In the case of the subnational regions of England and France discussed above, it is clear that those with higher population densities have higher homicide rates than more sparsely populated regions. Indeed, at local level, population density can be considered a factor influencing homicide and crime.

In the Americas, for example, it can be shown that population density and homicide rates are correlated (figure 6.1). Densely populated subnational regions, or states in the case of the United States, are more likely to have a higher homicide rate than others that are more sparsely populated. At a subnational level of disaggregation, the most densely populated areas (more than 500 inhabitants per square kilometre) in figure 6.1 include mainly megacities, cities and urban agglomerations, all of which are relatively small in area but contain, in many cases, significant proportions of the total national population. Whilst population density shows a general correlation with homicide rates, other factors may nonetheless result in unexpectedly high homicide rates in certain less densely populated areas.

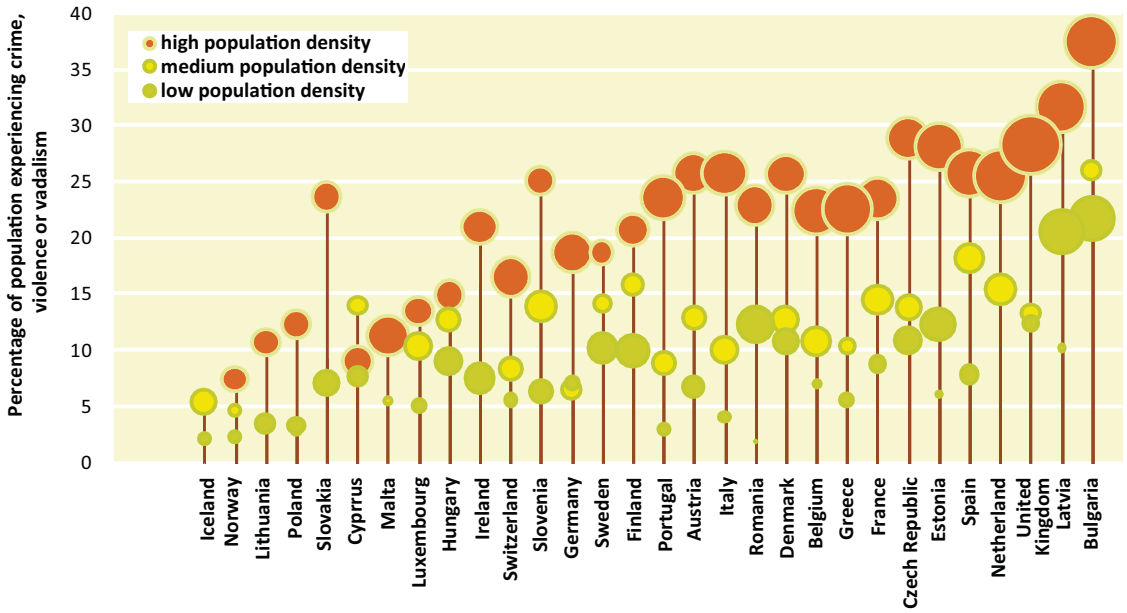
In map 6.1, a number of rural areas, such as Petén province in the North East of Guatemala for example, show among the highest subnational rates in the subregion. This may occur, in particular, where territory represents a strategic focus for the activities of organized criminal groups due to its location near national borders or key drug transit or production areas. Such areas may show homicide

Fig. 6.1: Homicide rates by population density of subnational regions, the Americas (2010 or latest available year)



Source: UNODC elaboration of national official sources.

Fig. 6.2: Percentage of population experiencing crime, violence or vandalism by degree of urbanization, European Union countries (2009)



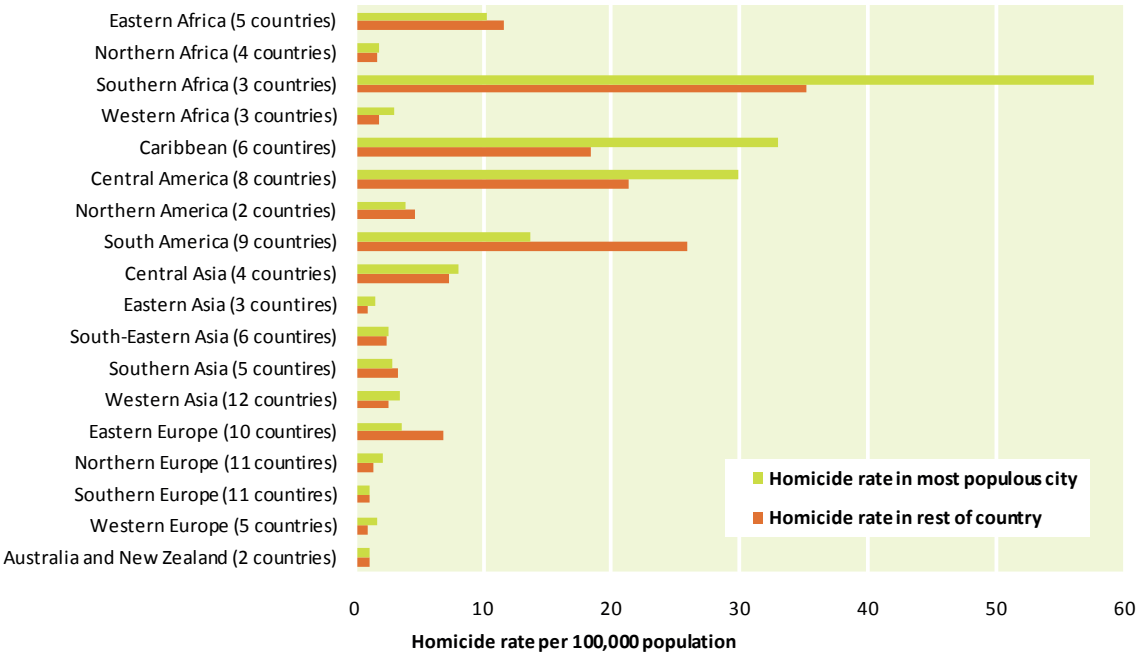
Source: Eurostat, *Regional Yearbook 2011* (2011).

rates that equal or even far exceed those in large urban agglomerations.

The general relationship between population density and homicide rate is not only valid in the Americas. Elsewhere, living in a more urbanized environment also increases the risk of being murdered or falling victim to other types of violent crime. When looking at the experience of crime, violence and vandalism, a clear trend also emerges for all European Union countries. The share of the population experiencing crime, violence or vandalism is higher in densely populated areas than in less densely populated areas. And inhabitants of densely populated areas of European Union countries are, on average, more than twice as likely to experience crime than inhabitants of intermediately populated areas and almost three times as likely to do so than those of sparsely populated areas (figure 6.2).

Numerous risk factors can explain higher levels of crime in cities, such as the multiplicity of possible targets and higher pecuniary returns that can attract criminals, as well as the lower risk of being recognized and arrested, while modern cities are

Fig. 6.3: Homicide rates in most populous city vs. rest of the country, by subregions (2010 or latest available year)

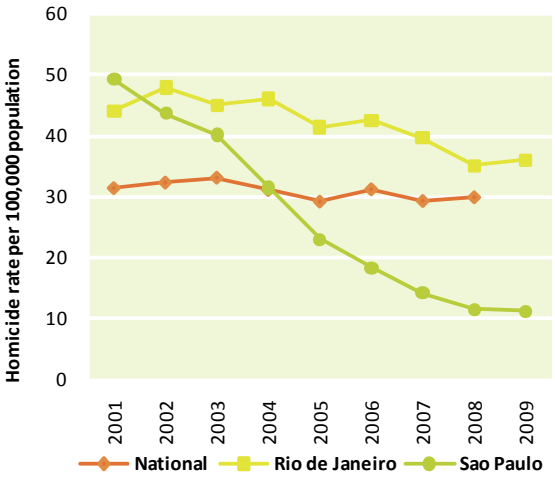


Source: UNODC Homicide Statistics (2011).

also often characterized by stark inequalities and social/spatial segregation, which can foster criminal behaviours. On top of this, rapid urbanization and migration represent challenges that can put additional strain on already tense relationships between people. Although urbanization can also offer some protective factors, such as increased police presence, closed circuit television (CCTV) monitoring of public places, and faster access to medical care, criminal activities in general and homicides in particular can be viewed as the tip of the "iceberg" of an increasingly strained relationships between individuals and the social context where they live. The fact that the risk of overall victimization for a number of crime types,[2] as well as homicide, is increased in urban environments suggests that such tensions may be particularly harsh in an urban context.

At global level, homicide rates in a country's most populous city are usually at least comparable and sometimes noticeably higher than in the rest of their respective countries. This is particularly evident in Southern and Western Africa, the Caribbean and Central America (figure 6.3). The few subregions where the most populous city rate is lower than for the rest of the country (such as South America and Eastern Europe) may perhaps

Fig. 6.4: Homicide rates in Brazil, Rio de Janeiro and Sao Paulo municipalities (2001-2009)



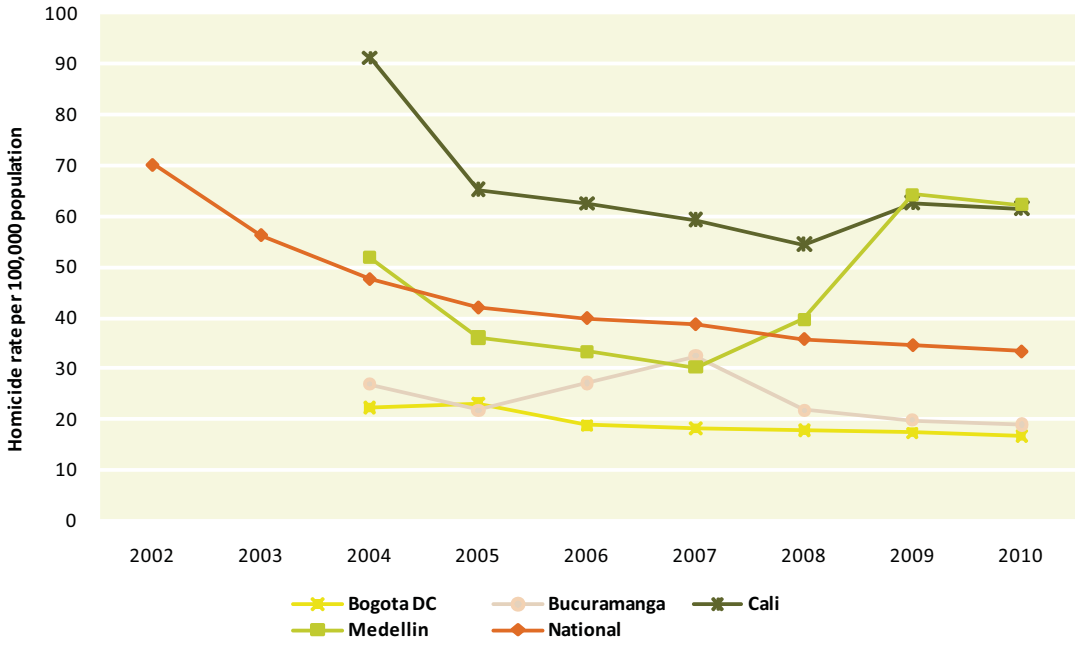
Source: UNODC Homicide Statistics (2011), Secretaria de Segurança Pública de São Paulo and Instituto de Segurança Pública de Rio de Janeiro.

be explained by the fact that data only cover the most populous city in each country, leaving homicides in other large urban areas to contribute to the "rest of country" rate. In the case of Brazil, for example, the homicide rate in Sao Paolo is compared to a rest of country rate that includes the significant number of homicides occurring in cities such as Rio de Janeiro, Salvador and Brasilia.

Indeed, the recent experience of Sao Paulo, Brazil's most populous city, demonstrates the significant

2 See van Dijk, K. van Kesteren, J. and Smit, P. *Criminal Victimisation in International Perspective. Key findings from the 2004-2005 ICVS and EU ICS* (2007).

Fig. 6.5: Homicide rates in Colombia, Medellín, Barraquilla, Bogota DC, Cali and Bucuramanga municipalities (2002-2010)



Source: National Police.

possibilities for violent crime prevention and reduction in the urban context. In the first decade of this century, new policies were implemented in Brazil to reduce crime levels and homicides in particular. In 2003, legislation was passed introducing tighter controls on firearms, in conjunction with disarmament campaigns. At national level, such measures probably contributed to the slight decrease in homicide rates after 2004, but the impact was noticeably stronger in Sao Paulo, where the enforcement of such measures was particularly effective also because of pre-existing efforts to curb violent crime through new policing methods.[3] The strikingly different trends in homicide rates in Sao Paulo and Rio de Janeiro show that such crime prevention policies can make a real difference at local level (figure 6.4).

Different homicide levels and trends are also apparent in cities in Columbia. Significant efforts in the fields of crime prevention (including weapons bans) and conflict resolution initiatives have contributed significantly to decreasing homicide trends at national level, as well is in cities such as Cali, where there is still a high homicide rate in comparison to the national average. In contrast, Medellín saw a sudden increase in murders after 2007 following conclusion of the paramilitary demobilization process, as well as local power struggles between criminal groups (figure 6.5).

Homicide patterns in two cities

Cape Town

Homicide is one of the predominant causes of all non-natural deaths in South Africa,[4] and while the homicide rate has decreased in recent years, it remains relatively high (34 per 100,000 in 2009, down from 49 per 100,000 in 2000). At 41 per 100,000, South Africa's second largest city, Cape Town, has a homicide rate higher than the national average (although it has decreased by some 50 per cent during the past decade). In 2010, the South African Police Service recorded 1,521 homicides among the city's 3.7 million inhabitants.[5]

As shown in map 6.3, homicides are not evenly distributed between Cape Town's police precincts:[6] an analysis of the most recent homicide data by police precinct shows that they tend to be concen-

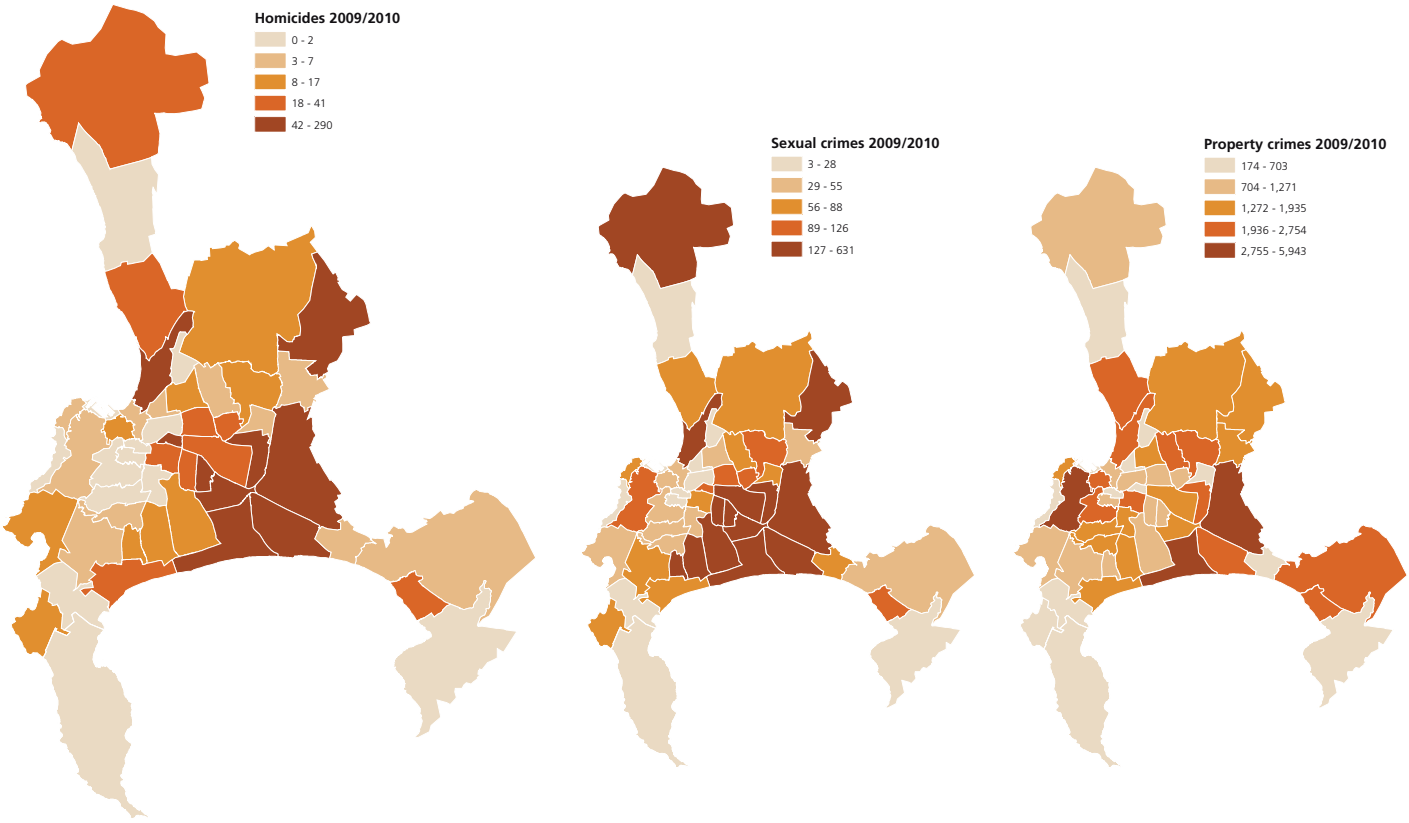
3 Marinho de Souza, M. et al., *Reductions in firearm-related mortality and hospitalizations in Brazil after gun control,* Health Affairs (2007) and Goertzel, T. and Kahn T., *The great Sao Paulo homicide drop,* Homicide Studies (2009).

4 See Berg, J. and Schaerf, W., *Crime Statistics in South Africa 1994-2003,* South African Journal of Criminal Justice (2004) and Demombynes, G. and Özler, B., *Crime and Local Inequality in South Africa* (2002).

5 South African Police Service (SAPS), *Crime Statistics 2003-2010,* compiled by the Strategic Development Information and GIS Department, City of Cape Town (2010).

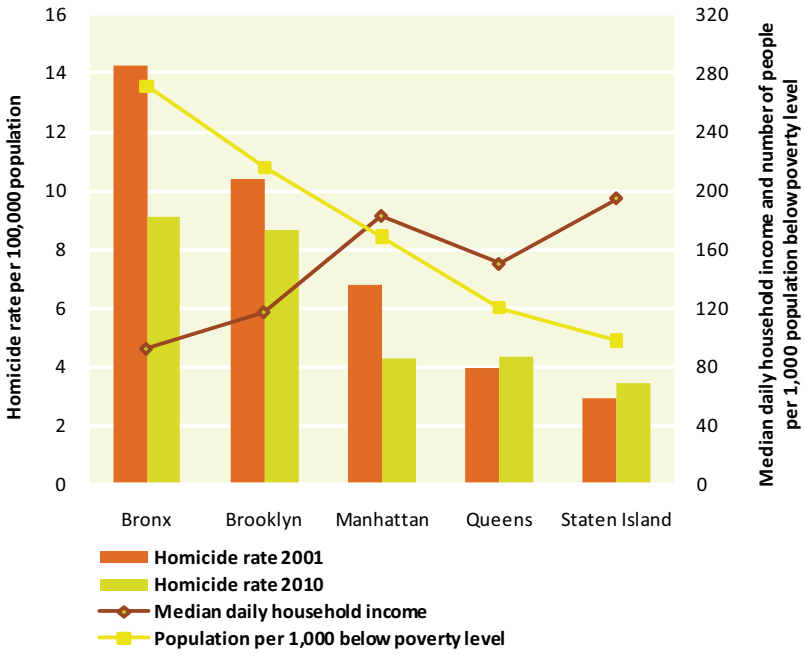
6 Police precincts are referred to as within their boundaries of 2000.

Map 6.3: Number of homicides, sexual crimes and property crimes by police precincts, Cape Town (2010)



Source: South African Police Service, Crime Statistics 2003-2010, compiled by the Strategic Development Information and GIS Department, City of Cape Town (2010).

