



**UNODC**

United Nations Office on Drugs and Crime



# GLOBAL STUDY ON *HOMICIDE* 2023



# GLOBAL STUDY ON **HOMICIDE 2023**



UNITED NATIONS OFFICE ON DRUGS AND CRIME / VIENNA

UNITED NATIONS  
New York, 2023

## Acknowledgements

The *Global Study on Homicide 2023* was prepared by the Research and Trend Analysis Branch, Division for Policy Analysis and Public Affairs, United Nations Office on Drugs and Crime, under the supervision of Jean-Luc Lemahieu, Director of the Division, and Angela Me, Chief of the Research and Trend Analysis Branch.

### General coordination and content overview

Angela Me, David Rausis, Antoine Vella, Sonya Yee

### Research, analysis and drafting

Camelia Abdelgelil, Gabriel Andreuccetti, Adrianna Ewa Collins, Maurice Dunaiski, Andrada-Maria Filip, Martijn Kind, Theodore Leggett, David Rausis, Angharad Smith, Tanya Wyatt, Louisa Victoria Zinke

### Expert contributions

Miranda Forsyth, Muluka-Anne Miti-Drummond, Robert Muggah, Mateus Rennó Santos, Rukmini S.

### Data management and estimate production

Melissa Arango, Laura Astrid Fonseca Hernandez, Natalia Ivanova, Markus Schwabe, Jianwen Wang, Yu Zhang

### Mapping

Coen Bussink, Martijn Kind

### Graphic design and production

Chloé Carpentier, Ivana Lazić, Suzanne Kunnen, Kristina Kuttnig, Maria Moser

### Editing

Jonathan Gibbons

### Administrative support

Andrada-Maria Filip, Iulia Lazar

### Review and comments

The *Global Study on Homicide 2023* benefited from the expertise of and invaluable contributions from UNODC colleagues in other divisions.

The research for this report was made possible thanks to the generous financial contributions of Norway and Sweden.

# PREFACE

Preventing and reducing homicide means sparing hundreds of thousands of lives lost to violence every year. To do that, we must understand the complex and highly diverse range of threats and phenomena that drive and intersect with such lethal violence – from interpersonal dynamics to organized crime and rule of law to climate change, poverty and inequality to demographics, and much more – and how they differ across national and regional contexts.

This *Global Study on Homicide* is an effort to reveal and delve into the facts behind the violence, to try and identify notable trends and to inform policies and solutions.

The Study shows that 2021 was an exceptionally lethal year, with an estimated 458,000 intentional homicides worldwide, averaging 52 killings every hour. The global homicide rate was at 5.8 for every 100,000 persons, a number that sadly reflects little progress in reducing lethal violence worldwide since the launch of the 2030 Agenda for Sustainable Development in 2015.

The biggest share of the victims were killed with firearms, which accounted for 47 per cent of homicides committed with a known mechanism worldwide. That number rises to 75 per cent in the Americas, which has the highest homicide rate in the world, and where organized crime is responsible for at least half of all homicides.

In different parts of the world, organized crime can lead to spikes in homicide, particularly as criminal groups compete for control. Organized crime has also had an impact on homicide rates in Europe. While the regional homicide rate has decreased over the last six years, there are signs of increased lethal violence connected to organized crime in various countries of the continent.

Such organized crime-related killing – and all homicidal violence, in all parts of the world – is far more likely to be committed by, and against, men. Men account for 81 per cent of the victims of intentional homicide globally, and around 90 per cent of the suspects.

Women, on the other hand, are more likely to be killed because of their gender, and more likely to lose their lives to violence at home. Women account for the victims in 54 per cent of killings in the home, and 66 per cent of intimate partner killings.

Many people are also killed because of what they do, including human rights defenders, humanitarian workers,

journalists, and environmental activists. The current global situation, characterized by growing conflicts and rule of law challenges, is fuelling such sociopolitical homicides, which in many cases happen with impunity.

Given the broad and diverse factors driving lethal violence around the world, effective responses to homicide must cover a wide spectrum of context-specific interventions. Some interventions will be designed to reduce gender-based violence against women and girls, others will be geared towards reducing organized crime and gang violence, and others still may focus on firearm laws and regulations, vocational training to at-risk demographics, or mental health interventions. But all responses must share common threads, namely the need to be based on evidence, the need to prioritize prevention and address root causes, and the need to invest significantly.

Investing in homicide prevention and responses is of particular priority in Africa, which this Global Study projects to be the most at-risk region over the coming decades, in large part due to its younger population, economic inequality levels, climate vulnerability and weaker response capabilities.

This study also highlights the significant limitations in the information available across regions, and the need to invest in better data collection. It is highly important to understand the types of homicide in any given context, whether family-related, gang-related, or any of the other identified typologies, yet more than a third of all detected homicides are classified as “unknown”. Similarly, four out of every ten killings of women and girls do not have information on the victim-perpetrator relationship, despite the prevalence of intimate partner killings against women and girls.

The Sustainable Development Goals set a target that is both ambitious and urgent: to significantly reduce all forms of violence and related deaths by 2030. I hope that this Global Study will inform responses and galvanize the level of action that is needed to be on track to meet this target.



GHADA WALY

Executive Director  
United Nations on Drugs and Crime



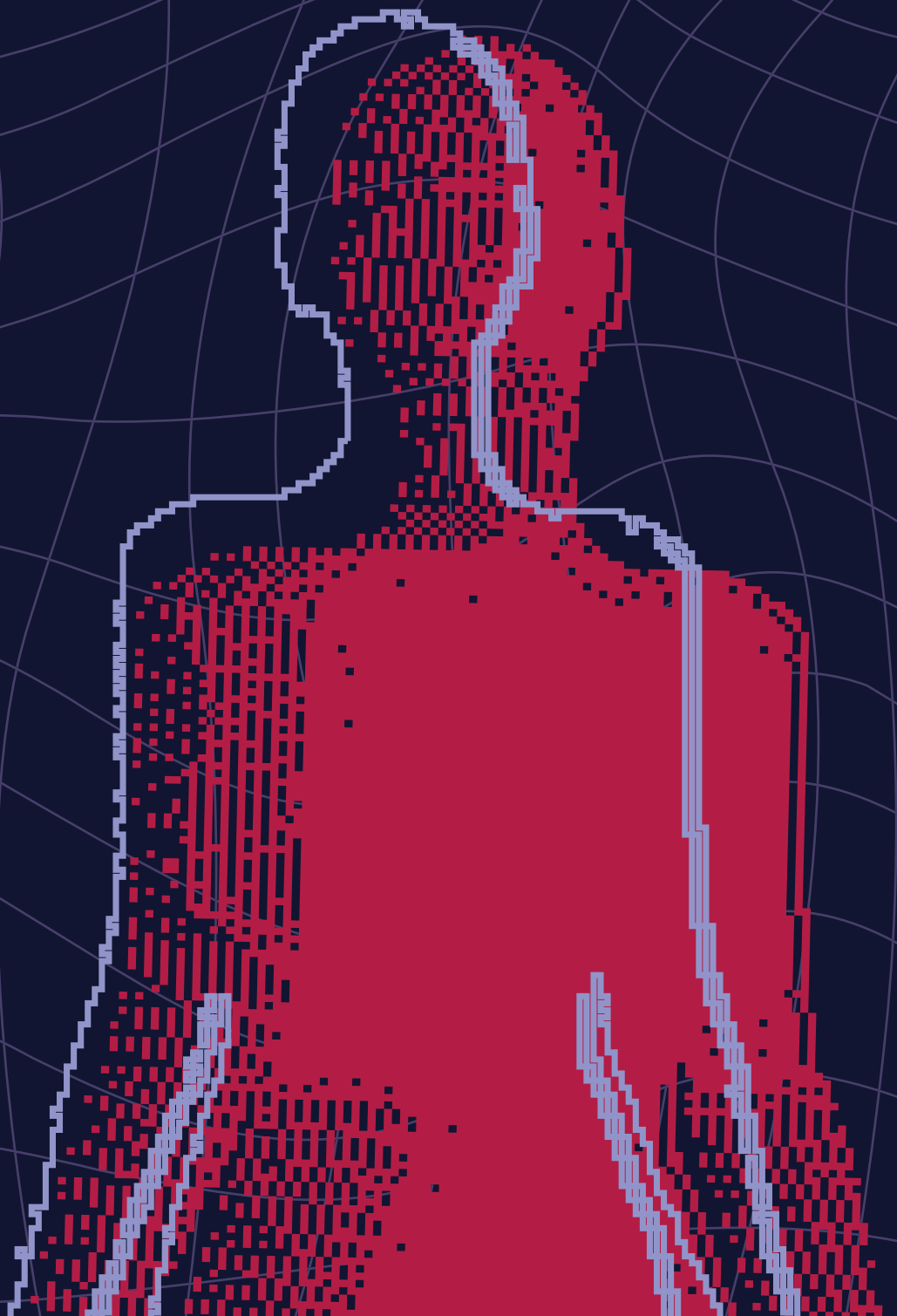
# CONTENTS

<b>PREFACE</b>	<b>3</b>
<b>SPECIAL POINTS OF INTEREST</b>	<b>7</b>
<b>CHAPTER 1 – EXECUTIVE SUMMARY</b>	<b>27</b>
About the study	28
2021 and 2022: a spike and differing regional developments	28
Trends over time – by region	29
Homicide deaths outnumber conflict-related and terrorist killings	30
Organized crime and trafficking can rapidly drive homicides up – or down	31
Firearms linked to increases in homicide	32
Gender dimensions of homicide	33
Interpersonal violence outside the family	34
“Defenders” at risk	34
Warning signs: SDG target to halve violence will not be met if trends continue	35
Criminal justice responses to homicide	35
<b>CHAPTER 2 – HOMICIDE TRENDS AND PATTERNS</b>	<b>39</b>
Introduction to the concept of intentional homicide	40
Homicide is a bigger killer than armed conflict and terrorism combined	41
Extent of intentional homicide in absolute numbers	43
Extent of homicide by rate	45
Global homicide trend	48
Regional homicide trends	50
Subregional homicide trends	52
Demographics of homicide victims	56
How the COVID-19 pandemic has affected homicide trends	60
References	67

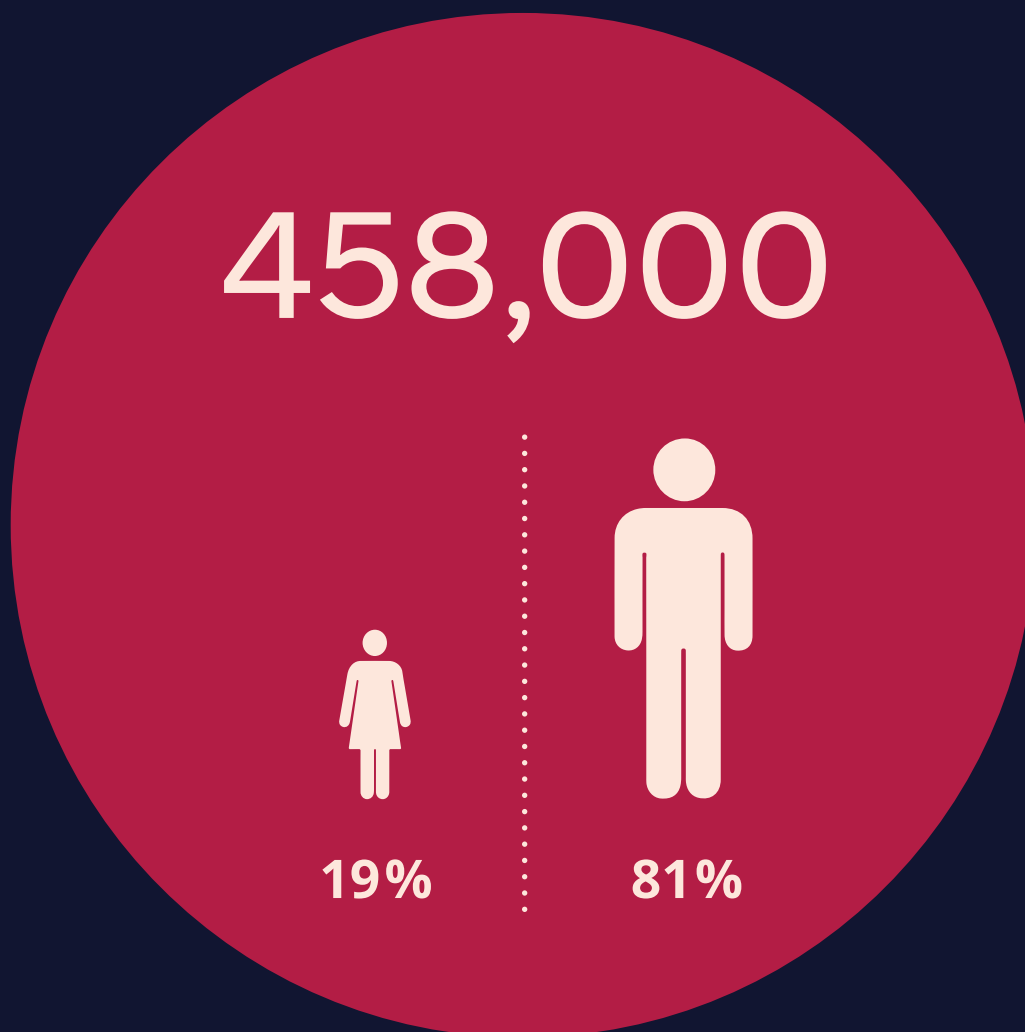
<b>CHAPTER 3 – MEGATRENDS AND HOMICIDE</b>	<b>71</b>
Background	72
Overview	73
Projections of homicide to 2100	77
Appendix	82
References	89
<b>CHAPTER 4 – UNDERSTANDING HOMICIDE</b>	<b>93</b>
Homicide typologies explained	94
Interpersonal homicide	101
Crime-related homicide	107
Sociopolitical homicide	121
Mechanisms of homicide	130
References	141
<b>CHAPTER 5 – CRIMINAL JUSTICE SYSTEM RESPONSE</b>	<b>147</b>
Introduction	148
Suspects brought into formal contact with the police for intentional homicide	149
Homicide prosecutions	152
Homicide convictions	153
Prisoners held for intentional homicide	154
Criminal justice personnel	155
References	159



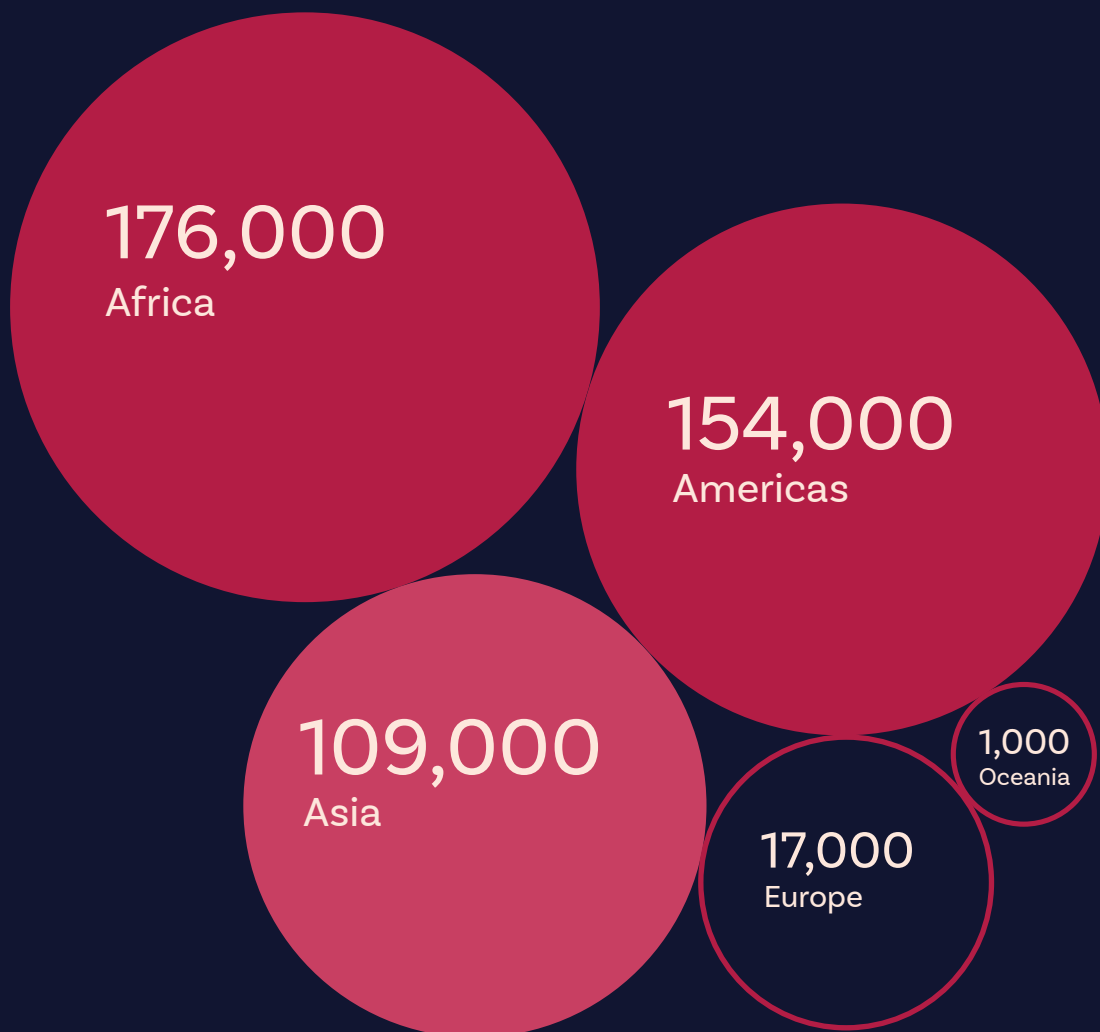
**SPECIAL POINTS  
OF INTEREST**



## Number of homicide victims globally in 2021



## Number of homicide victims by region in 2021

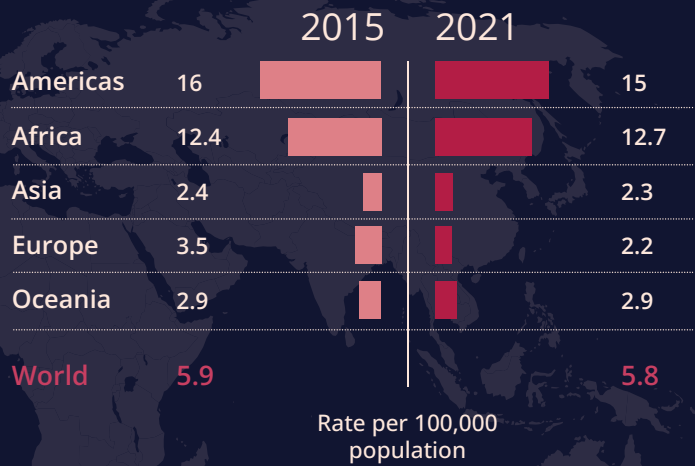


# KEY FIGURES AT A GLANCE

## Global homicide rate in 2021



## Global and regional homicide rates in 2015 and in 2021



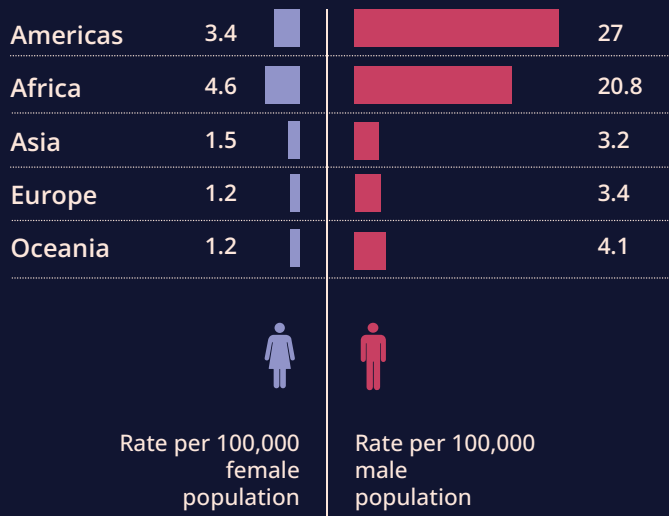
## Global and regional homicide rates by sex in 2021

**9.3**

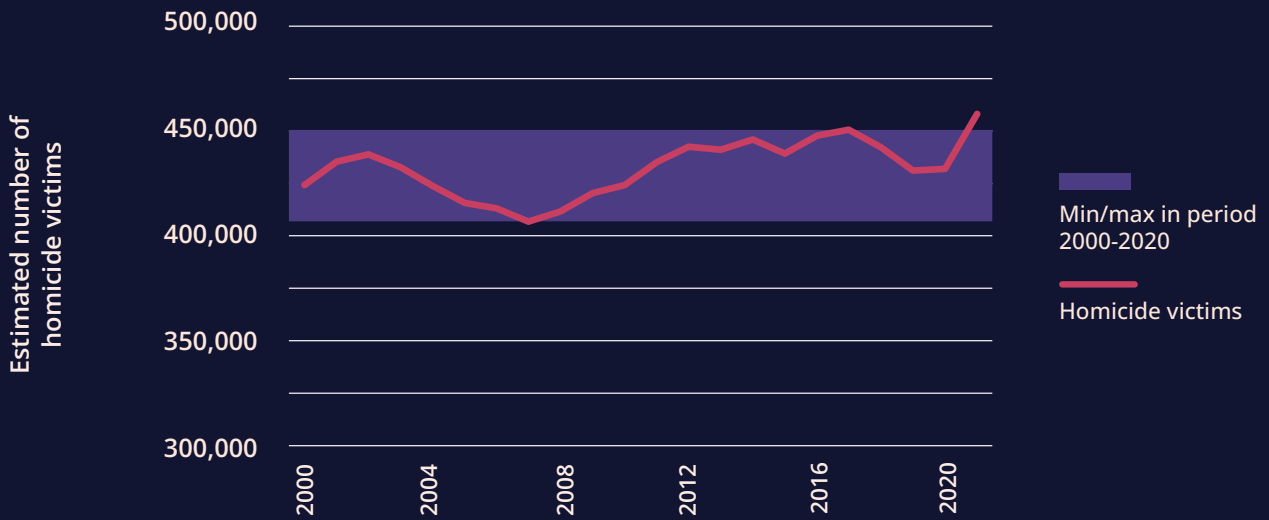
Rate per 100,000 male population

**2.2**

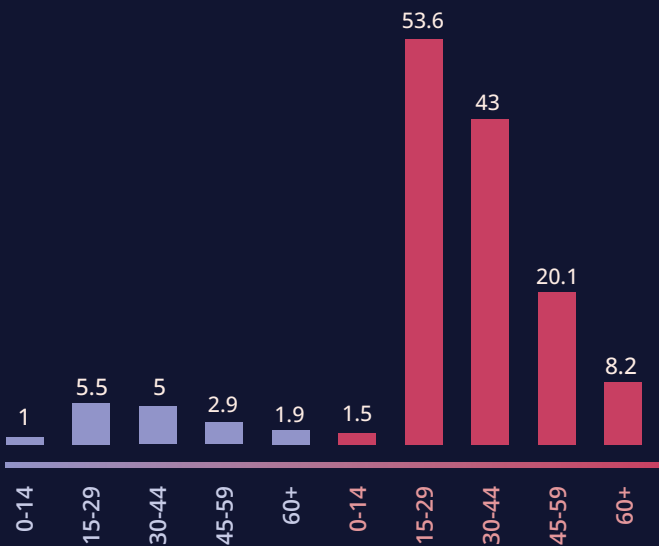
Rate per 100,000 female population



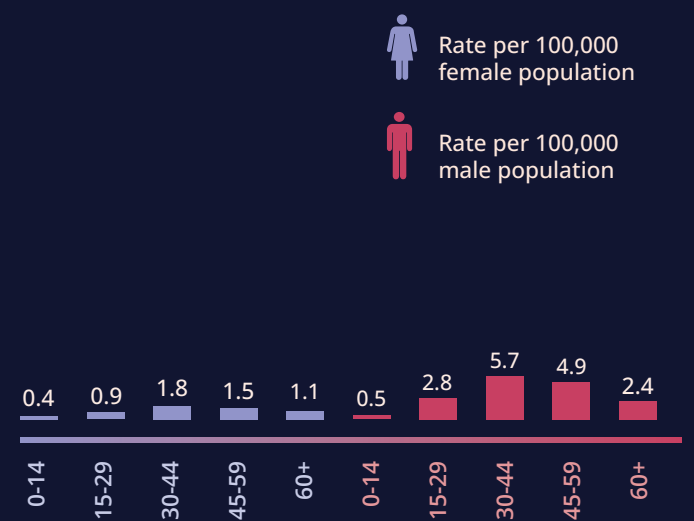
### Global trend in total number of homicide victims 2000–2021



### Homicide rate in the Americas by sex and age group in 2021



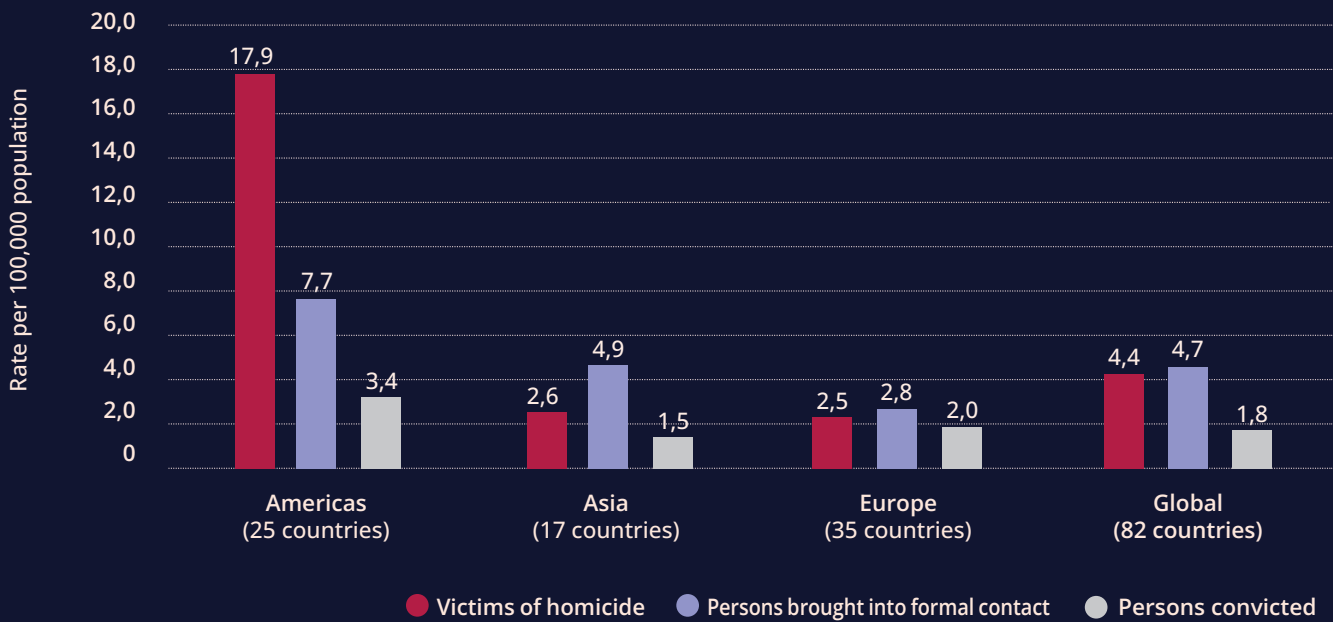
### Homicide rate in Europe by sex and age group in 2021



