

METHODOLOGICAL ANNEX

This methodological annex provides information on data sources and selection criteria for the compilation of UNODC Homicide Statistics. The dataset was compiled to provide users with a reference for the largest number of countries and the longest time series on homicide data possible. Overall, the UNODC Homicide Statistics dataset presents data for 207 countries and territories.

Sources

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 purpose: “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.

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. 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 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 UN-CTS data were not available.

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 WHO¹, both at central level and through some of its regional offices.² 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.

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 figures³.

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

¹ WHO, Causes of death 2008 dataset, 2011

² PAHO, Regional Core Health Data Initiative dataset (last accessed in June 2011) and WHO-Europe, European Health for All Database (last accessed in June 2011)

³ In some instances, mortality rates included in the UNODC Homicide Statistics dataset may slightly differ from country data due to different population data used at the denominator

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 and data series

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 and of trend data. 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.

	<i>Criminal Justice</i>	<i>Public health</i>	<i>Total number of countries</i>
<i>Homicide count (2010 or latest year)</i>	143	64	207
<i>Homicide time series (1995-2010)</i>	82	16	98
<i>Homicide victims by sex (2010 or latest year)</i>	57	136	193
<i>Homicides by firearm (1995-2010)</i>	99	17	116
<i>Homicides in most populous city (2000-2010)</i>	112	0	112

Homicide level for 2010, or latest available year, both in terms of counts and rates (207 countries)

For homicide counts, the degree of adherence to the standard definition of homicide and the resulting 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 especially the case for many countries in Western, Eastern and Middle Africa, where criminal justice data are less available and present issues of undercoverage.⁵

On the basis of these selection criteria, available data sources have been considered for each country in relation to 2010 or the latest available year. Criminal justice data source has been selected in 143 cases, while public health data have been selected for 64 countries, in particular, for the majority of the countries in Africa. In 57 of the

⁴ When 2010 data were not available for a given country, data for the most recent year were used.

⁵ Cf. Marshall, Ineke H. and Block, Carolyn R., Maximizing the Availability of Cross-National Data on Homicide, Homicide Studies (2004), and K.Bhalla, J. E. Harrison, S.Shahraza and L.A. Fingerhut on behalf of the Global Burden of Disease Injury Expert Group, Availability and quality of cause-of-death data for estimating the global burden of injuries, Bulletin of the World Health Organization (2010)

64 countries where public health data have been used, the source is WHO Causes of death dataset; in the large 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.

Homicide data series to be used for trends analyses (98 countries)

For time trends analysis the selection of the data series was made on the basis of length (number of years covered), consistency across time (no inexplicable sudden changes) and inclusion of recent data.

On the basis of these selection criteria and subject to data availability, a long and continuous time series on homicide counts and rates has been identified at country level. 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 countries⁶. Suitable time series are missing for most countries of Africa.

Homicides by sex (193 countries)

For the sex distribution of homicide victims, consistency has been ensured, to the extent possible, with data sources selected for homicide counts. In 57 countries the source is consistent with the criminal justice source selected for homicide counts. In total, data have been included for 193 countries. For the large majority of countries the source is public health (136).

Homicides by firearms (116 countries)

For data on firearms, consistency has been ensured, to the extent possible, with data sources selected for homicide counts. Data on homicides by firearm are compiled from a variety of sources but predominantly criminal justice data.

Homicides in the most populous city (112 countries)

For data for the most populous city, consistency has been ensured, to the extent possible, with data sources selected for homicide counts. Data for the most populous city are compiled predominantly from criminal justice sources.

Calculation of rates per 100,000 population and population data

Data sources used for production of the dataset most commonly provided information in counts (absolute numbers of homicides per year). Where data sources provided information in the form of a rate (per 100,000 population) data

⁶ As an exception to the general rule of not combining data deriving respectively from criminal justice and public health data, time series from the two sources were joined in three countries were combined to lengthen the time series. This was done to provide a longer time series and because the two sources were sufficiently consistent

was converted to count form using, wherever possible, population data supplied by that source. Where no population data was available, conversion to count was carried out using population data from the United Nations Population Division published in *World Population Prospects: 2010 Revision 7*.

Homicide rates per 100,000 population published in the dataset were all calculated from counts using population data for the respective year from *World Population Prospects* according to the formula $\text{rate} = (\text{count}/\text{population}) * 100,000$. This method ensured application of a uniform set of global population data. As a result of the calculation process, rates presented in the dataset may not correspond exactly with those published in the cited source.

Regions and sub-regions

In various sections, this report 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:

AFRICA

- 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.

AMERICAS

- 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.

⁷ United Nations, *World Population Prospects, the 2010 Revision*, 2011

- South America: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela (Bolivarian Republic of).

ASIA

- 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.

EUROPE

- Eastern Europe: Belarus, Bulgaria, Czech Republic, Hungary, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia and Ukraine.
- 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)).
- 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.

OCEANIA

- 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.