Fig. 6.6: Homicide rate, household income and poverty level by borough, New York (2001 and 2010)



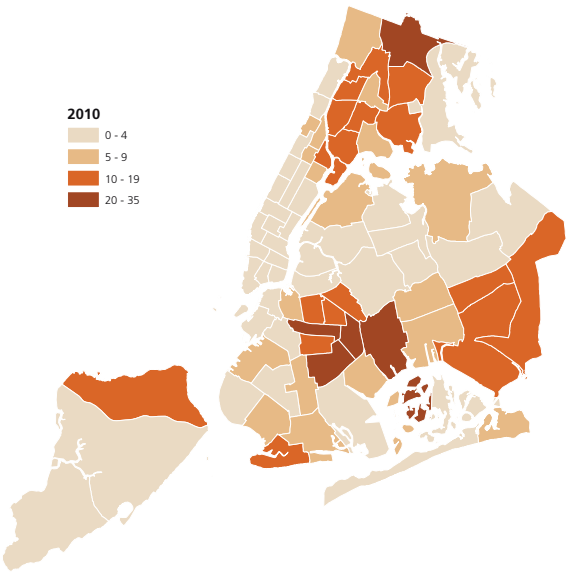
Source: New York City Police Department and US Census Bureau. Daily income is based on median annual household income for 2009. Share of population (per 1,000) with income below poverty level refers to 2009.

trated in the poorest parts of the city, such as the Khayelitsha, Nyanga and Guguletu neighbourhoods, where 44 per cent of Cape Town's homicides took place in 2009/2010. According to data from the most recent population census (2001), unemployment rates in these areas are more than 80 per cent higher than the city average, a high percentage of those actually in employment fall into low-income categories and more than twice the number of households live in informal dwellings[7] than the city average (respectively, 57, 44 and 32 per cent, as opposed to a city average of 14 per cent).

Homicides in Cape Town appear to be deeply entrenched in situations of social segregation and poverty that can easily spark spells of violence. This is confirmed when comparing the territorial distribution of homicides with those of other types of crimes: homicides show a pattern very similar to the distribution of other violent crimes, namely sexual crimes (including rape and indecent assault).

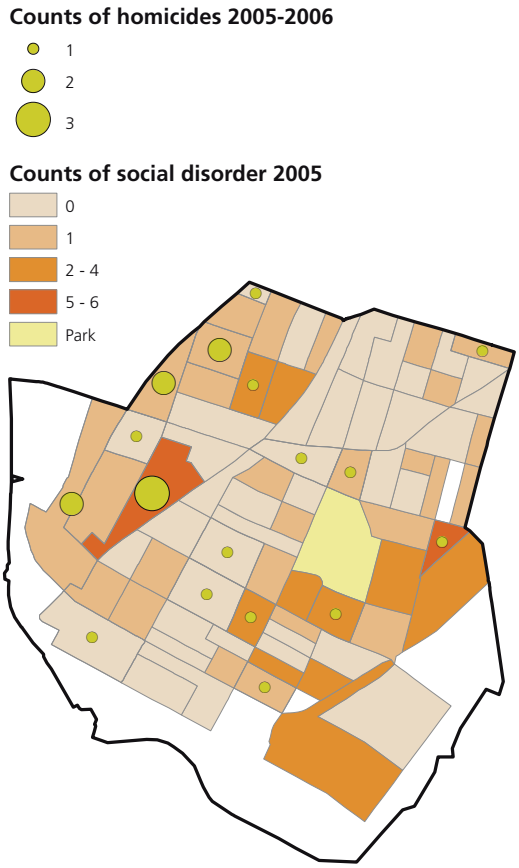
7 City of Cape Town - Strategic Development Information and GIS Department, *Crime in Cape Town: 2003–2010. An analysis of reported Violent, Property-related, Commercial Crime and Drug–related Crime in Cape Town* (2011).

Map 6.4: Number of homicides by police precinct, New York (2010)



Source: New York City Police Department.

Map 6.5: Number of homicides and signs of social disorder by block, South Bronx (2005)



Source: Rengifo, A.F., Slocum, L.A. and Herrmann, Ch., Signs of order and disorder in the South Bronx, Unpublished manuscript (2011). Homicide data derived from New York City Police Department Crime Data Warehouse (2003-2006).

The spatial distribution of property crimes, including non-aggravated robbery, burglary, motor vehicle theft, etc., is clearly characterized by a different pattern and those crimes tend to be more evenly distributed in the various sectors of the city. However, the more disadvantaged neighbourhoods mentioned above recorded only 4 per cent of all property crime in the city (against a share of 44 per cent of all the city's homicides), while three residential areas (Cape Town Central, Wynberg and Dieprivier police precincts) characterized by advanced social and economic conditions recorded some 15 per cent of the property crime total (against a proportion of less than 1 per cent of the city's homicides).

This suggests that poverty and income inequality may tend to drive different patterns of crime in different urban contexts. High-income areas may tend to attract property crime, but at the same time may have increased security and protection measures, resulting in target hardening. Low-income areas frequently remain vulnerable to property crime, including burglary, but residents may have fewer incentives (such as insurance coverage) to report crime to the police. Different levels of trust in law enforcement institutions may also be a factor affecting comparison of police statistics as between different socio-demographic areas within a city. Whilst property crime patterns can be complex, both police and victimization survey data demonstrate that, in a range of contexts, violent crime can be higher in lower-income areas due to a range of factors including environmental, health and social pressures.

New York

In New York, homicide rates have decreased by 20 per cent over the last 10 years, from 8.1 to 6.4 per 100,000. The decrease has not been uniform in the five boroughs of the city and while homicide rates have fallen by more than one third in Manhattan and the Bronx, they have decreased by less than 20 per cent in Brooklyn. In Queens and Staten Island, however, they have risen by ten and 18 per cent, respectively. As shown in other parts of this study and depicted in figure 6.6, homicide levels may be related to socio-economic conditions: boroughs with the highest levels of income and lower levels of poverty are associated with lower levels of homicide.

Map 6.4 indicates that murders tend to cluster, with highest counts being recorded in selected districts of Brooklyn and the Bronx. These boroughs are among the most disadvantaged in the city: on average, their inhabitants earn some 50 per cent less than those of Manhattan, and these boroughs have considerably higher proportions of the population with incomes below the poverty level.[8]

An additional, though related, dimension is represented by the physical and social manifestations of disorder that can characterize selected areas of the city. Studies on the ecological relationship between human behaviour and the environment suggest that a link exists between homicide and situations of disorder: signs of degradation or situations of disorder can—directly or indirectly—provoke violent conduct. In a study conducted in New York's South Bronx, homicide counts were related to counts of social disorder (prostitution, drug dealing and drug use, public consumption of alcohol, panhandling and homelessness).[9] Map 6.5 indicates that homicides tend to cluster in the exact locations where signs of social disorder are more frequent. Related observations have led to the recent development of crime prevention approaches that focus on environmental and spatial features, including, for example, the well known "broken windows" theory, which advocates maintaining urban environments in a well ordered condition to prevent escalation into more serious crime.[10] Whilst distinguishing between correlation and causality in such circumstances is extremely complex, an understanding of the social and environmental loci at which crimes may tend to cluster is one key first step in designing effective crime prevention policies.

The territorial dimension is fundamental in developing a better understanding of homicide and violent crime. At local level, factors such as high population density and social disorder can produce an explosive cocktail resulting in high rates of violent crime. Conversely, efforts to develop social cohesion alongside effective policing, social services and "safe urban spaces" can have a mitigating effect that prevents violence from escalating. Whilst urbanization generally continues to represent a risk factor for violent crime, significant differences in crime levels and patterns can also be found in areas that are otherwise similar. Factors such as conflict over territorial control by organized criminal groups may be an intervening factor that breaks such general trends. Trends of that nature can only be identified and analysed through territorially detailed data and information, which can also provide better insights towards understanding underlying causes of homicide, and in the design and implementation of effective preventive measures.

8 Source: US Census Bureau.

9 Rengifo, A.F., Slocum, L.A., and Herrmann, Ch., *Signs of order and disorder in the South Bronx,* Unpublished manuscript (2011).

10 Wilson, J.Q. and Kelling, G.L., *Broken Windows: The police and neighbourhood safety,* Atlantic Magazine (1982).

7. DATA CHALLENGES

Data included in this study

This Global Study on Homicide makes extensive use of the UNODC Homicide Statistics dataset,[1] compiled to provide users with a reference for the largest number of countries and the longest time series possible. Overall, the UNODC Homicide Statistics dataset presents data for 207 countries and territories.

As explained below, a variety of national and international sources on homicide have been considered and, in order to present accurate and comparable statistics, data have been selected which conform as much as possible to the definition of intentional homicide used by UNODC for statistical purposes, i.e. "unlawful death purposefully inflicted on a person by another person".

All existing data sources on intentional homicides, both at national and international level, stem from either criminal justice or public health systems. In the former case, data are generated by law enforcement or criminal justice authorities in the process of recording and investigating a crime event while, in the latter, data are produced by health authorities certifying the cause of death of an individual.

Both criminal justice and public health data have strengths and weaknesses. Criminal justice data have generally been given priority in this study when assessing homicide levels because of their closer adherence to intentional homicide as defined by national legislations. Public health data have also been used extensively: they are to a large extent internationally comparable and, because of their more universal coverage, they can fill some of the data gaps of criminal justice figures. In many cases there is good agreement between data produced by the two types of sources, however, larger discrepancies exist in a number of developing countries (see figures 1.5 to 1.10). Acknowledging such differences, all efforts have been made to ensure the greatest possible consistency in the use of data from the two types of sources.[2]

Compilation of data for UNODC Homicide Statistics dataset

The following mechanisms were used to collect the data included in the UNODC Homicide statistics dataset:

Criminal justice data

Data regularly collected by UNODC through the United Nations Survey of Crime Trends and Operations of Criminal Justice Systems (UN-CTS), comprise statistics on a number of conventional crimes, which are collected from all countries from police, prosecution, court and prison authorities. In this study, police-recorded data on intentional homicides from the UN-CTS are used, including—where available—complementary data on homicides by firearms, data on homicides by sex of victims and perpetrators and homicides in the most populous city of each country.

Data collected through publicly available sources and produced by national government sources (police, national statistical office, ministry of interior, ministry of justice, etc.) were used to complete data series for those countries for which

1 The UNODC Homicide Statistics (2011) is available at http://www.unodc.org/unodc/en/data-and-analysis/homicide.html.

2 For example, while it can be appropriate to compare time trends from the two different sources (CJ and PH) under the assumption that they both adequately capture changes in levels of homicides, it is generally inappropriate to form a time series for a given country by joining data of different years from separate CJ and PH sources.

Features of criminal justice and public health data on homicides

Criminal justice data

The first stage in a system of crime and criminal justice statistics are typically data recorded by the police. Police data on intentional killings are usually based on information collected when the police receive details about a crime, including: the type of crime; its modalities; and victims' and perpetrators' characteristics. Depending on national legislations and practices, data on homicides can be directly generated by police forces or by prosecutor offices. In addition, courts generate data on persons convicted of homicide offences.[1] The terms "criminal justice data" and "police data" are often used interchangeably to refer to data generated within the criminal justice system.

Police data on homicides have the following strengths:

- Detailed – murder is a very serious crime with a great impact at individual, community and social level so there is typically a strong interest in collecting as accurate information as possible on the event and all persons involved.
- Complete – compared to other crimes, homicide data suffer much less from under-coverage and therefore tend to reflect a relatively smaller "dark figure" for homicides than for other crime types.
- Valid – homicide data are often produced on the basis of national penal codes (or at least national police classifications that take such codes as their starting point), which provide relevant and detailed definitions, facilitating the production of data that measure intentional killings as defined at country level.

On the other hand, the following factors can sometimes undermine the accuracy and comparability of homicide statistics derived from police records:

- The accuracy of homicide police data depends upon the capacity of criminal justice information systems to register and record homicides with a sufficient degree of completeness.
- Despite broad agreement on the basic definition of a murder between national penal legislations, perfect comparability over time and between countries does not exist: for example, intentionality to provoke death can be defined quite differently (in some cases there must be intention to cause death, in others the intention to provoke serious harm is sufficient). Moreover, some types of killings (for instance, "honour" killings or dowry killings in certain countries) may not be counted as intentional homicides in all countries.
- Another issue concerns so-called "counting rules": some countries make reference to the criminal "case" and not to the victims involved; this means that, for example, if in one incident two persons are killed, an "incident-based" police reporting system may report this as "one crime". In contrast, a "victim-based" police reporting system will report this as "two victims". No consolidated standard exists on counting rules in the case of multiple victims and such differences between countries in respect of counting rules may make cross-national comparison of police homicide data particularly challenging.[2]

Public health data

Data collection and analysis on homicide benefit from the fact that a violent death usually comes to the attention not only of the police but also of the public health or medical system. In an ideal cause of death registration system, all deaths within a country are recorded and their cause explored and certified. National definitions and classifications used for this purpose are usually in line with the WHO "International Classification of Diseases (ICD)", the international standard diagnostic classification for epidemiological and clinical use. The current version is referred to as ICD-10 and came into use in 1994. With respect to causes of mortality, the ICD-10 offers a detailed framework for the classification of causes of death, covering infectious diseases, non-infectious diseases, and external factors, including violence. Notably, the code structure for death by assault (violence) excludes death by injuries due to legal intervention (such as operation of the death penalty or legal police killings) and operations of war and civil insurrection, consistent with the definition of "intentional homicide".

The procedures to establish the cause of death of a person can be very sophisticated and can differ to a great extent from country to country. Highly qualified health personnel may be required to perform examinations, including autopsies, to produce a scientifically determined cause of death. If a death is to be coded within ICD codes X85-Y09 (injuries inflicted by another person with intent to injure or kill), this requires that medical personnel take the decision that the death was caused intentionally by another. This judgement can be difficult in the absence of contextual information, for example in cases of death by chemicals or drowning.

The quality of public health data on homicides is influenced by factors similar to police data, including insufficient professional health staff (especially in developing countries), problems of undercounting when not all deaths are properly examined and certified and the possibility that cause of death assessments are changed by coroners after statistics are produced. In addition, the definitions used by criminal justice and public health systems may be different: for example a killing perpetrated in self-defence can be considered as an intentional homicide by the public health system while it may not be counted as such in police data.

1 Court data typically refer to persons brought before the court, acquittals and convictions: these data are apt for analysing the performance of criminal justice system and less to assess the level of crime at a given time.

2 For the purposes of this study, and for UNODC Homicide Statistics (2011), wherever possible victim-based data are used, in order to have an exact count of victims of homicides.

UN-CTS data were not available and for those variables not included in the UN-CTS, such as subnational data and data on homicide by type (organised crime, intimate partner/family-related, etc.).

Data collected and compiled by other international and regional agencies were also reviewed and used, where appropriate, including from Interpol, Eurostat, the Organisation of American States and UNICEF.

Public health data

Data on homicides were derived from databases on deaths by cause disseminated by WHO[3], both at central level and through some of its regional offices.[4] Whilst data published by PAHO and WHO-Europe are almost exclusively based on data reported to them by countries, the global cause of death dataset produced by WHO, though based on national data, is to a greater extent corrected or estimated to ensure a greater degree of completeness and international comparability. It is worth noting that for a number of countries, where cause of death data suffer from incomplete coverage or are inexistent, WHO estimates deaths by cause based on statistical models. In the WHO Causes of Death dataset, estimates through statistical modelling were produced for around 40 per cent of all countries, mainly located in Africa and Asia. Data produced by WHO have been used in this study for several countries in relation to total numbers of homicide and homicides by sex.

Furthermore, some homicide data by age and sex used in this study are sourced from the Global Burden of Injuries Project,[5] a research project that, starting from homicide figures provided by WHO, produces complete breakdowns of homicides by age and sex at country level through statistical techniques.

Data validation process

In the process of building the dataset the following rules and criteria have been followed to determine whether to include a data series in the UNODC Homicide Statistics dataset:

- The definitions used to produce data are in line with the homicide definition used in the UNODC Homicide Statistics dataset. In particular, additional documentation has been used to exclude categories of violent deaths such as manslaughter or death in conflict into the count of intentional homicides.
- The data are consistent across time. Time series have been analysed to identify possible outliers and to assess robustness of the data series.
- An analysis of official reports and research literature has been carried out to verify homicide data used by government agencies and the scientific community.

Data included in the dataset correspond to the original value provided by the source of origin, since no statistical procedure or modelling was used to change collected values or to create new or revised figures.

Data review by Member States

In order to ensure the quality of data used in the UNODC Homicide Statistics dataset, a process of technical consultation with Member States was undertaken before the finalization of the dataset. All country data on total number of homicides, homicide rates, homicides by sex, homicides by firearm, and homicides in big cities were sent to Member States for a quality review. Comments were received by a number of countries and they were addressed before the finalization of the Homicide Statistics dataset.

Selection of reference data series for the analyses presented in this study

As a result of the data collection and validation process, in many countries several homicide datasets have become available from different or multiple sources. Therefore, it became necessary to select the most appropriate reference counts of homicide levels for 2010[6] and of trend data to be used in the analyses shown in this study. Several criteria have been used to select—for each country—the data used to determine the reference figures of a) count of homicides (total number of homicides), b) the best time series for trend analysis and c) the distribution of homicide victims by sex.

For homicide counts, the degree of adherence to the standard definition of homicide and the result-

3 WHO, *Causes of death 2008 dataset* (2011).

4 PAHO, *Health Information and Analysis Project*. Regional Core Health Data Initiative (2010) and WHO –Europe, European Health For All Database

5 Global Burden of Injuries, *Injury Mortality Data Collection*, (2010).

6 When 2010 data were not available for a given country, data for the latest available year were used.

Table 7.1: Number of countries/territories by type of source used for 2010 homicide count and homicide time series

	Homicide count 2010 (or latest year)	Homicide time series	Homicide victims by sex (2010 or latest year)
Criminal Justice	143	82	57
Public health	64	16	136
Total number of countries	207	98	193

Source: UNODC Homicide Statistics.

ing international comparability were considered most important and therefore preference was given to data produced by the criminal justice system. In those cases where criminal justice data were not available or where coverage was poor (as determined, for example, by comparison with other data sources on homicides), preference was given to public health data. This was the case especially for many countries in Western, Eastern and Middle Africa, where criminal justice data are less available and present issues of undercoverage.[7] For time trends analysis, the selection of the data series was made on the basis of length (number of years covered), consistency over time (no inexplicable sudden changes) and inclusion of recent data. For the sex distribution of homicide victims, consistency has been ensured, to the extent possible, with data sources selected for homicide counts.

Challenges to improve homicide data

As outlined above, at national level homicide data are produced either by the criminal justice system or by the health system. In terms of definitions, statistical capacity and training needs, the public health system faces many of the same issues as the criminal justice system when recording violent deaths as homicides. In addition, the criminal justice system is faced by specific challenges in data collection.

While almost all States in the world have some system for keeping records on criminal offences and state responses to crime, and particularly for serious offences like homicide, in many cases these systems do not meet international standards for crime and criminal justice statistics.[8] For many countries, detailed data are simply not available or are incomplete. This is particularly the case in many developing countries, where the capacities for data collection of law enforcement and criminal justice agencies are limited by a lack of resources, coordination and staff trained in record-keeping and statistical data production.

More broadly, further work is needed to produce crime data that would enable countries to better assess the situation and performance of their own criminal justice systems in a wider context. To work towards more accurate and internationally comparable data for crime and criminal justice and for homicide statistics in particular, the following main issues need to be addressed:

- To enable meaningful comparisons between acts of lethal violence between countries, it is paramount to adopt standardized definitions of statistical concepts such as completed "intentional homicide" for international reporting purposes and to place distinctive events within a common classification framework (see next section).
- When designing or modifying the collection of crime data, a consistent framework needs to be developed that accounts for the various counting units that exist, such as criminal events, offences, victims, perpetrators, etc. Different counting rules can be adopted according to the specific use of derived statistical data, whether, for example, there is a need to determine the number of criminal events perpetrated, the number and types of offences committed or the number and type of victims affected. Adopting clear and appropriate counting units, according to the information required, is therefore of paramount importance to produce accurate data as well as to increase their international comparability. For example, in the case of homicide statistics, a victim-based count may allow clearer assessment of the overall impact of such crime and enable increased comparability with public health statistics.

7 See Marshall, I.H. and Block, C.R., *Maximizing the Availability of Cross-National Data on Homicide*, Homicide Studies (2004) and Bhalla, K. et al., *The global injury mortality data collection of the Global Burden of Disease Injury Expert Group: a publicly accessible research tool* (2011).

8 United Nations Department of Economic and Social Affairs and United Nations Statistics Division, *Manual for the Development of a System of Criminal Justice Statistics* (2003).

- Another issue that needs attention is the definition of the precise point at which a criminal event that comes to the attention of the police should be recorded. For example, with respect to homicide, an event may be recorded on the day of reporting as a serious assault but the victim may die after the statistics have been compiled, with the result that no completed homicide is recorded in police statistics. Data on homicide circumstances and identified suspects may also change over the course of investigation.
- Finally, the recording of a number of relevant attributes of homicides should be promoted and standardized to facilitate international comparisons. For example, the recording of homicides by situational context (e.g. organized crime/gang-related, robbery-related, intimate partner/family-related, etc.) and mechanisms (e.g. firearms, sharp objects, blunt objects, etc.) can provide important insights for analysis both at national and international level. Similarly, the recording of additional offender and victim characteristics will provide vital data for crime prevention and control purposes.