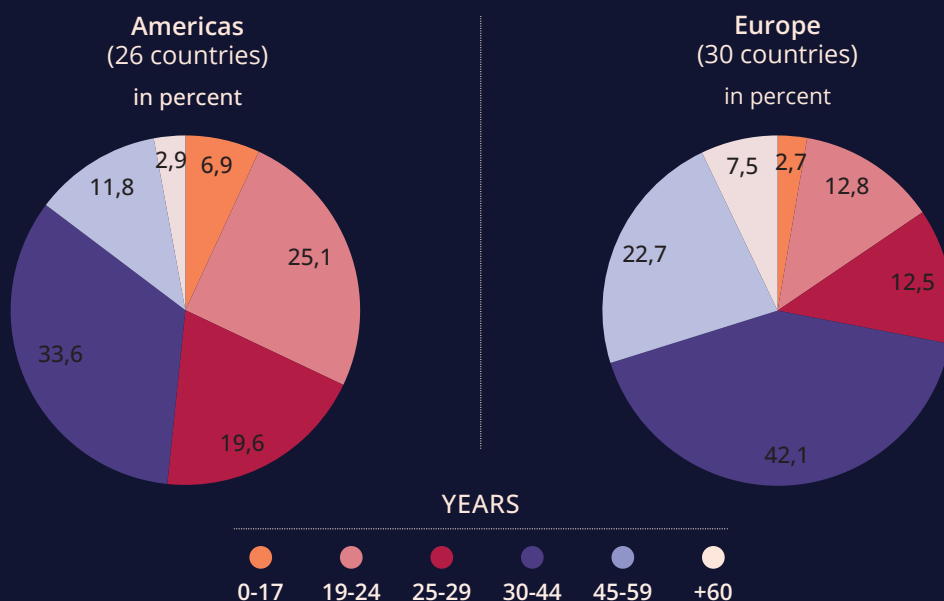


## KEY FIGURES AT A GLANCE

*Rates of homicide, persons suspected, and persons convicted of homicide, by region, 2021 or latest available year*

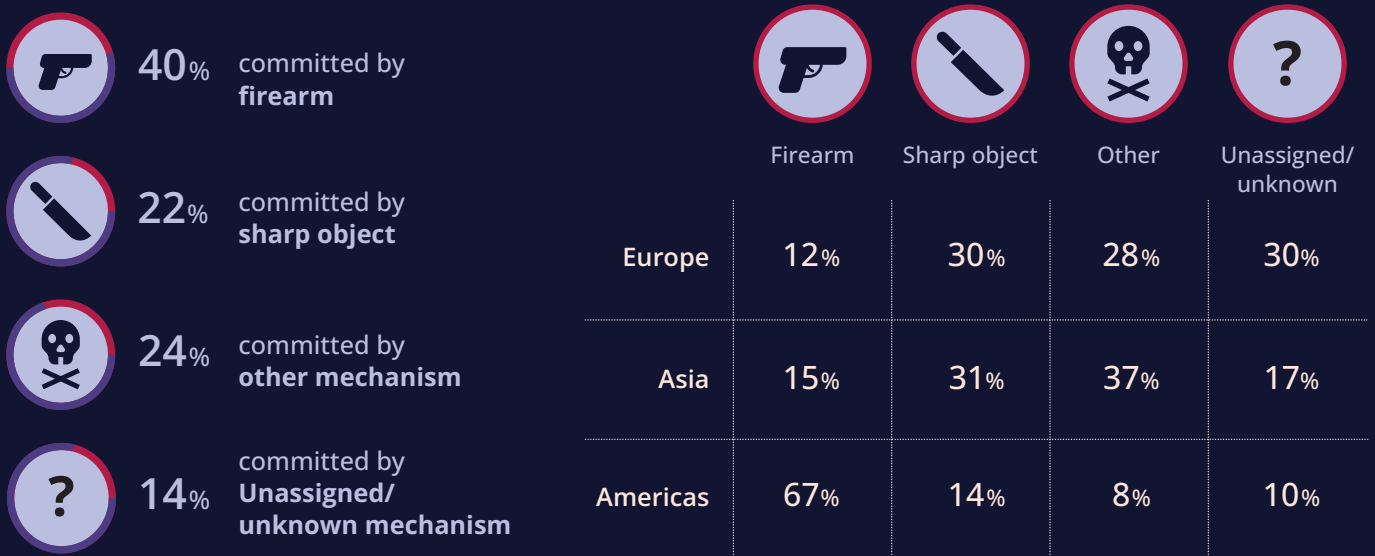


*Shares of suspects brought into formal contact with the police for intentional homicide in the Americas and Europe, 2021 or latest year since 2017, by age*



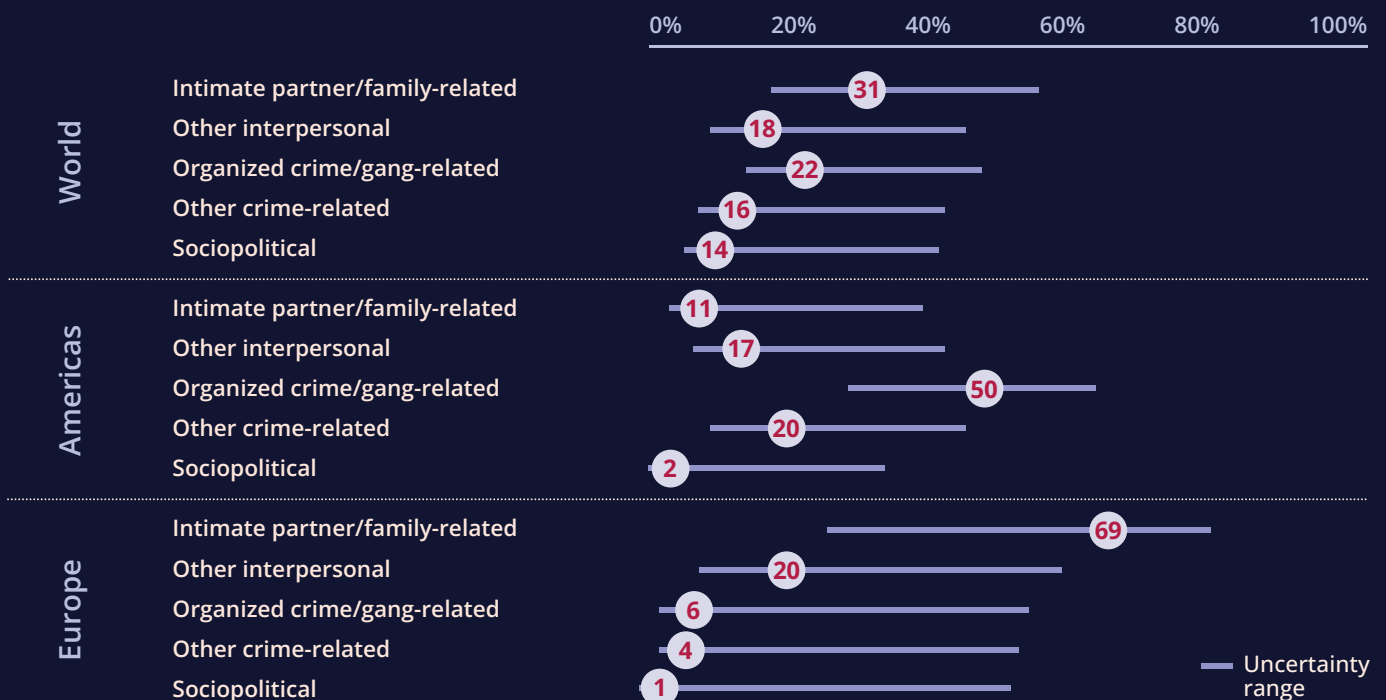
## Share of homicides by type of mechanism

Global and regional overview



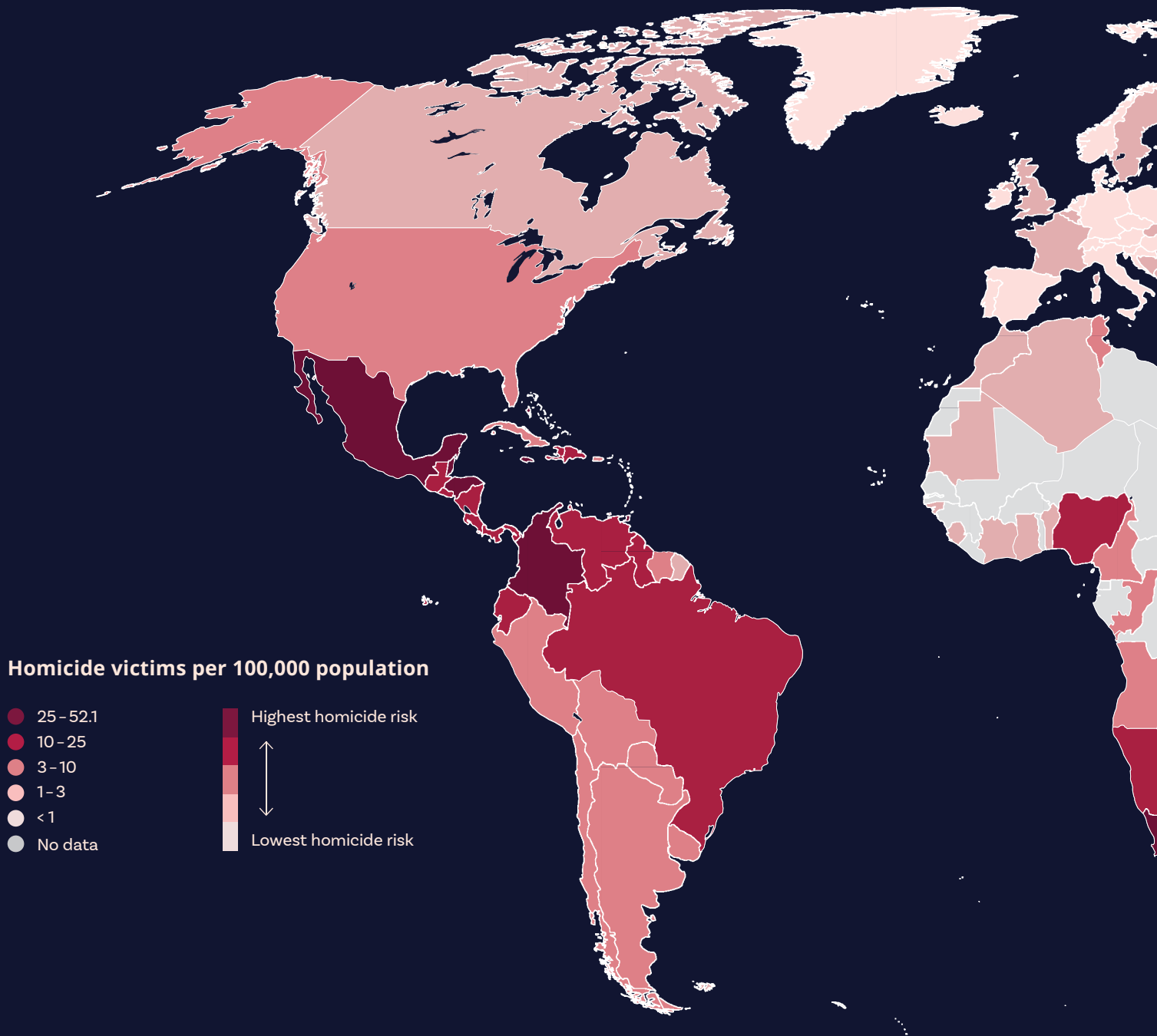
## Share of homicides by type, global and regional

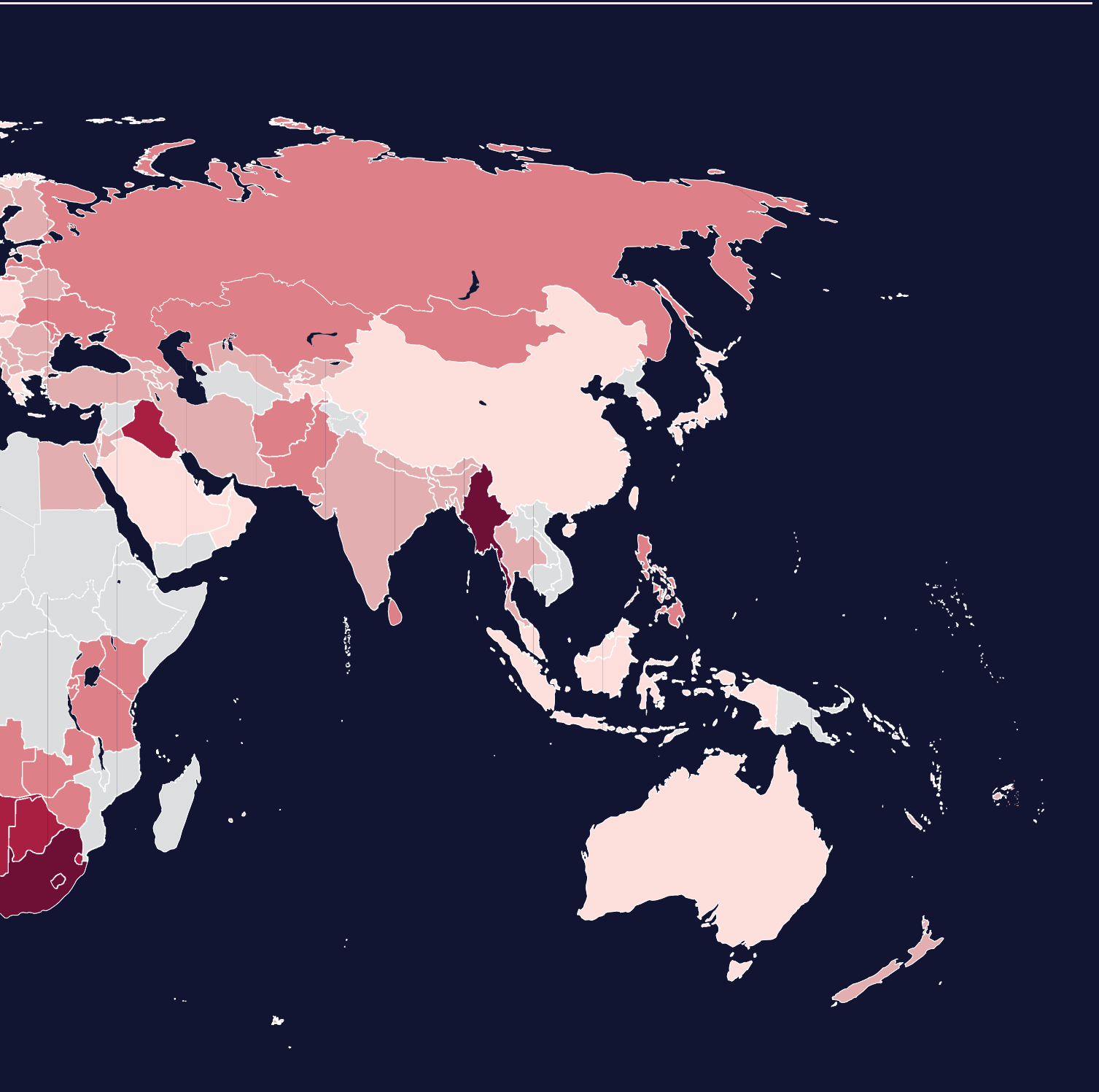
Overview in 2021 (or latest year available)



Map 1

*Homicide rate by country or territory, 2021*  
(or latest available year since 2016)





Source: UNODC homicide statistics.

*Note: The following countries and territories count offences instead of victims: Belgium, Benin, Burundi, Cameroon, Congo, Côte d'Ivoire, Gibraltar, Guam, Indonesia, Iran (Islamic Republic of), Kyrgyzstan, Lesotho, Philippines, Thailand, United States Virgin Islands, Zambia.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. 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. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).*

Map 2

## *Most prevalent mechanism used in the perpetration of homicides* In the Americas 2021 (or latest year available)

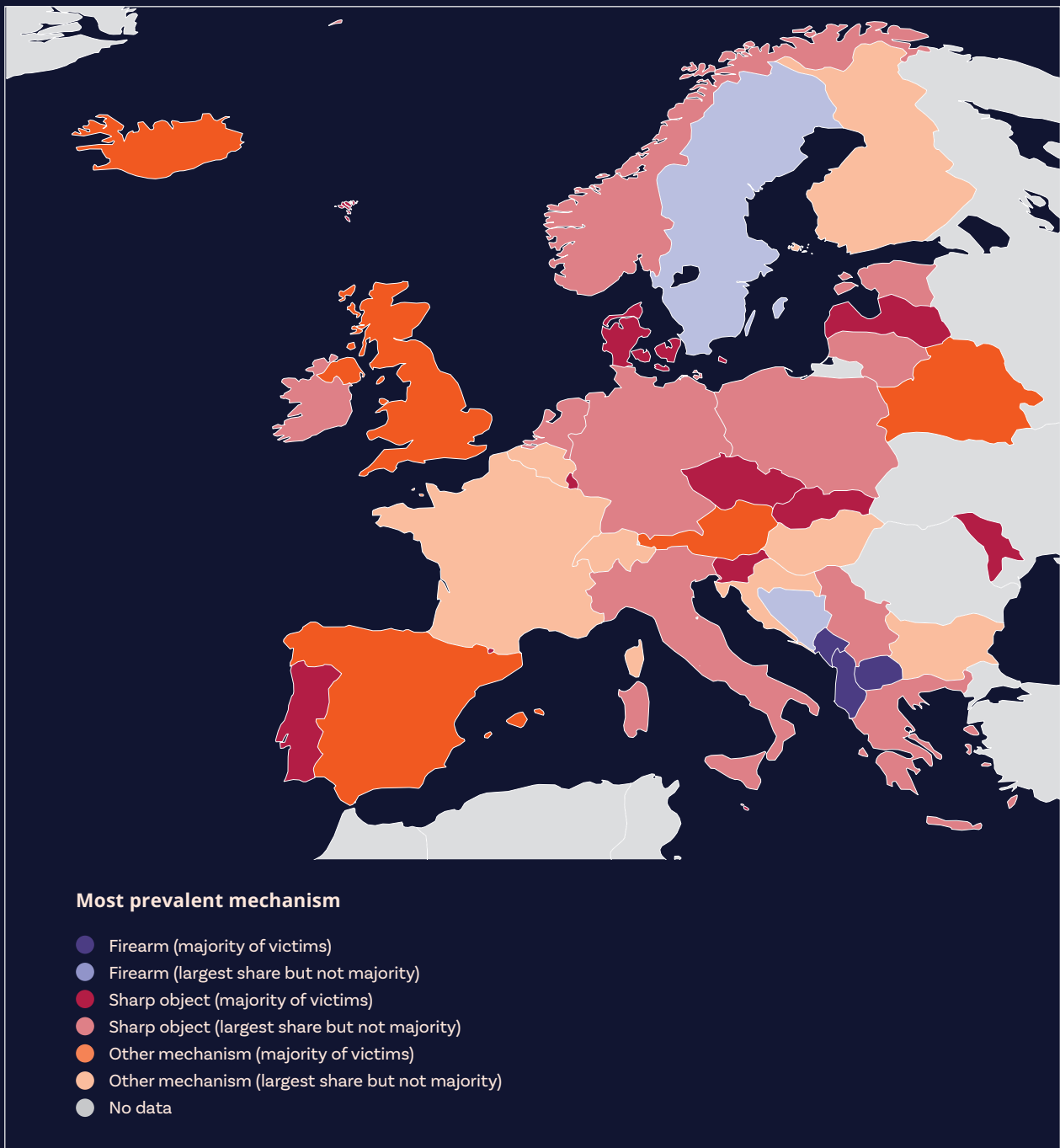


Source: UNODC homicide statistics.

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).*

Map 3

**Most prevalent mechanism used in the perpetration of homicides**  
 In Europe 2021 (or latest year available)



Source: UNODC homicide statistics.

Note: In Iceland and Ireland, the data refers to the most prevalent mechanism in the last 3 years.

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

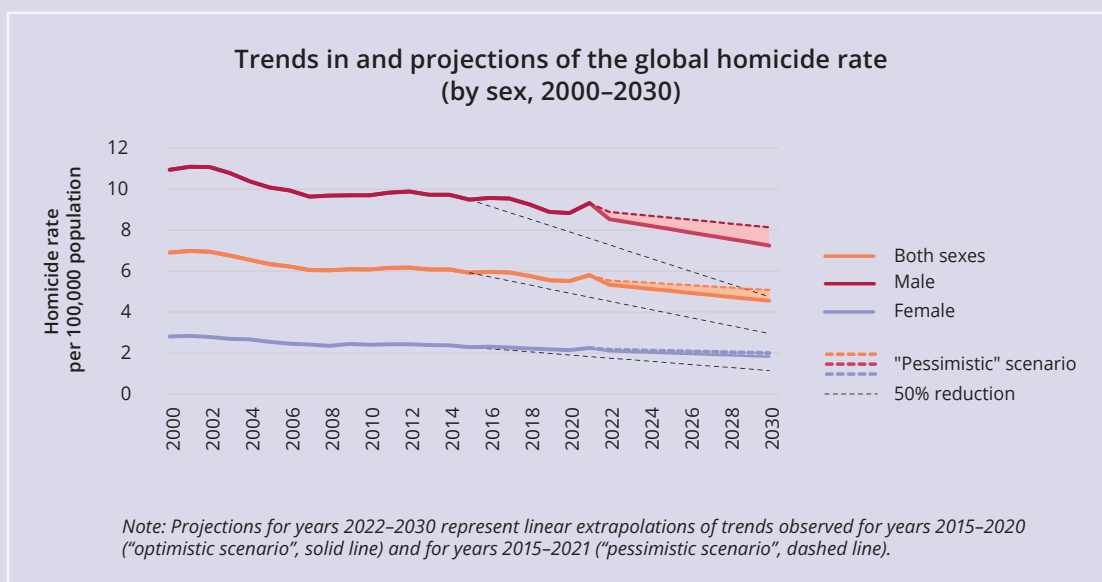
## KEY MESSAGES

### Without targeted action to prevent homicide, the world will fail to deliver on SDG pledges to reduce violence

- An average of 52 people lost their lives to homicidal violence every single hour in 2021, which was an exceptionally lethal year with an estimated 458,000 intentional homicides globally. The spike is linked, in part, to the economic consequences of COVID-19 restrictions and a rise in organized crime and gang-related and sociopolitical violence in multiple countries.
- Available 2022 data show decreases from the record high levels recorded the previous year. Nonetheless, for more than 15 years, there has been little improvement in the absolute number of homicide victims at the global level, which has fluctuated between some 400,000 and 450,000 victims annually.
- Target 16.1 of the Sustainable Development Goals to “significantly reduce all forms of violence and related death rates everywhere” by 2030 could be translated to a minimum 50% decrease in the global homicide rate. The reduction in the number of intentional homicides is pivotal for achieving SDG target 16.1. An “optimistic” projection based on the period 2015-2020 – excluding the 2021 death toll – suggests that the 2030 homicide rate will only be 23% lower compared with 2015, falling well short of the SDG target.

### Response

- World leaders at the SDG Summit 2023 adopted a Political Declaration to accelerate implementation of the Sustainable Development Goals. The Declaration reaffirmed the need to build peaceful, just and inclusive societies and highlighted factors “which give rise to violence, insecurity and injustice, such as inequality, corruption, poor governance and illicit financial and arms flows”, that are addressed in the 2030 Agenda for Sustainable Development.
- Experiences in violence prevention from different countries underscore the need for evidence-based interventions at different administrative levels, including specific programmes for neighbourhoods with high levels of homicidal violence. The area of intervention is also contingent to the type of intentional homicide. Actions to reduce violence against women, including the gender-related killing of women and girls, differ from those designed to reduce organized-crime and gang violence. Interventions may also be systematic, such as alcohol restriction and strict gun laws, or more targeted, for example by providing vocational skills to young men at high risk of engagement in violence. Mental health may also play an important role in intentional homicides, especially interpersonal homicides. Interventions should therefore also look at improving the circumstances of disadvantaged patients, treating substance abuse and reducing access to weapons.



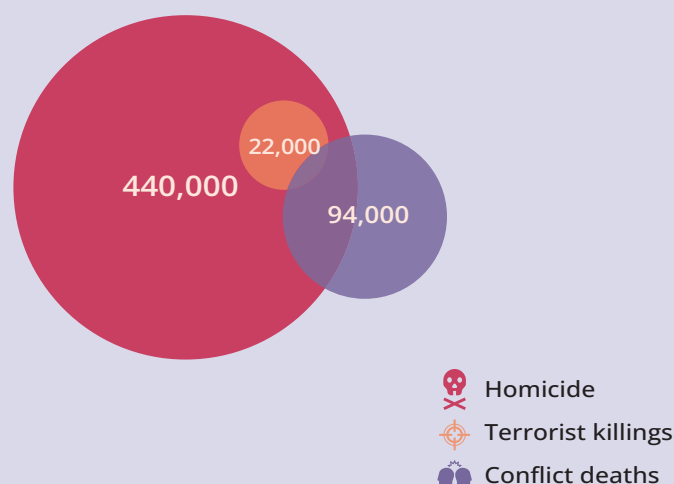
## Homicide responsible for more violent deaths than armed conflict

- Globally, homicide accounts for many more deaths than conflict-related killings and terrorist killings combined. Crime-related activities were responsible for at least a quarter of all homicides in 2021.
- An annual average of around 440,000 deaths worldwide were caused by intentional homicide in 2019-2021, of which an estimated 22,000 can be attributed to terrorism. The annual average number of conflict-related deaths in this period was 94,000, not including the lives lost in the Ukraine conflict.
- Despite a more than 95% increase in conflict deaths recorded between 2021 and 2022 – primarily due to escalating wars in Ukraine and Ethiopia – available homicide data for the year 2022 indicate that the global burden of homicide that year was nonetheless twice as large as the burden of conflict deaths.
- Classifying deaths in conflicts involves distinguishing between lawful and unlawful killings, which present different policy and justice considerations. The challenges posed by conflict classifications underscore the complexity of understanding intentional homicides and conflict-related deaths and the interlinkages between criminal and conflict violence.

## Response

- Member States and the United Nations should dedicate greater resources to comprehensively address persistent violence outside armed conflicts, as called for in the United Nations Secretary-General's New Agenda for Peace policy brief. Furthermore, due to the impact of criminal violence and other forms of violence, such as gender-based violence, in conflict settings, they should also integrate non-conflict violence prevention approaches in conflict prevention and resolution.
- Support for the implementation of the International Classification of Crime for Statistical Purposes (ICCS) could help to improve reporting and support more targeted responses to homicidal violence.

Average annual number of deaths caused by homicide, terrorism and conflict, 2019–2021





## KEY MESSAGES

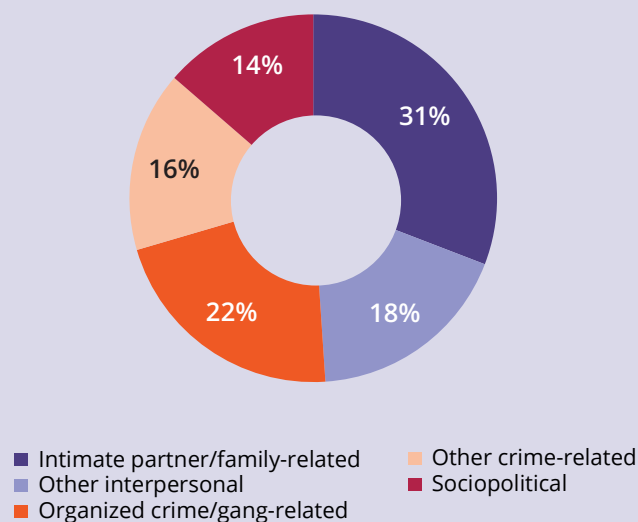
### Organized criminal groups/gangs can have sudden and sharp impacts on the number of intentional homicides

- An estimated 22% of intentional homicides globally with information on their situational context are caused by organized criminal groups/gangs. In the Americas, organized crime-related homicides represent half (50%) of all homicides with information on the situational context.
- Between 2015 and 2021, organized-crime related homicides killed almost as many people as armed conflicts, with about 100,000 victims annually for both categories.
- In countries, provinces or cities with the presence of multiple organized criminal groups/gangs, competition over criminal activities can lead to rapid and substantial increases in intentional homicides. This is highlighted by the spike in homicides in Ecuador and Haiti in the last few years. In addition, criminal organizations, notably gangs, are also contributing to rising homicide numbers. In contrast, the consolidation of criminal activities by a single group can lead to a reduction of violence.