Efforts to improve data at national level should correspond to improved availability of homicide data at international level. However, this is not automatic and further work is needed at all levels and by national authorities and regional and international organizations to improve existing data reporting channels. For example, the regular crime data collection of UNODC through the United Nations Survey of Crime Trends and Operations of Criminal Justice Systems (UN-CTS) still suffers from large data gaps: the percentage of countries reporting data usually varies between 40 and 50 per cent over time, with the lowest response rates in Africa and Oceania. The largest data gaps clearly indicate where efforts are needed by all concerned parties to improve capacities for data collection and reporting.

Towards a standardized definition

Data produced at national level typically correspond to the definition of intentional homicide in the national penal code in use at country level. From an international perspective, a first step to improve comparability of data on intentional homicide is to develop a more standardized definition.[9] As already mentioned, not all killings are considered intentional homicides: according to the definition used in this study, intentional homicide is "unlawful death purposefully inflicted on a person by another person". This definition contains three elements characterizing an intentional homicide:

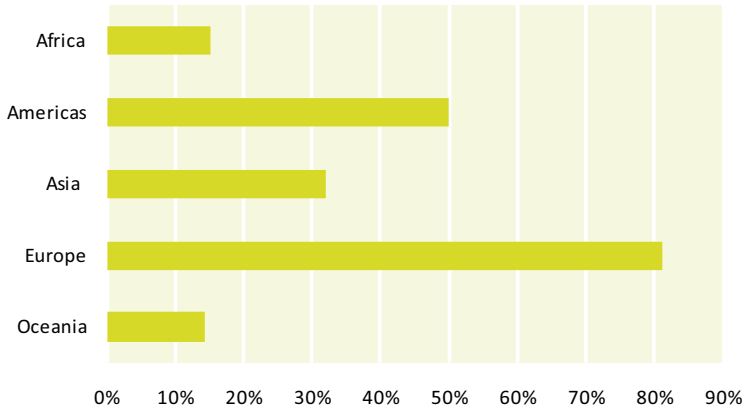
- The killing of a person by another person (objective element).
- The intent of the perpetrator to kill the victim (subjective element).
- The intentional killing needs to be against the law, which means that the law considers the perpetrator liable for intentional homicide (legal element).

Specificities of intentional homicide can be better understood when placed in the broad context of all violent acts leading to death (figure 7.2). The scheme shows that acts of interpersonal violence/homicide are distinguished in the first place from deaths that are a result of war or conflict, legal intervention, accidents or that are self-inflicted (suicide).

At a subsequent level, apart from the rather grey area of assisting suicide/euthanasia, other types of killings that are not considered as intentional homicides are:

- "Manslaughter" (or unintentional killing), which can be divided into two categories: killing through recklessness or negligence (as for example for dangerous driving or professional negligence) and a de facto intentional

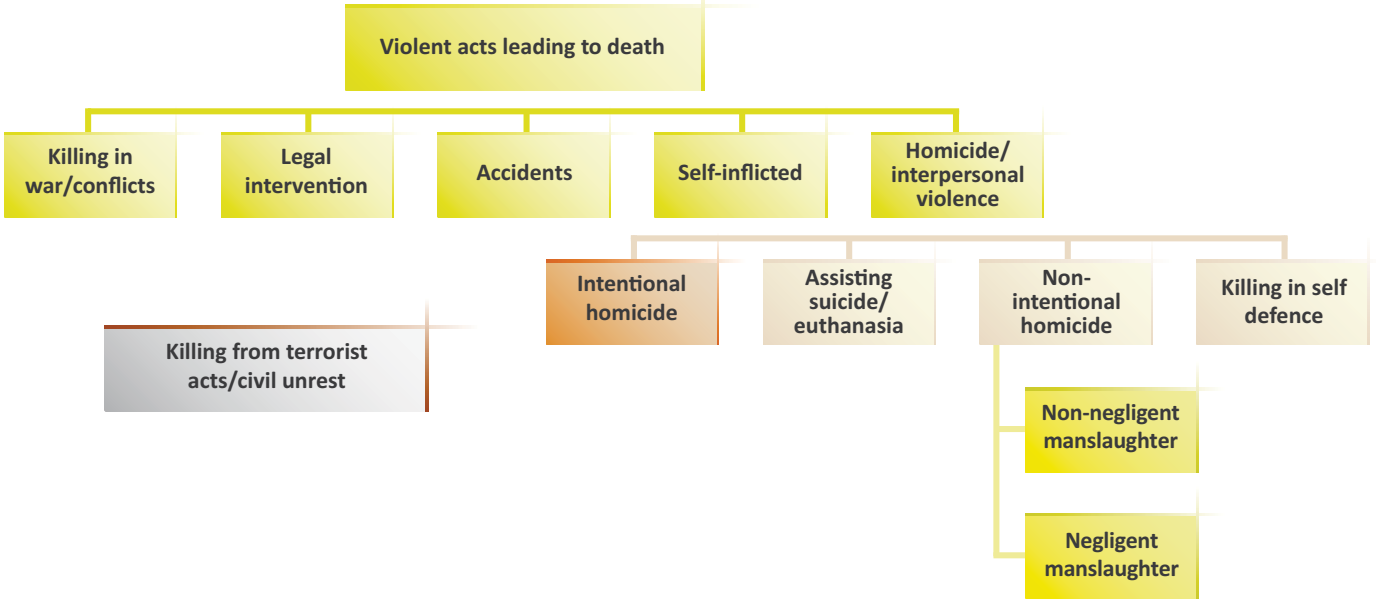
Fig. 7.1: Percentage of countries who reported to the UN-CTS in 2010, by region



Source: UN-CTS.

9 In this regard, it should be recalled that international comparability of data is primarily beneficial for countries themselves since it allows the creation of benchmarks to evaluate their own situation.

Fig. 7.2: Classifying violent acts leading to death



Source: UNODC elaboration of UNODC/UNECE Task Force on Crime Classification, *Report to the Conference of European Statisticians* (2011).[12]

killing that is not considered as such due to certain specific mitigating circumstances such as provocation (non-negligent manslaughter).

- An additional category is represented by killing in self-defence, which is considered a justifiable killing and thus not an intentional homicide.

Deaths due to terrorism or during civil unrest represent another challenging category. From a conceptual perspective, the legal label of "intentional homicide" is certainly broad enough to encompass such acts, and whilst perpetrators may face additional charges, such as acts of terrorism, acts against the state, or even crimes against humanity, the core act still concerns the intentional killing of another. However, such deaths, in certain contexts, might fall somewhere at the boundary between conflict and interpersonal violence.[11]

While several of the definitional elements described above appear to be common and in use at national and international level, others are more difficult to interpret and/or are in need of further discussion, as for example the element of intentionality (whether the intention to cause death or only to cause serious harm is required) or how to consider deaths related to terrorist acts.

It should also be recalled that the definition of the phenomenon under study refers to the intentional "death" of a person. Thus, only completed intentional homicides, resulting in the death of a person, are to be reported. Nonetheless, a number of countries report data on "total intentional homicide", including both cases where the victim died and cases where there is evidence that the perpetrator intended death, but the victim survived. The inclusion of attempted homicide in the definition of "intentional homicide" for the purpose of creating statistics has the effect of producing a "homicide" rate that is higher than the actual number of killed victims.

As the discussion above shows, many challenges still exist to get to a standardized definition of intentional homicide for the purpose of creating internationally comparable and accurate statistics. In this framework, the work being conducted by the Conference of European Statisticians to develop principles and a framework of international classification of crimes for statistical purposes is noteworthy.[12]

10 UNODC/UNECE Task Force on Crime Classification, *Report to the Conference of European Statisticians* (2011);

11 Country practice varies as to whether such deaths are included in police homicide statistics. Neither the nearly 3,000 victims of the attacks on the United States on 11 September 2001, nor the nearly 200 killed in terrorist attacks on 11 March 2004 in Madrid were recorded as homicides. In contrast, the 52 victims of the 7 July 2005 London bombings were included in official police statistics; homicide statistics in India include murder related to "terrorist/extremist" violence, and homicide statistics in a number of African countries include deaths by "mob action".

12 UNODC/UNECE Task Force on Crime Classification, *Report to the Conference of European Statisticians* (2011);

Fig. 7.3: Disaggregating homicide statistics

Mechanism	Victim and perpetrator attributes	Victim/perpetrator relationship	Geographical/ location attributes	Situational context
Use of weapon • Firearm • Knife • Blunt object • Strangulation • Etc.	• Male/female victim • Male/female perpetrator • Child perpetrator • Victim under influence of drugs/alcohol • Perpetrator under influence of drugs/ alcohol • Etc.	• Intimate partner perpetrator • Perpetrator related to victim • Perpetrator known to victim • Perpetrator unknown to victim • Etc.	• Urban/rural • Private residence • Commercial property • Street • Other public place • Etc.	• Organized crime-related • Gang-related • Robbery/ theft-related • Intimate partner/ family-related • Etc.

Source: UNODC elaboration of UNODC/UNECE Task Force on Crime Classification, *Report to the Conference of European Statisticians* (2011).

Qualifying intentional homicide

From a criminological perspective, it is clear that the label "intentional homicide" includes a very wide range of acts, not all of which are necessarily similar, other than the fact that they can be essentially represented by one person intentionally inflicting death on another person. As such, an examination of the "phenomenon" of homicide requires significantly more than examination of overall "total homicide" statistics. One challenge in this respect is to identify the most appropriate way in which to divide, or disaggregate, acts of homicide in order to generate meaningful subcategories that remain open to cross-national examination. Such categories may be (and are, in different national statistics) constructed in many ways, including with reference to the characteristics of the victim, the characteristics of the perpetrator, the nature of the offender-victim relationship, the weapon used, the physical location of the event, the time of the event, aggravating factors such as the involvement of drugs or alcohol, the motive, and the involvement of elements such as organized criminal groups. Taken together, such descriptors should be capable of producing a holistic description of the homicide incident, as a complete composite of offender, victim, offence and its context.[13]

Recent work on the classification of homicide recognizes the need for homicide data disaggregation and proposes that many such elements could be considered as "horizontal attributes" to be applied to all events falling within the general category of "intentional homicide". As shown in figure 7.3, these attributes may be grouped in five general clusters—mechanism, victim/perpetrator attributes, victim/perpetrator relationship, geographic/location attributes, and situational context.

Information on each of these aspects is typically available to different extents and using slightly different national terminology or categories in national police statistics. Some categories are more commonly recorded than others. Homicide mechanism, basic victim characteristics and geographic location are often recorded by either police or public health data. However, efforts are needed to standardize the recording of such characteristics both within and between countries in order to produce meaningful statistical data, including the socio-economic characteristics of involved persons. The identification and recording of other characteristics, such as the victim/perpetrator relationship and situational context, is more challenging and further work is needed to develop statistical concepts, definitions and classifications that can facilitate the production of comparable and accurate statistical data. Account needs to be taken of the fact that a number of categories—in particular, those regarding information about a suspected perpetrator—may only be available at a later stage in the investigation, or in some cases where no suspect is identified at all.

13 Miethe, T.D. and Regoeczi, W.C., *Rethinking Homicide: Exploring the Structure and Process Underlying Deadly Situations* (2004).

8. METHODOLOGICAL ANNEX

In this chapter, information is provided as to data sources and computation methods used for the analyses provided in the *Global Study on Homicide.*

Chapter 1:

Data used for homicide counts at country level (2010 or latest available year)

On the basis of the selection criteria discussed in chapter 7, available data sources have been considered for each country in relation to 2010 or the latest available year. Table 8.1 shows the selected source and the corresponding homicide counts and rates for each country.

Homicide rates have been calculated based on population estimates from the United Nations Population Division.[1] Global, regional and aggregated rates (such as those where countries are grouped by economic variables) are calculated as population-weighted averages.

As table 8.1 shows, a criminal justice data source has been selected in 143 cases, while public health data have been selected for 64 countries (31 percent of the total). For the majority of the countries in Africa, in particular, homicide rates are derived from a public health source. In 57 of the 64 countries where public health data have been used, the source is WHO Causes of Death dataset; in vast majority of such cases (53 countries), country data have been estimated by WHO through statistical modelling because of lack of death registration data from national sources.

Global and regional homicide counts and range estimates

The global and regional counts for total homicides are calculated as the sum of homicide counts provided by the selected national source. This "point estimate" is accompanied by an indication of its uncertainty by considering the variability between criminal justice and public health data for each country. Taking into account that for each country two homicide counts are typically available (one from criminal justice and one from public health, though in some countries only one source is available), two additional estimates are built for each region. The lower estimate in the range is determined by the sum of the smaller homicide counts for each country (from either the criminal justice or public health sources). Similarly, the upper estimate is calculated as the sum of the larger homicide counts for each country (from either public health or criminal justice sources). Bigger discrepancies between criminal justice and public health data produce larger range estimates at regional level, thus indicating the level of uncertainty associated with total homicide counts at regional and thus global level.

Data used for time series (trends) in homicides

On the basis of the selection criteria discussed in chapter 7, and subject to data availability, a long and continuous time series on homicide counts and rates has been identified at country level (see table 8.2).

1 United Nations, *World Population Prospects, the 2010 Revision, (2011).*

Table 8.1: Selected source of single point estimate

Region	Subregion	Country/territory	Preferred sources			
			Count	Rate	Year	Source
Africa	Eastern Africa	Burundi	1,726	21.7	2008	WHO
		Comoros	85	12.2	2008	WHO
		Djibouti	29	3.4	2008	WHO
		Eritrea	879	17.8	2008	WHO
		Ethiopia	20,239	25.5	2008	WHO
		Kenya	7,733	20.1	2008	WHO
		Madagascar	1,588	8.1	2008	WHO
		Malawi	5,039	36.0	2008	WHO
		Mauritius	54	4.2	2009	UN-CTS
		Mozambique	1,925	8.8	2007	GBI
		Rwanda	1,708	17.1	2008	WHO
		Seychelles	7	8.3	2006	UN-CTS
		Somalia	138	1.5	2008	WHO
		Uganda	11,373	36.3	2008	WHO
		United Republic of Tanzania	10,357	24.5	2008	WHO
		Zambia	4,710	38.0	2008	WHO
		Zimbabwe	1,775	14.3	2008	WHO
	Middle Africa	Angola	3,426	19.0	2008	WHO
		Cameroon	3,700	19.7	2008	WHO
		Central African Republic	1,240	29.3	2008	WHO
		Chad	1,686	15.8	2008	WHO
		Congo	1,180	30.8	2008	WHO
		Democratic Republic of the Congo	13,558	21.7	2008	WHO
		Equatorial Guinea	137	20.7	2008	WHO
		Gabon	200	13.8	2008	WHO
		Sao Tome and Principe	3	1.9	2008	WHO
	Northern Africa	Algeria	516	1.5	2008	UN-CTS
		Egypt	992	1.2	2009	UN-CTS
		Libyan Arab Jamahiriya	176	2.9	2008	WHO
		Morocco	447	1.4	2010	UN-CTS
		Sudan	10,028	24.2	2008	WHO
		Tunisia	117	1.1	2008	WHO
	Southern Africa	Botswana	287	14.5	2009	UN-CTS
		Lesotho	723	33.6	2009	UN-CTS
		Namibia	352	17.2	2004	Interpol
		South Africa	16,834	33.8	2009	National police
		Swaziland	141	12.9	2004	UN-CTS
	Western Africa	Benin	1,262	15.1	2008	WHO
		Burkina Faso	2,786	18.0	2008	WHO
		Cape Verde	56	11.6	2007	UN-OCHA
		Cote d'Ivoire	10,801	56.9	2008	WHO
		Gambia	176	10.8	2008	WHO
		Ghana	3,646	15.7	2008	WHO
		Guinea	2,152	22.5	2008	WHO
		Guinea-Bissau	294	20.2	2008	WHO
		Liberia	371	10.1	2008	WHO

Region	Subregion	Country/territory	Preferred sources			
			Count	Rate	Year	Source
		Mali	1,157	8.0	2008	WHO
		Mauritania	485	14.7	2008	WHO
		Niger	552	3.8	2008	WHO
		Nigeria	18,422	12.2	2008	WHO
		Senegal	1,027	8.7	2008	WHO
		Sierra Leone	837	14.9	2008	WHO
		Togo	627	10.9	2008	WHO
Americas	Caribbean	Anguilla	1	6.8	2008	NSO
		Antigua and Barbuda	6	6.8	2010	National police
		Bahamas	96	28.0	2010	OAS
		Barbados	31	11.3	2010	UN-CTS
		British Virgin Islands	2	8.6	2006	PAHO
		Cayman Islands	6	11.7	2004	PAHO
		Cuba	518	4.6	2008	PAHO
		Dominica	15	22.1	2010	OAS
		Dominican Republic	2,472	24.9	2010	National police
		Grenada	12	11.5	2010	OAS
		Guadeloupe	32	7.0	2008	National police
		Haiti	689	6.9	2010	UN-PKO
		Jamaica	1,428	52.1	2010	UN-CTS
		Martinique	17	4.2	2008	National police
		Montserrat	1	19.7	2008	PAHO
		Puerto Rico	983	26.2	2010	National police
		Saint Kitts and Nevis	20	38.2	2010	National police
		Saint Lucia	44	25.2	2010	OAS
		Saint Vincent and the Grenadines	24	22.0	2010	NGO
		Trinidad and Tobago	472	35.2	2010	National police
		Turks and Caicos Islands	3	8.9	2008	PAHO
		United States Virgin Islands	43	39.2	2007	PAHO
	Central America	Belize	130	41.7	2010	OAS
		Costa Rica	527	11.3	2010	Ministry of Justice
		El Salvador	4,085	66.0	2010	National police
		Guatemala	5,960	41.4	2010	National police
		Honduras	6,239	82.1	2010	National police
		Mexico	20,585	18.1	2010	National police
		Nicaragua	766	13.2	2010	National police
		Panama	759	21.6	2010	National police
	Northern America	Bermuda	5	7.7	2010	National police
		Canada	610	1.8	2009	NSO
		United States of America	15,241	5.0	2009	National police
	South America	Argentina	2,215	5.5	2009	Ministry of Justice
		Bolivia (Plurinational State of)	884	8.9	2010	National police
		Brazil	43,909	22.7	2009	Ministry of Justice
		Chile	630	3.7	2009	UN-CTS
		Colombia	15,459	33.4	2010	National police
		Ecuador	2,638	18.2	2010	National police
		French Guiana	32	14.6	2008	National police

Region	Subregion	Country/territory	Preferred sources			
			Count	Rate	Year	Source
		Guyana	139	18.4	2010	NSO
		Paraguay	741	11.5	2010	OAS
		Peru	1,490	5.2	2009	SES
		Suriname	69	13.7	2006	UN-CTS
		Uruguay	205	6.1	2010	Ministry of Interior
		Venezuela (Bolivarian Republic of)	13,985	49.0	2009	NGO
Asia	Central Asia	Kazakhstan	1,680	10.7	2008	Transmonee
		Kyrgyzstan	419	8.1	2009	UN-CTS
		Tajikistan	96	1.4	2009	UN-CTS
		Turkmenistan	209	4.4	2006	Transmonee
		Uzbekistan	831	3.1	2008	UN-CTS
	Eastern Asia	China	14,811	1.1	2008	NSO
		Taiwan Province of China	832	3.6	2009	NSO
		Democratic People's Republic of Korea	3,658	15.2	2008	WHO
		China, Hong Kong	35	0.5	2010	National police
		Japan	646	0.5	2008	UN-CTS
		China, Macao	10	1.9	2009	NSO
		Mongolia	205	7.6	2009	UN-CTS
		Republic of Korea	1,374	2.9	2009	National police
	South-Eastern Asia	Brunei Darussalam	2	0.5	2006	UN-CTS
		Cambodia	448	3.4	2005	NGO
		Indonesia	18,963	8.1	2008	WHO
		Lao People's Democratic Republic	279	4.6	2008	WHO
		Malaysia	604	2.3	2006	UN-CTS
		Myanmar	4,800	10.2	2008	WHO
		Philippines	4,947	5.4	2009	UN-CTS
		Singapore	25	0.5	2009	National police
		Thailand	3,654	5.3	2010	National police
		Timor-Leste	75	6.9	2008	WHO
		Viet Nam	1,346	1.6	2008	WHO
	Southern Asia	Afghanistan	712	2.4	2008	WHO
		Bangladesh	3,988	2.7	2010	National police
		Bhutan	7	1.0	2008	NSO
		India	40,752	3.4	2009	National police
		Iran (Islamic Republic of)	2,215	3.0	2009	NSO
		Maldives	5	1.6	2008	UN-CTS
		Nepal	818	2.8	2009	NSO
		Pakistan	12,491	7.3	2009	NSO
		Sri Lanka	958	4.6	2009	National police
	Western Asia	Armenia	83	2.7	2009	UN-CTS
		Azerbaijan	192	2.1	2008	UN-CTS
		Bahrain	6	0.6	2008	UN-CTS
		Cyprus	19	1.7	2009	UN-CTS
		Georgia	180	4.1	2010	UN-CTS
		Iraq	608	2.0	2008	WHO
		Israel	158	2.1	2010	NSO
		Jordan	100	1.8	2006	UN-CTS