### Response

- Organized-crime related homicide is the lethal, local manifestation of a transnational threat. The United Nations Convention against Transnational Organized Crime represents the sole global legal instrument to prevent and address organized crime challenges. The Convention enjoys near-universal adherence (192 Parties) and is supplemented by three protocols – the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children; the Protocol against Smuggling of Migrants by Land, Sea and Air and the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition.
- UNODC has developed the Organized Crime Strategy Toolkit to support Member States in the development of comprehensive strategic frameworks to prevent and combat organized crime.

Global distribution of homicide, by situational context, 2021 or latest year available





**Sociopolitical homicide, including, among others, deliberate killings of human rights defenders, environmental defenders, community leaders, journalists, and aid workers, constitutes at least 9% of global homicides**

- Humanitarian aid workers continue to face threats, with a higher average number of fatalities over the period 2017–2022 than 2010–2016.
- Since the start of hostilities in the Gaza Strip and Israel in October 2023 and until 12 November 2023, over 100 UNRWA employees have died. This represents the highest number of United Nations aid workers killed in any conflict in the history of the organization.
- Environmental defenders, working to protect natural resources, face considerable risks. The Americas report the highest number of such homicides between 2012 and 2021, with indigenous individuals reported to comprise 39% of the victims during that period.
- Journalists worldwide are facing growing dangers, with 44% of deaths in 2022 occurring in conflict zones and areas dealing with crime, corruption and environmental reporting. Male journalists account for over 90% of victims, and impunity for these killings remains high at 86%.



**Response**

- Regional treaties like the Escazú Agreement in Latin America and the Caribbean as well as initiatives by the UN Environment Programme and resolutions from the UN Human Rights Commission reflect growing recognition of the importance of safeguarding human rights defenders and other individuals from socio-politically-motivated homicide.



## KEY MESSAGES

### Women continue to be most at risk of deadly violence at home

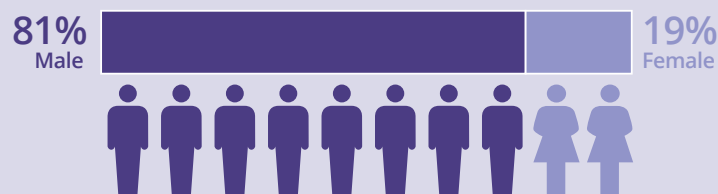
- Homicidal violence has a clear gender dimension. While in 2021 most homicides worldwide were committed against men and boys (81%), women and girls were disproportionately affected by homicidal violence in the home: they represent approximately 54% of all victims of killings in the home and 66% of all victims of intimate partner killings.
- Roughly four in ten killings of women and girls do not have information on the victim perpetrator relationship, and the actual number of women victims of intimate partner and family-related homicide could be much higher.

### Response

- Global data availability on gender-related killings is gradually increasing: while 74 countries had at least one data point on female intimate partner/family-related homicide in the period 2009-2015, this increased to 99 countries in the period 2016-2022. The UN system has taken concrete steps to assist Member States in improving data collection and reporting, including through the introduction and support for implementation of the *Statistical framework for measuring the gender-related killing of women and girls*.
- In-depth multi-stakeholder reviews of gender-related killings of women and girls have been introduced in several countries, including Australia, Canada, New Zealand, Portugal, Sweden, the United Kingdom and the United States. Multi-sectoral committees conduct regular in-depth reviews of deaths or homicides related to domestic violence, often with the involvement and participation of families and social networks of victims, with the aim of improving institutional responses and preventing future killings. See the joint UNODC/UN Women 2023 research brief, *Gender-related Killings of Women and Girls (Femicide/Feminicide)*.

#### Share of male and female homicide victims, overall and killed by intimate partners/family members, 2021

Male and female shares of all homicide victims  
2021



Shares of male and female homicide victims killed by intimate partners or other family members  
2021

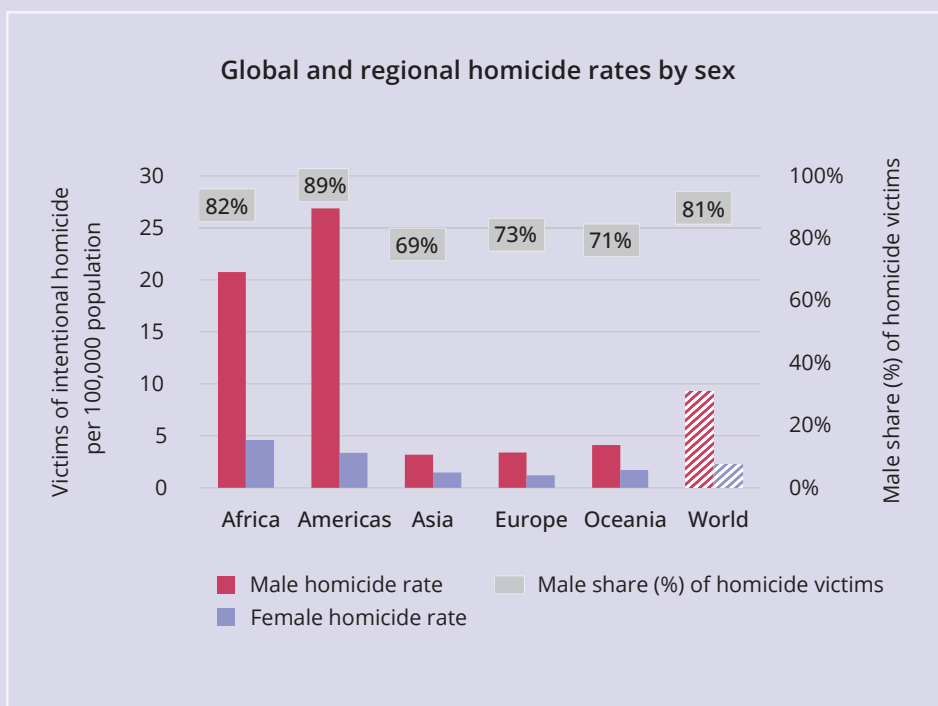


### Men, mostly young, remain the most likely victims and perpetrators of homicide

- Age-disaggregated homicide estimates in the Americas and Europe suggest that young men are most at risk. In 2021, young men aged 15-29 years in the Americas were those most at risk of homicide, with an estimated rate of 53.6 male victims per 100,000 male population – twice the average male homicide rate in the Americas (27) and more than five times the global male homicide rate (9.3).
- Men accounted for 81% of the victims of intentional homicide globally in 2021, and some 90% of the suspects brought into formal contact with the police for intentional homicides in 2021 were men.
- The correlation between the aggregate homicide rate and the proportion of male victims is also observable at the national level. Nations characterized by elevated overall homicide rates also tend to exhibit a higher proportion of male victims.
- Globally, children under 18 make up about 15% of homicide victims (71,600 in 2021). Male children, comprising 67% of child victims, account for a lower share than adult men (83%). Gender differences in homicide rates increase with age. While young children generally share similar homicide rates, older men become more vulnerable to non-domestic violence, particularly organized crime and gang-related incidents, compared to women. The overall homicide rate increases with age, and the sex disparity between male and female homicide rates becomes pronounced after the age of 14.
- Young males are the most at risk of being involved in organized-crime related homicides, both as victims and offenders.

### Response

- Violence prevention programmes should focus on providing support to young men to prevent them from being lured into a subculture of violence, including in organized crime or gangs, and those already involved need to receive help through social work and rehabilitation programmes (see UNODC *Global Study on Homicide 2019*).



## KEY MESSAGES



### The Americas present a greater risk of criminal violence per capita than any other region

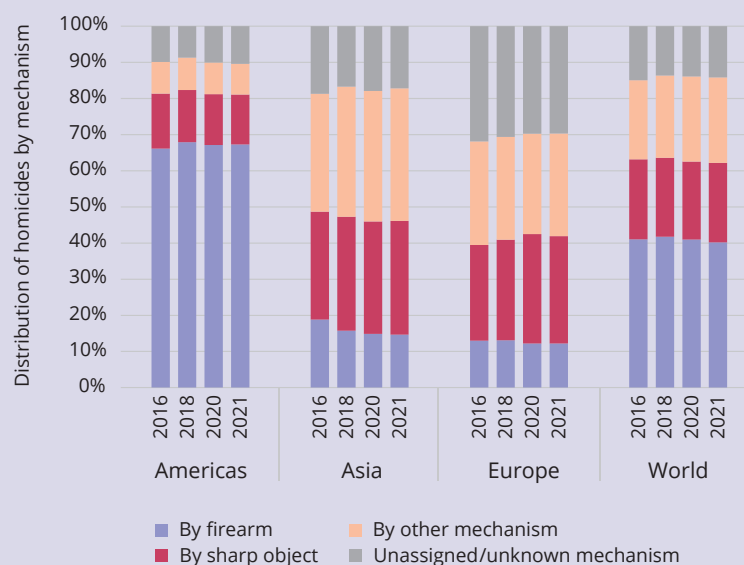
- The Americas have the highest regional homicide rate in the world, and high rates of homicidal violence related to organized crime.
- The subregional homicide rate in the Caribbean has declined by approximately 19% over the past decade but 2022 data from several countries show an increase (e.g., the number of homicides increased by 35% in Haiti from 2021 to 2022). Central America continues to be the subregion with the highest and most volatile homicide rate.
- Controversial states of emergency and public security interventions together with gang violence prevention programmes are credited with both reductions and increases in lethal violence in the region.
- Firearms persist as the prevailing identified mechanism of homicide on a global scale. In the Americas, firearms were used in an estimated 75% of killings recorded in 2021. By comparison, firearms were used in 17% of homicides in Europe and 18% in Asia.



### Response

- Amid mounting public concern with violent crime and low trust in police, some Latin American and Caribbean governments are enacting “states of emergency” in response to organized crime and violent gangs. The United Nations High Commissioner for Human Rights has expressed concern about the human rights impacts of states of emergency introduced to address organized crime and violence, while the Secretary-General’s New Agenda for Peace policy brief notes that over-securitized responses can be counterproductive and can reinforce the very dynamics they seek to overcome, as their far-reaching consequences – blowback from local populations, human rights violations and abuses, exacerbation of gender inequalities and distortion of local economies – can be powerful drivers for recruitment into terrorist or armed groups.

Distribution of homicides by type of mechanism, by selected regions and years

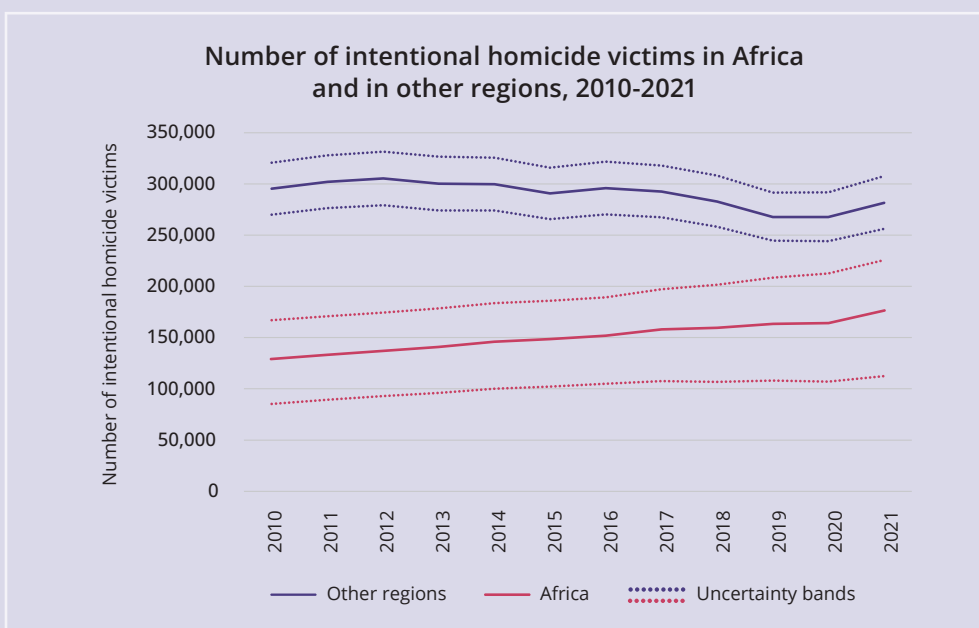


**The future of homicide: a large youth population, more heat days and persisting inequality in Africa could exacerbate lethal violence**

- Several “megatrends” - including those associated with demographic, economic, technological and climatic trends - do not necessarily point to rising homicide around the world and may contribute to continued general decline in homicide in the longer term. However, effects will vary by location.
- Based on projections examining the effects of climate change, ageing and economic inequality on homicide rates until the year 2100, Africa emerges as the most vulnerable region, due to a younger population (aged 15-29) which is projected to increase until 2035, slower projected reductions in economic inequality and the concentration of climate-related shocks and stresses combined with weaker response capabilities.
- Africa already had the highest absolute number of homicides of all regions of the world in 2021, and available data suggest that the homicide rate is not falling, even as decreases have been registered in other regions. Furthermore, 2022 data from populous countries such as Kenya and South Africa show the number of homicides has remained at a high level or is increasing. While terrorist attacks are the cause of a significant share of homicides in Nigeria, interpersonal and crime-related homicides are the most prevalent types of homicides in countries such as Algeria and South Africa. Nonetheless, substantial data gaps in the region pose challenges to precisely assessing the extent and type of homicidal violence in Africa.
- Natural resource scarcity is already having an impact on intentional homicides, with competition over resources leading to an increase of violence. For example, disputes over access to water are a prominent driver of interpersonal homicide, with substantial increases reported in Southern Asia, Sub-Saharan Africa and Central America.

**Response**

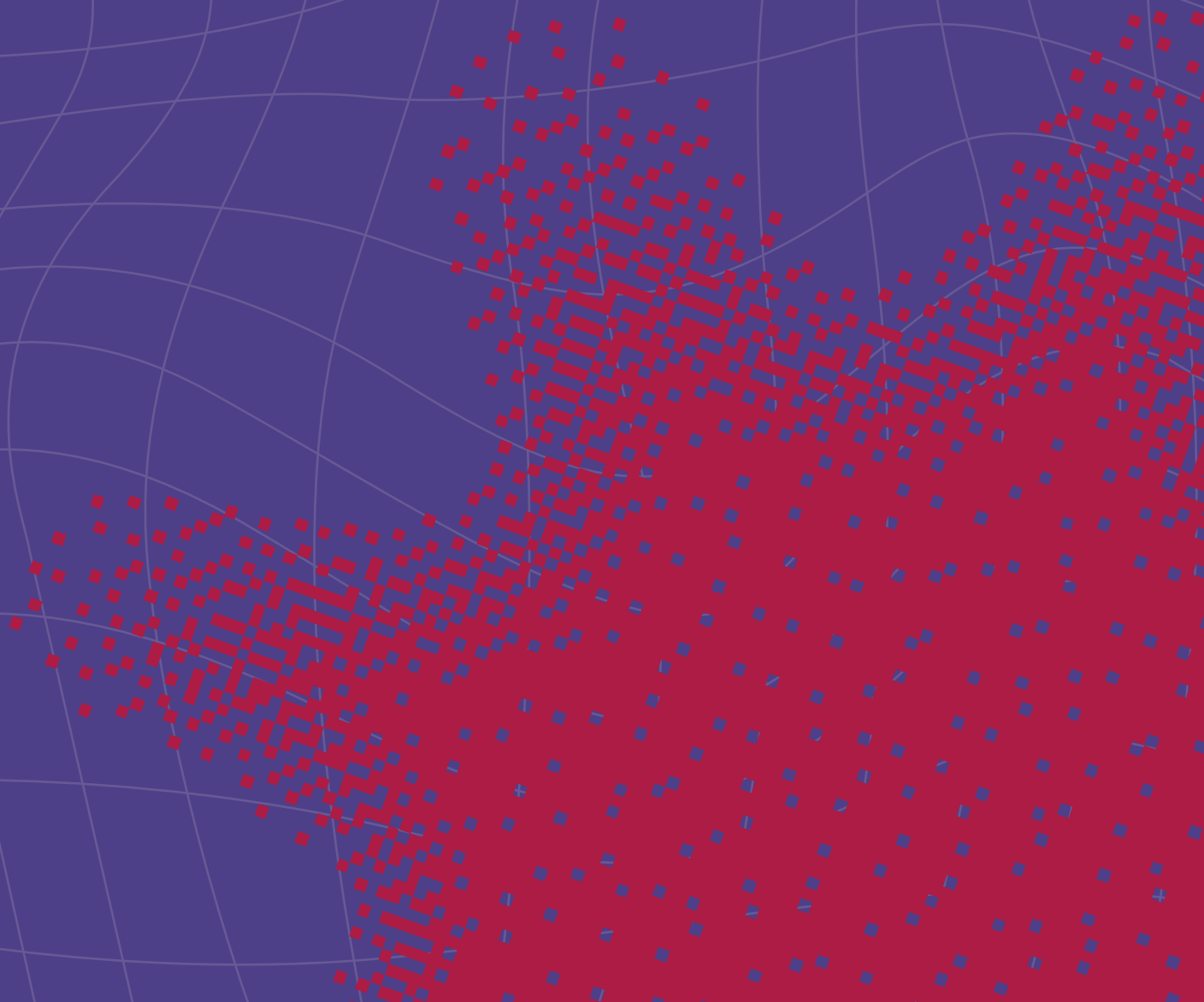
- Climate responses and development interventions should seek to address and mitigate risk factors for violence and homicide. The 2020 report of the UN Economist Network, *Shaping the Trends of Our Time*, further highlighted the importance of policies that can influence a single megatrend as well as other megatrends interacting with it, so that interventions can generate more effective, mutually reinforcing changes and greater impacts.
- Limited data availability remains an obstacle to assess the extent and the causes of intentional homicides in various countries, particularly in Africa. This, in turn, is hampering the formulation of effective interventions to address homicidal violence. Enhancing the collaboration of criminal justice system agencies and national statistical offices to improve data collection and analysis is, therefore, crucial to develop evidence-based policies to reduce homicides and other forms of violence.





# CHAPTER 1

# EXECUTIVE SUMMARY





## Chapter 1

# EXECUTIVE SUMMARY

“Every violent death is preventable, and it is our collective moral responsibility to achieve this goal. Building on Sustainable Development Goal 16.1, I invite each Member State to consider the ambitious target of halving violent death rates in their societies by 2030.”

United Nations Secretary-General António Guterres  
*New Agenda for Peace*

### About the study

With Goal 16 of the 2030 Agenda for Sustainable Development, Member States committed to significantly reducing all forms of violence and related death rates. However, as United Nations Secretary-General António Guterres underscored in the 2023 *New Agenda for Peace* policy brief, the scourge of violence has continued to shape the lives and livelihoods of people, and not just of those in armed conflicts.

To support Member States and the international community in efforts to prevent violence and strengthen responses, the UNODC *Global Study on Homicide* offers a comprehensive examination of intentional homicide trends and patterns around the world and analyses the complex dynamics behind the numbers. The study delves into different aspects of homicide, including the extent of intentional homicide in absolute numbers and rates. It highlights regional and subregional trends, demographics, age and gender profiles of victims. It also explores the impact of the COVID-19 pandemic on homicide trends. Chapter 4 analyses different dimensions of homicides related to criminal activities, interpersonal homicides and sociopolitically motivated homicides. An expanded special section looks at how organized crime is driving homicide trends in Latin America and the Caribbean.

In addition, the study considers the impacts of megatrends such as climate change, demographic changes, inequality, urbanization and technological shifts, with the aim of providing insights into how larger global developments may intersect with and influence homicide rates. The study also examines the criminal justice system's response to intentional homicide, seeking to identify areas for improvement and intervention.

### 2021 and 2022: a spike and differing regional developments

The global estimate for intentional homicides in 2021 is approximately 458,000 victims, averaging 52 individuals per hour. Despite the consistent stability in the global count of homicides over the past two decades, with the absolute number of homicides fluctuating between approximately 400,000 and 450,000 victims annually, the year 2021 stood out as exceptionally lethal.

During that year, the African continent recorded the highest number of intentional homicides, with an estimated 176,000 victims, followed by the Americas with over 154,000 victims. Asia reported 109,000 intentional homicides, while Europe had 17,000 and Oceania 1,000.

Turning away from absolute numbers to homicide rates per 100,000 population, the Americas faced a higher risk of intentional killings than any other region, with an estimated rate of 15.0 homicide victims per 100,000 population, surpassing rates in Africa (12.7), Oceania (2.9), Asia (2.3) and Europe (2.2).

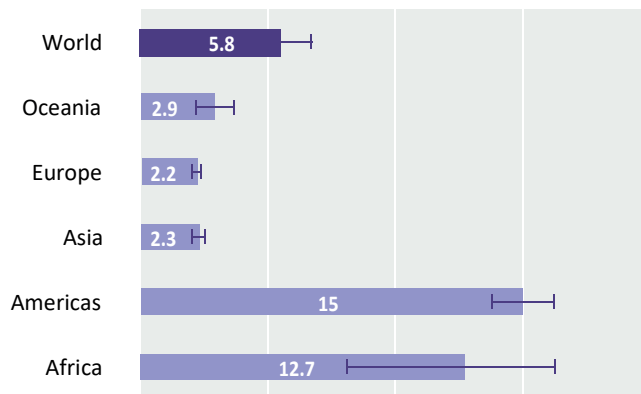
In terms of global distribution, Africa accounted for 38 per cent of all homicide victims in 2021, the Americas for 34 per cent, Asia for 24 per cent, Europe for 4 per cent and Oceania for less than 1 per cent. Notably, Brazil and Nigeria, which constitute only 6 per cent of the world population, contributed to 20 per cent of the global homicide toll. The top 10 countries with the highest absolute numbers of homicide victims collectively represented 58 per cent of global victims, despite constituting only 37 per cent of the global population.

The rise in homicide numbers in 2021 can be attributed to various factors. While the impact of the COVID-19 pandemic on intentional homicides varied across countries and regions in 2020, the increase observed in 2021 can be partly linked to the economic repercussions of COVID-19-related restrictions. A rise in gang-related and sociopolitical violence also contributed to the escalation in several countries.

Available 2022 data show decreases in some subregions. For example, in Northern America, recent estimates suggest a 5.4 per cent decrease in homicides from 2021 to 2022. This decrease comes in the context of an increasing homicide rate over the past decade and recent surge in homicides in the United States of America.

Meanwhile, several countries in the Caribbean experienced a significant increase in homicidal violence in 2021 and

**FIG. 1** Homicide rate (victims of intentional homicide per 100,000 population), by region, 2021



Source: Estimates based on UNODC homicide statistics.

*Note: Uncertainty bands represent possible estimation errors due to the imputation of missing values at the country level. The bands do not represent probability confidence intervals. The estimates are based on the latest available data, which remain limited, especially in Africa and Asia. The size of the error bars provides an indication of the level of uncertainty that the estimates carry at the regional level.*

2022, linked to crime and trafficking, access to firearms and ammunition and the expansion and fragmentation of gangs seeking to control territory.

Estimates indicate that Africa had the highest absolute number of homicides of any region in 2021, and available data suggest that the homicide rate is not falling, even as decreases have been registered in other regions. Furthermore, projections suggest that Africa – which will continue to have the youngest population in the world, the highest number of hot days and persisting inequality gaps – will remain particularly vulnerable to homicide.

## Methodology

Global and regional estimates are based on the updated UNODC homicide statistics dataset, which draws on national data submitted to UNODC by Member States through the annual United Nations Survey of Crime Trends and Operations of Criminal Justice Systems (UN-CTS), along with other pertinent data sources. The estimates are produced based on available national data and through a statistical model imputing missing values at the country level.

The study adheres to the definition of intentional homicides outlined by the International Classification of Crime for Statistical Purposes (ICCS). According to the ICCS, intentional homicide is defined as the "unlawful death inflicted upon a person with the intent to cause death or serious injury." This classification encompasses various forms of intentional killings, including murder, honour killing, fatal serious assaults, deaths resulting from terrorist activities, femicide, infanticide and extrajudicial killings.

## Trends over time – by region

The global trend in the homicide rate conceals substantial differences and disparities at the regional level, just as regional trends in the homicide rate obscure variations within subregions and between countries.

Since the early 1990s, homicide rates in the subregions of **Europe** have generally stayed below the global average. In Western Europe, the highest national homicide rate in 2021 (France) was approximately double the lowest (Switzerland). In Northern Europe, the highest rate (Latvia) was seven times greater than the lowest (Ireland), resembling the disparities observed in Central America, albeit at a considerably lower level. In Eastern Europe, the highest national homicide rate (Russian Federation) was 15 times higher than the lowest (Czechia), surpassing the disparity seen in the Caribbean.

Meanwhile, as Europe has seen a modest decline in its homicide rate over the past decade, **the Americas** have experienced greater fluctuations, including significant decreases since 2017. Nonetheless, by 2021 the homicide rate in the Americas remained over six times higher than that in Europe.

Over the past decade, trends in the homicide rate within the Americas have been diverging among subregions. In South America, the homicide rate has experienced a downward trend since 2017. This decline is primarily driven by a reduction in the annual number of homicides recorded in Brazil, the most populous country in the subregion. Brazil's homicides decreased from a peak of over 63,000 in 2017 to less than 46,000 in 2021. Peru and the Bolivarian Republic of Venezuela have also seen a decline in annual homicides in recent years. However, in contrast, countries like Colombia and Ecuador experienced considerable increases in homicidal violence between the end of 2020 and the end of 2021.

In Central America, several countries historically associated with high homicide rates registered sharp declines, while others experienced increasing lethal violence. The national homicide trend in Mexico, which accounted for roughly 77 per cent of all homicide victims in the subregion in 2021, has driven the subregional trend over the past decade. Several smaller countries in the subregion, such as Honduras, Belize, Panama and El Salvador experienced reductions in homicidal violence in the wake of aggressive anti-gang interventions. By contrast, Costa Rica experienced a slight increase in homicide rates between 2019 and 2022.

Northern America has witnessed an uptick in the homicide rate over the past decade, particularly since the onset of the COVID-19 pandemic in 2020, with lockdown measures, changes in police-community relations and record gun sales in the United States cited as contributing factors. Following a nearly 30 per cent increase in homicides in the United States from the end of 2019 to the end of 2020, and a smaller rise of around 6 per cent in 2021, recent estimates based on the National Incident-Based Reporting System and the Summary Reporting System indicate a nationwide decrease in homicides by 6.1 per cent from 2021 to 2022. In Canada, the annual number of homicides has been steadily increasing since 2013. With a homicide rate of 2.1 per 100,000 population in 2021, Canada's rate remains over three times lower than that of the United States.