Region	Subregion	Country/territory	Preferred sources			
			Count	Rate	Year	Source
		Kuwait	59	2.2	2009	UN-CTS
		Lebanon	95	2.2	2010	National police
		Occupied Palestinian Territory	145	4.1	2005	UN-CTS
		Oman	18	0.7	2008	UN-CTS
		Qatar	13	0.9	2008	UN-CTS
		Saudi Arabia	265	1.0	2007	NSO
		Syrian Arab Republic	582	3.0	2008	UN-CTS
		Turkey	2,320	3.3	2008	UN-CTS
		United Arab Emirates	39	0.8	2006	UN-CTS
		Yemen	990	4.2	2009	NSO
Europe	Eastern Europe	Belarus	473	4.9	2009	UN-CTS
		Bulgaria	144	1.9	2009	UN-CTS
		Czech Republic	92	0.9	2009	UN-CTS
		Hungary	139	1.4	2009	UN-CTS
		Poland	493	1.3	2009	UN-CTS
		Republic of Moldova	265	6.6	2010	UN-CTS
		Romania	397	1.8	2009	UN-CTS
		Russian Federation	15,954	11.2	2009	UN-CTS
		Slovakia	84	1.5	2009	UN-CTS
		Ukraine	2,194	4.8	2009	UN-CTS
	Northern Europe	Denmark	47	0.9	2009	UN-CTS
		Estonia	70	5.2	2009	UN-CTS
		Finland	121	2.3	2009	UN-CTS
		Greenland	6	10.5	2008	NSO
		Iceland	1	0.3	2009	UN-CTS
		Ireland	53	1.2	2010	National police
		Latvia	108	4.8	2009	UN-CTS
		Lithuania	252	7.5	2009	UN-CTS
		Norway	29	0.6	2009	UN-CTS
		Sweden	93	1.0	2009	UN-CTS
		United Kingdom	724	1.2	2009	Eurostat
	Southern Europe	Albania	93	2.9	2008	UN-CTS
		Andorra	1	1.3	2004	Interpol
		Bosnia and Herzegovina	66	1.7	2008	UN-CTS
		Croatia	49	1.1	2009	UN-CTS
		Greece	118	1.0	2008	UN-CTS
		Italy	590	1.0	2009	UN-CTS
		Malta	4	1.0	2009	UN-CTS
		Montenegro	22	3.5	2009	UN-CTS
		Portugal	130	1.2	2009	UN-CTS
		Serbia	145	1.5	2008	Eurostat
		Slovenia	13	0.6	2009	UN-CTS
		Spain	399	0.9	2009	UN-CTS
		The FYR of Macedonia	40	1.9	2010	UN-CTS
	Western Europe	Austria	43	0.5	2009	UN-CTS
		Belgium	185	1.7	2009	UN-CTS
		France	839	1.4	2008	Eurostat

Region	Subregion	Country/territory	Preferred sources			
			Count	Rate	Year	Source
		Germany	690	0.8	2010	UN-CTS
		Liechtenstein	1	2.8	2008	Eurostat
		Luxembourg	12	2.5	2008	UN-CTS
		Monaco	0	0.0	2008	UN-CTS
		Netherlands	179	1.1	2009	UN-CTS
		Switzerland	54	0.7	2008	UN-CTS
Oceania	Australia and New Zealand	Australia	262	1.2	2009	UN-CTS
		New Zealand	65	1.5	2009	National police
	Melanesia	Fiji	23	2.8	2004	Interpol
		Papua New Guinea	854	13.0	2008	WHO
		Solomon Islands	19	3.7	2008	UN-CTS
		Vanuatu	2	0.9	2008	WHO
	Micronesia	Guam	1	0.6	2007	National police
		Kiribati	7	7.3	2008	WHO
		Micronesia (Federated States of)	1	0.9	2008	WHO
		Nauru	1	9.8	2008	WHO
		Palau	0	0.0	2008	WHO
	Polynesia	French Polynesia	9	3.4	2008	National police
		Samoa	2	1.1	2008	WHO
		Tonga	1	1.0	2008	WHO

Table 8.2: Selection of source for time series

Region	Subregion	Country/territory	Source	
Africa	Eastern Africa	Mauritius	CJ	CTS
	Northern Africa	Egypt	CJ	CTS
		Morocco	CJ	CTS
	Southern Africa	South Africa	CJ	National police
	Western Africa	Nigeria	CJ	NGO
Americas	Caribbean	Bahamas	PH/CJ	PAHO/OAS
		Barbados	PH/CJ	PAHO/CTS
		Cuba	PH	PAHO
		Dominica	CJ	OAS
		Dominican Republic	CJ	NGO/SES
		Grenada	CJ	OAS
		Jamaica	CJ	CTS/National police
		Puerto Rico	CJ	National police
		Saint Kitts and Nevis	CJ	OAS/National police
		Saint Lucia	CJ	OAS
		Saint Vincent and the Grenadines	CJ	OAS/NGO
		Trinidad and Tobago	PH/CJ	PAHO/OAS/National police

Region	Subregion	Country/territory	Source	
	Central America	Belize	CJ	CTS/OAS
		Costa Rica	CJ	CTS/Ministry of Justice
		El Salvador	CJ	National police
		Guatemala	CJ	CTS/National police
		Honduras	CJ	OCAVI/National police
		Mexico	PH	PAHO/NSO
		Nicaragua	CJ	National police
		Panama	CJ	National police
	Northern America	Bermuda	CJ	National police
		Canada	CJ	CTS
		United States of America	CJ	National police
	South America	Argentina	CJ	CTS/Ministry of Justice
		Bolivia (Plurinational State of)	CJ	National police
		Brazil	PH	PAHO
		Chile	PH	PAHO
		Colombia	CJ	National police
		Ecuador	PH	PAHO
		Guyana	CJ	OAS/NSO
		Peru	PH	PAHO
		Surinam	CJ	OAS
		Uruguay	CJ	Ministry of Interior/SES
		Venezuela (Bolivarian Republic of)	CJ	NGO
Asia	Central Asia	Kazakhstan	CJ	UNICEF Transmonee
		Kyrgyzstan	CJ	CTS/UNICEF Transmonee
		Tajikistan	CJ	UNICEF Transmonee
		Turkmenistan	CJ	UNICEF Transmonee
		Uzbekistan	CJ	CTS/UNICEF Transmonee
	Eastern Asia	China	CJ	NSO
		Taiwan Province of China	CJ	NSO
		Japan	PH	WHO-MDB
		Republic of Korea	CJ	National police
	South-Eastern Asia	Cambodia	CJ	NGO
		Myanmar	CJ	NSO
		Philippines	CJ	CTS
		Singapore	CJ	CTS/National police
		Thailand	CJ	National police
	Southern Asia	Bhutan	CJ	NSO
		India	CJ	National police
		Nepal	CJ	NSO
		Pakistan	CJ	NSO
	Eastern Asia	Armenia	CJ	CTS/UNICEF Transmonee
		Georgia	CJ	CTS/UNICEF Transmonee
		Israel	CJ	CTS/NSO
		Qatar	CJ	CTS
		Saudi Arabia	CJ	NSO
		Syrian Arab Republic	CJ	NSO

Region	Subregion	Country/territory	Source	
Europe	Eastern Europe	Belarus	CJ	CTS
		Bulgaria	CJ	CTS/Eurostat
		Czech Republic	PH	WHO-HFA
		Hungary	CJ	CTS
		Poland	CJ	CTS
		Republic of Moldova	CJ	CTS
		Romania	PH	WHO-HFA
		Russian Federation	CJ	UNICEF Transmonee
		Slovakia	CJ	CTS/UNICEF Transmonee
		Ukraine	CJ	UNICEF Transmonee
	Northern Europe	Denmark	CJ	CTS
		Estonia	CJ	CTS/Eurostat
		Finland	CJ	CTS
		Greenland	CJ	NSO
		Ireland	CJ	CTS/National police
		Latvia	PH	WHO-HFA
		Lithuania	PH	WHO-HFA
		Norway	CJ	CTS/Eurostat
		Sweden	PH	WHO-HFA
	Southern Europe	Albania	CJ	CTS/UNICEF Transmonee
		Croatia	CJ	CTS/Eurostat
		Greece	PH	WHO-HFA
		Italy	CJ	CTS
		Portugal	CJ	CTS/Eurostat
		Serbia	PH	WHO-HFA
		Slovenia	CJ	CTS
		The fYR of Macedonia	CJ	CTS/Eurostat
	Western Europe	Austria	CJ	CTS/Eurostat
		Belgium	CJ	CTS
		France	PH	WHO-HFA
		Germany	CJ	CTS
		Netherlands	PH	WHO-HFA
		Switzerland	CJ	CTS/Eurostat
Oceania	Australia and New Zealand	Australia	CJ	CTS/NSO
		New Zealand	CJ	National police

A suitable time series covering the time period 1995-2010 (at least partially) has been selected for 98 countries. In most cases criminal justice data have been used, while a public health source has been selected for 16 countries (16 per cent of the total number of time series).[2] As map 8.1 shows, suitable time series are missing for most countries of Africa.

2 As an exception to the general rule of not combining criminal justice and public health data, time series from the two sources were joined in three countries. This was done to provide a longer time series and because the two sources were sufficiently consistent.

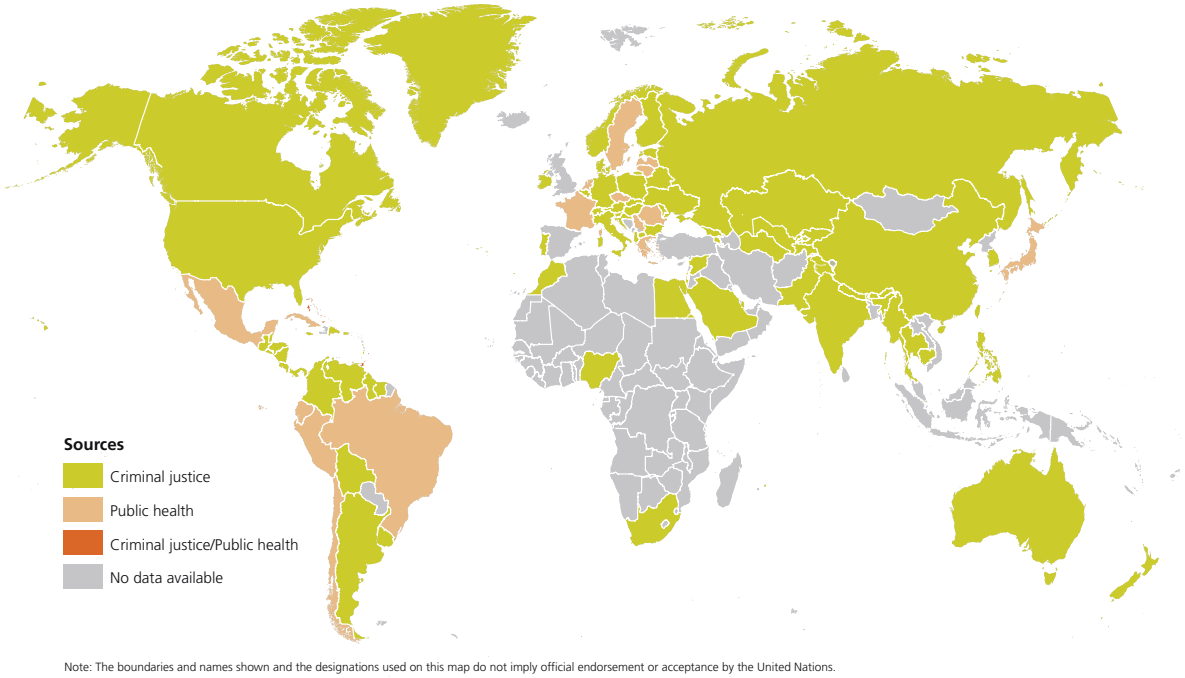
Estimates of regional and subregional homicide trends

Regional and subregional homicide rates over the time period 1995-2010 (or latest year) are based on the selected national time series. Regional and subregional rates are calculated as population-weighted averages of national rates.

Chapter 2:

In the analyses of this chapter, each country's homicide rate has been matched as closely as possible by year (values prior to the year 2000 were not

Map 8.1: Data source selected for homicide time series, by country



Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Source: UNODC Homicide Statistics (2011).

considered) to the Gini Index for income inequality, sourced from the World Bank.[3] Availability of data on Gini Index, in terms of the number of countries represented and the corresponding percentage of total population and homicides, is shown in table 8.3.

Gini Index data are available for relatively few countries, although these countries cover 90 per cent of global population and 93 per cent of global homicides. Countries missing are mostly those with a small population and low numbers of homicides. Because of the lack of data in Oceania, this region was not considered in the regional analysis.

Country homicide rates have also been matched by year to the Human Development Index (HDI)[4] against the year for which the selected homicide rate was calculated. The level of coverage in each region by country, population and homicides is presented in table 8.4.

Global coverage of countries in the analysis of homicides by HDI is high at over 80 per cent, but it includes 98 per cent both of global population and global homicides. Countries missing from the analysis are those with a relatively small populations and low numbers of homicides.

3 World Bank Data.

4 UNDP, *2010 Human Development Report* (2011).

Table 8.3: Number of countries included in the analyses of homicides by Gini Index, by region

Region	Number of countries	Percent of population	Percent of homicides
Africa	43/53	88%	92%
Americas	22/46	98%	98%
Asia	32/51	91%	90%
Europe	30/43	76%	92%
Oceania	1/14	<1%	<1%
Global	128/207	90%	93%

Table 8.4: Number of countries included in the analyses of homicides by the Human Development Index (HDI), by region

Region	Number of countries	Percent of population	Percent of homicides
Africa	49/53	97%	98%
Americas	28/46	98%	99%
Asia	43/51	98%	96%
Europe	41/43	99.9%	99.9%
Oceania	7/14	97%	98%
Global	168/207	98%	98%

Chapter 3:

Homicides by mechanism

Data on homicides by firearm are compiled from a variety of sources, though predominantly from criminal justice data (see table 9.2 in chapter 9).

Table 8.5: Number of countries with data on homicides by firearms, by subregion

Region	Subregion	Number of countries	Percent of homicides†
Africa		10/53	14%
Americas	Northern	3/3	100%
	Central	8/8	100%
	Caribbean	11/22	93%
	South	10/13	99%
Asia	Central	4/5	72%
	Eastern	4/8	15%
	South Eastern	5/11	49%
	Southern	5/9	75%
	Western	10/18	77%
Europe	Eastern	9/10	22%
	Northern	9/11	96%
	Southern	10/13	99%
	Western	7/9	73%
Oceania		3/14	27%
Global		**109/207**	**54%**

† Percentage is approximate due to differences in source year between homicide by firearm data and subregional total homicide data.

Overall, data for 109 countries have been compiled and coverage at subregional level is shown in table 8.5.

Homicides by firearm data were available for countries covering 54 per cent of total global homicides, although there are large subregional variations. The regional and subregional percentages of homicides by firearm are weighted averages, with weights represented by country numbers of homicides.

The global estimate of the percentage of homicides by firearm has been calculated in three steps:

a. Calculating the percentage of homicides by firearm at subregional level on the basis of available data (see table 9.2).
b. Applying the percentage calculated under a) to the total number of homicides at subregional level (selected country data for 2010 or latest year available) to obtain an estimated total number of homicides by firearm for each subregion.
c. Adding the subregional counts to obtain the global estimate of homicides by firearm.

Additional data (not combined with the dataset described above) on homicide mechanism are sourced from the Global Burden of Injuries project,[5] which details the counts of homicides by age and gender resulting from the use of firearms, sharp objects and other means.

Gang/organized crime-related homicides

Data on gang/organized crime-related homicides are sourced from criminal justice data produced by national authorities. Data have been compiled according to national practices and definitions, which are generally linked to national legislations. Comparison between countries should therefore be conducted with caution.

Chapter 4:

Intimate partner/family-related homicides

Data on homicides related to intimate partners and/or family are sourced from criminal justice data produced by national authorities. Data have been compiled according to national practices and definitions. Comparison between countries should therefore be conducted with caution.

Chapter 5:

Homicide victims by sex

Data on victims of homicides by sex have been compiled from various sources, subject to criteria discussed in chapter 7 and data availability. In total, data have been included for 193 countries (see table 9.4): in the vast majority of cases the

5 Global Burden of Injuries, *Injury Mortality Data Collection, (2010).*

Table 8.6: Sources for subnational data for the Americas

Country	Category	Original Source
French Guiana	CJ	National police
Paraguay	CJ	National police
Suriname	CJ	CTS
Guyana	CJ	National statistical office
Venezuela	CJ	The Venezuelan Program of Action and Education in Human Rights (PROVEA)
Bolivia	CJ	National police
Guatemala	CJ	National police
Nicaragua	CJ	National police
Peru	CJ	National police
United States	CJ	National police
Argentina	CJ	Ministry of Justice
Chile	CJ	Ministry of Interior
Ecuador	CJ	Ministry of Interior
Uruguay	CJ	Ministry of Interior
Canada	CJ	National statistical office
Mexico	PH	National statistical office
Belize	CJ	National police
El Salvador	CJ	National police and Attorney General
Panama	CJ	National police
Honduras	CJ	National police
Brazil	CJ	Ministry of Justice
Colombia	PH	National Institute of Legal Medicine and Forensic Sciences
Costa Rica	CJ	Judiciary

PH: Public Health source; CJ: Criminal Justice source

source is public health data (136), while in 57 cases the source is criminal justice data.

Calculation of cumulative risk of homicide

The cumulative risk of being a victim of homicide has been calculated for four different countries representing different scenarios that reflect varying types of homicide typologies and levels.

Data from the Global Burden of Injuries project have been used to calculate the risk of being murdered for each successive year between the ages of 20 and 30, for each year between 1996 and 2006.

For any given year (and therefore age/sex) the risk of being murdered is r = 2h/2+h, where h is the homicide rate for the relevant year, sex and age. This small correction to the rate is applied to derive the risk from the rate, given that the risk is calculated on the population group at the beginning of the year, while the rate is calculated on the mid-year population. The cumulative rate (R) is the sum of the annual, single-year age-specific rates, and the cumulative risk (or probability) is given by P=1-exp(-R).[6]

Chapter 6:

Homicides at subnational level

Homicide rates at the subnational level for countries in Europe for 2005 are sourced from Eurostat.[7] The data are disaggregated according to the NUTS (Nomenclature of territorial units for statistics) regional classification.

Subnational homicide rates for countries in the Americas (excluding the Caribbean) have been compiled for all but five countries within the time period 2007-2010 from a number of sources, predominantly reflecting criminal justice data. Details of the sources are given in table 8.6.

6 Day, N.E., *A new measure of age-standardized incidence, the cumulative rate*, (1976).

7 European Commission, *Investing in Europe's Future. Fifth report on economic, social and territorial cohesion, (2010).*

9. STATISTICAL ANNEX

Abbreviations

Source type:	
CJ	Criminal Justice
PH	Public Health
Data sources:	
CTS	Data are provided to UNODC annually by national police, national statistical offices or other competent national authorities through the United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems (CTS). Detailed information can be found on http://www.unodc.org
Eurostat	Statistical Office of the European Union.
GBI	Global Burden of Injuries, Injury Mortality Data Collection.
Interpol	International Criminal Police Oganization.
NGO (a-f)	Non-governmental organization: (a) Cleen Foundation. Homicide data based on police annual reports (b) Mayra Brea de Cabral and Edylberto Cabral (2009), "Violence in the Dominican Republic: nature, recent developments and prospects for control". Data from the national police and the Attorney General of the Dominican Republic (c) Annita Montoute and David Anyanwu (2009), "Situational Analysis of Gun Related Crime in the Caribbean: The Case of Trinidad & Tobago; Antigua & Barbuda; St Vincent & the Grenadines and St. Lucia". (d) The Venezuelan Program of Action and Education in Human Rights (PROVEA) (e) Rod Broadhurst and Thierry Bouhours (2009), "Policing in Cambodia: legitimacy in the making?", Policing and Society. Data based on murder recorded by judicial police.
NSO	National Statistical Office.
OAS	Organization of American States, Observatory on Citizen Security.
OCAVI	Observatorio Centroamericano sobre Violencia, The Central American Observatory on Violence. Sourced from national police data.
PAHO	Pan American Health Organization's Core Health Data System.
SES	Regional System of Standardized Citizen Security and Coexistence Indicators.
Transmonee	UNICEF Transmonee Database. Innocenti Research Centre, Florence.
UN-CASA	The United Nations Coordinating Action on Small Arms.
UN-OCHA	UN Office for the Coordination of Humanitarian Affairs, Integrated Regional Information Network.
UN-PKO	UN Peacekeeping Operation.
UNU	United Nations University. World Institute for Development Economics Research. Research paper no. 2004/5.
WHO	World Health Organization Causes of death 2008 dataset.
WHO-HFA	World Health Organization European Health For All database.
WHO-MDB	World Health Organization Mortality Database.

9.1. Intentional homicide rate by country and source (1995-2010)

Country/territory		Source	Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AFRICA																		
Eastern Africa																		
Burundi	PH	WHO †														21.7		
Comoros	PH	WHO †														12.2		
Djibouti	PH	WHO †														3.4		
Eritrea	PH	WHO †														17.8		
Ethiopia	CJ	Interpol										6.5						
	PH	WHO †														25.5		
Kenya	CJ	CTS/National police										4.0	3.5	3.5	3.4	3.7	3.0	2.9
	PH	WHO †														20.1		
Madagascar	CJ	UNU						8.5										
	PH	WHO †														8.1		
Malawi	PH	WHO †														36.0		
Mauritius	CJ	CTS	2.2	3.0	2.1	2.6	1.9	2.2	2.3	2.5	2.9	2.8	2.9	3.9	3.5	3.7	4.2	
	PH	WHO-MDB				2.4	2.9	2.7	2.2	2.4	2.6	2.8	3.7	5.1	3.5	4.1		
Mozambique	CJ	UN-CASA					4.9	5.0	5.9	5.4	5.1							
	PH	GBI													8.8			
Rwanda	CJ	National police									4.2	4.8	4.3	5.6	4.5	2.4		
	PH	WHO †														17.1		
Seychelles	CJ	CTS												8.3				
	PH	WHO														2.3		
Somalia	PH	WHO †														1.5		
Uganda	CJ	CTS									8.0	7.4						
	PH	WHO †														36.3		
United Republic of Tanzania	CJ	Interpol									7.6	7.7						
	PH	WHO †														24.5		
Zambia	CJ	CTS				9.0	10.8											
	PH	WHO †														38.0		
Zimbabwe	CJ	CTS	6.5	6.4	6.8	6.3	7.0	7.3			8.2	8.7	8.7	7.4	5.2	7.7		
	PH	WHO †														14.3		
AFRICA																		
Middle Africa																		
Angola	CJ	Interpol										5.1						
	PH	WHO †														19.0		
Cameroon	CJ	CTS												5.4	2.3			
	PH	WHO †														19.7		
Central African Republic	PH	WHO †														29.3		
Chad	PH	WHO †														15.8		
Congo	PH	WHO †														30.8		
Democratic Republic of the Congo	CJ	UN-PKO										4.5	5.2	4.5	4.5	4.7	4.9	4.7
	PH	WHO †														21.7		
Equatorial Guinea	PH	WHO †														20.7		
Gabon	PH	WHO †														13.8		
Sao Tome and Principe	PH	WHO †														1.9		

Country/territory	Source		Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AFRICA																		
Northern Africa																		
Algeria	CJ	CTS									2.0	1.4	0.6	0.6	1.3	1.5		
	PH	WHO †														7.2		
Egypt	CJ	CTS									0.7	0.4	0.7	0.4	0.9	1.0	1.2	
	PH	WHO-MDB						0.1				0.2	0.2	0.2	0.2	0.2		
Libyan Arab Jamahiriya	CJ	Interpol									2.3							
	PH	WHO †														2.9		
Morocco	CJ	CTS					1.9	1.6	1.9	1.6	1.7	1.6	1.5	1.6	1.7	1.4	1.4	1.4
	PH	WHO †														0.8		
Sudan	CJ	CTS													3.7	4.1		
	PH	WHO †														24.2		
Tunisia	CJ	CTS				0.9	1.1	1.2	1.3	1.2								
	PH	WHO †														1.1		
AFRICA																		
Southern Africa																		
Botswana	CJ	CTS											13.2	11.7			14.5	
	PH	WHO †														23.9		
Lesotho	CJ	CTS															33.6	
	PH	WHO †														22.9		
Namibia	CJ	Interpol										17.2						
	PH	WHO †														27.4		
South Africa	CJ	National police	64.9	60.4	57.1	57.7	51.2	48.6	47.2	46.8	42.5	39.8	38.8	39.7	37.9	36.8	33.8	
	PH	WHO-MDB		48.3	22.2	21.5	22.0	21.7	27.0	24.7	26.1	28.5	25.7	31.6	19.9			
Swaziland	CJ	CTS	18.7								12.4	12.9						
	PH	WHO †														41.0		
AFRICA																		
Western Africa																		
Benin	PH	WHO †														15.1		
Burkina Faso	CJ	NSO								0.6	0.6	0.6	0.4	0.5	0.6	0.7		
	PH	WHO †														18.0		
Cape Verde	CJ	UN-OCHA													11.6			
	PH	WHO †														13.1		
Cote d'Ivoire	CJ	CTS													0.3	0.4		
	PH	WHO †														56.9		
Gambia	CJ	Interpol										0.4						
	PH	WHO †														10.8		
Ghana	CJ	National police														1.8	1.8	
	PH	WHO †														15.7		
Guinea	PH	WHO †														22.5		
Guinea-Bissau	PH	WHO †														20.2		
Liberia	CJ	UN-PKO													2.9	4.8	3.8	3.2
	PH	WHO †														10.1		
Mali	PH	WHO †														8.0		
Mauritania	PH	WHO †														14.7		
Niger	PH	WHO †														3.8		

Country/territory	Source		Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Nigeria	CJ	NGO (a)	1.4	1.4	1.5	1.4	1.4	1.0	1.7	1.6	1.6	1.9	1.5	1.4	1.3	1.3		
	PH	WHO †														12.2		
Senegal	CJ	Interpol									1.1	1.2						
	PH	WHO †														8.7		
Sierra Leone	CJ	CTS										2.3	1.9	1.9	2.4	2.6		
	PH	WHO †														14.9		
Togo	PH	WHO †														10.9		
AMERICAS																		
Caribbean																		
Anguilla	CJ	NSO	10.2	0.0	9.8	0.0	0.0	9.0	0.0	16.7	15.9	7.6	7.4	28.6	27.8	6.8		
	PH	PAHO	0.0					8.8	0.0		8.0	0.0		29.7				
Antigua and Barbuda	CJ	OAS/National police						5.2	8.8	6.2	6.1	4.8	3.6	12.9	19.8	16.1	18.2	6.8
	PH	PAHO	10.6					3.0	13.4	5.9	2.5	8.8		4.9				
Bahamas	CJ	OAS						24.9	14.3	17.0	16.1	14.0	16.3	19.1	23.7	21.6	25.1	28.0
	PH	PAHO	15.0	14.4	16.2	16.6	18.1	20.8	16.2	16.3	15.8	13.7	16.9					
Barbados	CJ	CTS/OAS				7.5	8.6	7.5	9.3	9.3	12.2	8.1	9.2	12.9	9.2	8.5	7.0	11.3
	PH	PAHO	6.1					9.8	9.7	11.9	9.5	1.6		18.1				
British Virgin Islands	PH	PAHO	10.5	10.8	0.0	0.0	5.0	0.0	4.8	4.7	9.2	18.0		8.6				
Cayman Islands	PH	PAHO	6.0	2.9	5.7	2.8	0.0	10.4			7.1	11.7						
Cuba	PH	PAHO	7.8	6.7	6.8	7.9	5.9	5.8	5.9	7.0	6.4	6.5	6.2	5.5	5.5	4.6		
Dominica	CJ	OAS						2.9	1.4	13.0	11.6	11.6	11.6	7.3	10.2	10.3	19.1	22.1
	PH	PAHO	5.5		5.5	1.4	6.9	1.4	1.4	14.1	9.8	5.6		1.4				
Dominican Republic	CJ	NGO (b)/SES	12.7	12.8	12.7	13.5	12.6	14.1	12.5	14.4	21.1	24.5	25.8	22.8	22.1	24.8	24.2	24.9
	PH	PAHO	9.8	10.5	13.4	15.4	15.0	12.7	9.6	8.5	7.6	9.9						
Grenada	CJ	OAS						14.8	5.9	13.7	8.8	5.9	10.7	11.6	10.6	13.5	6.7	11.5
	PH	PAHO	0.0	3.0				0.0	0.0	2.0			1.0	1.9	1.0	1.0		
Guadeloupe	CJ	National police										5.9	5.2	5.3	6.4	7.0		
	PH	PAHO						0.5	2.4	3.5	2.0	2.5	3.4					
Haiti	CJ	UN-PKO													5.1	5.0	6.1	6.9
	PH	PAHO					14.6		15.7	19.7	21.3	14.5						
Jamaica	CJ	CTS/National police	31.7	37.2	41.4	37.6	33.2	34.4	43.7	39.8	36.8	55.2	62.4	49.7	58.4	59.5	61.6	52.1
	PH	WHO														50.6		
Martinique	CJ	National police											4.8	5.8	5.7	4.2		
	PH	PAHO						1.8	3.6	2.1	3.0	2.3	3.5					
Montserrat	PH	PAHO	0.0	9.1	0.0	27.8	0.0	0.0	0.0	0.0	0.0		22.1	21.6		19.7		
Netherlands Antilles	PH	PAHO		8.5	7.5	9.8	7.7											
Puerto Rico	CJ	National police	23.3	23.3	19.3	17.2	15.6	18.2	19.6	20.5	20.7	21.0	20.4	19.8	19.4	21.5	23.8	26.2
	PH	PAHO	25.1	24.9	23.4	21.3	17.4	17.7	19.7	18.8	19.1	18.5	19.3	18.3	18.1			
Saint Kitts and Nevis	CJ	OAS/National police	9.3	9.2	15.8	17.8	13.2	13.0	12.8	10.6	20.9	22.7	16.3	34.1	31.7	45.0	52.2	38.2
	PH	PAHO	14.3	7.1	17.8	5.1	25.7	17.3	13.0	10.7	21.0	18.9		2.1	8.2	26.5		
Saint Lucia	CJ	OAS						14.6	21.4	26.2	22.2	22.0	20.6	23.4	14.8	22.9	22.6	25.2
	PH	PAHO	11.0	8.1	8.7	9.3	10.6	18.3	16.9	24.4	21.0	23.2	17.6					
Saint Vincent and the Grenadines	CJ	OAS/NGO (c)	18.5	22.2	8.3	22.2	13.0	18.5	11.1	18.5	16.6	24.9	22.1	11.9	33.0	24.7	18.3	22.0
	PH	PAHO	12.4	7.9	3.5	17.4	10.4	12.9	10.3	13.9	8.5	26.7	22.1	11.9	33.9	8.2		

Country/territory	Source		Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Trinidad and Tobago	CJ	OAS/National police				7.6	7.2	9.3	11.6	13.1	17.5	19.9	29.3	28.1	29.5	41.1	37.9	35.2
	PH	PAHO	10.7	9.6	8.3	8.5	8.9	12.1	15.1	13.7		22.3	30.2	30.2				
Turks and Caicos Islands	PH	PAHO	7.1	6.7	12.8	0.0	0.0	0.0	0.0	9.0	0.0		0.0			8.9		
United States Virgin Islands	PH	PAHO			27.6	22.9	24.6	20.8	25.3	36.9	28.3	33.2	31.4	40.1	39.2			
AMERICAS																		
Central America																		
Belize	CJ	CTS/OAS						18.8	24.9	33.1	24.9	28.7	28.8	32.1	33.1	34.4	31.8	41.7
	PH	PAHO				21.1	16.8	23.3	21.5	25.0	21.8	14.5	16.6	16.3	11.9	12.6		
Costa Rica	CJ	CTS/Ministry of Justice	5.3	5.3	5.8	6.0	6.4	6.4	6.4	6.3	7.2	6.6	7.8	8.0	8.3	11.3	11.4	11.3
	PH	PAHO	5.2	5.5	5.6	5.7	6.1	6.3	6.1	5.8	7.3	6.5	7.7	8.0	7.1	8.7		
El Salvador	CJ	National police	139.1	117.3	112.6	95.0	65.0	59.8	60.2	47.3	55.9	64.6	62.4	64.7	57.3	51.9	70.9	66.0
	PH	PAHO	51.2	52.3	45.5	53.2	50.7	45.4	43.7	42.5	43.0	57.7	61.3	63.8	65.9	64.2		
Guatemala	CJ	CTS/National police	32.5	35.3	38.1	30.9	24.2	25.8	28.1	30.8	35.0	36.3	42.0	45.1	43.3	46.0	46.3	41.4
	PH	PAHO	19.7	21.2	28.7	26.2	18.0	19.3	20.0	23.7	27.8	27.5	34.6	33.3	33.8	40.7		
Honduras	CJ	OCAVI/National police					42.1	51.1	55.0	56.0	33.6	32.0	35.1	43.0	50.1	61.3	70.7	82.1
	PH	WHO †														19.7		
Mexico	CJ	CTS/National police			17.7	14.7	14.8	13.9	13.7	12.8	12.2	11.1	10.6	10.9	9.4	11.9	14.4	18.1
	PH	PAHO/NSO	18.4	17.0	15.8	15.9	14.4	12.3	11.7	11.3	11.3	10.6	10.5	11.2	8.1	12.7	17.7	21.5
Nicaragua	CJ	National police	15.2	14.0	14.1	13.0	11.2	9.4	10.4	10.6	12.0	12.1	13.4	13.1	12.8	13.1	14.0	13.2
	PH	PAHO		11.7	11.7	10.0	13.0	13.0	13.7	12.5	18.7	18.8	17.5	13.2				
Panama	CJ	National police	14.1	9.1	11.3	9.9	9.8	10.1	10.2	12.4	10.8	9.7	11.2	11.3	13.3	19.2	23.6	21.6
	PH	PAHO		9.4	12.2	10.8	10.6	12.0	12.4	14.9	13.8	12.4	13.5	12.7	15.5	20.2		
AMERICAS																		
Northern America																		
Bermuda	CJ	National police				6.4	0.0	1.6	3.2	4.7	3.1	3.1	4.7	4.7	4.7	7.7	9.3	7.7
	PH	PAHO		6.6	1.6	0.0	1.6	0.0	3.2	0.0	1.5	1.5	3.0					
Canada	CJ	NSO	2.0	2.1	2.0	1.9	1.8	1.8	1.8	1.9	1.7	2.0	2.1	1.9	1.8	1.8	1.8	
	PH	PAHO	1.7	1.7	1.4	1.6	1.5	1.5	1.5	1.5	1.4	1.6						
United States of America	CJ	National police/OAS	8.1	7.3	6.7	6.2	5.6	5.5	5.6	5.6	5.7	5.5	5.6	5.7	5.6	5.3	5.0	4.6
	PH	PAHO	8.3	7.6	7.1	6.4	5.9	5.8	7.0	6.0	5.9	5.8	6.0	6.0	5.9			
AMERICAS																		
South America																		
Argentina	CJ	CTS/Ministry of Justice	7.8	8.5	9.1	7.2	7.3	7.2	8.2	9.2	7.6	5.9	5.5	5.3	5.3	5.8	5.5	
	PH	PAHO	4.2	4.7	4.8	4.7	5.3	5.8	7.0	7.6	7.3	5.8	5.2	5.0	4.5	4.4		
Bolivia (Plurinational State of)	CJ	National police											6.5	5.7	7.6	7.5	6.9	8.9
	PH	WHO †														3.2		
Brazil	CJ	Ministry of Justice										22.5	22.4	22.7	22.3	22.8	22.7	
	PH	PAHO	25.7	27.0	28.7	29.5	30.4	29.7	31.4	32.3	33.1	31.1	29.2	31.2	29.3	29.9		
Chile	CJ	CTS											3.5	3.6	3.7	3.5	3.7	
	PH	PAHO	3.2	3.0	2.5	2.8	3.0	5.1	5.4	5.3	5.2	5.3	5.8	5.6	4.5			
Colombia	CJ	National police	69.7	71.8	67.2	60.1	62.3	66.7	68.9	70.2	56.4	47.7	42.1	40.0	38.8	35.9	34.6	33.4
	PH	PAHO	76.6	80.1	75.0	80.1	80.7	80.7	83.6	89.1	72.8	65.6	52.5	55.3	54.0			
Ecuador	CJ	National police															18.4	18.2
	PH	PAHO	13.4	16.1	12.5	15.3	17.7	16.9	15.9	16.3	13.8	17.9	18.4	21.2	20.7	21.7		
French Guiana	CJ	National police										29.8	22.3	20.1	13.1	14.6		
	PH	PAHO							7.0	8.5	5.3	8.0	5.7					

Country/territory	Source		Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Guyana	CJ	OAS/NSO	15.0	12.1	11.9	15.5	12.4	10.1	10.7	19.2	27.8	17.6	19.0	21.8	15.3	21.0	15.5	18.4
	PH	PAHO	7.2	4.3	3.8	2.9	4.5		9.1	20.5	24.1	14.1	18.7	20.8				
Paraguay	CJ	OAS										20.9	18.2	15.5	14.8	15.1	13.4	11.5
	PH	PAHO	18.6	20.0	18.0	18.5	17.5	20.1	20.7	19.8	21.0	22.4	17.6	16.1	16.9	16.4		
Peru	CJ	National police/SES					5.1	5.0	4.9	4.3	4.9	5.6	5.8	5.9	5.7	5.6	5.2	
	PH	PAHO	5.5	4.4	4.2	5.4	2.6	3.2	3.0	2.7	2.9	3.0	2.9	2.7	3.0			
Suriname	CJ	OAS						4.6	16.7	11.9	12.3	14.4	13.8	12.3	8.8	8.3	4.6	
	PH	PAHO	4.8	3.3	4.7	8.4	6.9	4.6	4.9	3.1	4.1	1.6	2.2					
Uruguay	CJ	Ministry of Interior/SES						6.4	6.6	6.9	5.9	6.0	5.7	6.1	5.8	6.6	6.8	6.1
	PH	PAHO	4.7	4.4	4.7	5.8	5.4	5.5	4.9		4.7	4.6						
Venezuela (Bolivarian Republic of)	CJ	NGO (d)	20.3	22.0	18.4	19.4	25.0	32.9	32.1	38.1	44.1	37.1	37.4	45.2	47.7	52.0	49.0	
	PH	PAHO		14.8	14.1	13.7	19.2	29.3	29.4	34.1	34.6	32.5	31.9	32.8	34.7			
ASIA Central Asia																		
Kazakhstan	CJ	Transmonee	15.4	16.7	16.7	16.6	15.7	15.5	14.5	13.2	13.3	13.9	12.2	11.5	10.8	10.7		
	PH	WHO-HFA	22.4	21.1	19.8	19.7	17.8	17.9	16.6	13.8	14.7	16.0	14.3	13.3	12.7	11.7		
Kyrgyzstan	CJ	CTS/Transmonee	11.7	11.1	9.3	8.8	8.8	8.3	7.7	8.2	8.4	8.3	9.7	8.8	8.1	8.0	7.9	
	PH	WHO-HFA	16.9	15.3	11.5	9.5	9.2	9.6	8.2	7.6	7.6	7.8	8.8	7.6	7.4	6.5	8.0	
Tajikistan	CJ	CTS										2.2	1.9	2.8	1.8	1.4	1.4	
		Transmonee	7.5	8.3	8.4	8.1	5.8	4.6	3.7	2.9	2.6	2.2	2.4	4.3	2.3	1.8		
	PH	WHO-HFA	9.1	15.7	13.9	11.1	8.5	6.4	5.7	4.5	3.5	3.1	2.4					
Turkmenistan	CJ	Transmonee	7.9	7.2	6.2	7.6	8.0	7.7	7.1	5.8	5.3	5.1	4.9	4.4				
	PH	WHO														11.8		
Uzbekistan	CJ	CTS/Transmonee	5.0	4.9	4.4	4.4	4.1	4.3	4.3	4.2	3.8	3.7	3.5	3.3	3.1	3.1		
	PH	WHO-HFA	6.8	6.5	5.0	4.5	3.9	3.8	3.9	3.8	2.7	3.0	3.4					
ASIA Eastern Asia																		
China	CJ	NSO								2.0	1.9	1.9	1.6	1.4	1.2	1.1		
	PH	WHO														1.6		
Taiwan, Province of China	CJ	NSO	8.3	8.4	7.9	6.1	5.7	5.1	4.8	5.1	4.7	4.0	4.0	4.0	3.8	3.5	3.6	
Democratic People's Republic of Korea	PH	WHO †														15.2		
China, Hong Kong	CJ	CTS/National police	1.2	1.2	1.6	1.0	0.9	0.6	1.0	1.0	0.8	0.7	0.5	0.5	0.3	0.5	0.7	0.5
	PH	WHO-MDB							0.8	1.0	0.9	0.6	0.6	0.5	0.3			
Japan	CJ	CTS	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	
	PH	WHO-MDB	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.5		
China, Macao	CJ	NSO					9.7					2.1			2.2	1.5	1.9	
Mongolia	CJ	CTS										13.2	15.6	13.0	10.8	7.4	7.6	
	PH	WHO †														3.9		
Republic of Korea	CJ	National police						2.0	2.3	2.1	2.1	2.3	2.3	2.3	2.3	2.3	2.9	
	PH	WHO-MDB	1.9	2.0	2.2	2.2	1.8	1.9	1.7	1.8	1.9	2.0	2.0	1.8				
ASIA South-Eastern Asia																		
Brunei Darussalam	CJ	CTS									0.6	1.4	0.0	0.5				
	PH	WHO-MDB		3.0	2.6	1.3	1.3	1.2										
Cambodia	CJ	NGO (e)	3.6	4.7	6.8	6.6	4.8	4.6	3.2	3.3	3.9	3.9	3.4					
	PH	WHO †														21.5		