In **Africa**, the trend in the homicide rate has the greatest uncertainty due to limited time series availability. Based on available data, the region recorded a significant increase in homicides in 2021, which can be partially attributed to trends in Kenya and South Africa that may be linked to pandemic-related stressors such as unemployment. In South Africa, there were around 5,000 additional homicide

victims from 2020 to 2021, with a total of nearly 25,000, representing the largest absolute increase in Africa that year. Homicide figures in South Africa continued to climb in 2022, rising 8 per cent over the previous year and surpassing pre-pandemic levels by approximately 28 per cent. By contrast, Uganda and the United Republic of Tanzania observed reductions in homicidal violence, while in Northern Africa, Algeria and Morocco showed a steady increase in homicide rates over the past decade, albeit at significantly lower levels than other subregions in Africa.

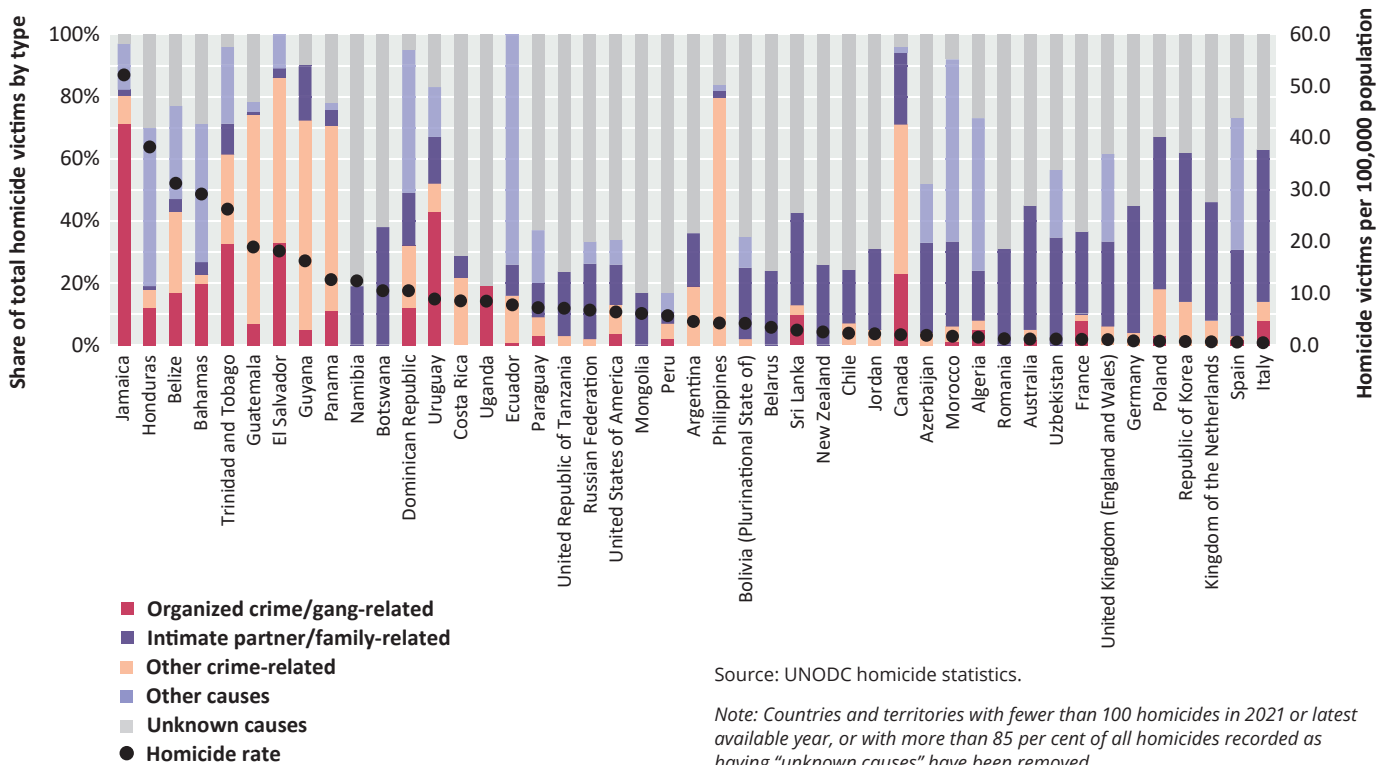
In **Asia**, subregional trends reveal different patterns, with Central Asia experiencing a significant decrease in the homicide rate, attributed mostly to reduced homicides in Kazakhstan, while Western Asia's homicide rate has shown little improvement over the past decade, fluctuating at a relatively high level of roughly 5 per 100,000 population. A decline in Asia's overall homicide rate over the past decade was disrupted in 2021 by a sharp increase in killings, notably in Myanmar. Other populous countries in the region, like China, Indonesia, Malaysia and Thailand have reported reductions in annual homicides over the past decade, contributing to the region's general downward trend prior to 2021. The two most populous countries in Southern Asia, India and Pakistan, have both seen moderate increases in homicide rates since the onset of the COVID-19 pandemic, which contrasts with the previous longer-term trend of continuous decline. It should also be noted that important data gaps remain in Asia; for example, Viet Nam has not reported homicide data since 2011.

Meanwhile, in **Oceania**, the homicide rate has remained comparatively stable over the last ten years, except for a surge in 2019 in New Zealand due to the Christchurch Mosque shootings. Australia and New Zealand are the only countries in the subregion with reliable trend data.

## Homicide deaths outnumber conflict-related and terrorist killings

Globally, intentional homicides contribute to a significantly higher number of deaths than conflict-related and terrorist killings combined. Between 2019 and 2021, an annual average of approximately 440,000 deaths resulted from intentional homicide; the annual average number of conflict-related deaths was 94,000, while the estimated annual average number of deaths attributed to terrorism during the same period was 22,000. This indicates that homicides accounted for approximately five times as many deaths as armed conflict and 20 times as many deaths as terrorism during the specified timeframe. Moreover, despite an increase of more than 95 per cent in the number of conflict deaths recorded from 2021 to 2022, which was primarily the result of escalating conflicts in various countries such as Burkina Faso, Ethiopia, Mali, Somalia and Ukraine, available homicide data indicate

**FIG. 2** Share of homicides by type, selected countries, 2021 or latest available year



that the global burden of homicide in 2022 was still double that of conflict deaths.

Recording statistics on violent deaths during large-scale conflicts is complicated, and disentangling lethal violence related to the conflict itself from homicidal violence by both combatants and non-combatants is often difficult. Additionally, distinguishing between typical combatant groups, organized crime entities and terrorist organizations, and between the deaths resulting from their violent actions, can pose further challenges.

### Organized crime and trafficking can rapidly drive homicides up – or down

Nearly 40 per cent of global homicides are connected to crime, mainly organized crime and gang-related violence. From 2015 to 2021, organized crime caused around 700,000 deaths, comparable to casualties resulting from armed conflicts. While the majority of these deaths occurred in the Americas, organized-crime related homicides are prevalent worldwide.

In 2021, 8 of the 10 countries with the highest homicide rates in the world were in Latin America and the Caribbean. Persistently high levels of lethal violence in the region are attributed to complex dynamics relating to criminal groups competing for control over illegal markets, structural

issues like weak rule of law, social inequality and youth unemployment, and factors such as record-breaking drug production and firearms.

The surge in cocaine production since 2020 and the expansion of transnational criminal organizations have led to increased rates of lethal violence. One of the more concerning examples is Ecuador, which following years of relatively low homicide rates has seen a 407 per cent increase in homicides between 2016 and 2022, which can be attributed to intensifying violent competition among rival drug trafficking gangs.

While drug transshipment through the Caribbean is not new, the region has faced renewed challenges, with large-scale trafficking, including through the Dominican Republic, resurging due to rising European demand. The Caribbean has also seen a significant increase in the extent and intensity of gang violence. In 2022, the Turks and Caicos Islands reported 28 murders by 28 October, compared to 13 homicides for all of 2021. Jamaica's 2022 homicide rate reached 53.3 per 100,000, with around 70 per cent linked to organized criminal groups or gangs. Saint Lucia recorded a homicide rate of 36.7 per 100,000 in 2022, a slight decrease from the previous year, while Saint Vincent and the Grenadines reported 40.4 per 100,000. Trinidad and Tobago's rate rose to 39.5 per 100,000 in 2022, driven by the splintering of larger gangs into small violent factions, and the Bahamas reported a rate of 31.2 per 100,000.

Haiti's 2022 homicide rate surged to 18.0 per 100,000, a 35 per cent increase from 2021, mainly due to soaring gang violence.

In contrast to the Caribbean, some Central American countries, including Honduras and El Salvador, have seen stabilizing or declining homicide rates. Notably, Costa Rica deviated from this trend, with an increase in homicides to 12.8 per 100,000 in 2022 due to organized crime groups vying for control of the port of Limón, a key node for trafficking to Europe.

In South America, homicide trends varied, with countries known for high rates witnessing declines and those with historically low violence experiencing increases. Colombia saw a slight drop from 25.7 per 100,000 in 2021 to 25.4 per 100,000 in 2022, after a notable increase a year earlier with higher rates in areas where armed groups like ex-Fuerzas Armadas Revolucionarias de Colombia (FARC) and Ejército de Liberación Nacional (ELN) were active. Brazil's rate remained steady at 21.3 per 100,000 in 2021, the second lowest since 2000, but violence persisted in the northeast and north due to tensions between drug factions. Argentina reported a rate of 4.3 per 100,000 in 2022, a slight decline from 4.6 per 100,000 in 2021, while areas including Santa Fe province and the city of Rosario in particular experienced a surge in homicides, also attributed to rivalries between local drug factions.

However, the presence of organized crime does not always lead to high rates of homicidal violence. While Latin Amer-

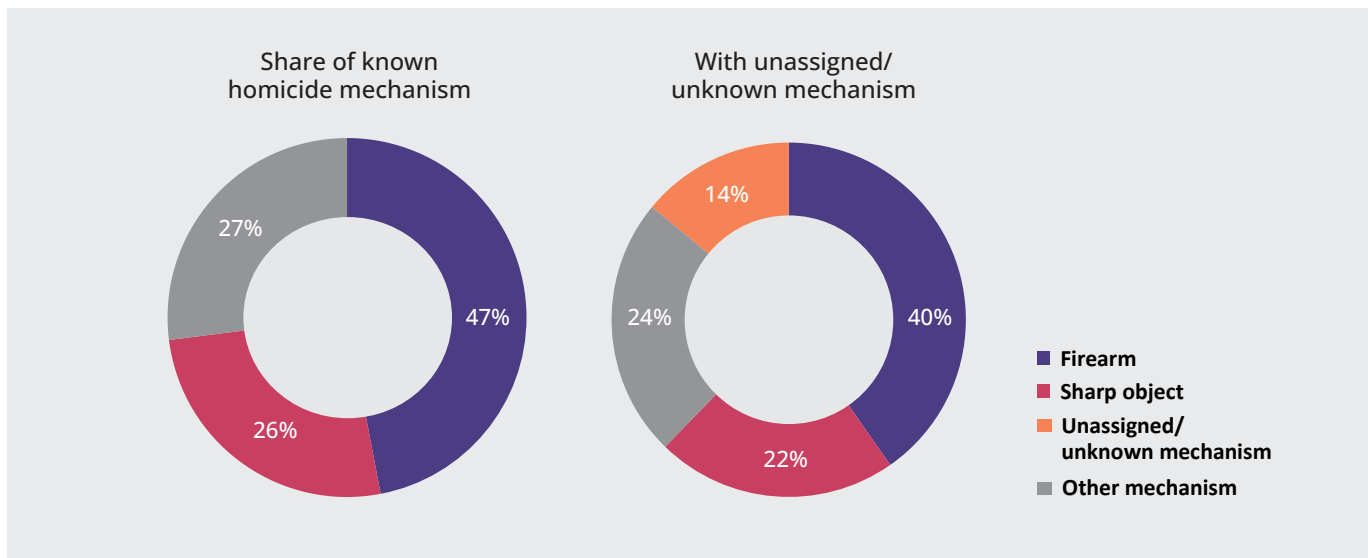
ica, the Caribbean and certain African countries often show higher organized crime-related homicide shares, some regions like Asia and Europe have lower shares. Lower levels of organized crime-related homicide do not necessarily indicate less organized crime presence but rather could be the outcome of different “management” approaches. For instance, Southeast European countries on the Balkan Route, a major heroin trafficking corridor, do not exhibit high homicide rates.

Organized crime groups in Asia, like the Japanese Yakuza, are prominent but national homicide rates remain low (e.g., 0.23 per 100,000 in Japan in 2021). Dominant criminal groups can influence violent crime by controlling territory and markets. For example, in Brazil's São Paulo, areas dominated by the Primeiro Comando da Capital experienced fewer violent crimes. And in Mexico an analysis of municipal-level data indicates that a very high presence of organized crime has led to lower levels of homicide.

### Firearms linked to increases in homicide

High rates of lethal violence in Latin America and the Caribbean are significantly influenced by access to and misuse of firearms. Unlike bladed weapons and blunt objects, firearms escalate the speed and scale of intentional and unintentional homicides. The key determinant is not merely the availability of firearms, such as ownership, but rather encompasses weak oversight and control and

**FIG. 3** Global shares of homicides by type of mechanism, including unassigned/unknown mechanism, and by type of known mechanism, 2021



Source: Estimates based on UNODC homicide statistics.

Note: The shares without an unassigned/unknown mechanism are based on the assumption that the distribution of homicides with an assigned mechanism is representative of the ones with unassigned/unknown mechanism.



associated impunity. Criminal factions often procure and misuse handguns as well as semi- and automatic rifles, amplifying disputes. Studies from Belize, Suriname and Trinidad and Tobago reveal varied motives for obtaining illicit firearms, including personal protection, peer pressure, criminal activities and financial considerations. Organized criminal groups acquire firearms through diverse means, including domestic sources, private dealers, black markets or diversion from law enforcement and military stocks. Firearms in the Americas are also frequently sourced from foreign countries, particularly North America and Western Europe, through legal and illegal channels. The “iron” pipeline involving networks from the United States to the Caribbean, Central America and South American countries is a focus of growing attention, as highlighted in a 2023 “War on Guns” declaration from heads of government of the Caribbean Community (CARICOM).

Latin American and Caribbean countries record the highest proportion of gun-related homicides globally. In 2021, there were at least 89,100 gun-related homicide victims in the region, with specific rates per 100,000 of 9.3, 16.9, and 12.7 per 100,000 in the Caribbean, Central America and South America, respectively. The use of firearms in homicides ranged from 67 per cent in the Caribbean to 70 per cent in South America in 2021. The association between higher firearm use and increased homicide rates is evident, underscoring the role of firearms in the region's elevated levels of violence.

Firearms are also an enabler of crime and violence in the Sahel, where a vicious cycle of firearms trafficking and conflict is evident. In Nigeria, firearms were the most prevalent mechanism of killing in 2016 and 2019, the only years for which data are available, accounting for some 47 and 40 per cent of all homicides respectively in those years. Firearms are not the most prevalent homicide mechanism in Europe, only accounting for approximately 12 per cent of recorded homicides. However, the region has recently experienced an increase in lethal violence linked to organized criminal groups, attributed to increased drug production in South America and increased trafficking to supply European consumers. Certain geographies, particularly areas with prolific drug markets, are highlighted as at-risk areas by law enforcement, notably including coastal cities like Antwerp, Amsterdam, Rotterdam and Hamburg, which serve as transit hubs for drug trafficking. The increasing visibility of acts of violence, including torture, has raised concerns about the strategic threat of violent organized crime in the European Union.

Sweden has experienced unprecedented levels of gang violence and firearm-related deaths in recent years. There were 391 shootings in Sweden, 63 of which were fatal in 2022. The Swedish National Council for Crime Prevention reported that Sweden had among the highest levels of firearm-related deaths in a study of over 20 European

countries. Although research connects the increase in gun-related violence to conflicts related to illegal drug markets and criminal gangs, uncertainties persist about the extent of organized crime's involvement in Swedish homicides, and the country does not provide official data to UNODC on this matter.

## Gender dimensions of homicide

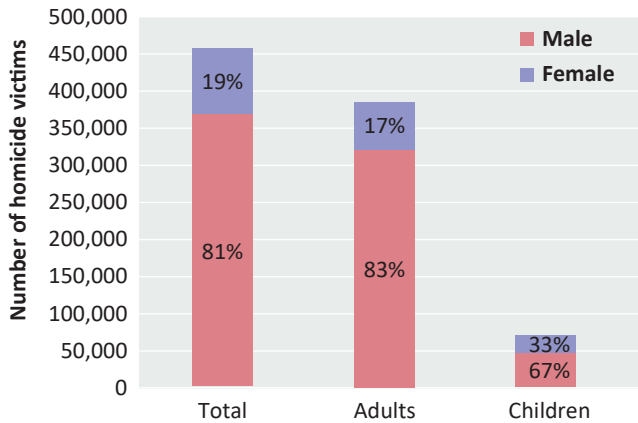
Gender and age serve as reliable indicators of the potential risk of homicide, with young males showing a higher risk compared to other demographic groups. In countries with high homicide rates, such as Brazil, Colombia, Jamaica and Nigeria, male victims significantly outnumber females. In contrast, in countries with low homicide rates like China, Germany, Japan, the Republic of Korea and Switzerland, males and females share a more evenly distributed risk of homicide.

In 2021, most global homicides (81 per cent) targeted men and boys, with women and girls comprising a significantly smaller share (19 per cent). However, women and girls are disproportionately affected by homicide perpetrated by intimate partners or family members, which accounts for 56 per cent of all female homicide victims. This highlights the home as the most dangerous place for women and girls. Moreover, 40 per cent of female homicide cases lack information on the victim-perpetrator relationship, potentially indicating that homicide by family members or intimate partners is responsible for still more victims.

Conversely, men and boys are more at risk of being killed by someone outside their family, with only about 11 per cent of male homicide victims in 2021 killed by intimate partners or family members, and with similar uncertainties in cases without information on the victim-perpetrator relationship. That women are disproportionately affected by homicidal violence in the family is a pattern observed in all world regions. However, in regions with lower overall intentional homicide rates, including both familial and non-familial violence, such as Europe and Asia, the proportion of male homicides related to family violence is higher, nearing 20 per cent. In contrast, in regions with very high levels of homicidal violence, like Africa, the share decreases to below 10 per cent.

Research indicates that intentional killings of young children are predominantly committed by family members, linked to gender stereotypes, family violence and parental mental health issues. As children age, the risk shifts to non-family-related homicide, especially for young men in the Americas facing organized crime and gang violence. Globally, children below the age of 18 represent over 15 per cent of homicide victims (around 71,600 in 2021), with males comprising over two-thirds of child homicide victims.

**FIG. 4** Global number and share of male and female homicide victims among adults and children, 2021



Source: UNODC homicide statistics.

The gender disparity in child homicide rates increases with age: there tends to be parity in the homicide rate among male and female child victims aged 0-9 years, while in older age groups males become significantly more likely than females to fall victim to homicide. Domestic violence tends to affect male and female young children similarly, while among older children, more exposed to non-domestic homicide risks, young males exhibit higher vulnerability.

## Interpersonal violence outside the family

Interpersonal homicide outside the family is challenging to systematically quantify due to limited information on the victim-perpetrator relationship and situational context. Instances can arise in communities facing threats to livelihoods, resulting in strained relations. Land disputes, often driven by insecure land tenure, can also contribute to violence.

In the North Rift counties of Kenya, deaths from cattle rustling surged by 170 per cent from 2020 to 2021 among pastoralist communities facing increased competition due to droughts. In India, disputes over property or land constitute 16 per cent of interpersonal murders, spanning various sectors and involving both common and private lands.

Water access disputes, exacerbated by population growth, economic expansion and climate change, have led to increased violence. Data from the non-governmental organization The Pacific Institute indicate a significant increase in incidents of violence linked to water resources since 2015, with most of these events reported in Southern Asia, Sub-Saharan Africa and Central America. While systematic global data

on homicides from such disputes are lacking, specific country data reveal significant concerns, including over 1,700 violent deaths in Nigeria in 2018 due to conflicts between farmers and pastoralists over water and land. In India, almost 300 interpersonal murders from 2019 to 2021 are attributed to water-related conflicts.

## “Defenders” at risk

Sociopolitical homicide encompasses killings by terrorist groups and targeted assassinations of individuals, including human rights defenders, environmental advocates, community leaders, journalists and humanitarian aid workers. Global data on this type of homicide are limited, with less than 20 per cent of countries reporting to UNODC through the UN-CTS. However, in countries experiencing political instability, sociopolitical homicides may constitute a significant proportion of total homicides, as seen in Nigeria and Mali. Human rights defenders are particularly vulnerable to sociopolitical killings, making them one of the groups most at risk.

Humanitarian aid workers face significant dangers and threats in their work, including kidnappings, injuries and deaths. Data from the Aid Worker Security Database show that annual aid worker casualties had been on a downward trend since 2017, but the total number of fatalities from 2017 to 2022 was higher than the period from 2010 to 2016. While outside the period covered in this report, 2023 saw the largest number of United Nations aid workers killed – 100 people - in any conflict in the history of the organization, with the start of hostilities in the Gaza Strip and Israel in October 2023 until 12 November 2023. In the years 2021-2022, the majority (63 per cent) of killings of aid workers occurred in South Sudan, Afghanistan, Myanmar, Somalia and Ethiopia, with these numbers significantly surpassing those of the previous three years. In 2022, Ukraine also witnessed a notable number of lethal attacks on aid workers. The attacks vary in context but are often politically motivated, with a majority of victims being national staff. Shooting was the most common method used in lethal attacks in 2021, accounting for 69 per cent of cases, followed by airstrikes and shelling at 9 per cent.

Data on homicides of environmental defenders is predominantly sourced from Global Witness, a non-governmental organization that has been estimating such incidents globally since 2012, based on searches in national and international databases, media sources and reaching out to local organizations in the relevant countries. This method has limitations, potentially leading to an underreporting of homicides and geographic bias due to reliance on media and civil society reporting. According to Global Witness, there have been 1,733 killings of environmental defenders globally since 2012, with 39 per cent involving indigenous persons and 11 per cent women. The Americas account

for 68 per cent of these homicides, followed by Asia (25 per cent), Africa (6 per cent) and Europe/Oceania (less than 1 per cent).

UNESCO's indicator 16.10.1 under SDG 16 monitors cases of harm to journalists. Between 2018 and 2022, killings of journalists were 25 per cent lower on average compared to the preceding five years, with 2021 marking the lowest toll since 2008. Spikes in killings, notably in 2022, were linked to conflicts in Ukraine and reporting on crime, corruption and violence in Mexico and Haiti. Male journalists accounted for over 90 per cent of victims. Latin America, the Caribbean and Asia have seen the highest average number of journalist killings since 2015. Notably, Northern Africa and Western Asia experienced a decline in journalist deaths since 2015 due to reduced armed conflicts.

### Warning signs: SDG target to halve violence will not be met if trends continue

The homicide rate is a crucial indicator agreed by Member States for measuring progress towards target 16.1 of the Sustainable Development Goals to significantly reduce all forms of violence and related death rates everywhere. In a more "optimistic" scenario, considering 2021 as an exceptional year with no influence on future trends, projections of homicide rates to 2030 suggest a global rate of around 4.6 per 100,000 population by 2030 – a modest 23 per cent decrease compared to the 2015 rate of 5.9 per 100,000 population. This falls well short of the SDG target, which has been interpreted to mean a minimum 50 per cent reduction in the homicide rate by 2030.

Based on historical trends, the downward movement in the global homicide rate is projected to continue until at least 2030. Nonetheless, this study reveals numerous factors and megatrends that could impede the projections of historical trends. The narrative is complex – for example, continued population growth may lead to an absolute increase in the number of homicides by 2030 despite declining rates. Moreover, when analysing a spectrum of demographic, socioeconomic and climate-related factors, it is plausible that homicide rates might escalate in specific regions, such as Africa, or Southern Asia. This contrasts with potential declines in other parts of the world. Nevertheless, there are justifications for anticipating a general decrease in homicide rates by the year 2100.

The future landscape of homicide will be influenced by factors such as increased life expectancy, declining fertility rates, shifting urbanization patterns and evolving socioeconomic dynamics. These megatrends are bound to affect different regions in the world in various ways. Regions considered "hot spots" for violence, like Latin

America and the Caribbean, may become less at risk compared to areas in Sub-Saharan Africa and Southern Asia undergoing major transitions. The impact of accelerating technological transformation, social media exposure, job automation and climate shocks on homicidal violence is hard to predict. An analysis of the potential effects of climate change, change in age structure and inequality on homicide rates until 2100 in this study highlights Africa as the most vulnerable region, thanks to a growing proportion of young people (15-29) which is expected to increase until 2035, slower reductions in inequality and a concentration of climate-related shocks and stresses combined with weaker response capacities.

### Criminal justice responses to homicide

Globally, data from 82 countries in 2021 reveal that there are four persons convicted for every 10 intentional homicide victims. Regional variations persist where data are available, with eight persons convicted in countries of Europe, fewer than two in countries of the Americas, and almost six for the same number of victims in countries of Asia. These patterns, consistent over the years, suggest chronic impunity in the Americas compared to other regions, although differences across countries and the possibility of one perpetrator killing multiple victims or one victim being killed by multiple individuals should also be taken into account.

Although the number of suspects brought into formal contact with the police has remained stable, there was a slight decrease in the average rate of suspects brought into formal contact with the police for intentional homicide in countries with available data for 2021, particularly in the Americas.

In 91 countries with data for 2021 or a recent year, an average of 4.1 persons were prosecuted for intentional homicide per 100,000 population compared to 3.3 victims, with countries in the Americas with data prosecuting 17 persons per 100,000, and countries with data in Europe prosecuting only 2.7 per 100,000. Globally, the number of persons prosecuted remained relatively stable, and during the COVID-19 pandemic, there was no significant drop – in fact, some countries even experienced an uptick in prosecutions. Notable exceptions include El Salvador, which saw a 57 per cent decline in prosecutions for intentional homicide in 2021 compared to 2018, potentially influenced by changes in the legal landscape and the impact of measures to combat gang-related crime.

Some Latin American and Caribbean countries, grappling with rising violent crime, are resorting to "states of emergency", deploying the military alongside law enforcement and engaging citizens in crime control, and in some cases



raising concerns about potential excessive use of force and human rights violations. Anti-crime measures as well as changes in criminal groups – splintering or consolidating control – can influence levels of violence, underscoring the complex relationship between state actions and crime dynamics.

In countries primarily in Europe, data for the years 2017-2021 show fluctuations in the number of convictions for intentional homicides. While there were decreases in convictions in 2019 and 2020, a majority of these countries reported an increasing or stable number of convictions in 2021. This trend is observed not only for intentional homicides but also for other crimes like rape and drug trafficking. Despite a slight increase in 2021, there was an average of 20 per cent fewer convictions for intentional homicide in countries with data than in 2018.

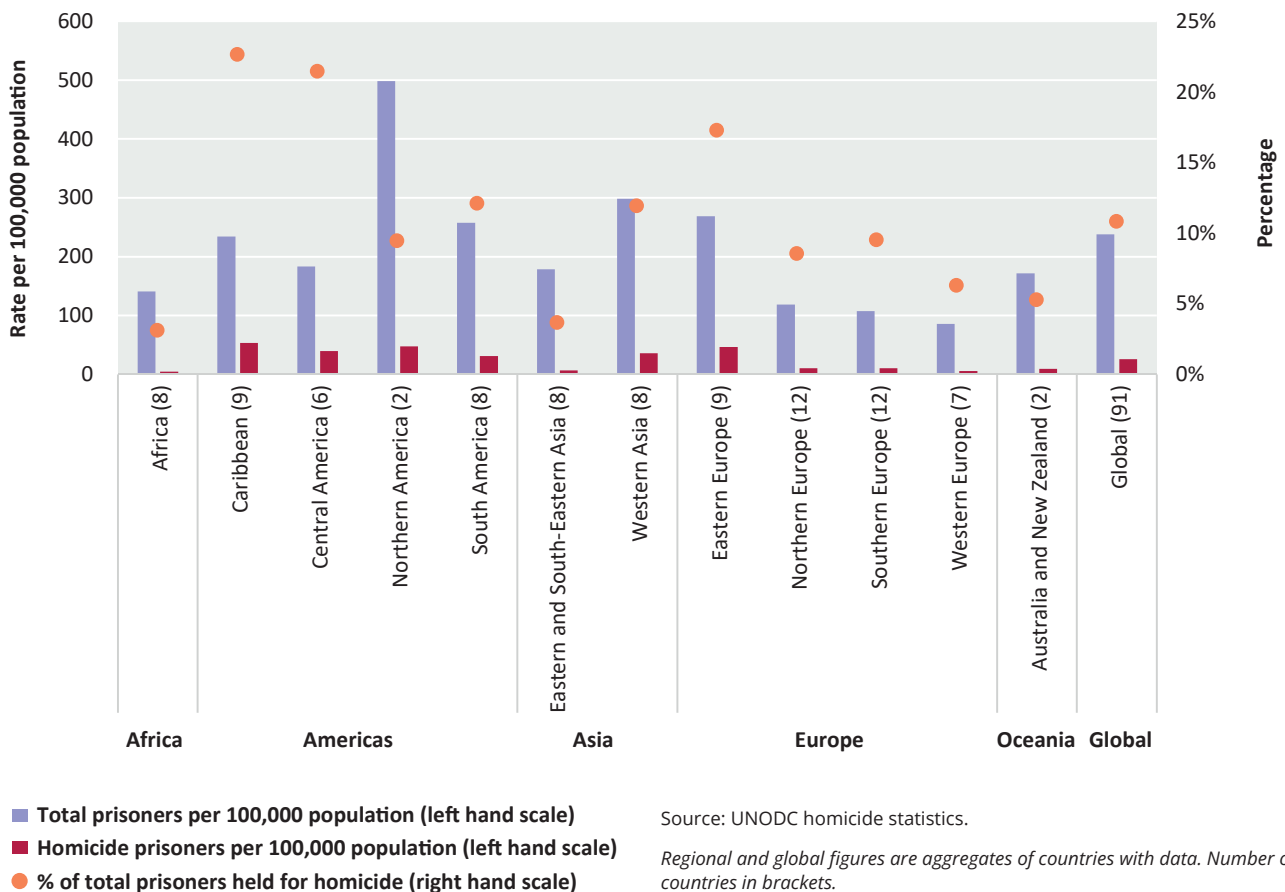
To evaluate the state's response to violence, understanding the progression of cases through the criminal justice system — arrest, prosecution, conviction and detention — is crucial. Attrition occurs as cases and suspects decrease at each stage due to various reasons, such as lack of evidence

or witnesses. Measuring individuals at each stage requires data from multiple agencies, presenting challenges like discrepancies and statistical gaps.

Notwithstanding these obstacles, tracking arrests, prosecutions and convictions compared to the number of victims offers valuable insights into the criminal justice system's effectiveness and resource needs. High attrition at the prosecution stage may indicate a need for more resources or training. Homicides without arrests, prosecutions or convictions contribute to impunity, potentially reflecting weak rule of law or challenges in solving cases involving certain types of homicides, such as those linked to organized crime. High homicide rates may strain law enforcement capacities, hindering effective investigation and processing of cases.

The persistence of stable or increasing numbers of intentional homicides and prosecutions, coupled with decreasing convictions, may suggest a backlog of pre-trial detainees for intentional homicide, emphasizing the need to address related challenges and uphold the principles of the rule of law and equal access to justice.

**FIG. 5** Rate of prisoners detained per 100,000 population, rate of prisoners detained for homicide per 100,000 population and percentage of prisoners convicted of homicide, as a percentage of total prisoners, in selected regions and countries, 2021 or latest year available

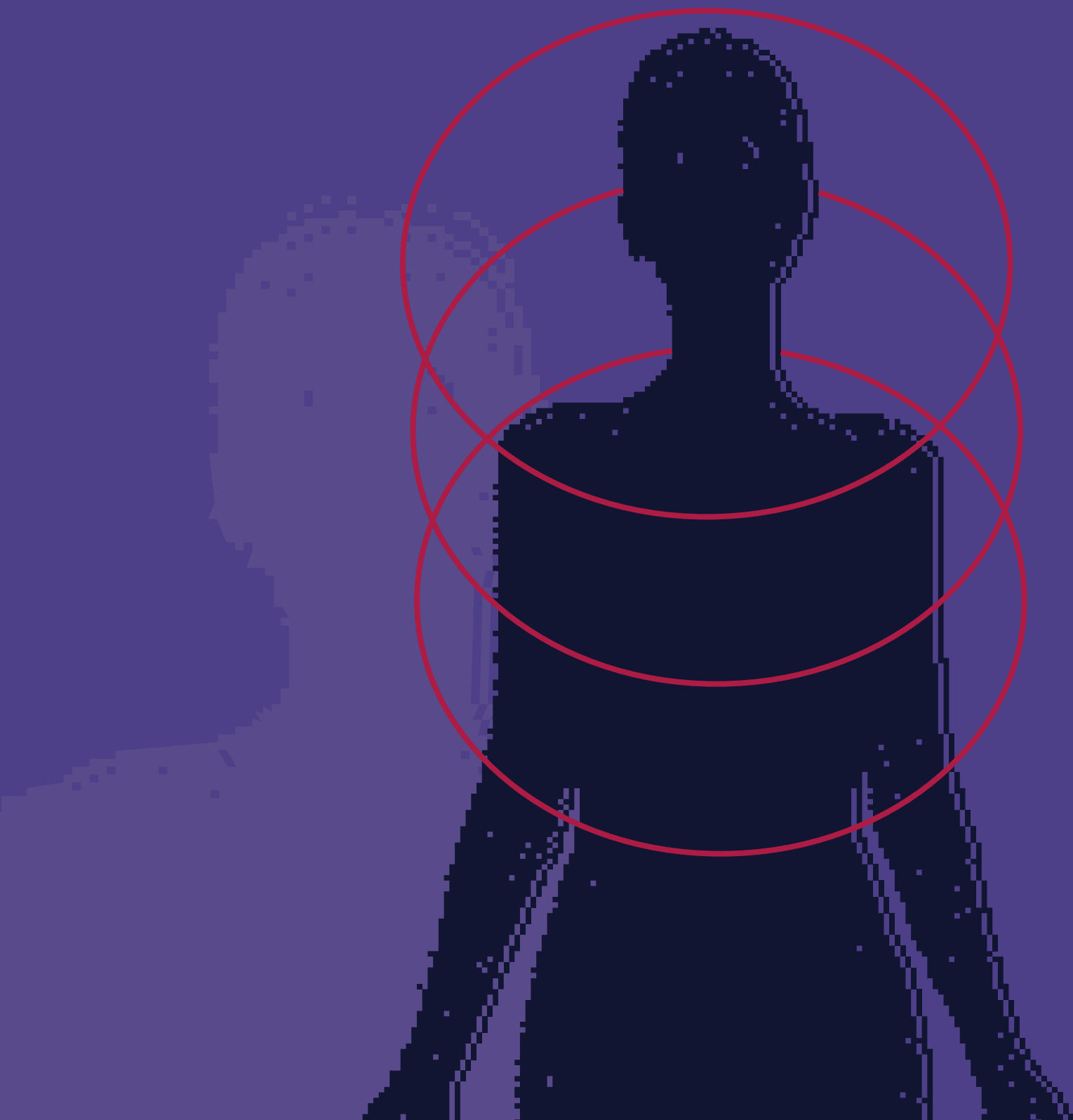


Based on data from 91 countries, 11 per cent of the prison population is sentenced for intentional homicide, with significant regional variation. In the Americas, particularly in the Caribbean and Central America, the number of homicide prisoners exceeds the global average. Northern America, with a high total prison population, has 47 homicide prisoners per 100,000 population. In Europe, Eastern European countries have higher rates of both total prisoners and homicide prisoners per 100,000 population compared to other subregions. Australia and New Zealand have a similar number of homicide prisoners per capita as Northern, Southern and Western Europe, but a higher rate of total prisoners, resulting in a lower share of prisoners held for homicide. In Western Asia, the number of homicide prisoners per 100,000 population is higher than the global average, with a share of persons held for homicide out of all prisoners of 12 per cent. Limited data in other regions hinders drawing conclusive comparisons. Globally, there were more than 11 million persons incarcerated in 2021. This would indicate that there could be more than 1 million persons in prison for intentional homicide in the world.



## **CHAPTER 2**

# **HOMICIDE TRENDS AND PATTERNS**



## Chapter 2

# HOMICIDE TRENDS AND PATTERNS

---

### Introduction to the concept of intentional homicide

Homicide is one of the most scrupulously recorded crimes and homicide data are considered among the most representative and comparable crime indicators, in particular for monitoring violent deaths. In some circumstances, homicide also represents a reasonable proxy for violent crime in general, as well as a robust indicator of levels of violence, both at the national level and for longitudinal and cross-national comparisons.

The definition of intentional homicide used in the *Global Study on Homicide* is the same as that developed by the United Nations Office on Drugs and Crime (UNODC) in the *International Classification of Crime for Statistical Purposes (ICCS)*, which defines intentional homicide as “Unlawful death inflicted upon a person with the intent to cause death or serious injury”. This definition contains three elements characterizing the killing of a person as intentional homicide:

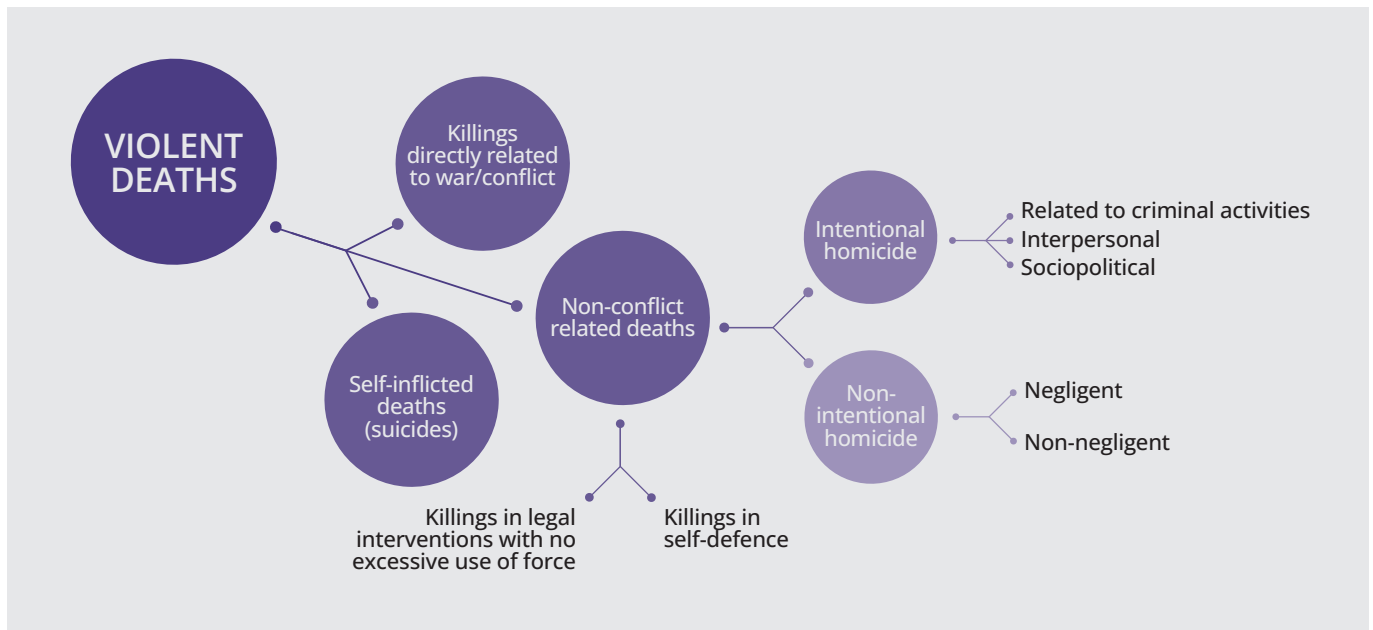
1. The killing of a person by another person (objective element)
2. The intent of the perpetrator to kill or seriously injure the victim (subjective element)
3. The unlawfulness of the killing, which means that the law considers the perpetrator liable for the unlawful death (legal element)

For international statistical purposes, all killings that meet the three criteria listed above are considered to be intentional homicides, irrespective of the specific definitions used by countries in their national legislation or other national practices.

The definitions used at the national and international levels may differ, and the concepts shown in the violent deaths framework below may overlap in three contexts: armed conflict, terrorism and killings by State authorities. From a statistical point of view there is a clear distinction between killings by State authorities that are considered to be legal interventions<sup>1</sup> and killings by State authorities that are considered unlawful and that must therefore be counted as homicide.<sup>2</sup> The definition of intentional homicide in ICCS includes “extrajudicial killings” and “killings caused by excessive use of force by law enforcement/State officials”, but excludes killings due to legal interventions.<sup>3</sup> From a practical point of view, however, distinguishing between these two categories may be a challenge for some national and international data systems. As a result, killings by State authorities considered to be homicide may be undercounted.

In conflict situations it is often difficult to disentangle lethal violence that is part of a conflict (including deaths from war operations), or of a lower-intensity continuation of conflict, from homicidal violence (both by combatants and non-combatants).<sup>4</sup> Similarly, it is sometimes difficult to separate typical combatant groups from organized crime groups and terrorist organizations, and, by extension, the deaths associated with their violent actions.<sup>5</sup> The separation of these types of death is further complicated by the difficulties inherent in the statistical recording of homicides in the context of large-scale conflicts.<sup>6</sup>

Killings by terrorists are deemed homicides under the ICCS classification if they meet the three criteria listed above (the specific category is sociopolitical homicide).<sup>7</sup> There can, however, be considerable ambiguity as to whether a particular intentional killing should be attributed to con-



flict, homicide or terrorism. There is no internationally agreed list of conflicts or of terrorist groups.<sup>8</sup> Insurgent groups may be classed as combatants, terrorists, or simply civilians, depending on the political context of the conflict. In practice, some countries do not include killings by groups they deem to be “terrorist” groups in their national homicide count.

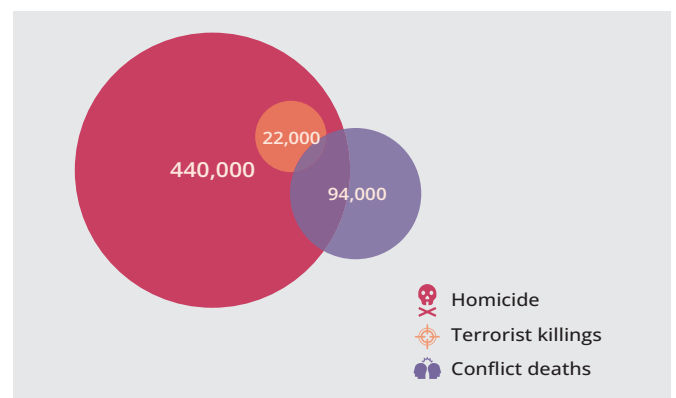
### Homicide is a bigger killer than armed conflict and terrorism combined

Globally, homicide accounts for many more deaths than conflict-related killings and terrorist killings combined (figure 1).<sup>9</sup> An annual average of around 440,000 deaths worldwide were caused by intentional homicide in the period 2019–2021, of which an estimated annual average of 22,000 can be attributed to terrorism.<sup>10</sup> The annual average number of conflict-related deaths during the same period was 94,000, not including the lives lost in the Ukraine conflict.<sup>11</sup> This means that homicide accounted for roughly five times as many deaths as armed conflict in the same period and for 20 times as many deaths as terrorism.

Despite an increase of more than 95 per cent in the number of conflict deaths recorded in the period 2021/22, which was primarily the result of escalating conflicts in countries such as Burkina Faso, Ethiopia, Mali, Somalia and Ukraine, available homicide data indicate that the global burden of homicide in 2022 was still double that of conflict deaths.<sup>12</sup>

In comparison with the number of deaths resulting from homicide, those attributable to terrorism and armed conflict are more variable over the years, with noticeable spikes in both types of killings recorded around 2014,

**FIG. 1** Average annual number of deaths caused by homicide, terrorism and conflict, 2019–2021 average



Sources: Homicide estimates are based on UNODC homicide statistics. Conflict death estimates are from the Uppsala Conflict Data Program/Peace Research Institute Oslo (UCDP/PRI) Armed Conflict Dataset (available at <https://ucdp.uu.se/exploratory>) and include deaths from state-based violence, non-state violence, and one-sided violence. Terrorist killings estimates are from the Global Terrorism Database. The Global Terrorism Database defines a terrorist attack as the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation. Data on terrorist killings for the year 2021 are not yet available (<https://www.start.umd.edu/gtd/>).

*Note: Death as a result of terrorist activities is counted as intentional homicide (ICCS). International datasets on conflict deaths and terrorism, on the one hand, and UNODC homicide statistics, on the other, have a certain degree of overlap. The same killing may meet the ICCS criteria, the criteria of the Uppsala Conflict Data Program (UCDP) database and those of the Global Terrorism Database. When, for example, people are killed by a terrorist group outside of conflict zones. Violence stemming from terrorism is subject to a great deal of scrutiny by the international community. This can partly be attributed to the nature of the victimization, terrorism’s impact on public life, and media and political attention, as well as the actual number of lives lost. Conflict deaths include deaths from state-based violence and non-state conflict refers to deaths where there is use of armed force between warring parties in a conflict dyad. This includes traditional battlefield fighting, guerrilla activities (e.g. hit-and-run attacks / ambushes) and all kinds of bombardments of military units, cities and villages etc. Both deaths of military and civilians are included. One-sided violence deaths refer to deaths stemming from attacks carried out by organized actors, targeting unarmed civilians.*

## Considerations for classifying conflict-related deaths and intentional homicides, and their overlap in conflict situations

In conflict situations, recognizing and classifying deaths as intentional homicides or conflict-related deaths (or both) can be a complex matter due to the existence of legal, operational and statistical challenges. *The International Classification of Crime for Statistical Purposes (ICCS)* defines intentional homicide as “unlawful death inflicted upon a person with the intent to cause death or serious injury”. This includes murder, honour killing, serious assault leading to death, death as a result of terrorist activities, femicide, infanticide, extrajudicial killings and more.

To determine whether conflict-related deaths should be counted as intentional homicide or not, the intent of the perpetrator and the legality of the killing need to be determined; in other words, the evaluation has both a subjective and legal element. As a statistical tool to classify offences, ICCS is not prescriptive about how countries should determine intent, nor has any bearing on the legal aspect, since the legality of a specific act is determined by Member States and international law.

ICCS offers statistical categories for conflict-related deaths that are not classified as intentional homicide based on the intent (as determined by the investigative authority) and legality principles (as determined in (international) law). For example, ICCS category 110131 related to homicide concerns unlawful killings associated with armed conflict. These are defined as “acts that result in death or serious injury, or intend to cause death or serious injury in violation of the laws and customs applicable in armed conflict as expressed in the Rome Statute and the Geneva Conventions (1949)”.

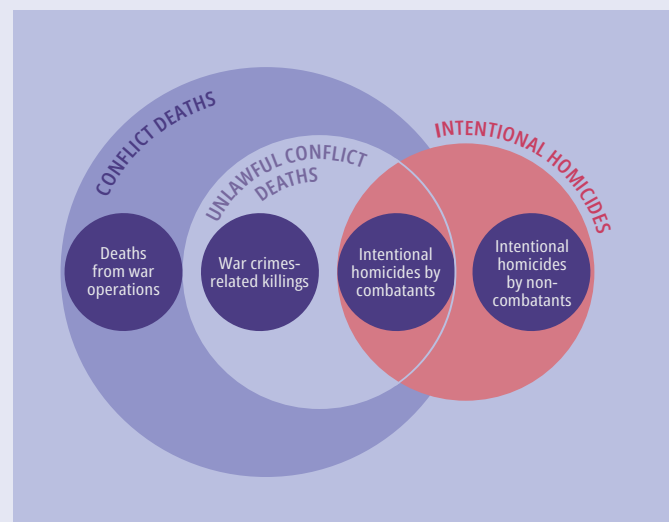
The specific classification of violent deaths in situations of conflict is particularly difficult as it is conceptually challenging to discriminate between different forms of lethal violence. For example, it can be difficult to distinguish typical combatant groups from organized crime groups and terrorist organizations. Moreover, forms of armed confrontations are growing increasingly complex (with the targeting of civilians or military hors de combat increasingly used as a conflict tactic, increased use of unmanned aerial vehicles, etc.).<sup>a</sup>

In this continuum of violence, differentiating the count of deaths strictly related to conflicts from deaths related to unlawful killings is important for understanding the nature of the problem and the tools available to resolve it. From a policy perspective, it is important to distinguish between unlawful killings and other types of killings in all situations, including conflict-related deaths, since unlawful killings are to be prosecuted by criminal justice institutions, while the others are not.

The different categories of violent death in conflict situations have been defined and classified in ICCS and, depending on the definition of conflict, killings considered in ICCS as intentional homicide may partially overlap with conflict deaths. Considering the policy relevance of counting conflict deaths in their totality (including unlawful or lawful killings) and the need to maintain consistency with ICCS, four types of intentional killings can be identified when considering the totality of intentional homicides together with conflict-related deaths in the context of conflict situations:

1. Lawful conflict deaths due to war operations that fall outside of the scope of the criminal justice system.
2. Unlawful conflict deaths committed by combatants that are in breach of international humanitarian law and considered war crimes. These are covered under ICCS category 11013 “war crimes” and are considered criminal offences.
3. Unlawful conflict deaths committed by combatants outside of combat operations that do not amount to war crimes. These are covered under ICCS category 0107 “unlawful killing associated with armed conflict” and are considered criminal offences.
4. Intentional homicides unrelated to the conflict committed by non-combatants. These are covered under ICCS category 0101 “intentional homicide” (taking into account the exclusions listed in ICCS, such as death due to legal interventions and justifiable homicide in self-defence) and are considered criminal offences.

### Overlap between intentional homicides and conflict-related deaths



### Classifying armed conflict

Aside from the potential overlap with homicide, in order to properly designate a death as “conflict-related”, it is crucial to determine whether the situation in which the killing occurred can be classified as armed conflict. International humanitarian law broadly distinguishes between two types of armed conflict:<sup>b</sup> (1) international armed conflicts, which exist wherever there is armed force between States;<sup>c</sup> and (2) non-international armed conflicts (or internal armed conflict), which occur whenever there is protracted armed violence between governmental authorities and organized armed groups or between such groups within a State.<sup>d</sup>





In the case of international armed conflicts, it is possible to distinguish between declared wars where the state of war is recognized by the parties concerned and other forms of inter-State armed conflict that do not depend on how the parties define them but rather on verifiable facts in accordance with established objective criteria. These conditions are characterized by hostility between States parties motivated by the intention to harm the other side.<sup>e</sup>

In the case of non-international armed conflicts, hostilities take place either between one (or more) armed group(s) and government forces or solely between armed groups. A non-international armed conflict is distinct from situations of internal disturbances and tensions, such as riots, isolated and sporadic acts of violence and other acts of a similar nature.<sup>f</sup> The difficulty lies in assessing whether a conflict situation has the characteristics of “protracted armed violence”. Some of the criteria that may be used for such assessment are the intensity of the violence and the organization of the parties.<sup>g</sup> However, no definition exists in international law for either of these two concepts.

Another aspect that may be taken into consideration when defining an armed conflict is the motives of the non-governmental groups involved in the conflict situation.<sup>h</sup> Groups that are aiming to achieve a political objective can be considered as parties to non-international armed conflicts, while purely criminal organizations such as mafia groups or territorial gangs would not be considered as parties to a non-international armed conflict. However, there is currently no legal basis for this position in international law. This would also prove difficult to implement in practice, as the motives of armed groups are never uniform and cannot always be clearly identified.

Adding to this conceptual complexity, the classification of armed violence also has a political dimension. States may be unwilling to label a conflict situation as armed conflict in order to deny applicability of international humanitarian law. There is no independent international body authorized to classify armed conflicts.

a See, for example, Davies, S., Patterson, T. and Öberg, M., “Organized violence 1989–2021 and drone warfare”, *Journal of Peace Research* 2022, vol. 59, No.4 (June 2022), pp. 593–610.

b Vité, S., “Typology of armed conflicts in international humanitarian law: legal concepts and actual situations”, *International Review of the Red Cross*, vol. 91, No. 873 (March 2009).

c Common Article 2 of the Geneva Conventions.

d Common Article 3 of the Geneva Conventions and Article 1 of Additional Protocol II.

e Vité, S., “Typology of armed conflicts in international humanitarian law: legal concepts and actual situations”, *International Review of the Red Cross*, vol. 91, No. 873 (March 2009).

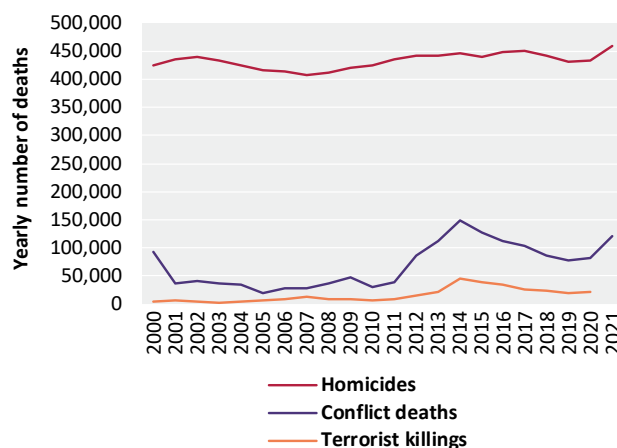
f Article 1(2) of Additional Protocol II.

g Vité, S., “Typology of armed conflicts in international humanitarian law: legal concepts and actual situations”, *International Review of the Red Cross*, vol. 91, No. 873 (March 2009).

h Ibid.

which can be attributed in part to the armed conflict in the Syrian Arab Republic (figure 2). Yet while armed conflicts can cause many more deaths at specific points in time, such as during the Rwandan genocide in 1994, homicide accounts for significantly more lives lost over time. Since 2000, approximately 9.5 million people worldwide have lost their lives to homicidal violence, compared with an estimated 340,000 deaths resulting from terrorist attacks and roughly 1.5 million related to armed conflict. The cumulative number of homicide victims recorded globally since 2000 is roughly equal to the entire populations of large urban agglomerations<sup>13</sup> such as London (United Kingdom of Great Britain and Northern Ireland), Tehran (Islamic Republic of Iran), Nagoya (Japan) or Hyderabad (India).

**FIG. 2** Number of deaths caused by homicide, armed conflict and terrorism, 2000–2021



Sources: Homicide estimates are based on UNODC homicide statistics. Conflict death estimates are from the UCDP/PRIO Armed Conflict Dataset (available at <https://ucdp.uu.se/exploratory>) and include deaths from state-based violence, non-state violence and one-sided violence. Terrorist killings estimates are from the Global Terrorism Database (available at <https://www.start.umd.edu/gtd/>). Data on terrorist killings for the year 2021 are not yet available.