Country/territory	Source		Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Indonesia	CJ	Interpol									0.7	0.6						
	PH	WHO †														8.1		
Lao People's Democratic Republic	CJ	National police																0.5
	PH	WHO †														4.6		
Malaysia	CJ	CTS	1.9	2.1	2.5	2.8	2.6	2.4					1.9	2.3				
	PH	WHO-MDB						1.0	1.6	1.3	1.6	1.6	1.4	1.8				
Myanmar	CJ	NSO	3.8					2.3	2.0	1.8	1.7	1.6	1.5	1.7	1.6			
	PH	WHO †														10.2		
Philippines	CJ	CTS				8.0	7.5	7.4	7.4	8.1	7.8	7.6	7.5	7.1	6.7	6.5	5.4	
	PH	WHO-MDB					14.7	17.4	18.2	18.4	17.9							
Singapore	CJ	CTS/National police	1.5	0.9	1.1	1.0	1.0	0.9	0.8	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.5	
	PH	WHO-MDB	0.9	0.7	0.8	0.7	1.0	1.2	0.9	1.0	1.1							
Thailand	CJ	National police	7.6	7.4	7.9	8.7	8.1	8.1	7.9	7.0	9.8	6.5	7.2	7.0	6.5	5.8	5.4	5.3
	PH	WHO-MDB	6.0	9.7	6.1	8.1	11.4	8.7		7.8				9.3				
Timor-Leste	CJ	UN-PKO										2.4	4.6	4.7	5.8	3.2	2.9	3.5
	PH	WHO †														6.9		
Viet Nam	CJ	CTS											1.7	1.9				
	PH	WHO														1.6		
ASIA																		
Southern Asia																		
Afghanistan	PH	WHO †														2.4		
Bangladesh	CJ	National police						2.6				2.8	2.6	2.9	2.7	2.8	2.9	2.7
	PH	WHO †														8.4		
Bhutan	CJ	NSO						3.2	3.2	3.1	0.8	2.3	1.7	1.3	1.2	1.0		
	PH	WHO †														4.8		
India	CJ	National police	4.4	4.4	4.4	4.5	4.2	4.2	4.0	3.9	3.5	3.6	3.5	3.5	3.4	3.4	3.4	
	PH	WHO														4.4		
Iran (Islamic Republic of)	CJ	NSO															3.0	
	PH	WHO														1.4		
Maldives	CJ	CTS	0.8		2.3				2.5	2.8	1.4				1.0	1.6		
	PH	WHO														0.7		
Nepal	CJ	NSO			2.5	2.8	2.6	2.6	3.4	3.4	2.9	3.5	3.3	2.3	3.1	3.2	2.8	
	PH	WHO †														8.5		
Pakistan	CJ	NSO		6.9	6.9	7.4	6.6	6.2	6.5	6.2	6.1	6.2	6.1	6.2	6.4	7.2	7.3	
	PH	WHO †														3.6		
Sri Lanka	CJ	National police											6.2	10.2	8.2	7.3	4.6	
	PH	WHO-MDB			4.8	4.3	4.7	5.1	4.1	4.5	3.7							
ASIA																		
Western Asia																		
Armenia	CJ	CTS/Transmonee	3.6	3.6	3.2	3.0	2.9	3.0	2.9	2.3	2.2	2.4	1.8	2.4	2.3	2.5	2.2	
	PH	WHO-HFA	5.3	3.6	3.1	3.3	3.3	2.5	2.4	2.2	1.9			1.9		1.8		
Azerbaijan	CJ	CTS													2.1	2.1		
	PH	WHO-HFA	9.4	7.9	6.4	6.0	4.8	3.2	2.7	2.8	2.6	1.9						
Bahrain	CJ	CTS									0.5	1.0	0.6	0.9	0.4	0.6		
	PH	WHO-MDB			0.7	0.6	0.6	1.6	0.9									

Country/territory	Source		Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cyprus	CJ	CTS										1.6	1.9	1.4	1.2	0.8	1.7	
	PH	WHO-HFA										1.5	1.7	1.6	1.4	1.2		
Georgia	CJ	CTS/Transmonee	7.7	5.4	5.8	5.0	5.1	5.0	5.6	6.3	6.6	6.2	9.0	7.3	7.5	6.0	4.7	4.1
	PH	WHO-HFA	0.0	0.6	2.0	4.2	3.5	3.2	3.9									
Iraq	PH	WHO †														2.0		
Israel	CJ	CTS/NSO	2.1	2.1	2.8	2.5	2.3	2.4	3.6	3.6	3.2	2.7	2.5	2.8	1.9	2.3	2.1	2.1
	PH	WHO-HFA	1.5	1.1	0.5	0.5	2.2	3.3	6.0	7.9	5.3	3.8	3.1	2.9	0.7			
Jordan	CJ	CTS											1.3	1.8				
	PH	WHO														7.1		
Kuwait	CJ	CTS										4.5	2.9	1.8	3.1	2.2	2.2	
	PH	WHO-MDB	1.7	1.9	1.4	1.6	2.1	1.3	1.8	1.3						1.1		
Lebanon	CJ	National police										3.1	3.8	2.1	2.6	6.0	1.9	2.2
	PH	WHO †														1.7		
Occupied Palestinian Territory	CJ	CTS	1.2	4.4	1.6	1.5	1.7				2.7	4.2	4.1					
Oman	CJ	CTS							0.6	0.7					0.7	0.7		
	PH	WHO †														2.2		
Qatar	CJ	CTS				0.9	0.5	0.2			0.6	0.8	0.7	0.2	2.5	0.9		
	PH	WHO														0.6		
Saudi Arabia	CJ	NSO					0.9	0.9	1.1	1.3	1.1	1.3	1.2	1.0	1.0			
	PH	WHO †														2.7		
Syrian Arab Republic	CJ	CTS													3.1	3.0		
		NSO			2.0	2.2	2.1	2.2	2.3	2.2	2.3	2.4	2.3	2.4	2.8	2.7	2.4	
	PH	WHO														2.6		
Turkey	CJ	CTS									4.3	4.3	4.9	4.6	3.6	3.3		
	PH	WHO														2.9		
United Arab Emirates	CJ	CTS									1.3	0.7	1.4	0.8				
	PH	WHO †														0.3		
Yemen	CJ	NSO									3.6	3.2	4.6	4.2	4.1	3.9	4.2	
	PH	WHO †														2.1		
EUROPE																		
Eastern Europe																		
Belarus	CJ	CTS	9.3	9.5	10.0	10.2	9.6	10.1	9.7	9.9	8.9	8.3	8.4	7.5	6.7	5.6	4.9	
	PH	WHO-HFA	11.8	11.3	11.9	12.5	11.1	11.1	10.9	11.0	9.0	8.7	8.4		6.2			
Bulgaria	CJ	CTS/Eurostat	5.9	5.3	4.9	4.7	4.1	4.1	3.9	3.2	3.2	3.1	2.5	2.4	2.2	2.3	1.9	
	PH	WHO-HFA	4.6	4.9	4.3	3.5	2.7	3.3	3.0	2.7	2.4	2.6	2.1	1.6	1.6	1.4		
Czech Republic	CJ	CTS										1.3	0.9	1.2	1.1	1.0	0.9	
	PH	WHO-HFA	1.8	1.6	1.5	1.6	1.5	1.6	1.2	1.3	1.3	1.2	0.9	1.0	1.1	0.8	0.9	
Hungary	CJ	CTS	2.9	2.6	2.8	2.8	2.5	2.0	2.5	2.0	2.3	2.1	1.6	1.7	1.5	1.5	1.4	
	PH	WHO-HFA	3.2	3.0	3.0	3.1	2.7	2.5	2.2	2.4	1.8	2.0	1.6	1.8	1.6	1.8	1.2	
Poland	CJ	CTS	2.2	2.3	2.1	4.9	4.7	5.7	2.0	1.9	1.7	1.7	1.5	1.3	1.4	1.2	1.3	
	PH	WHO-HFA	2.8	2.7			2.3	2.1	1.7	1.8	1.5	1.5	1.4	1.5	1.3	1.2		
Republic of Moldova	CJ	CTS	9.3	9.2	9.7	8.9	9.4	10.1	10.2	10.1	9.1	7.9	7.1	6.9	5.9	6.4	6.7	7.4
	PH	WHO-HFA	17.6	14.4	13.5	12.3	11.3	12.3	11.4	9.8	9.1	7.3	7.6	7.2	6.3	6.7		

Country/territory	Source		Year														
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Romania	CJ	CTS	3.4	3.4	3.2	3.1	2.5	2.1	2.5	2.7	2.6	2.5	2.1	2.0	1.9	2.2	1.8	
	PH	WHO-HFA	4.1	3.8	3.6	3.1	3.4	3.4	3.3	3.4	3.6	2.9	2.4	2.0	1.8	2.2	2.0	
Russian Federation	CJ	CTS														11.6	11.2	
	PH	NSO	30.8	26.6	23.9	23.0	26.2	28.2	29.8	30.7	29.1	27.3	24.9	20.2	17.9	16.7	15.1	
Slovakia	CJ	CTS/Transmonee	2.4	2.5	2.6	2.4	2.6	2.6	2.4	2.6	2.7	2.3	2.0	1.6	1.6	1.7	1.5	
	PH	WHO-HFA	2.1	2.0	2.7	2.0	2.3	2.2	2.1	2.1	1.9	1.6	1.5					
Ukraine	CJ	CTS									7.6	7.4	6.4	6.3	5.7	5.3	4.8	
		Transmonee	7.8	9.0	9.5	9.8	9.2	9.3	9.5	10.0	10.2	9.1	8.6	8.1	7.2	7.0		
	PH	WHO-HFA	15.3	15.2	13.1	12.0	12.5	12.7	12.0	11.4	10.5	10.0	9.0	8.5		7.7		
EUROPE																		
Northern Europe																		
Denmark	CJ	CTS	1.1	1.3	1.7	0.9	1.0	1.1	1.0	1.0	1.2	0.8	1.0	0.5	0.7	1.0	0.9	
	PH	WHO-HFA	1.2	1.2	1.3	1.0	1.2	1.3	0.9	1.0	1.2	0.6	1.0	0.7				
Estonia	CJ	CTS/Eurostat	17.1	15.1	12.7	14.1	11.4	10.4	10.1	10.5	10.9	6.7	8.4	6.8	6.9	6.3	5.2	
	PH	WHO-HFA	24.3	21.2	16.3	19.0	17.1	13.4	15.1	12.0	11.1	7.8	8.9	7.4	6.7	6.3		
Finland	CJ	CTS	2.9	3.0	2.7	2.2	2.8	2.9	3.0	2.5	2.0	2.8	2.2	2.3	2.4	2.5	2.3	
	PH	WHO-HFA	3.2	3.6	2.7	2.4	2.9	2.8	3.0	2.7	2.0	2.6	2.2	2.0	2.3	2.4	2.0	
Greenland	CJ	NSO	25.2	5.4	19.7	10.7	21.4	24.9	30.1	23.0	10.6	21.0	19.2	19.2	7.0	10.5		
Iceland	CJ	CTS					0.7	1.8	0.4	1.4	0.0	1.0	1.0	0.0	0.7	0.0	0.3	
	PH	WHO-HFA	0.0	0.7	1.2		0.4	1.9	0.8	1.6		1.5	1.2	0.4	0.7	0.3	0.4	
Ireland	CJ	CTS/National police	1.2	1.2	1.0	1.0	1.0	1.0	1.3	1.3	1.1	0.7	1.3	1.5	1.8	1.1	1.3	1.2
	PH	WHO-HFA	0.8	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.0	0.6	1.0	0.9	1.1	0.9	1.1	
Latvia	CJ	CTS	14.0	11.7	11.0	11.2	10.4	9.6	10.1	9.3	9.2	8.7	5.5	5.6	4.1	4.4	4.8	
	PH	WHO-HFA	18.7	16.3	16.6	13.3	13.0	12.8	12.5	10.8	10.5	9.2	10.4	9.6	8.3	7.4		
Lithuania	CJ	CTS										10.0	10.9	8.5	8.2	8.9	7.5	
	PH	WHO-HFA	12.4	9.7	9.5	8.9	8.4	9.9	10.2	7.2	9.3	8.4	8.9	7.4	7.0	7.1	5.6	
Norway	CJ	CTS/Eurostat	1.0	1.0	0.9	0.9	0.8	1.1	0.8	1.0	1.1	0.8	0.7	0.7	0.6	0.7	0.6	
	PH	WHO-HFA	1.1	1.0	1.0	1.0	0.9	1.2	0.8	0.9	1.1	0.9	0.7	1.0	0.6	0.6	0.6	
Sweden	CJ	CTS/Eurostat		1.1	1.0	1.1	1.1	1.0	0.9	1.1	0.9	1.2	0.9	1.0	1.2	0.9	1.0	
	PH	WHO-HFA	1.1	1.3	1.1	1.2	1.2	1.0	0.9	1.2	1.0	1.2	1.0	0.9	1.2	0.8		
United Kingdom (England and Wales)	CJ	Eurostat	1.5	1.3	1.4	1.5	1.5	1.6	1.7	2.0	1.7	1.5	1.3	1.3	1.4	1.2	1.1	
United Kingdom (Northern Ireland)	CJ	Eurostat	1.5	2.3	2.5	4.5	2.0	2.9	3.1	2.7	1.9	2.4	1.7	1.4	1.7	1.5	1.5	
United Kingdom (Scotland)	CJ	Eurostat	2.6	2.6	1.8	1.9	2.4	2.1	2.2	2.5	2.1	2.7	1.8	2.3	2.2	1.9	1.5	
United Kingdom of Great Britain and Northern Ireland	CJ	Eurostat															1.2	
	PH	WHO-HFA	1.1	0.9	0.7	0.8	0.8	1.1	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	
EUROPE																		
Southern Europe																		
Albania	CJ	CTS/Transmonee	6.7	8.0	49.9	18.6	16.1	9.0	6.8	5.8	4.6	3.8	4.2	2.8	3.3	2.9		
	PH	WHO-HFA	8.4	8.7	41.0	19.9	15.8	4.0	7.6	7.4	5.9	4.4						
Andorra	CJ	Interpol										1.3						
	PH	WHO †														1.2		
Bosnia and Herzegovina	CJ	CTS											1.9	1.9	1.7	1.7		
	PH	WHO														1.3		

Country/territory	Source		Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Croatia	CJ	CTS/Eurostat	3.6	2.6	2.6	2.9	2.7	2.5	1.9	1.8	1.5	1.9	1.5	1.7	1.4	1.6	1.1	
	PH	WHO-HFA	3.2	2.9	2.6	3.1	2.6	2.7	1.9	1.3	1.6	1.7	1.3	1.8	1.4	1.7	1.1	
Greece	CJ	CTS/Eurostat	1.4	1.6	1.9	1.6	1.4	1.4	1.3	1.0	1.1	1.0	1.1	1.0	1.0	1.0		
	PH	WHO-HFA	1.2	1.5	1.5	1.3	1.1	1.0	0.9	0.7	1.0	0.8	1.0	0.7	1.0	1.2	1.4	
Italy	CJ	CTS	1.8	1.7	1.5	1.5	1.4	1.3	1.2	1.1	1.2	1.2	1.0	1.1	1.1	1.0	1.0	
	PH	WHO-HFA	1.5	1.4	1.2	1.3	1.2	1.0	0.9	1.0	1.1			0.9	0.9			
Malta	CJ	CTS							1.5	1.5	0.0	1.7	1.0	0.0	1.0	1.4	1.0	
	PH	WHO-HFA	0.9	1.1	0.6	1.6	2.3	0.9	2.9	1.4		1.5	0.5		0.5	1.4		
Montenegro	CJ	CTS									3.2	2.2	3.5	4.0	1.6	3.7	3.5	
	PH	WHO-HFA											3.8		0.5	2.3		
Portugal	CJ	CTS/Eurostat		1.0	1.1	1.2	1.1	1.1	1.0	1.1	1.4	1.4	1.3	1.5	1.7	1.2	1.2	
	PH	WHO-HFA	1.7	1.2	1.3	1.4	1.1	1.0	1.3	1.6	1.5	0.9			0.9	1.4	1.0	
Serbia	CJ	Eurostat						2.2	2.4	2.0	1.8	1.9	1.6	1.6	1.9	1.5		
	PH	WHO-HFA				3.4	3.0	2.5	2.7	2.1	2.2	1.6	1.9	1.8	2.4	1.7		
Slovenia	CJ	CTS	2.2	1.9	1.8	0.7	1.3	1.8	1.4	1.8	1.1	1.4	1.0	0.6	1.2	0.5	0.6	
	PH	WHO-HFA	2.3	2.3	2.2	1.0	1.3	1.0	0.8	1.4	1.2	1.8	1.1	0.5	0.9	0.6		
Spain	CJ	CTS	0.6	0.6	0.5	1.2	1.1	1.2					0.9	0.8	0.8	0.9	0.9	
	PH	WHO-HFA	0.9	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.4	0.8	0.8	0.7	0.8		
The former Yugoslav Republic of Macedonia	CJ	CTS/Eurostat					2.5	2.7	3.0	3.5	2.4	2.8	2.6	2.5	2.1	1.8	1.8	1.9
	PH	WHO-HFA	1.7	2.2	2.3	2.4	2.6	2.7	6.4	3.0	3.3							
EUROPE																		
Western Europe																		
Austria	CJ	CTS/Eurostat	1.0	1.2	0.8	1.0	0.8	1.0	0.9	0.8	0.6	0.7	0.7	0.7	0.5	0.5	0.5	
	PH	WHO-HFA	1.0	1.1	1.0	1.1	0.8	0.8	1.0	0.9	0.6	0.7	0.8	0.8	0.6	0.5	0.7	
Belgium	CJ	CTS	1.4	1.2	1.4			2.1	2.8	3.1	2.2	2.6	2.1	2.1	2.0	1.9	1.7	
	PH	WHO-HFA	1.6	2.0	1.8	1.9	2.4					1.7	1.6					
France	CJ	Eurostat		2.0	1.7	1.6	1.6	1.8	1.8	1.9	1.6	1.6	1.6	1.4	1.3	1.4		
	PH	WHO-HFA	1.1	1.1	0.9	0.8	0.7	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.7		
Germany	CJ	CTS	1.7	1.5	1.4	1.2	1.2	1.2	1.1	1.2	1.0	1.1	1.1	1.0	0.9	0.9	0.9	0.8
	PH	WHO-HFA	1.2	1.1	0.9	0.9	0.9	0.8	0.7	0.8	0.7	0.7	0.6	0.6				
Liechtenstein	CJ	Eurostat		0.0	0.0	0.0	3.1	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.8		
Luxembourg	CJ	CTS												1.5	1.5	2.5		
	PH	WHO-HFA	0.8	0.5	0.4	1.1	0.4	1.8	2.4	2.1	1.0	0.5	1.5	1.5	1.3	1.5		
Monaco	CJ	CTS										2.8	2.8	2.8	0.0	0.0		
	PH	WHO †														0.0		
Netherlands	CJ	CTS	1.8	1.6	1.5	1.2	1.4	1.2	1.2	1.0	1.3	1.4	1.2	1.0	1.0	1.1	1.1	
	PH	WHO-HFA	1.3	1.4	1.3	1.1	1.3	1.2	1.3	1.3	1.2	1.2	1.1	0.8	1.0	1.0	1.0	
Switzerland	CJ	CTS/Eurostat	1.2	1.2	1.2	1.1	1.2	1.0	1.2	1.2	1.0	1.1	1.0	0.8	0.7	0.7		
	PH	WHO-HFA	0.9	1.1	1.4	0.9	1.1	0.8	1.1	0.9	0.7	1.0	1.0	0.6	0.6			

Country/territory	Source		Year															
			1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
OCEANIA																		
Australia and New Zealand																		
Australia	CJ	CTS/NSO	1.8	1.7	1.7	1.5	1.8	1.6	1.6	1.6	1.5	1.3	1.3	1.4	1.2	1.2	1.2	
	PH	WHO-MDB			1.7	1.6	1.6	1.6	1.6	1.5	1.3	0.8		0.7				
New Zealand	CJ	National police	1.1	1.5	1.8	1.4	1.3	1.3	1.3	1.5	1.1	1.1	1.5	1.2	1.1	1.2	1.5	
	PH	WHO-MDB			1.9	1.5	1.4	1.5	1.4	1.8	1.4	1.2	1.8					
OCEANIA																		
Melanesia																		
Fiji	CJ	Interpol									3.1	2.8						
	PH	WHO														0.9		
Papua New Guinea	CJ	National police												9.8	8.1			
	PH	WHO †														13.0		
Solomon Islands	CJ	CTS										4.4	5.5	4.8	5.2	3.7		
	PH	WHO †														1.0		
Vanuatu	PH	WHO †														0.9		
OCEANIA																		
Micronesia																		
Guam	CJ	National police						1.3	5.1	1.2	4.9	5.4	4.2	6.4	0.6			
Kiribati	PH	WHO														7.3		
Micronesia (Federated States of)	PH	WHO †														0.9		
Nauru	PH	WHO														9.8		
Palau	PH	WHO †														0.0		
OCEANIA																		
Polynesia																		
French Polynesia	CJ	National police												1.2	2.7	3.4		
Samoa	PH	WHO †														1.1		
Tonga	PH	WHO														1.0		

† Country information on causes of death not available for most causes. Estimates based on cause of death modelling and death registration data from other countries in the region. Further country-level information and data on specific causes was also used.

9.2. Percentage of homicides committed with a firearm by country (1995-2010)

Country/territory	Source		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AFRICA Eastern Africa																		
Mauritius	CJ	CTS											0.0	2.0				
Uganda	CJ	CTS/National police									15.7	18.0		14.0	12.8	12.7	10.5	
Zambia	CJ	National police										5.6	5.4	4.9	4.6	7.4	4.8	11.7
Zimbabwe	CJ	CTS				72.2	68.3	65.6										
AFRICA Middle Africa																		
Democratic Republic of the Congo	CJ	UN-PKO										21.8	19.4	20.7	24.8	17.1	22.2	33.2
AFRICA Northern Africa																		
Algeria	CJ	CTS									2.0	2.0			3.6	4.8		
Egypt	CJ	CTS									65.6	45.0	59.1	60.0	64.5	76.2	69.1	
AFRICA Southern Africa																		
South Africa	CJ	National police	41.5	44.2	45.6	49.4	49.6	49.3	48.0	47.0	49.0	48.0	46.4	47.2	45.0			
Africa Western Africa																		
Liberia	CJ	UN-PKO													10.0	7.9	10.3	13.2
Sierra Leone	CJ	CTS														87.7		
AMERICAS Caribbean																		
Anguilla	PH	PAHO												24.0				
Bahamas	CJ	OAS															61.2	
Barbados	CJ	CTS				35.0	39.1	40.0										
Cuba	PH	PAHO													4.4			
Dominican Republic	CJ	SES/National police														75.1	69.5	65.5
Grenada	CJ	OAS								0.0	0.0	16.7	9.1	8.3	18.2	7.1	0.0	0.0
Jamaica	CJ	CTS/National police										75.5	76.3	75.2	78.9	77.4	76.7	75.6
Puerto Rico	PH	PAHO											94.8					
Saint Kitts and Nevis	CJ	National police										63.6	75.0	76.5	75.0	78.3	85.2	85.0
Saint Vincent and the Grenadines	CJ	OAS															30.0	
Trinidad and Tobago	CJ	OAS										69.0	70.5	72.5	78.3	79.5	72.1	
AMERICAS Central America																		
Belize	CJ	CTS/OAS										45.6	50.6	40.2	42.3	64.1	48.5	52.3
Costa Rica	CJ	CTS/Ministry of Justice	47.3	50.3	51.4	52.7	51.4		52.1	50.8	49.0	53.6	58.5	57.3				
El Salvador	CJ	National police							45.7	50.8			77.0	78.2		76.9		
Guatemala	CJ	CTS/National police				72.3	69.3	72.6	74.9	75.5	81.4	80.8	79.4	78.3	82.6	83.2	83.2	84.0

Country/territory	Source		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Honduras	CJ	National police/OCAVI											76.0	78.2	75.0	80.3	81.4	83.4
Mexico	CJ	CTS/National police			29.9	46.2	60.1	26.0	25.3	19.8	23.7	24.5	28.5	30.7	39.4	38.6	54.6	54.9
Nicaragua	CJ	National police														35.2	42.1	
Panama	CJ	National police										60.1	57.1	68.7	65.1	79.4	81.5	75.0
AMERICAS																		
Northern America																		
Bermuda	CJ	National police									50.0	0.0						
Canada	CJ	CTS	31.2	36.0	35.6	29.8	34.2		30.4	27.5	28.6	30.2	36.2	33.5	34.7	35.3	32.0	
United States of America	CJ	National police									58.4	58.1	60.7	60.0	59.8	58.3	60.0	
Argentina	CJ	CTS											49.4	49.4	49.1	52.0		
Brazil	PH	Ministry of Health										69.9	69.4	70.3	70.8	70.8		
Chile	PH	PAHO											37.3					
Colombia	CJ	National police										84.0	81.5	79.6	80.3	79.9	81.0	81.1
Ecuador	CJ	CTS/SES										61.6	80.8	68.6		68.7		
Guyana	PH	PAHO											61.3					
Paraguay	CJ	CTS/SES				60.0	63.6	61.0					60.3	63.3			56.1	
Peru	CJ	CTS/SES										35.8	38.4	32.0	36.8	32.9	50.8	
Uruguay	CJ	Ministry of Interior						39.3	83.5	47.2	44.2	46.5						
Venezuela (Bolivarian Republic of)	CJ	NGO															79.5	
ASIA																		
Central Asia																		
Kazakhstan	CJ	Transmonee	7.1	7.0	8.4								5.4	4.0	13.2	12.5		
Kyrgyzstan	PH	WHO-HFA														8.3		
Tajikistan	CJ	CTS										19.7	12.9	25.3	14.3	9.5	15.6	
Turkmenistan	CJ	Transmonee											2.1	2.4				
ASIA																		
Eastern Asia																		
Taiwan Province of China	CJ	NSO				8.4	10.3	10.4	12.8	14.5	16.9	23.6	20.4	16.4	17.4	15.9		
China, Hong Kong	CJ	CTS/National police	4.1	5.5	2.0			2.3			5.8	0.0						
Japan	PH	WHO-MDB	5.5	5.0	4.5				7.2	6.0						1.8		
Mongolia	CJ	CTS									5.8	7.3	4.9	1.9	3.4	4.3	1.4	
Republic of Korea	PH	WHO-MDB												1.7				
ASIA																		
South-Eastern Asia																		
Brunei Darussalam	CJ	CTS											0.0	0.0				
Cambodia	CJ	NGO				58.4	47.7	43.4	36.9	32.9	36.7							
Malaysia	PH	WHO-MDB												13.4				
Philippines	PH	WHO-MDB									49.9							
Singapore	CJ	CTS/National police						2.7			0.0	0.0	0.0	5.9				
Viet Nam	CJ	CTS											53.2	52.9				
Bangladesh	CJ	National police						43.6										
India	CJ	National police					21.2					20.8	14.3	13.9	12.0	10.0	7.6	

Country/territory	Source		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Maldives	CJ	CTS													22.2	62.5		
Nepal	CJ	NSO											11.5	13.3				
Sri Lanka	CJ	CTS/National police									13.3	21.1						
ASIA																		
Western Asia																		
Armenia	CJ	CTS										25.3	14.5	21.3	23.9	17.9	13.0	
Azerbaijan	CJ	CTS									7.7	8.0	8.9	9.5	12.5	6.5		
Bahrain	CJ	CTS													25.0	0.0		
Cyprus	CJ	CTS	100.0	70.0	66.7						71.4	50.0	62.5	35.7	27.3	33.3	26.3	
Georgia	CJ	CTS									30.5	28.5	23.3	25.4	14.2	17.1	16.1	13.3
Israel	PH	WHO-HFA													11.7			
Jordan	CJ	CTS											38.8					
Lebanon	CJ	National police											5.1	36.5				
Occupied Palestinian Territory	CJ	CTS										66.9	72.4					
Qatar	CJ	CTS									50.0	16.7						
Turkey	CJ	CTS (Victims)									19.0	18.5	14.9	16.9				
EUROPE																		
Eastern Europe																		
Belarus	CJ	CTS	8.3	6.8	6.4				5.5	3.8	4.8	5.3	1.3	0.8	2.5	2.8	2.5	
Bulgaria	CJ	CTS	21.7	24.0	27.6	14.2	20.8	19.0			20.6	18.8	21.9	24.0	32.0	29.7		
Czech Republic	CJ	CTS									19.8	13.7	12.4	14.3	16.3	16.8	11.0	
Hungary	CJ	CTS				14.2	19.0	21.5	12.6	18.7	9.3	5.3	12.8	5.7	7.8	8.2	5.0	
Poland	CJ	CTS							16.9	15.5	14.5	10.6	9.7	9.8	10.3	7.0	7.1	
Republic of Moldova	CJ	CTS	6.7	7.6	5.3	5.9	8.2	4.8	8.3	5.0	4.5	6.6	4.9	4.3	2.8	2.1	3.3	
Romania	CJ	CTS									1.2	0.5	1.5	1.6	1.7	1.3	1.3	
Slovakia	CJ	CTS									27.4	25.4	11.3	11.2				
Ukraine	CJ	CTS	6.3	5.5	5.4	4.6	4.5	3.8			3.6	3.0	3.3	4.7	2.8	3.4	4.5	
EUROPE																		
Northern Europe																		
Denmark	CJ	CTS	23.3	31.9	21.6	28.6	21.2	24.1					20.8	27.6	17.9	11.1	31.9	
Estonia	PH	WHO-HFA														3.9		
Finland	CJ	CTS				19.5					17.5	19.6	10.3	15.8	18.8	22.7	19.8	
Iceland	CJ	CTS									0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Ireland	CJ	CTS/National police	27.9	38.1	23.7	7.9	31.6				46.7	30.0	42.3	43.5	23.4	42.0		
Latvia	CJ	CTS	16.1	15.6	13.8	17.3	14.8	13.1	16.4	12.8	8.4	3.5	10.3	3.1	4.3	8.1	4.6	
Lithuania	CJ	CTS	50.2	47.2	33.5	37.6	27.2	22.4	4.2	5.5	2.0	5.0	3.0	3.2	2.6	1.4	2.5	
Norway	PH	WHO-HFA													8.1			
Sweden	CJ	CTS/Eurostat		28.9	19.8				39.3	58.6	48.2	33.9						
United Kingdom (England and Wales)	CJ	Eurostat	9.3	7.2	8.0	6.5	8.1		10.8		7.5	9.4	7.1	8.3	7.1	5.9	6.6	
United Kingdom (Northern Ireland)	CJ	Eurostat									36.4	14.6	24.1	0.0	13.3	3.8	4.5	

Country/territory	Source		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
EUROPE																		
Southern Europe																		
Albania	CJ	CTS							78.8	75.4					61.2	65.9		
Bosnia and Herzegovina	CJ	CTS											25.7	24.7				
Croatia	CJ	CTS									78.3	48.2	47.1	50.0	46.8	38.0	34.7	
Greece	PH	WHO-HFA												34.9				
Italy	CJ	CTS				71.1	71.3	71.2	65.7	65.7	65.9	66.9	66.2	66.7				
Malta	CJ	CTS										57.1	0.0	0.0	50.0	83.3	0.0	
Portugal	CJ	CTS									53.0	50.0	50.4	51.6	28.6	43.5	33.8	
Serbia	CJ	CTS											26.1	32.6	29.0	38.3	33.1	
Slovenia	CJ	CTS									23.8	25.0	55.0	25.0	36.0	18.2	15.4	
Spain	CJ	CTS				19.8	18.1	19.6					15.6	17.9	17.4	16.7	21.8	
The former Yugoslav Republic of Macedonia	CJ	CTS/Ministry of Interior					35.3	47.3				55.4	60.4	54.9	61.9	47.2	36.1	62.5
EUROPE																		
Western Europe																		
Austria	CJ	CTS							31.4	38.5			24.1	29.5				
Belgium	PH	WHO-HFA	37.3									39.5						
France	PH	WHO-HFA													9.6			
Germany	CJ	CTS	58.6	46.6	47.1	41.2	41.2	40.0	38.1	29.4	33.8	30.5	28.6	29.4	26.9	26.1	29.9	26.3
Liechtenstein	CJ	Eurostat											0.0	0.0	0.0	100		
Luxembourg	CJ	Eurostat												11.1	28.6	42.9		
Monaco	CJ	CTS										100	0.0	0.0				
Netherlands	CJ	CTS										29.9	32.3	26.9	28.7	29.5	30.7	
Switzerland	CJ	CTS/Eurostat				86.8	80.9	58.0	54.7	79.1	64.4	72.2						
OCEANIA																		
Australia and New Zealand																		
Australia	CJ	NSO	17.8	31.7	23.4	18.9	18.1	19.9	16.1	13.2	12.3	12.1	8.9	16.4	13.3	11.8	11.5	
New Zealand	CJ	National police	22.5	16.4	19.7	7.5	10.0	13.5	11.8	16.7			14.8	18.4	10.4	13.5		
Solomon Islands	CJ	CTS										0.0	0.0	0.0	0.0	0.0		

9.3. Intentional homicide rate in the most populous city, by country (2000-2010)

Country/territory	City	Source	Year										
			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AFRICA													
Eastern Africa													
Kenya	Nairobi	CTS					7.1	7.0	6.1	4.1	4.0		
Mauritius	Port Louis	CTS						5.4	3.4	5.4	9.4	7.4	
Uganda	Kampala	National police									13.4	15.3	
United Republic of Tanzania	Dar es Salaam	NGO					12.9						
Zambia	Lusaka	National police					8.5	8.1	8.6	10.8	3.1	9.5	8.1
AFRICA													
Middle Africa													
Democratic Republic of the Congo	Kinshasa	UN-PKO											1.6
AFRICA													
Northern Africa													
Algeria	Algiers	CTS						0.8	0.5	0.4	0.5		
Egypt	Cairo	CTS				0.2	0.4	0.3	0.7	0.7	0.7	0.6	
Morocco	Casablanca	CTS				1.0	1.0	1.2	0.8	1.1	1.0	1.4	
Sudan	Khartoum	CTS									5.0		
AFRICA													
Southern Africa													
Botswana	Gaborone	CTS										16.1	
Lesotho	Maseru	CTS								64.1	59.7	61.9	
South Africa	Cape Town	National police		77.0	86.0	60.0	55.0	55.4	61.0	59.9			
AFRICA													
Western Africa													
Ghana	Accra	National police									1.3	1.3	
Liberia	Monrovia	UN-PKO								4.6	6.7	5.7	4.9
Sierra Leone	Freetown	CTS								5.8	8.0		
AMERICAS													
Caribbean													
Bahamas	Nassau	CTS										28.5	
Dominican Republic	Santo Domingo	CTS						37.3	29.7				
Haiti	Port au Prince	UN-PKO								23.8	13.1	24.1	40.1
Jamaica	Kingston	CTS/National police					33.7	50.8	33.1	43.1	29.0	26.8	20.2
Saint Kitts and Nevis	Basseterre	National police					26.6	32.5	25.6	50.6	50.0	97.6	47.4
Trinidad and Tobago	Port of Spain	CTS					28.5	43.3	36.7	31.9	60.7	47.0	
AMERICAS													
Central America													
Belize	Belize City	CTS					54.0	60.3	61.9	65.1	70.5	81.0	106.4
Costa Rica	San Jose	CTS						6.2	6.7				
El Salvador	San Salvador	CTS							88.2			94.6	
Guatemala	Guatemala City	CTS/National police					94.7	102.1	108.0	115.3	109.0	118.3	116.6
Honduras	Tegucigalpa	National police										72.7	
Mexico	Mexico City	CTS					8.0	7.9	7.3	8.0	8.0	8.4	
Nicaragua	Managua	CTS						11.7	14.1				
Panama	Panama City	CTS					13.1	15.8	15.0	18.1	27.0	34.6	
AMERICAS													
Northern America													
Canada	Toronto	CTS				1.7	1.7	1.9	1.8	1.9	1.8	1.5	
United States of America	New York	CTS				7.2	6.8	6.5	7.1	5.9	6.3	5.6	
AMERICAS													
South America													
Argentina	Buenos Aires	CTS						4.3	3.8	3.9			
Bolivia (Plurinational State of)	La Paz	CTS						5.5	5.2				
Brazil	Sao Paolo	National police					20.8	16.8	13.9	11.6	10.5	10.8	
Colombia	Bogota	National police					22.3	23.2	18.8	18.2	17.8	17.4	17.1
Ecuador	Quito	CTS						11.4	13.8				
Paraguay	Asuncion	CTS						13.1	10.6				
Peru	Lima	NSO					3.9						
Uruguay	Montevideo	Ministry of Interior								6.5			
Venezuela (Bolivarian Republic of)	Caracas	NGO	113.0	92.0	118.0	119.0	90.0	88.0	107.0	130.5	127.0	122.0	

Country/territory	City	Source	Year										
			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASIA													
Central Asia													
Kazakhstan	Almaty	CTS						11.5	10.9	8.7	11.3		
Kyrgyzstan	Bishkek	CTS				9.4	9.9	15.3	12.2	11.0	10.5		
Tajikistan	Dushanbe	CTS					8.2	6.0	6.0	5.0	3.4	3.7	
Turkmenistan	Ashkhabad	CTS						3.6	3.5				
ASIA													
Eastern Asia													
Japan	Tokyo	CTS						0.4	0.4	0.4	0.6	0.4	
Mongolia	Ulan Bator	CTS				16.8	15.5	16.3	15.7	14.8	11.5	10.2	
Republic of Korea	Seoul	CTS										2.4	
ASIA													
South-Eastern Asia													
Indonesia	Jakarta	NGO					0.7						
Malaysia	Kuala Lampur	CTS						3.0	4.4				
Myanmar	Yangon	NSO							2.9				
Philippines	Quezon City	CTS					1.2	3.0	2.0	1.9	2.0	5.3	
Thailand	Bangkok	CTS						5.5	5.8	5.0	4.5	4.0	
Timor-Leste	Dili	UN-PKO											11.3
ASIA													
Southern Asia													
Bangladesh	Dhaka	CTS						3.6	5.3				
India	Mumbai	CTS					1.5	1.3	1.5	1.4	1.3	1.3	
Maldives	Male	CTS								6.7	5.0		
Nepal	Kathmandu	CTS						19.2	18.5				
Sri Lanka	Colombo	National police							2.6	2.2	2.2	1.2	
ASIA													
Western Asia													
Armenia	Yerevan	CTS						0.6	0.8	0.9	1.2	0.9	
Azerbaijan	Baku	CTS						3.5	3.5	3.3	3.3		
Cyprus	Nicosia	CTS					1.3	1.0	2.6	1.0	1.0	1.3	
Georgia	Tbilisi	CTS						13.1	7.8	8.2	4.9	5.0	3.4
Israel	Tel Aviv	CTS				4.6	4.8	6.1	3.8	4.3	4.6		
Jordan	Amman	CTS						1.5	1.8				
Kuwait	Kuwait City	CTS					0.3	1.0	1.1	1.3	1.2	1.2	
Occupied Palestinian Territory	Hebron	CTS						3.2					
Oman	Muscat	CTS								0.6	0.6		
Qatar	Doha	CTS								1.3	1.1		
Syrian Arab Republic	Aleppo	CTS								2.9	2.5		
Turkey	Istanbul	CTS				6.7	6.8	7.3	6.7	5.2	4.7		
United Arab Emirates	Dubai	CTS						1.9	1.5				
EUROPE													
Eastern Europe													
Belarus	Minsk	CTS					8.7	10.1	10.3	5.8	6.6	5.7	
Bulgaria	Sofia	CTS				3.8	3.0	3.1	2.2	1.9	2.2	1.8	
Czech Republic	Prague	CTS				3.9	4.1	3.1	3.3	3.3	2.6	2.7	
Hungary	Budapest	Eurostat/CTS				2.3	1.9	1.8	1.8	1.0	1.5	2.1	
Poland	Warsaw	Eurostat/CTS				2.9	2.1	2.2	2.1	2.2	1.5	1.9	
Republic of Moldova	Chishinau	CTS					9.4	7.3	7.2	6.5	4.6	5.5	5.3
Romania	Bucharest	Eurostat/CTS				1.3	1.2	1.4	1.3	1.1	0.9	0.9	
Russian Federation	Moscow	CTS					8.8	7.4	7.4	6.0	6.0	4.6	
Slovakia	Bratislava	CTS				4.0	4.2	2.6	3.5	3.8	2.1	2.1	
Ukraine	Kiev	CTS					5.0	4.4	4.4	3.4	3.4	4.2	
EUROPE													
Northern Europe													
Denmark	Copenhagen	Eurostat				1.6	1.2	3.2	1.8	1.4	1.6		
Estonia	Tallinn	Eurostat/CTS				10.6	8.6	10.1	7.3	8.8	6.0	7.3	
Finland	Helsinki	CTS					3.9	2.3	2.5	1.8	2.8	1.2	
Iceland	Reykjavik	CTS						1.0	0.0	1.0	0.0	0.5	
Ireland	Dublin	Eurostat				2.4	1.8	2.8	2.7	2.5	2.1		
Latvia	Riga	Eurostat				12.9	10.5	5.2	7.6	5.4	4.8	5.4	