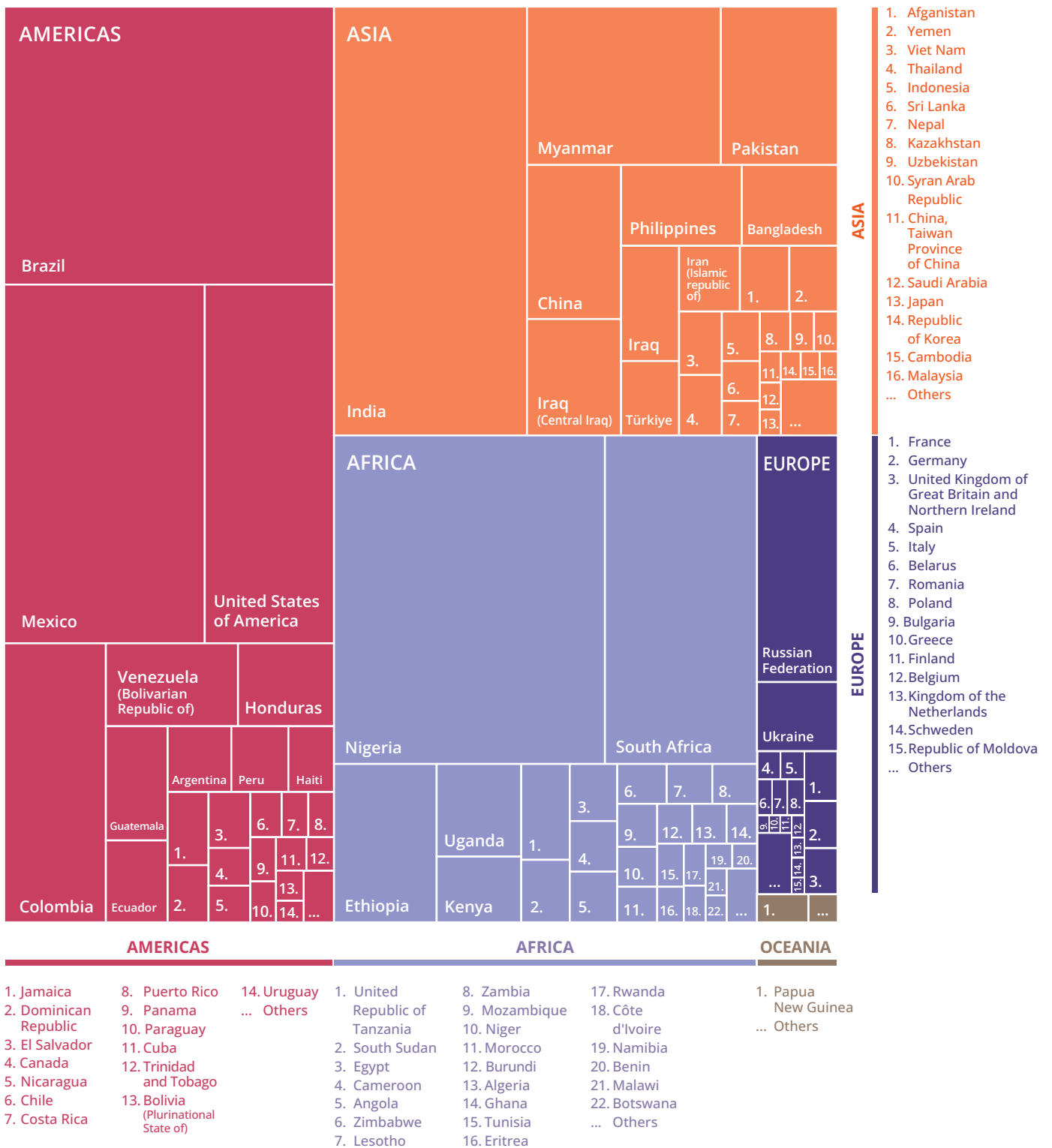
## Extent of intentional homicide in absolute numbers

It is estimated that there were roughly 458,000 victims of intentional homicide worldwide in 2021, meaning that an average of 52 individuals lost their lives to homicidal violence every single hour. This global estimate is based on the updated UNODC homicide statistics dataset, which draws on national data submitted to UNODC by Member States through the annual United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems (UN-CTS) as well as other data sources.

Accounting for an estimated 176,000 victims, the largest number of intentional homicides in 2021 was in Africa, followed by the Americas, with more than 154,000 victims. In Asia, an estimated 109,000 people were killed intentionally in 2021, while the figure was 17,000 in Europe and 1,000 in Oceania (figure 4).<sup>14</sup> This means that Africa accounted

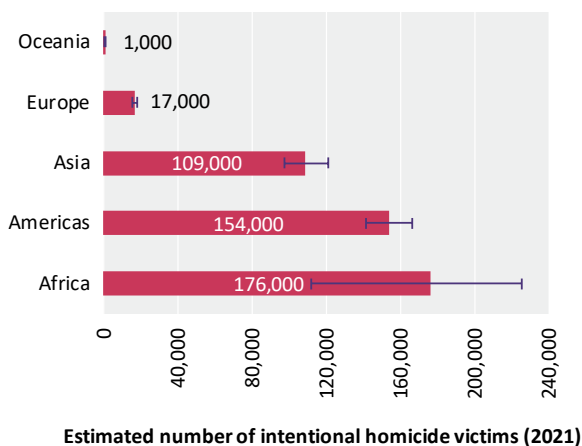


FIG. 3 Magnitude of intentional homicide, by region and available country, 2021 or latest year available



Source: UNODC homicide statistics.

**FIG. 4** Total number of homicide victims, by region, 2021



Source: Estimates based on UNODC homicide statistics.

*Note: Uncertainty bands represent possible estimation errors due to the imputation of missing values at the country level. The bands do not represent probability confidence intervals. The estimates are based on the latest available data, which remain limited, especially in Africa and Asia. The size of the error bars provides an indication of the level of uncertainty that the estimates carry at the regional level.*

for roughly 38 per cent of all homicide victims globally in 2021, while the Americas accounted for 34 per cent, Asia for 24 per cent, Europe for 4 per cent and Oceania for fewer than 1 per cent.

Large disparities in homicide levels are also apparent at the national level. Indeed, a very small number of large, populous countries accounted for a significant share of the estimated global homicide toll of 458,000 victims in 2021. For example, Brazil and Nigeria, which jointly make up 6 per cent of the world population, accounted for around one fifth (20 per cent) of all homicide victims worldwide.<sup>15</sup>

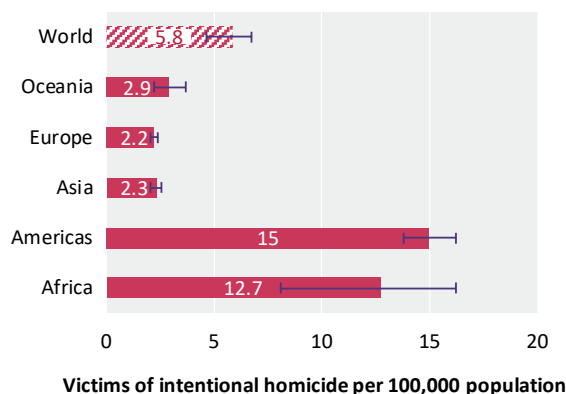
Taken together, the 10 countries with the largest absolute numbers of homicide victims account for around 58 per cent of all homicide victims worldwide, despite representing only 37 per cent of the global population (figure 3).<sup>16</sup> As differences in absolute numbers of homicide victims between regions and countries are also a reflection of differences in the size of regional and national populations, however, it is important to examine the extent of homicide in terms of the homicide rate (per 100,000 population).

## Extent of homicide by rate

Although the magnitude of homicidal violence may be easier to conceive of in terms of the absolute number of victims, the homicide rate by population is better suited to capturing the relative risk of falling victim to homicide in a specific region or country. This is because the homicide rate takes into account differences across regions and countries in terms of population size and population growth. The global homicide rate in 2021 is estimated at 5.8 victims per 100,000 population.<sup>17</sup> This estimate represents an improvement in data quality compared with the global estimates published in previous editions of the *Global Study on Homicide*, but there is still a considerable degree of uncertainty around the extent of homicide in numerous countries, in particular in Africa, Asia and Oceania.<sup>18</sup>

Although the absolute number of intentional homicides was highest in Africa in 2021, there was a greater risk of being killed intentionally in the Americas than in any other region (figure 5), as the homicide rate in the Americas is estimated at 15 per 100,000 population as opposed to 12.7 in Africa, 2.9 in Oceania, 2.3 in Asia and 2.2 in Europe.

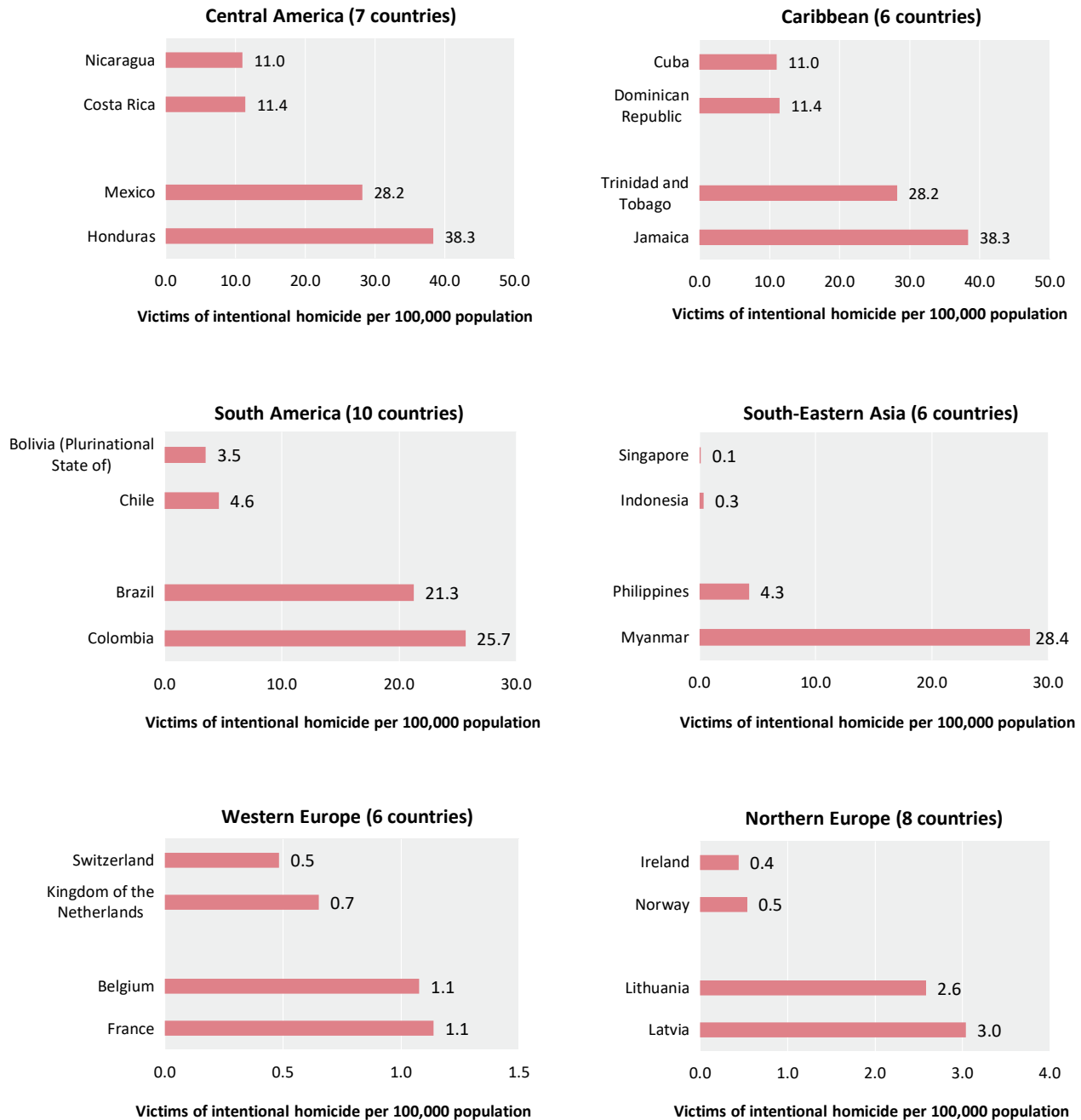
**FIG. 5** Homicide rate (victims of intentional homicide per 100,000 population), by region, 2021



Source: Estimates based on UNODC homicide statistics.

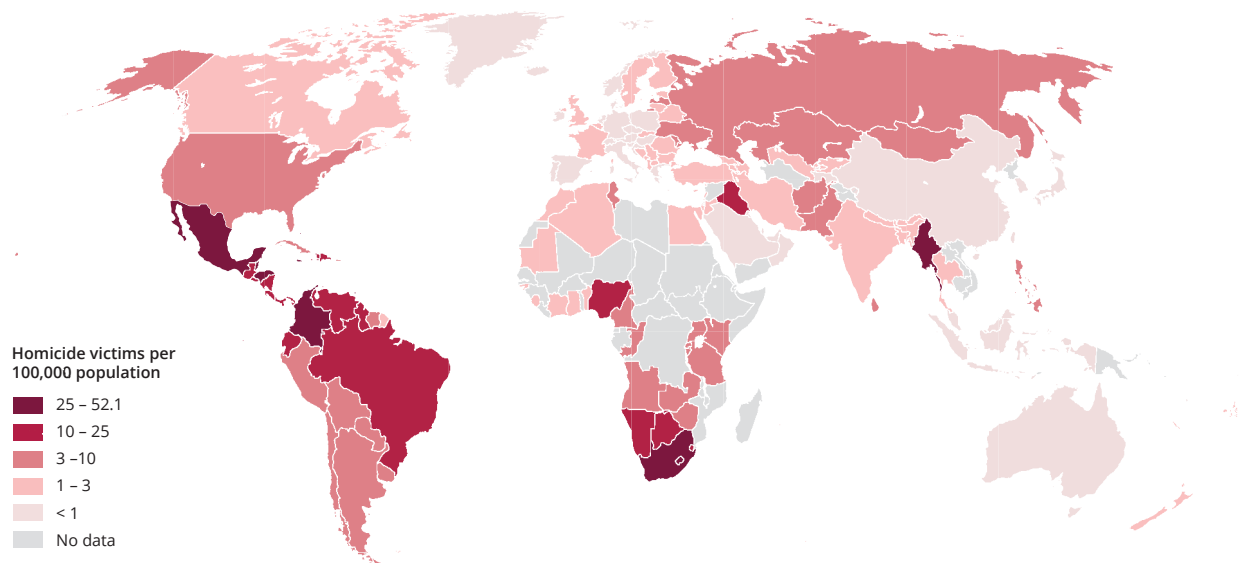
*Note: Uncertainty bands represent possible estimation errors due to the imputation of missing values at the country level. The bands do not represent probability confidence intervals. The estimates are based on the latest available data, which remain limited, especially in Africa and Asia. The size of the error bars provides an indication of the level of uncertainty that the estimates carry at the regional level.*

**FIG. 6** Countries with the highest or lowest homicide rates in selected subregions, 2021 or latest year since 2019 with available data



Source: UNODC homicide statistics. Data for Cuba are from 2019.

Note: Countries and territories with a population of less than 1 million and countries with no available homicide data for the period 2019–2021 are not considered for the comparison.

**MAP 1** Homicide rate by country or territory, 2021 or latest available year since 2016

Source: UNODC homicide statistics.

Notes: The following countries and territories count offences instead of victims: Belgium, Benin, Burundi, Cameroon, Congo, Côte d'Ivoire, Gibraltar, Guam, Indonesia, Iran (Islamic Republic of), Kyrgyzstan, Lesotho, Philippines, Thailand, United States Virgin Islands, Zambia.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. 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. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

A total of 18 countries and territories had a homicide rate above 20 per 100,000 population in 2021, most of them in the Americas (14 in total), three in Africa (South Africa, Lesotho and Nigeria) and one in Asia (Myanmar).<sup>19</sup> Taken together, these 18 countries and territories make up some 10 per cent of the global population, yet they accounted for more than 41 per cent of the global homicide toll in 2021. That said, eight of them are small islands in the Caribbean with a population of less than 1 million, which means that their homicide rates are highly variable and that just a few homicides can lead to a dramatic change in the homicide rate.

As regional homicide rates are effectively a combination of the homicide rates in all the countries located in a specific region, they inevitably mask considerable variability in levels of lethal violence within regions, subregions and between countries (figure 6). In 2021, the highest national homicide rate in South-Eastern Asia (Myanmar), for example, was roughly 28 times higher than the lowest (Singapore) and the highest national homicide rate in the Caribbean (Jamaica) was 12 times higher than the lowest (Cuba).<sup>20</sup>

In Central America and South America, disparities between national homicide rates are also large, but less pronounced. For example, in 2021, the highest national homicide rate in Central America (Honduras) was roughly seven times

higher than the lowest (Nicaragua) and the highest national homicide rate in South America (Colombia) was eight times higher than the lowest (Bolivia (Plurinational State of)).

In Europe, disparities between national homicide rates vary by subregion. In Western Europe, for example, the highest national homicide rate in 2021 (France) was roughly double the lowest (Switzerland), while in Northern Europe, the highest (Latvia) was seven times higher than the lowest (Ireland), comparable to the disparity between national homicide rates in Central America, albeit at a much lower level (figure 6). Meanwhile, in Eastern Europe, the highest national homicide rate (Russian Federation) was 15 times higher than the lowest (Czechia), a greater disparity than in the Caribbean.

Although several countries have yet to release their 2022 homicide figures, available data indicate a decrease in the global homicide rate in 2022, owing for the most part to a decrease in the number of homicides in Asia and to a lesser extent in the Americas. While this decrease partially offsets the significant increase in the global homicide rate observed in 2021, it is important to note that several countries in Africa and in the Caribbean that have reported 2022 data experienced an increase in the number of homicides from the previous year, indicating a probable rise in the homicide rate in those regions from 2021 to 2022.<sup>21</sup>

## Homicide data: criminal justice data sources versus public health sources

Homicide data are mostly derived from either criminal justice or public health data registries. In the former, data are generated by law enforcement authorities in charge of recording and investigating a criminal act, which are typically police departments or public prosecutions. Health authorities also collect data on cause of death, which is determined by national medical services. UNODC primarily collects criminal justice data through UN-CTS, in line with ICCS,<sup>a</sup> as well as other available sources. Public health data on homicide, on the other hand, are sourced from national vital registration statistics provided by Member States or collected by the World Health Organization (WHO) and are categorized as deaths caused by violence according to the International Classification of Diseases and Related Health Problems (ICD). ICD-10 codes X85-Y09 (injuries inflicted by another person with intent to injure or kill) and ICD-10 code Y87.1 (sequelae of assault), or ICD-11 codes PD50-PF2Z and PJ20-PJ2Z, generally correspond to the definition of intentional homicide.

In the case of countries where data are available from both sources, preference is given to criminal justice data, as they provide legal information on the criminal act, which is needed to align the data with ICCS. In such cases, public health data are still used to assess possible discrepancies and, in exceptional cases (such as Brazil and Mexico), are preferred over

criminal justice data due to their comprehensiveness and quality. Where there are no criminal justice data available, public health data are used to complement data on total homicide counts, although the number of countries where this is necessary has decreased considerably over the years.

Finally, household surveys including a crime victimization module with questions on the prevalence of interpersonal killings in the household may be used to estimate the rate and number of intentional homicides in a country. A concrete example of such an approach is the Survey on Quality and Integrity of Public Services in Nigeria, which integrates a module enabling the estimation of intentional homicides. Another example is the National Survey on Victimization and Perception of Public Security (ENVIPE), in Mexico, which includes questions on homicide.<sup>b</sup>

a ICCS includes a numerical coding of the categories covered, in accordance with their level in the classification. Homicide offences are included in the first level of ICCS; code 0101 is assigned to intentional homicide. For more information, see page 33 of ICCS.

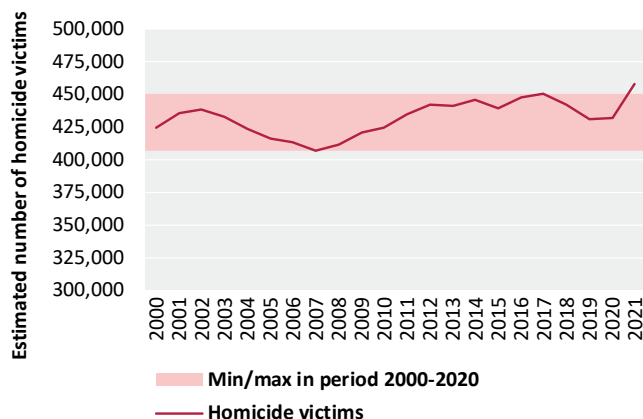
b National Institute of Statistics and Geography (INEGI), National Survey on Victimization and Perception of Public Security (ENVIPE) 2019. Available at <https://en.www.inegi.org.mx/programas/envipe/2019/>.

## Global homicide trend

Fluctuating between around 400,000 and 450,000 victims annually, the total number of homicides recorded worldwide each year has remained relatively stable over the past two decades (figure 7). Since 2007, there has been little improvement in the absolute number of homicide victims at the global level, with 2021 being an exceptionally lethal year in which roughly 458,000 people were killed intentionally,

more than in any other year in the previous two decades (figure 7). Although the impact of the COVID-19 pandemic on intentional homicides varied across countries in 2020,<sup>22</sup> the noticeable spike in killings in 2021 can be attributed in part to the economic repercussions of COVID-related restrictions,<sup>23</sup> as well as to an escalation of gang-related and sociopolitical violence in several countries, including Ecuador and Myanmar.

**FIG. 7** Global trend in the total number of homicide victims, 2000–2021



When considering the global number of homicide victims in relation to the global population, the global homicide rate can be seen to have declined by 16 per cent between 2000 and 2021, from 6.9 to 5.8 per 100,000 population, which reflects the fact the absolute number of homicides has remained somewhat stable despite the rapid growth of the global population.<sup>24</sup>

The homicide rate is one of the main indicators agreed on by Member States for measuring progress towards target 16.1 of the Sustainable Development Goals: “Significantly reduce all forms of violence and related death rates everywhere”. Reducing the number of intentional homicides is crucial to this target because, as mentioned above, homicidal violence is responsible for many more deaths worldwide than armed conflict and terrorism combined.

## Assessing the quality of homicide data

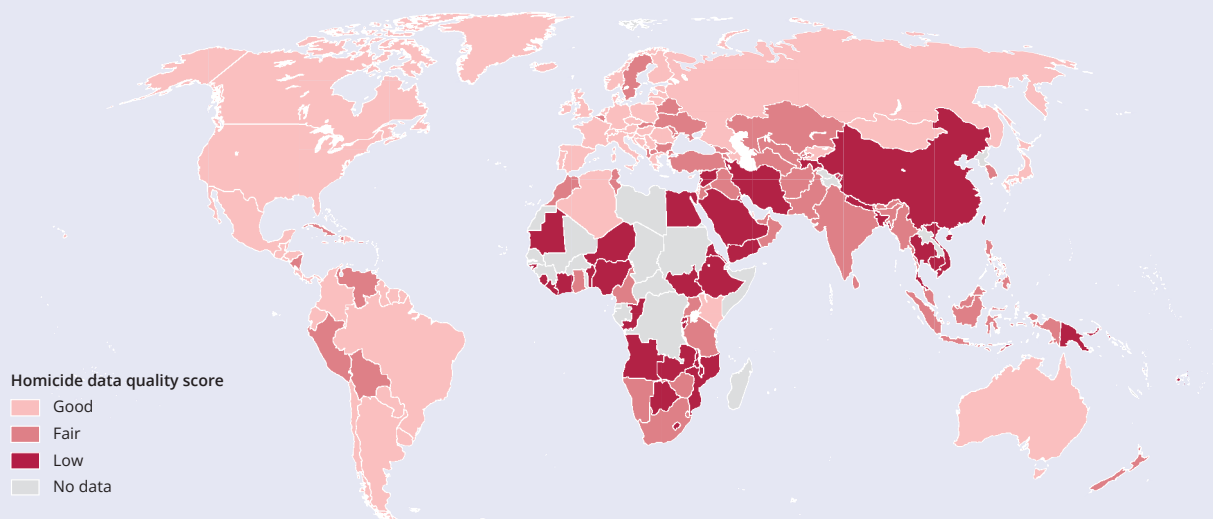
The dataset used for the *Global Study on Homicide 2023* is the result of an extensive and continuous process of data collection and validation. Numerous improvements in terms of global coverage, timeliness and disaggregation of data have been made to enable the presentation of a more accurate picture of trends and patterns around the world, making comparisons with figures from previous editions of the *Global Study on Homicide* difficult. For the *Global Study on Homicide 2019*, UNODC used a quality measurement framework to assign country-specific data quality scores based on the available homicide data.<sup>a</sup> The purpose of this framework is to assess how closely the data represent the reality of the situation and the international comparability of the data, as well as to serve as a method for identifying and addressing areas where improvements in the data collection process can be made. Using the framework, a country-specific data quality

score was created based on five dimensions:

- Comparability
- Completeness
- Timeliness
- Internal consistency
- External consistency

Each dimension contains a set of quantitative criteria used to determine a quality score per country and per dimension, which is then categorized in three levels (good, fair and low). The total quality score corresponds to the weighted average of the five quantitative dimension scores and is converted into the same three levels. The total quality score was computed for 198 countries and territories.

### Quality score categories for homicide data, 2012–2021



Source: UNODC homicide statistics. For details about how the quality score categories were calculated for each country, see the methodological annex to this study.

*Notes: The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Dashed lines represent undetermined boundaries. 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. The final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).*

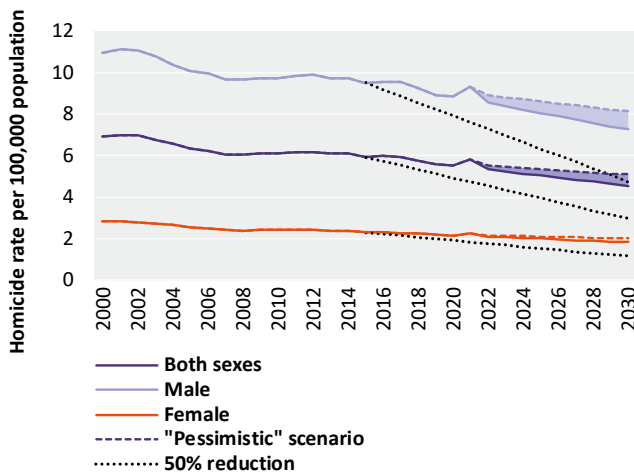
a For details, see the methodological annex to the present study.

If the increase in homicide in 2021 is an indication of a trend reversal, target 16.1 of the Sustainable Development Goals will definitely not be met, as shown in the “pessimistic” scenario in figure 10. In a more “optimistic” scenario in which 2021 is considered to be an exceptional year with no bearing on future homicide trends, projecting the trend in the homicide rate from the period 2015–2020<sup>25</sup> to 2030, the deadline of the Sustainable Development Goals, suggests that if this pattern of violence persists, the global homicide

rate will be in the region of 4.6 per 100,000 population in 2030, resulting in an overall decrease of just 23 per cent from the homicide rate of 5.9 per 100,000 population in 2015, with a very similar decrease for both sexes (figure 8). This projected decrease in the global homicide rate would also fall short of the significant reduction referred to in target 16.1 of the Sustainable Development Goals, which can be translated as a decrease in the homicide rate of at least 50 per cent by 2030 (see dotted line in figure 8).



**FIG. 8** Trends in and projections of the global homicide rate (per 100,000 population), by sex, 2000–2030



Source: Estimates based on UNODC homicide statistics.

Note: Projections for years 2022–2030 represent linear extrapolations of trends observed for years 2015–2020 (“optimistic scenario”, solid line) and for years 2015–2021 (“pessimistic scenario”, dashed line).

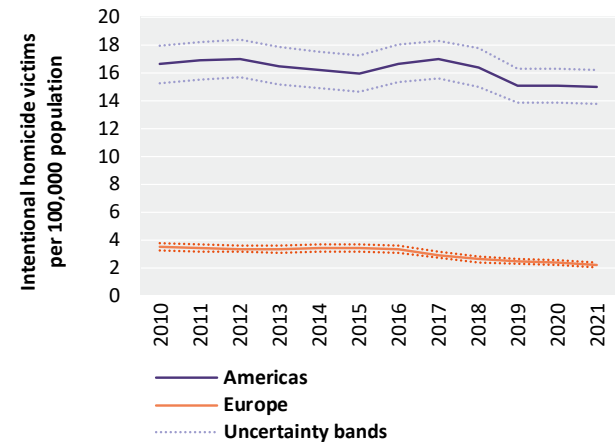
### Regional homicide trends

Just as the regional homicide rate masks variability in levels of lethal violence within regions, subregions and between countries, the global trend in the homicide rate hides significant variability and disparities at the regional level. For example, the homicide rate in Europe has declined modestly over the past decade, whereas the homicide rate in the Americas has undergone greater fluctuation over time, with some significant decreases recorded since 2017 (figure 9). Nonetheless, in 2021, the homicide rate in the Americas remained more than six times higher than in Europe.

Africa is the region where the homicide rate has the greatest level of uncertainty because of the limited availability of trend data from countries in the region. The data available suggest, however, that the homicide rate in Africa has remained relatively stable over the past decade, although there was a marked uptick in killings recorded in 2021, almost two years into the COVID-19 pandemic (figure 10), which can be partly attributed to sharp increases in the number of intentional homicides in Kenya and South Africa from the end of 2020 to the end of 2021.

A similar phenomenon occurred in Asia where, despite the homicide rate declining modestly over the past decade, from 2.7 per 100,000 population in 2010 to 2.3 in 2021, the downward trend was reversed in 2021 after a sharp increase in killings, most notably in Myanmar, drove the homicide rate back to a level not seen since 2016. In Oceania, the homicide rate has also remained relatively stable, fluctuating at around 2.9 per 100,000 population over the past decade (figure 10).

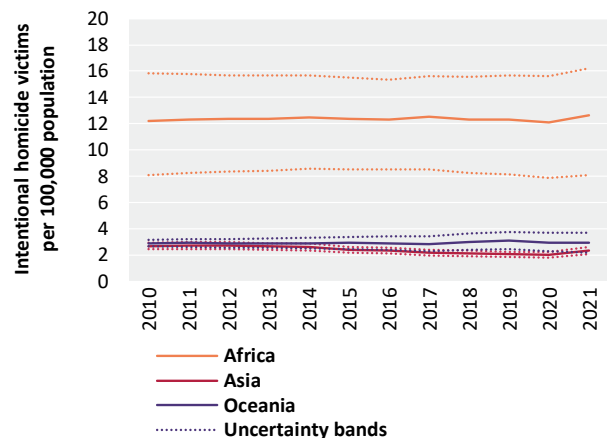
**FIG. 9** Trends in the homicide rate in the Americas and Europe, 2010–2021



Source: Estimates based on UNODC homicide statistics.

Note: Uncertainty bands represent possible estimation errors due to the imputation of missing values at the country level. The bands do not represent probability confidence intervals. The estimates are based on the latest available data, which remain limited, especially in Africa and Asia. The size of the error bars provides an indication of the level of uncertainty that the estimates carry at the regional level.

**FIG. 10** Trends in the homicide rate in Africa, Asia and Oceania, 2010–2021



Source: Estimates based on UNODC homicide statistics.

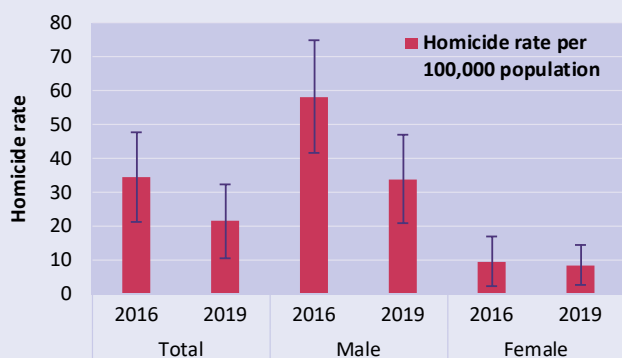
Note: Uncertainty bands represent possible estimation errors due to the imputation of missing values at the country level. The bands do not represent probability confidence intervals. The estimates are based on the latest available data, which remain limited, especially in Africa and Asia. The size of the error bars provides an indication of the level of uncertainty that the estimates carry at the regional level.

## Estimating the homicide rate in Nigeria

In Nigeria, the most populous country in Africa, primary research has been carried out on the extent of homicidal violence, but different data sources paint different pictures. Criminal justice data on homicide in Nigeria do not capture the full extent of lethal victimization in the country and seem incomplete. In 2017, for example, the Nigeria Police Force recorded 3,219 homicides,<sup>a</sup> resulting in a homicide rate of roughly 1.6 per 100,000, which was lower than in Canada. This may indicate that only a limited share of all the homicides in the country make it to the official records, not least given that, based on a model that imputes homicide data based on socioeconomic indicators, WHO estimated that there were 33,817 victims of homicide in Nigeria in 2012.<sup>b</sup> Homicide is not included among the leading causes of death of men and women in Nigeria by WHO, however.<sup>c</sup>

An alternative source to official statistics is open-source monitoring, recording violent deaths as they are reported in the media and other sources. Yet just as police sources may fail to record all homicides, not every homicide may be recorded in open sources and reliance on open sources can introduce bias. Intimate partner homicides, for example, are less likely to appear in the media than organized attacks, thus in order to capture killings that may be considered less dramatic, or that occur in more remote areas, an alternative is to gather data through household victimization surveys. To that end, in April and May 2016, the Nigerian National Bureau of Statistics, in cooperation with UNODC, conducted a survey with questions designed to elicit the number of homicides in the country. In total, 33,067 households were polled in all 36 of the country's states and the capital territory. This resulted in a national estimate of roughly 64,000 homicides per year, corresponding to an annual rate of some 34 homicides per 100,000 population between 2013 and 2016.<sup>d</sup> This figure is not only much higher than the official figures reported by the police but also most public health or media-monitoring estimates.

Estimated homicide rate in Nigeria, by sex, 2016 and 2019



Source: UNODC and National Bureau of Statistics, *Corruption in Nigeria: Patterns and Trends* (Vienna, 2019).

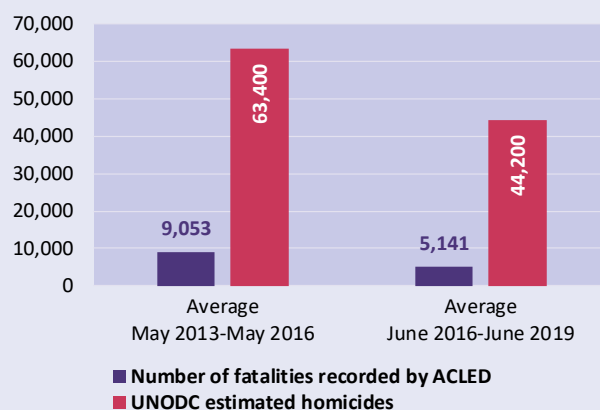
A follow-up survey conducted in 2019 resulted in a significantly lower estimate of 44,200 homicides, corresponding to an annual rate of 22 per 100,000, between 2016 and 2019. The

resulting decrease from the previous survey, while dramatic, was also reflected in other data sources, such as the Armed Conflict Location & Event Data Project (ACLED) conflict event fatality data.<sup>e</sup>

Questions remain about the validity of the estimates of intentional homicides resulting from the household surveys and refer mostly to whether respondents understood the questions accurately and excluded unintentional homicides and other deaths from their answers. Moreover, the household surveys did not cover certain groups of people, such as victims who lived in single-person households, victims who lived in closed settings, such as refugee camps, foster homes or prisons, and victims who lived in households with no surviving household members who could be interviewed. Other groups not covered in the survey samples included homeless people and people who had moved abroad between the reference period and the time the surveys were conducted.

Despite these limitations, the high estimates obtained in the two household surveys indicate that improvements in national data collection efforts and criminal justice statistics are urgently needed in order to more accurately determine the actual level of lethal violence in Nigeria and identify the underlying causes of any fluctuations.

Annual number of conflict fatalities estimated by ACLED and of homicides estimated by UNODC in Nigeria, three-year averages, 2013–2019



Source: Elaborated by UNODC with data from ACLED and UNODC homicide statistics.

- a National Bureau of Statistics, *Crime Statistics: reported Offences by Type and State* (2017).
- b According to the WHO Representative in Nigeria, "...the World Health Organization does not have data on the cause of death in Nigeria." Official letter from WHO Nigeria, 23 June 2022. A link provided in the letter to data from the National Population Commission showed data for 14 of Nigeria's 36 states totalling 3,588 deaths from all causes in 2021, of which 2,114 were certified as to cause of death. These data suggest, for example, that only 34 people died from all causes in Kano State in 2021, a state with over 14 million people.
- c For more information, see <https://data.who.int/countries/566>.
- d UNODC, *Global Study on Homicide 2019*, Booklet 2, *Homicide: Extent, Patterns, Trends and Criminal Justice Response* (Vienna 2019), p. 24.
- e Based on annual figures, the average number of violent deaths recorded by Nigeria Watch was 16,011 between 2013 and 2016 and 10,865 between 2016 and 2019.

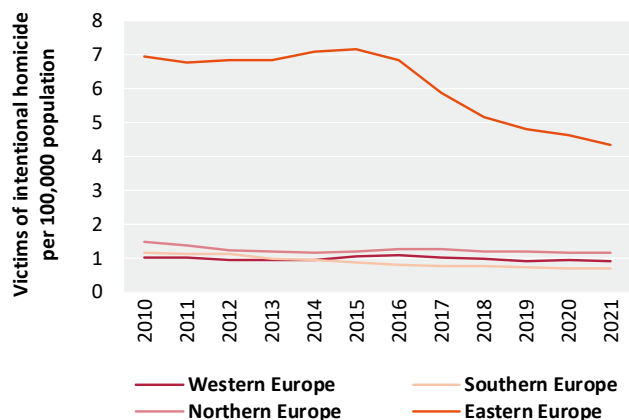


## Subregional homicide trends

### Europe

Since the early 1990s at least, homicide rates in the subregions of Europe have generally remained below the global average. The exception is Eastern Europe,<sup>26</sup> which is also the European subregion where the most noteworthy homicide trend has been seen over the past decade. The homicide rate has declined significantly in Eastern Europe during this period, albeit from a much higher level than in the other European subregions (figure 11), from an estimated 6.9 per 100,000 population in 2010 to 4.3 per in 2021. Given that Eastern Europe includes the Russian Federation, which has a far larger population than any other country in the subregion, the declining homicide trend in Eastern Europe has been primarily driven by the trend in that country, which has reported a marked (40 per cent) decline in the annual number of homicides to UNODC, from roughly 17,000 in 2010 to less than 10,000 in 2021.

**FIG. 11** Trends in the homicide rate in Europe, by subregion, 2010–2021



Source: Estimates based on UNODC homicide statistics.

The trend in homicidal violence in the Russian Federation has been attributed to various drivers, including changes in alcohol consumption patterns, the availability of firearms and the socioeconomic upheaval resulting from the country's transition from a communist to a capitalist society.<sup>27</sup> Neighbouring Belarus has experienced a similar decline in homicidal violence, but at a much lower level than in the Russian Federation, at roughly 400 victims in 2010 to just over 200 in 2019, the latest year with available data. Other populous countries in Eastern Europe have not exhibited such a clear downward trend, however, suggesting that national homicide trends in Eastern Europe have not followed a singular trajectory over the past decade. In Romania, for example, the annual number of homicides has fluctuated at around 250 victims during the past decade, while Ukraine saw an increase in homicides at the beginning of the decade, followed by a decline

from 2017 to 2021. The heterogeneity of these national homicide trends is hidden in the subregional trend for Eastern Europe.

In both Southern and Northern Europe, the subregional homicide rate has also declined over the past decade, albeit at a significantly lower level than in Eastern Europe (figure 11). By contrast, little progress in reducing the homicide rate has been recorded in Western Europe, where it has fluctuated around a relatively stable longer-term trend of around 1 per 100,000 population.

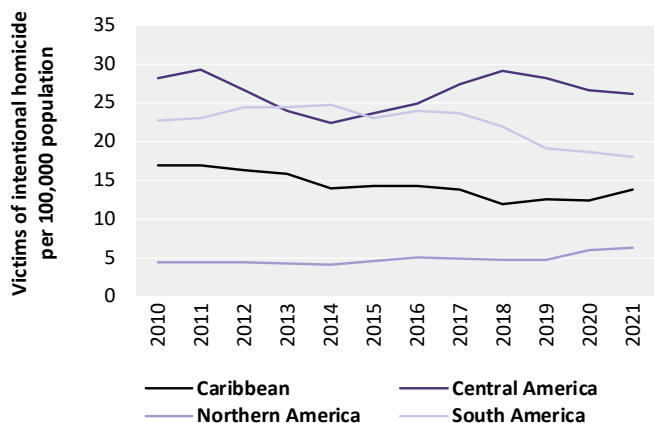
### Americas

In the Americas, trends in the homicide rate have been diverging between the different subregions over the past decade (figure 12). In South America, the homicide rate has been on a downward trend since 2017, driven primarily by a decline in the annual number of homicides recorded in Brazil, the most populous country in the subregion, where homicides fell from a temporary peak of more than 63,000 in 2017 to less than 46,000 in 2021.<sup>28</sup> Several possible causal factors behind the recent decline in homicide in Brazil have been identified in studies, such as demographic change, changes in policing and the increasing dominance of certain organized crime groups, as well as public policies, including those relating to gun control.<sup>29</sup> What is clear is that the national homicide trend hides markedly diverging trends at the subnational level in Brazil, which suggests that no single causal factor is likely to provide a full explanation for the national trend.<sup>30</sup>

Likewise, Peru and Venezuela (Bolivarian Republic of) have also recorded reductions in the number of annual killings in recent years,<sup>31</sup> but that has not been the case in other countries in South America. Colombia and Ecuador, for example, both recorded significant increases in homicidal violence between the end of 2020 and the end of 2021, which in the case of Ecuador in particular can be attributed to organized crime and gang-related violence.<sup>32</sup>

As in South America, the subregional homicide rate in the Caribbean has declined by around 19 per cent over the past decade (figure 12). This longer-term subregional decline in the Caribbean can be partly explained by a downward trend in homicidal violence in a few populous countries (and territories), such as Cuba, the Dominican Republic and Puerto Rico, while other relatively populous countries in the subregion, most notably Haiti and Jamaica, have seen an increase in deadly violence in recent years, which can explain the reversal in the subregional trend since 2018. Indeed, 2022 data from several countries in the subregion show an increase in homicidal violence, for example, the number of homicides increased by 35 per cent in Haiti from 2021 to 2022.<sup>33</sup> Initial data from other countries in the subregion, such as the Bahamas, the Dominican Republic and Jamaica, also suggest an increase in the number of homicides in 2022.

**FIG. 12** Trends in the homicide rate in the Americas, by subregion, 2010–2021



Source: Estimates based on UNODC homicide statistics.

In contrast to South America and the Caribbean, Northern America has seen an increase in the homicide rate over the past decade, especially since the onset of the COVID-19 pandemic in 2020 (figure 12). The recent homicide trend in Northern America is explained primarily by the national trend in the United States of America, which recorded an increase of nearly 30 per cent in the number of homicides from the end of 2019 to the end of 2020, followed by a smaller increase of around 6 per cent in 2021.<sup>34</sup> Various explanations have been put forward to explain the surge in homicides in the United States in 2020, including the implementation of COVID-19 confinement measures, changes in police-community relations and record gun sales in the country.<sup>35</sup> That said, estimates based on the recently implemented National Incident-Based Reporting System (NIBRS) and the Summary Reporting System (SRS) indicate that homicides in the United States decreased nationwide by 6.1 per cent from 2021 to 2022,<sup>36</sup> and data from 30 American cities point to a decrease in homicides in the first half of 2023 compared with during the first half of 2022.<sup>37</sup> In neighbouring Canada, the annual number of homicides has been increasing steadily since 2013, including by 10 per cent from 2019 to 2020. At 2.1 per 100,000 population in 2021, however, the homicide rate is still significantly lower in Canada than in the United States, where it is more than three times higher.<sup>38</sup>

Central America continues to be the subregion in the Americas with the highest and most volatile homicide rate (figure 12). The national homicide trend in Mexico, which accounted for roughly 77 per cent of all homicide victims in the subregion in 2021, has driven the subregional trend over the past decade. The temporary dip in lethal violence around 2014 and the subsequent surge in killings between 2015 and 2018 in particular, can be largely attributed to organized crime-related violence in Mexico.<sup>39</sup> Although the level of homicidal violence in Mexico has remained relatively high since 2018, several smaller countries in

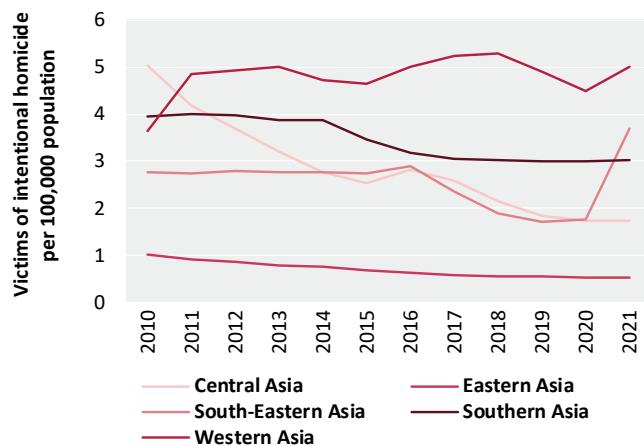
the subregion, most notably El Salvador, Guatemala and Honduras, have recorded significant reductions in the annual number of homicides in recent years, albeit from very high baseline levels.<sup>40</sup> These dynamics can explain why, on average, the subregional homicide trend in Central America has been a declining one since 2018 (figure 12).

### Asia

In Asia, there has been an overall moderate decline in the homicide rate over the past decade that hides substantially diverging trends at the subregional level (figure 13), including two particularly noteworthy developments. The first is the significant decrease in the homicide rate recorded in Central Asia, from 5.4 per 100,000 population in 2010 to 1.9 in 2021, a nearly threefold decrease. The decline in Central Asia can be attributed to a large extent to a reduction in the annual number of homicides in Kazakhstan, from around 1,400 in 2010 to 600 in 2020, the latest year with available data. The temporary increase in the homicide rate in the subregion around 2016 can in turn be attributed to a significant spike in killings recorded in Uzbekistan, the subregion’s most populous country (figure 13).

The second noteworthy development in Asia concerns the drastic increase in the homicide rate in South-Eastern Asia from the end of 2020 to the end of 2021 (figure 13). This increase can be traced to the escalation of sociopolitical violence in Myanmar, where a nearly tenfold increase in the reported number of homicides, from roughly 1,500 to more than 15,000 was recorded in that period.<sup>41</sup> The continued presence of armed groups and thriving illicit markets, notably involving methamphetamine manufacture and opium cultivation,<sup>42</sup> along with economic insecurity, may be contributing factors, but the lack of official data and disaggregated information on the situational context of homicides makes this challenging to determine.

**FIG. 13** Trends in the homicide rate in Asia, by subregion, 2010–2021



Source: Estimates based on UNODC homicide statistics.

Prior to 2021, the subregional homicide trend in South-Eastern Asia was driven primarily by the national trend in the Philippines due to the large size of its population relative to other countries in the subregion; vigilante violence and the activities of organized crime and terrorist groups play an important role in explaining the trend. Other populous countries in the subregion, such as Indonesia, Malaysia and Thailand, have recorded reductions in the annual number of homicides over the past decade, which contributed to the general downward trend in the subregion prior to 2021.<sup>43</sup> An important data gap in South-Eastern Asia exists in the case of Viet Nam, which has not reported data on the number of homicide victims since 2011.

The subregional trends in Eastern Asia and Southern Asia are respectively dominated by national trends in China and India, both of which have recorded steady declines in the annual number of homicides over the past decade (figure 13). In contrast to the other subregions in Asia, the homicide rate in Western Asia has shown little sign of improvement over the past decade, fluctuating at the relatively high level of roughly 5 per 100,000 population (figure 13).

### Spotlight on Myanmar

Despite a lack of situational context, the increase in killings in Myanmar between the end of 2020 and the end of 2021, which according to data from the Myanmar Police Forces submitted to UNODC by the Central Statistical Organization increased tenfold to more than 15,000, can be attributed to a complex interplay between sociopolitical factors and deepening crises following the military takeover in 2021. This includes the activities of non-state armed groups, ethnic conflicts, economic insecurity, the breakdown of law and order and corruption.

The military takeover, which took place on 1 February 2021, and the increase in violence that followed it represent a watershed moment in the country.<sup>44</sup> Although the military takeover was not immediately followed by violent responses by security forces, the use of lethal force against protesters was reported within a few weeks.<sup>45</sup> Credible sources are reported to have verified 2,940 killings of civilians by the military between the military takeover and January 2023.<sup>46</sup>

In this context, the continued presence of non-state armed groups in the country has been another factor in the rising level of violence and the country's overall destabilization. The increased availability of weapons, may have further contributed to the rise in homicide, with at least \$1 billion in arms, dual-use goods, equipment and raw materials for manufacturing weapons being imported into Myanmar between the military takeover in February 2021 and December 2022.<sup>47</sup> Conflict between the Myanmar security forces and ethnic armed organizations and other anti-military

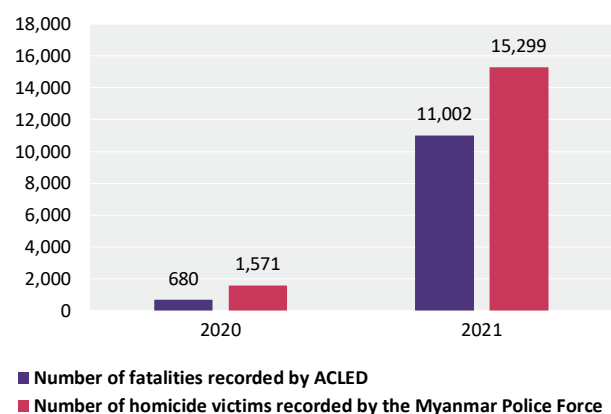
elements have also contributed directly to the number of people killed. Antimilitary elements have publicly claimed responsibility for killings of current or former ward and village administrators and suspected military informants.<sup>48</sup> Although not independently validated, information provided by the military has indicated that attacks by anti-military armed groups and elements had led to the death of 6,000 civilians by 30 June 2023.<sup>49</sup>

The Independent Investigative Mechanism for Myanmar to the Human Rights Council noted that the intensity and sustained nature of the violence and the degree of organization of the armed groups fighting against the Myanmar security forces appear to satisfy the threshold for the existence of an armed conflict.<sup>50</sup> Due to a lack of verifiable information, it is difficult to assess to what extent the killings recorded in Myanmar since the military takeover were intentional homicides or conflict deaths.<sup>51</sup> However, irrespective of the type of killing, it is important to note that similar trends in and levels of killings in Myanmar for the years 2020 and 2021 have been reported across different data sources (figure 14).<sup>52</sup>

Data for 2022 reported by the Myanmar Police Force indicate that the number of homicides that year decreased to just over 2,000. Conversely, other sources indicate that there may have been an acceleration in lethal violence, further highlighting the difficulty of distinguishing between homicides and deaths related to armed conflict in the Myanmar context.<sup>53</sup>

Economic factors may have played an important role in the evolution of crime trends in Myanmar.<sup>54</sup> The political upheaval following the military takeover disrupted economic activities and livelihoods, leading to widespread financial

**FIG. 14** Fatalities caused by violent events in Myanmar, 2020–2021



Source: Myanmar Police Force and ACLED.

Note: "Number of fatalities recorded by ACLED" includes violence against civilians, battles, explosions/remote violence, protests, riots.

difficulties, with the number of employed people in the country reportedly falling by 1.6 million, or 8 per cent, between the end of 2020 and the end of 2021.<sup>55</sup> This may have been a factor in the surge in violence in the country, as some people have turned to criminal behaviour, including violence, according to the media.<sup>56</sup>

Between the end of 2020 and the end of 2021, confidence in the Government plunged from 86 per cent to 28 per cent<sup>57</sup> and the political instability and prolonged unrest impacted public services, including law enforcement and emergency services. Indeed, the proportion of the population that feel safe walking alone around the area they live after dark fell from 69 per cent in 2020 to 39 per cent in 2021.<sup>58</sup> Criminal activities seem to have thrived as a result of the weakening of law enforcement and oversight, leading to an overall increase in crime, including homicide, as reported in the media.<sup>59</sup>

Moreover, there are signs that organized crime networks are expanding in the country. Opium poppy cultivation is estimated to have increased by 33 per cent from the 2021 season to the 2022 season, which began in November 2021.<sup>60</sup> Opium poppy cultivation is closely linked to multi-dimensional poverty, insecurity and a lack of services and although only a small part of the proceeds of the illicit trade in drugs is generated within Myanmar, opium poppy cultivation is closely linked to insecurity and conflict in the country.<sup>61</sup> An increase in drug production and trafficking can further accelerate and reinforce these linkages, particularly in light of the country's current environment of insecurity, weakened rule of law and economy.<sup>62</sup>

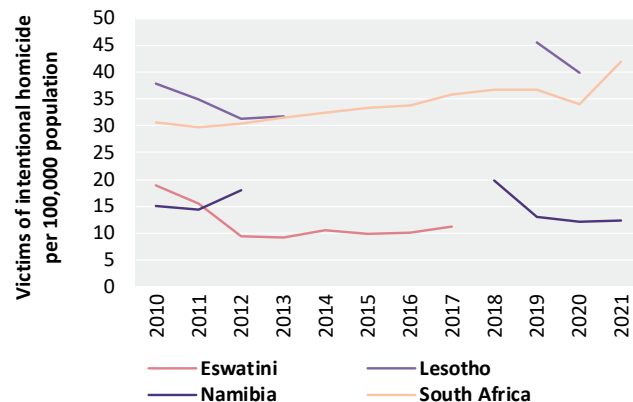
It is important to acknowledge, however, that the lack of official data and disaggregated information on the situational context of killings makes understanding the interplay between the reasons behind the escalation in lethal violence in Myanmar a challenge. Accurate and comprehensive data are crucial to understanding the root causes and dynamics of the increase in killings and the development of effective strategies to address the issue.

## Africa and Oceania

Comprehensive data on homicide trends are not available for many countries in Africa and Oceania, which makes it difficult to draw firm conclusions about longer-term trends at the subregional level in those two regions. In Oceania, reliable trend data are available only for Australia and New Zealand, where homicide rates have remained relatively stable over the past decade, other than for a short-term spike in 2019 in New Zealand that was attributable to the Christchurch mosque shootings.<sup>63</sup>

Because of the very limited availability of reliable homicide data from countries in Africa, it remains very difficult to identify a general homicide trend for the region, given that homicide rates and trends can vary widely between

**FIG. 15** Homicide trends in selected countries in Southern Africa, by country, 2010–2021



Source: UNODC homicide statistics.