Country/territory	City	Source	Year									
			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Lithuania	Vilnius	Eurostat/CTS				9.8	8.5	8.5	6.9	7.4	10.6	5.4	
Norway	Oslo	CTS				2.0	1.4	1.6	1.6	1.4	2.1	1.2	
United Kingdom (England and Wales)	London	CTS				2.9	2.6	2.4	2.2	2.2	2.1	1.6	
United Kingdom (Northern Ireland)	Belfast	CTS				2.9	2.2	4.9	4.1	2.2	1.5	2.6	
United Kingdom (Scotland)	Glasgow	CTS					4.0	3.1	4.5	4.1	4.1	3.3	
EUROPE													
Southern Europe													
Albania	Tirana	CTS							1.1	1.6	2.8		
Bosnia and Herzegovina	Sarajevo	CTS						1.8	2.0				
Croatia	Zagreb	CTS				1.9	0.9	2.1	1.4	0.8	1.9	0.6	
Greece	Athens	Eurostat				0.9	0.9	1.1	1.0	0.9	1.3		
Italy	Rome	Eurostat				1.1	1.2	1.4	1.2	1.3	1.1		
Montenegro	Podgorica	CTS				5.0	3.9	6.7	5.5	0.5	3.5		
Portugal	Lisbon	Eurostat/CTS				0.6	0.5	0.7	0.8	0.6	0.5	0.2	
Serbia	Belgrade	CTS						2.9	2.8	2.4	2.2	1.4	
Slovenia	Ljubljana	CTS				1.1	2.6	1.5	0.4	1.1	0.0	0.4	
Spain	Madrid	CTS						1.1	1.2	1.1	1.2	1.0	
The former Yugoslav Republic of Macedonia	Skopje	Ministry of Interior					3.4	2.8	4.0	4.0	2.3	2.3	2.3
EUROPE													
Western Europe													
Austria	Vienna	CTS				1.1	0.9	1.3	1.1	1.2	0.9	1.1	
Belgium	Brussels	CTS	3.4	4.2	6.9	4.8	3.9	3.1	3.6	1.9	3.9	3.0	
France	Paris	CTS				2.6	1.0	1.6	1.3	1.5	1.6		
Germany	Berlin	CTS	2.2	2.3	2.0	2.0	2.0	1.8	1.5	1.2	1.2	1.8	1.1
Netherlands	Amsterdam	Eurostat/NSO				5.3	3.7	4.3	2.3	4.4	2.7	4.4	
OCEANIA													
Australia and New Zealand													
Australia	Sydney	NSO				1.4	1.1	1.2	1.4	1.1			
New Zealand	Auckland	CTS						1.3	1.6	0.8	1.3		
OCEANIA													
Melanesia													
Solomon Islands	Honiara City	CTS					3.5	5.2	20.8	33.0	19.1		

9.4. Percentage of male, female and undetermined intentional homicides (latest available year)

Country/territory	Source		Year	Males	Females	Undetermined
AFRICA						
Eastern Africa						
Burundi	PH	WHO †	2008	75.9%	24.1%	0.0%
Comoros	PH	WHO †	2008	67.9%	32.1%	0.0%
Djibouti	PH	WHO †	2008	90.9%	9.1%	0.0%
Eritrea	PH	WHO †	2008	82.4%	17.6%	0.0%
Ethiopia	PH	WHO †	2008	81.8%	18.2%	0.0%
Kenya	PH	WHO †	2008	91.9%	8.1%	0.0%
Madagascar	PH	WHO †	2008	80.6%	19.4%	0.0%
Malawi	PH	WHO †	2008	87.8%	12.2%	0.0%
Mauritius	CJ	NSO	2009	66.7%	33.3%	0.0%
Mozambique	PH	WHO †	2008	85.8%	14.2%	0.0%
Rwanda	PH	WHO †	2008	81.1%	18.9%	0.0%
Seychelles	PH	WHO	2008	53.6%	46.4%	0.0%
Somalia	PH	WHO †	2008	52.5%	47.5%	0.0%
Uganda	CJ	National police	2009	94.0%	6.0%	0.0%
United Republic of Tanzania	PH	WHO †	2008	93.0%	7.0%	0.0%
Zambia	CJ	National police	2010	77.8%	22.2%	0.0%
Zimbabwe	PH	WHO †	2008	84.8%	15.2%	0.0%
AFRICA						
Middle Africa						
Angola	PH	WHO †	2008	79.6%	20.4%	0.0%
Cameroon	PH	WHO †	2008	64.7%	35.3%	0.0%
Central African Republic	PH	WHO †	2008	75.0%	25.0%	0.0%
Chad	PH	WHO †	2008	74.8%	25.2%	0.0%
Congo	PH	WHO †	2008	78.1%	21.9%	0.0%
Democratic Republic of the Congo	PH	WHO †	2008	82.0%	18.0%	0.0%
Equatorial Guinea	PH	WHO †	2008	74.5%	25.5%	0.0%
Gabon	PH	WHO †	2008	74.6%	25.4%	0.0%
Sao Tome and Principe	PH	WHO †	2008	81.9%	18.1%	0.0%
AFRICA						
Northern Africa						
Algeria	PH	WHO †	2008	72.3%	27.7%	0.0%
Egypt	CJ	CTS	2009	87.7%	12.3%	0.0%
Libyan Arab Jamahiriya	PH	WHO †	2008	92.0%	8.0%	0.0%
Morocco	PH	WHO †	2008	80.5%	19.5%	0.0%
Sudan	PH	WHO †	2008	65.8%	34.2%	0.0%
Tunisia	PH	WHO †	2008	88.1%	11.9%	0.0%
AFRICA						
Southern Africa						
Botswana	PH	WHO †	2008	75.6%	24.4%	0.0%
Lesotho	PH	WHO †	2008	78.0%	22.0%	0.0%
Namibia	PH	WHO †	2008	86.8%	13.2%	0.0%
South Africa	PH	WHO	2008	81.5%	18.5%	0.0%
Swaziland	PH	WHO †	2008	83.5%	16.5%	0.0%
AFRICA						
Western Africa						
Benin	PH	WHO †	2008	83.4%	16.6%	0.0%
Burkina Faso	PH	WHO †	2008	90.8%	9.2%	0.0%
Cape Verde	PH	WHO †	2008	81.6%	18.4%	0.0%
Cote d'Ivoire	PH	WHO †	2008	84.8%	15.2%	0.0%
Gambia	PH	WHO †	2008	70.4%	29.6%	0.0%
Ghana	PH	WHO †	2008	81.5%	18.5%	0.0%
Guinea	PH	WHO †	2008	79.1%	20.9%	0.0%

Country/territory	Source		Year	Males	Females	Undetermined
Guinea-Bissau	PH	WHO †	2008	77.6%	22.4%	0.0%
Liberia	PH	WHO †	2008	83.6%	16.4%	0.0%
Mali	PH	WHO †	2008	91.4%	8.6%	0.0%
Mauritania	PH	WHO †	2008	61.4%	38.6%	0.0%
Niger	PH	WHO †	2008	83.3%	16.7%	0.0%
Nigeria	PH	WHO †	2008	75.4%	24.6%	0.0%
Senegal	PH	WHO †	2008	72.3%	27.7%	0.0%
Sierra Leone	PH	WHO †	2008	78.4%	21.6%	0.0%
Togo	PH	WHO †	2008	75.7%	24.3%	0.0%
AMERICAS Caribbean						
Antigua and Barbuda	PH	WHO	2008	66.7%	33.3%	0.0%
Bahamas	CJ	CTS	2009	88.5%	11.5%	0.0%
Barbados	CJ	National police	2010	67.7%	32.3%	0.0%
Cuba	PH	WHO	2008	76.7%	23.3%	0.0%
Dominica	PH	WHO	2008	68.7%	31.3%	0.0%
Dominican Republic	PH	WHO	2008	87.5%	12.5%	0.0%
Grenada	CJ	CTA	2010	83.3%	16.7%	0.0%
Haiti	PH	WHO	2008	85.5%	14.5%	0.0%
Jamaica	CJ	National police	2010	89.9%	10.1%	0.0%
Saint Kitts and Nevis	CJ	National police	2010	85.0%	15.0%	0.0%
Saint Lucia	PH	WHO	2008	93.3%	6.7%	0.0%
Saint Vincent and the Grenadines	CJ	CTS	2009	85.0%	15.0%	0.0%
Trinidad and Tobago	CJ	CTS	2009	92.5%	7.5%	0.0%
AMERICAS Central America						
Belize	CJ	CTS	2010	86.9%	12.3%	0.8%
Costa Rica	PH	WHO	2008	88.2%	11.8%	0.0%
El Salvador	PH	WHO	2008	87.4%	12.6%	0.0%
Guatemala	CJ	CTS	2009	88.9%	11.1%	0.0%
Honduras	CJ	National police	2009	93.1%	6.9%	0.0%
Mexico	CJ	NSO	2008	89.8%	10.2%	0.0%
Nicaragua	PH	WHO	2008	92.1%	7.9%	0.0%
Panama	CJ	CTS	2009	91.3%	8.7%	0.0%
AMERICAS North America						
Canada	CJ	CTS	2009	73.8%	26.2%	0.0%
United States of America	CJ	National police	2010	77.4%	22.5%	0.2%
AMERICAS South America						
Argentina	CJ	Ministry of Justice	2009	77.9%	15.3%	6.8%
Bolivia (Plurinational State of)	PH	WHO †	2008	83.4%	16.6%	0.0%
Brazil	PH	WHO	2008	90.8%	9.2%	0.0%
Chile	PH	WHO	2008	86.5%	13.5%	0.0%
Colombia	CJ	National police	2009	92.0%	8.0%	0.0%
Ecuador	PH	WHO	2008	91.8%	8.2%	0.0%
Guyana	CJ	CTS	2009	76.1%	23.9%	0.0%
Paraguay	PH	WHO	2008	93.6%	6.4%	0.0%
Peru	PH	WHO	2008	77.3%	22.7%	0.0%
Suriname	PH	WHO	2008	76.9%	23.1%	0.0%
Uruguay	PH	WHO	2008	69.9%	30.1%	0.0%
Venezuela (Bolivarian Republic of)	PH	WHO	2008	95.0%	5.0%	0.0%

Country/territory	Source		Year	Males	Females	Undetermined
ASIA						
Central Asia						
Kazakhstan	PH	WHO	2008	74.8%	25.2%	0.0%
Kyrgyzstan	PH	WHO	2008	79.4%	20.6%	0.0%
Tajikistan	CJ	UNECE	2008	57.6%	42.4%	0.0%
Turkmenistan	PH	WHO	2008	85.9%	14.1%	0.0%
Uzbekistan	PH	WHO	2008	78.1%	21.9%	0.0%
ASIA						
Eastern Asia						
China	PH	WHO	2008	69.9%	30.1%	0.0%
Democratic People's Republic of Korea	PH	WHO †	2008	87.6%	12.4%	0.0%
Japan	CJ	CTS	2009	50.0%	50.0%	0.0%
Mongolia	CJ	CTS	2009	72.7%	27.3%	0.0%
Republic of Korea	PH	WHO	2008	49.0%	51.0%	0.0%
ASIA						
South-Eastern Asia						
Brunei Darussalam	PH	WHO	2008	48.9%	51.1%	0.0%
Cambodia	PH	WHO †	2008	90.8%	9.2%	0.0%
Indonesia	PH	WHO †	2008	85.8%	14.2%	0.0%
Lao People's Democratic Republic	PH	WHO †	2008	67.6%	32.4%	0.0%
Malaysia	PH	WHO	2008	76.8%	23.2%	0.0%
Myanmar	PH	WHO †	2008	84.4%	15.6%	0.0%
ASIA						
South-Eastern Asia						
Philippines	PH	WHO	2008	91.8%	8.2%	0.0%
Singapore	PH	WHO	2008	65.4%	34.6%	0.0%
Thailand	PH	WHO	2008	88.3%	11.7%	0.0%
Timor-Leste	PH	WHO †	2008	91.8%	8.2%	0.0%
Viet Nam	PH	WHO	2008	82.4%	17.6%	0.0%
ASIA						
Southern Asia						
Afghanistan	PH	WHO †	2008	81.3%	18.7%	0.0%
Bangladesh	PH	WHO †	2008	74.8%	25.2%	0.0%
Bhutan	PH	WHO †	2008	65.6%	34.4%	0.0%
India	CJ	CTS	2009	73.7%	26.3%	0.0%
Iran (Islamic Republic of)	PH	WHO	2008	79.5%	20.5%	0.0%
Maldives	PH	WHO	2008	99.3%	0.7%	0.0%
Nepal	PH	WHO †	2008	87.3%	12.7%	0.0%
Pakistan	PH	WHO †	2008	60.5%	39.5%	0.0%
Sri Lanka	PH	WHO	2008	96.3%	3.7%	0.0%
ASIA						
Western Asia						
Armenia	CJ	CTS	2009	69.9%	30.1%	0.0%
Azerbaijan	CJ	UNECE	2008	77.5%	22.5%	0.0%
Bahrain *	PH	WHO	2008	-	-	-
Cyprus	CJ	CTS	2009	63.2%	36.8%	0.0%
Georgia	CJ	CTS	2010	84.0%	15.0%	1.1%
Iraq	PH	WHO †	2008	80.3%	19.7%	0.0%
Israel	PH	WHO	2008	81.2%	18.8%	0.0%
Jordan	PH	WHO	2008	82.3%	17.7%	0.0%
Kuwait	PH	WHO	2008	80.4%	19.6%	0.0%
Lebanon	PH	WHO †	2008	84.0%	16.0%	0.0%
Oman	PH	WHO †	2008	73.9%	26.1%	0.0%
Qatar	PH	WHO	2008	75.3%	24.7%	0.0%
Saudi Arabia	PH	WHO †	2008	71.5%	28.5%	0.0%

Country/territory	Source		Year	Males	Females	Undetermined
Syrian Arab Republic	PH	WHO	2008	87.6%	12.4%	0.0%
Turkey	CJ	UNECE	2008	80.9%	19.1%	0.0%
United Arab Emirates	PH	WHO †	2008	81.3%	18.7%	0.0%
Yemen	PH	WHO †	2008	85.1%	14.9%	0.0%
EUROPE						
Eastern Europe						
Belarus	CJ	CTS	2009	59.3%	40.7%	0.0%
Bulgaria	CJ	UNECE	2008	74.7%	25.3%	0.0%
Czech Republic	CJ	CTS	2009	60.9%	39.1%	0.0%
Hungary	CJ	CTS	2009	54.7%	45.3%	0.0%
Poland	PH	WHO	2008	72.9%	27.1%	0.0%
Republic of Moldova	CJ	PM	2010	67.9%	32.1%	0.0%
Romania	CJ	UNECE	2008	60.6%	39.4%	0.0%
Russian Federation	PH	WHO	2008	74.3%	25.7%	0.0%
Slovakia	CJ	UNECE	2008	66.0%	25.5%	8.5%
Ukraine	CJ	UNECE	2008	74.9%	25.1%	0.0%
EUROPE						
Northern Europe						
Denmark	PH	WHO	2008	65.5%	34.5%	0.0%
Estonia	PH	WHO	2008	78.3%	21.7%	0.0%
Finland	CJ	CTS	2009	71.1%	28.9%	0.0%
Iceland *	CJ	UNECE	2008	-	-	-
Ireland	CJ	UNECE	2008	81.8%	18.2%	0.0%
Latvia	PH	WHO	2008	68.2%	31.8%	0.0%
Lithuania	CJ	CTS	2009	74.6%	25.4%	0.0%
Norway	CJ	CTS	2009	58.6%	41.4%	0.0%
Sweden	PH	WHO	2008	65.5%	34.5%	0.0%
United Kingdom	CJ	Eurostat	2009	66.1%	33.9%	0.0%
EUROPE						
Southern Europe						
Albania	PH	WHO	2008	79.6%	20.4%	0.0%
Andorra	PH	WHO †	2008	73.7%	26.3%	0.0%
Bosnia and Herzegovina	CJ	CTS	2009	78.9%	21.1%	0.0%
Croatia	CJ	CTS	2009	51.0%	49.0%	0.0%
Greece	CJ	CTS	2009	70.3%	5.0%	24.8%
Italy	CJ	National police	2008	75.9%	23.9%	0.2%
Malta	CJ	CTS	2009	25.0%	75.0%	0.0%
Montenegro	PH	WHO	2008	70.3%	29.7%	0.0%
Portugal	PH	WHO	2008	70.7%	29.3%	0.0%
San Marino *	PH	WHO	2008	-	-	-
Serbia	CJ	UNECE	2009	71.2%	28.8%	0.0%
Slovenia	CJ	CTS	2009	46.2%	53.8%	0.0%
Spain	CJ	CTS	2009	66.9%	33.1%	0.0%
The former Yugoslav Republic of Macedonia	CJ	National police	2010	65.9%	34.1%	0.0%
EUROPE						
Western Europe						
Austria	CJ	CTS	2009	63.8%	36.2%	0.0%
Belgium	PH	WHO	2008	58.5%	41.5%	0.0%
France	PH	WHO	2008	65.7%	34.3%	0.0%
Germany	CJ	CTS	2009	50.4%	49.6%	0.0%
Luxembourg	PH	WHO	2008	71.5%	28.5%	0.0%
Monaco	PH	WHO †	2008	68.2%	31.9%	0.0%
Netherlands	CJ	National police	2009	70.4%	26.4%	3.1%
Switzerland	PH	WHO	2008	50.9%	49.1%	0.0%

Country/territory	Source		Year	Males	Females	Undetermined
OCEANIA Australia and New Zealand						
Australia	CJ	CTS	2009	72.1%	27.5%	0.4%
New Zealand	PH	WHO	2008	59.1%	40.9%	0.0%
OCEANIA Melanesia						
Fiji	PH	WHO	2008	85.8%	14.2%	0.0%
Papua New Guinea	PH	WHO †	2008	85.9%	14.1%	0.0%
Solomon Islands	PH	WHO †	2008	76.2%	23.8%	0.0%
Vanuatu	PH	WHO †	2008	78.3%	21.7%	0.0%
OCEANIA Micronesia						
Kiribati	PH	WHO	2008	100.0%	0.0%	0.0%
Marshall Islands	PH	WHO †	2008	84.2%	15.8%	0.0%
Micronesia (Federated States of)	PH	WHO †	2008	73.6%	26.4%	0.0%
Nauru	PH	WHO	2008	19.6%	80.4%	0.0%
Palau	PH	WHO †	2008	87.3%	12.7%	0.0%
OCEANIA Polynesia						
Cook Islands	PH	WHO	2008	76.3%	23.7%	0.0%
Niue	PH	WHO	2008	68.0%	32.0%	0.0%
Samoa	PH	WHO †	2008	89.7%	10.3%	0.0%
Tonga	PH	WHO	2008	68.9%	31.1%	0.0%
Tuvalu	PH	WHO †	2008	74.3%	25.7%	0.0%

* no homicide was recorded in the respective year

† Country information on causes of death not available for most causes. Estimates based on cause of death modelling and death registration data from other countries in the region. Further country-level information and data on specific causes was also used