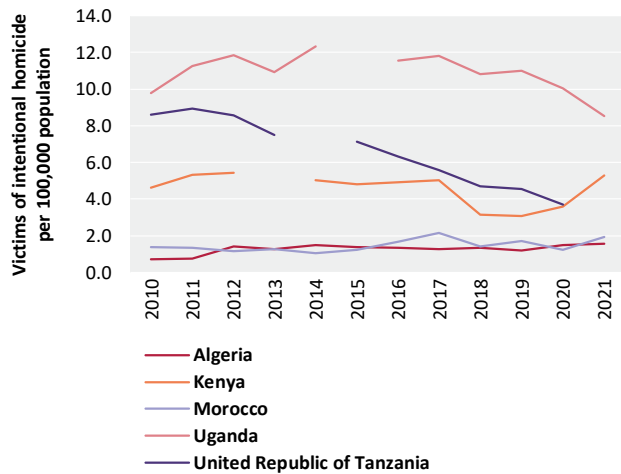
countries and subregions. Some of the variations observed may reflect genuine differences in levels of criminal violence across countries but may also be due to different capacities of national authorities to record homicide data. In Africa, longer-term homicide trend data are only available for a selected number of countries and, even then, the time series frequently contains gaps (figure 15 and figure 16).

Although the available national data do not provide sufficient evidence to draw conclusions about a general regional trend, several national homicide trends in the different subregions of Africa are still noteworthy. In Southern Africa, for example, South Africa has recorded a steady increase in the homicide rate over the past decade, with a temporary decrease at the onset of the COVID-19 pandemic in 2020 followed by a significant spike in lethal violence in 2021, including an increase in crime-related homicide (figure 15).<sup>64</sup> Available trend data from neighbouring Namibia indicate that the spike in violence almost two years into the COVID-19 pandemic observed in South Africa may not necessarily have affected other countries in the subregion, however, even those sharing a historical legacy of racial and economic inequality.

In Eastern Africa, available homicide trend data point to significant heterogeneity between countries, for example, Uganda and the United Republic of Tanzania have both recorded reductions in homicidal violence in recent years, while Kenya has seen a dramatic increase in annual homicides since the onset of the COVID-19 pandemic (figure 16). Moreover, in Northern Africa, available trend data from two relatively populous countries, Algeria and Morocco, suggest that homicide rates have been steadily increasing over the past decade while remaining at significantly lower levels than those observed in countries in other subregions of Africa (figure 16).

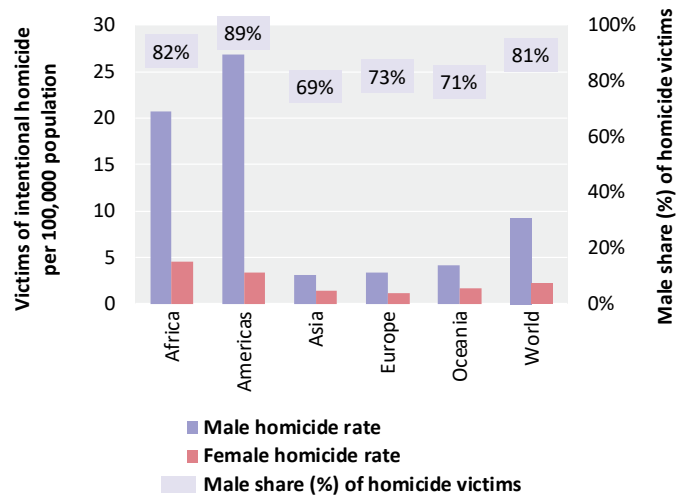


**FIG. 16** Homicide trends in selected countries in Northern Africa and Eastern Africa, 2010–2021



Source: UNODC homicide statistics.

**FIG. 17** Homicide rate, by region and sex, 2021



Source: Estimates based on UNODC homicide statistics.

## Demographics of homicide victims

Given that the overall homicide rate only provides an initial indication of the general level of lethal violence in a country, if the underlying reasons for fluctuations in the rate are to be understood and public policy targeted adequately, the homicide rate needs to be disaggregated by, for example, the sex and age of victims. It is well documented that both sex and age have a strong bearing, along with other factors, on the likelihood of victimization by homicide.<sup>65</sup> The sex and age of homicide victims are also the two most readily available and comparable demographic characteristics at the global and regional levels.

### Sex of homicide victims

Homicidal violence has a clear gender dimension. In 2021, more than 8 out of 10 homicide victims worldwide were men and boys (81 per cent) while fewer than 2 out of 10 were women and girls (19 per cent). This means that, at the global level, the male homicide rate was more than four times the female homicide rate, at 9.3 male victims per 100,000 male population as opposed to 2.2 female victims per 100,000 female population.

Although the male homicide rate exceeds the female homicide rate in all the regions, the “sex gap” in homicide victimization varies significantly between regions (figure 17). In 2021, the regions with the highest male homicide rates were the Americas (27.0 male victims per 100,000 male population) and Africa (20.8), while the regions with the lowest were Asia (3.2), Europe (3.4) and Oceania (4.1).

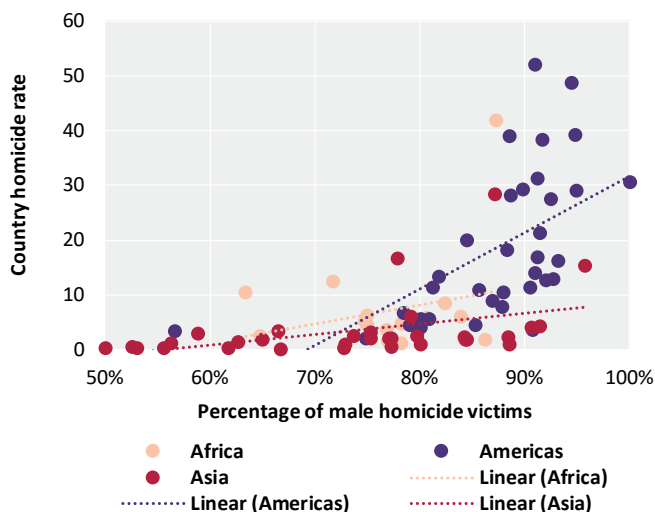
By contrast, there was much less variability in the female homicide rate between regions, with Africa being the region with the highest female homicide rate in 2021 (4.6 female

victims per 100,000 female population) and Europe the region with the lowest (1.2).

As mentioned above, the male homicide rate varies considerably across regions (figure 17). Moreover, in regions with a high overall level of homicidal violence, such as Africa and the Americas, the difference between the male and female homicide rates is generally greater than in other regions and, consequently, the proportion of male homicide victims is higher. The relationship between the overall homicide rate and the male share of homicide victims not only holds at the regional level but also at the country level and countries with a higher overall homicide rate tend to have a larger share of male victims (figure 18 and figure 19). The sole exception to this pattern is Oceania, where this relationship cannot be seen in the only three countries with data. In 2021, just a handful of countries recorded more female homicide victims than male homicide victims and they were all countries with a relatively low overall homicide rate located in Europe: Austria, Czechia, Iceland, Latvia, Norway, Slovenia and Switzerland (figure 19).

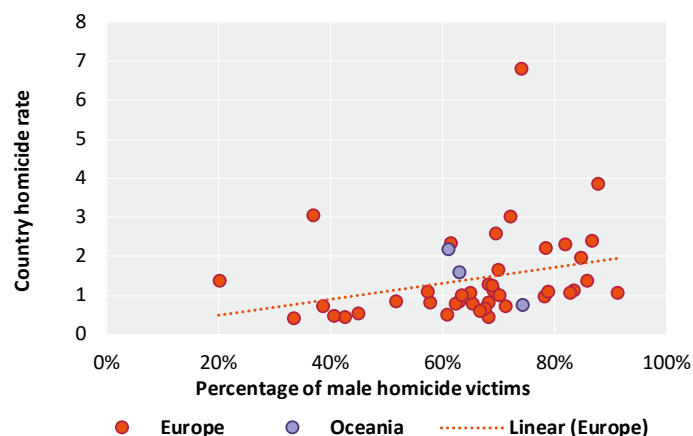
The variation in the “sex gap” in homicide victimization between regions and countries largely depends on what drives national homicide rates.<sup>66</sup> In regions or countries with relatively high homicide rates, male-to-male killings, often between gang members or organized crime groups, drive high levels of lethal violence and tend to be the dominant type of homicide, while in those with relatively low homicide rates, intimate partner/family-related homicide tends to account for a larger share of homicides. This type of homicide is predominantly the result of male-to-female

**FIG. 18** Share of male homicide victims versus total homicide rate in selected countries in Africa, the Americas and Asia, 2021 or latest year since 2019



Source: UNODC homicide statistics.

**FIG. 19** Share of male homicide victims versus total homicide rates in selected countries in Europe and Oceania, 2021 or latest year since 2019



Source: UNODC homicide statistics.

*Note: Based on 128 countries with latest year of data on reported homicide totals available between 2019 and 2021. Countries with a total population below 100,000 and countries with fewer than five homicide victims per year have been omitted from the analysis, since the share of male and female homicides tends to fluctuate strongly from year to year. Data for Oceania are only available for three countries (Australia, Fiji and New Zealand), so the linear best fit is omitted for that region.*

violence and its level tends to be more stable across countries and regions than other types of homicide.<sup>67</sup> Thus, male-to-male homicide explains much of the variability in overall homicide levels and uncovering the drivers of such homicides is crucial if global and regional homicide trends are to be fully understood.

### Age of homicide victims

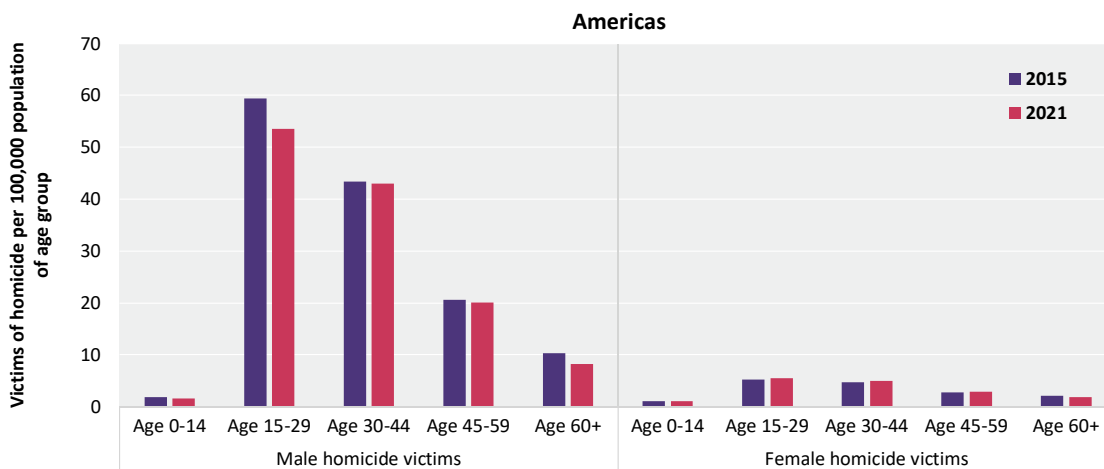
Disaggregated data on the age of homicide victims are not as readily available as data on the sex of victims. In the Americas and Europe, the availability of age-disaggregated data enables the production of regional estimates of the age profile of homicide victims, whereas in Asia, Africa and Oceania, the availability of such data is limited, making regional estimates of the age profile of homicide victims unreliable in those regions.

Age-disaggregated homicide estimates in the Americas and Europe suggest that young men are most at risk of homicidal violence. In 2021, young men aged 15–29 years in the Americas were those most at risk of homicide, with an estimated rate of 53.6 male victims per 100,000 male population in that age group – twice the average male homicide rate in the Americas (27) and more than five times the global male homicide rate of 9.3 per 100,000 male population (figure 20). In Europe, on the other hand, men aged 30–44 years were the age group most at risk of homicide, with a rate of 5.7 per 100,000 male population in 2021 (figure 21). Women and girls face a much lower homicide risk than men and boys across all age groups, both in the Americas and Europe. The relative age-specific homicide risks are comparable across the sexes, however, with women and girls aged 15–29 years also facing the highest risk of homicide in the Americas and women aged 30–44 years are those most at risk in Europe.

Data for the years 2008 to 2017 show that globally 6 out of 10 victims of intentional homicide under the age of 15 in that period were male. The overall homicide rate increases with age, with the sex disparity increasing sharply after the age of 14 years.<sup>68</sup> The preponderance of male victims starts to become apparent from 10–14 years of age in the Americas, while in Europe this is the case from 18–19 years of age.<sup>69</sup>

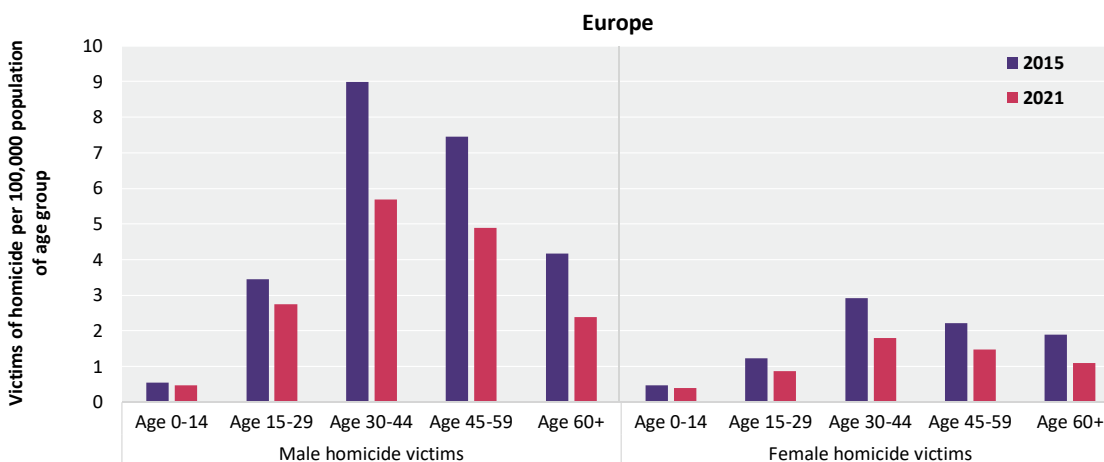
Data for the period 2015–2021 indicate that broad regional age patterns of homicide victimization remain relatively stable over time (figure 20 and figure 21). It is nonetheless useful to investigate age-specific homicide rates over time because changes in such rates may indicate the target populations where prevention policies are working as well as those where they are not. Sex and age-specific homicide trend estimates for Europe and the Americas suggest that while the recent decrease in the regional homicide rate in the Americas has been primarily concentrated among young men aged 15 to 29 years (figure 20), the decline in the regional homicide rate in Europe appears to have been spread equally across the sexes and different age groups (figure 21). One explanation for the concentrated age- and sex-specific decrease in the Americas between 2015 and 2021 is that homicide related to organized crime – the predominant homicide type in the Americas –<sup>70</sup> tends primarily to affect young men, and a decrease in

FIG. 20 Homicide rate in the Americas, by sex and age group, 2015 and 2021



Source: Estimates based on UNODC homicide statistics.

FIG. 21 Homicide rate in Europe, by sex and age group, 2015 and 2021



Source: Estimates based on UNODC homicide statistics.

organized crime-related homicide may have affected the decrease in the number of young male homicide victims. Trends in organized crime-related violence tend to be more volatile than trends in interpersonal homicide, the predominant homicide type in Europe.<sup>71</sup>

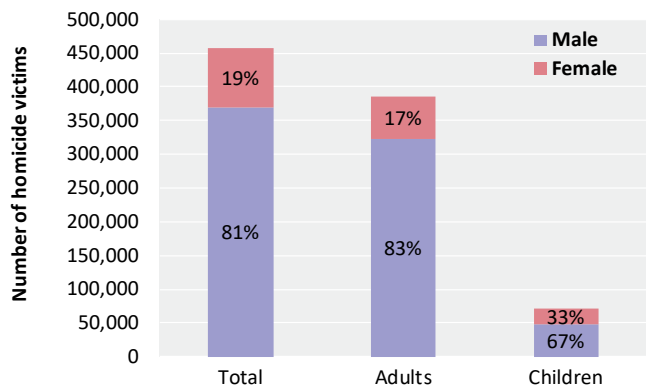
### Patterns and trends in child homicide

Previous research has indicated that intentional killings of young children are mainly perpetrated by family members.<sup>72</sup> Among other factors, such killings tend to be linked to gender stereotypes, family violence and mental health problems among the victims' parents.<sup>73</sup> As children grow older, they are more likely to fall victim to homicide perpetrated outside the family context. In the Americas,

young men are particularly at risk of homicide related to organized crime and gang-related violence.<sup>74</sup> At the global level, systematic information on the situational context of child homicide remains limited, however, with homicide data provided to UNODC by Member States not capturing the relationship between victims and perpetrators disaggregated by the age of victims.<sup>75</sup>

Globally, children<sup>76</sup> make up a relatively small share of the total number of homicide victims. It is estimated that around 71,600 homicide victims in 2021 were children, which equates to just over 15 per cent of the estimated total that year.<sup>77</sup> The disproportionate victimization of men and boys<sup>78</sup> observed globally (83 per cent of adults) is less pronounced in young age groups, but male victims

**FIG. 22** Global number and share of male and female homicide victims among adults and children, 2021



Source: UNODC homicide statistics.

still account for more than two thirds (67 per cent) of child homicide victims (figure 22).

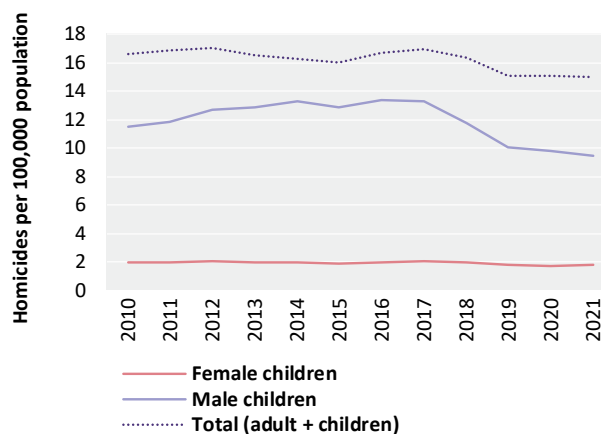
The gender disparity in the homicide rate among children and young people increases with age, as it does in the total homicide rate. There tends to be parity in the homicide rate among male and female child victims aged 0–9 years, while in older age groups, males become significantly more likely than females to fall victim to homicide.<sup>79</sup> Research suggests that the killing of young children in the context of domestic violence tends to affect male and female children to a similar extent. By contrast, in the case of older children and young adults, who are more likely to fall victim to non-domestic homicide, young males are more vulnerable than young females because they are more exposed to organized crime and gang-related violence.<sup>80</sup>

Although disaggregated trend data on the age of homicide victims are not readily available at the global level,<sup>81</sup> in the Americas and Europe, the availability of reliable age-disaggregated data enables the production of regional trend estimates of child homicide victims. By contrast, in Asia, Africa and Oceania, the availability of age-disaggregated data is more limited, making regional trend estimates of child homicide victims unreliable in those regions.

In the Americas, trend estimates for the period 2010–2021 suggest that trends in the male and female child homicide rates tend to move in tandem over time and that, to some extent, they mirror the trend in the total homicide rate observed over the same period in the region, with decreases recorded in recent years after a temporary peak around 2017. The male child homicide rate in the Americas is more than five times the female child homicide rate, however, and year-on-year fluctuations in the male child homicide trend appear to be stronger than in the female child homicide trend (figure 23).

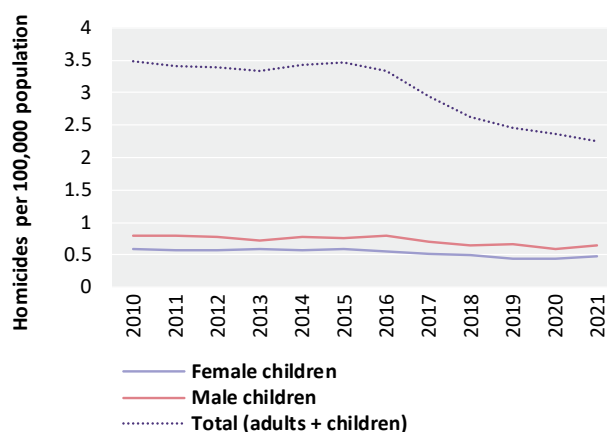
As in the Americas, trends in the male and female child homicide rates in Europe also tend to move in tandem. Over the period 2010–2021, the male and female child homicide rates also moved largely in the same direction as the total homicide trend in the region, although declining at a more moderate pace. A noticeable exception is the period between the end of 2020 and the end of 2021, where both the male and female child homicide rate increased in Europe while the total homicide rate continued to decrease (figure 24).

**FIG. 23** Trends in the child homicide rate in the Americas, by sex, 2010–2021



Source: UNODC homicide statistics.

**FIG. 24** Trends in the child homicide rate in Europe, by sex, 2010–2021



Source: UNODC homicide statistics.



## How the COVID-19 pandemic has affected homicide trends

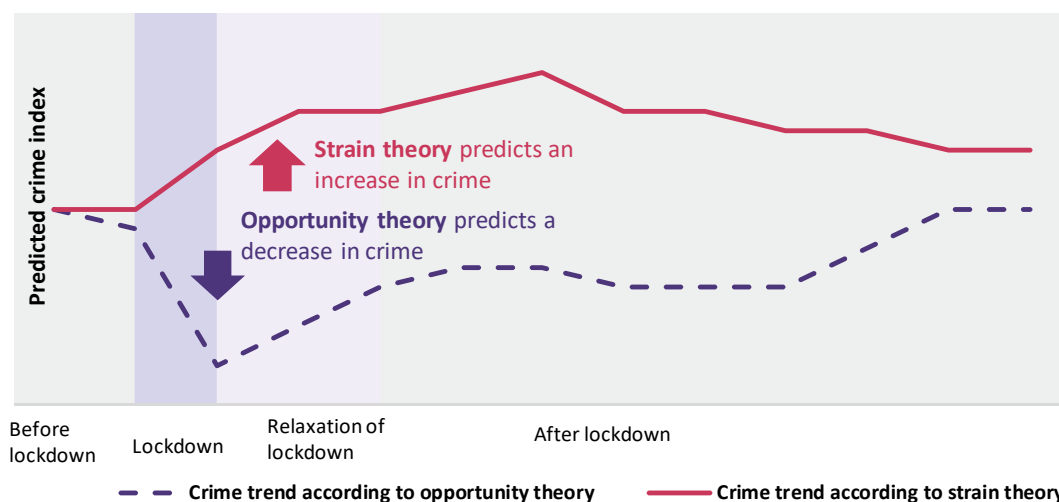
There are many possible causal mechanisms through which the onset of the COVID-19 pandemic in early 2020 may have affected homicide trends globally, regionally and nationally. Arguably, the most relevant mechanisms are those that have resulted from the COVID-19-related mobility restrictions (“lockdowns”) imposed by Governments to curtail the spread of the virus.<sup>82</sup> These restrictions include a whole range of policy measures, each of which may have resulted in different impacts on homicide trends, both in the short term and the longer term.<sup>83</sup> Restrictive measures range from social distancing and bans on gatherings in public spaces, the closure of hospitality and educational establishments, businesses and factories, to travel restrictions and electronic surveillance of the daily movements of citizens.<sup>84</sup>

When assessing the possible impact of lockdowns on homicide trends it is useful to distinguish between the short-term impact that may have occurred within the first few days or months of the implementation of lockdowns and the longer-term impact. In the short term, the crime “opportunity” mechanism may have affected homicide in different ways, as lockdown restrictions may have reduced the “opportunity” to commit crimes such as street robbery and gang-related violence,<sup>85</sup> while the “opportunity” to commit homicide by intimate partners and family members, which typically occurs behind closed doors, may have increased domestic homicides. In the longer-term, the negative social and economic repercussions of lockdowns, which may include increased stress and anxiety, unemployment or loss of income, can be expected to affect

homicide trends by creating an environment of “strain” that drives individuals to commit crime. The influence of the “strain” mechanism is likely to have a more long-lasting effect on homicide trends, even after lockdowns are lifted (figure 25).<sup>86</sup> It is important to acknowledge that no single lockdown-related mechanism can be expected to explain all variations in homicide trends. Furthermore, homicide trends are likely to be influenced by the level of support provided by Governments to mitigate lockdown-related challenges, as well as by pre-existing conditions in countries in terms of crime and governance.<sup>87</sup>

Although empirical research has not definitively established a causal link between the COVID-19 pandemic’s impact on mental health and an increase in interpersonal conflict and violence, there is a possible connection.<sup>88</sup> The COVID-19 pandemic led to an increase in the prevalence of anxiety and depression worldwide.<sup>89</sup> Mental health services were also impacted by the pandemic, which reduced their ability to respond to the demand for services.<sup>90</sup> Furthermore, the economic strain and social isolation resulting from the pandemic may have exacerbated existing tensions within households and communities, further increasing the potential for violence. Previous research has highlighted how mental health challenges resulting from violent crime can perpetuate a cycle of violence.<sup>91</sup> Traumatized individuals may become more prone to engaging in violent acts as a maladaptive coping mechanism or to seek retribution. Additionally, the fear of victimization can lead individuals to arm themselves in self-defence, potentially escalating conflicts and increasing the overall level of violence in society. Addressing mental health challenges is a crucial factor in breaking this cycle and promoting safer communities.

**FIG. 25** Simulation of crime trends based on causal mechanisms that influence crime during a pandemic



Source: UNODC, “Research brief: Effect of the COVID-19 pandemic and related restrictions on homicide and property crime” (Vienna, 2020).

Note: Based on: Eisner, M. and Nivette, A., “Violence and the pandemic: urgent questions for research and policy”, HFG Research and Policy Brief (April 2020).

More than three years into the COVID-19 pandemic, there is increasing cross-national evidence on the short-term impact of the lockdowns on homicide trends, albeit with a preponderance of evidence from countries in the Americas and Europe. By contrast, cross-national evidence on the longer-term impact remains limited and largely inconclusive.

### Evidence on the short-term impact of the COVID-19 pandemic on homicide

Available cross-national evidence suggests that while the short-term impact of the lockdown measures on homicide trends was highly heterogeneous and context-specific, it appears to have been relatively limited and short-lived overall.

Monthly data from 21 countries (mostly in the Americas and Europe) show diverse trends in the number of homicide victims recorded after the introduction of lockdown measures, with no clear overall pattern emerging.<sup>92</sup> In 7 out of 10 countries where it was possible to use pre-COVID-19 monthly trends for comparison, the decrease in the number of homicide victims recorded from March to April 2020 was more than 25 per cent larger than the average change recorded during the same months over the period 2015–2019.<sup>93</sup> Any significant changes in national homicide trends were short-lived, however, and pre-pandemic dynamics soon returned.<sup>94</sup>

Using daily crime data from 27 cities across 23 countries in the Americas, Europe, the Middle East and Asia, a recent interrupted time series analysis suggested that the lockdowns were associated with considerable but relatively short-lived reductions in urban crime, with substantial variations across cities and types of crime.<sup>95</sup> However, in contrast to other types of crime such as robbery, theft and assault, all of which declined significantly during the lockdowns, homicide trends were found to be much less affected, with some notable exceptions in the cities of Cali (Colombia), Lima (Peru) and Rio de Janeiro (Brazil). The study hypothesized, but did not show empirically, that the limited impact of the lockdowns on urban homicide trends in the short-term could be explained in part by the large share of domestic homicides not affected by the related reduction in the number of daily encounters in cities, as well as the share of homicides related to organized crime groups, whose activities may be less impacted by changes in the daily routines of ordinary citizens.<sup>96</sup>

Another possible explanation is that the overall limited impact of the lockdowns on homicide trends can be explained by the different effects they may have had on different types of homicide, with, for example, increases in domestic homicide “cancelling out” decreases in non-domestic homicide.

Several country-specific studies point to the highly heterogeneous and context-specific impact of the lockdowns on homicide trends in the short-term. A recent study in Mexico,<sup>97</sup> for example, where organized crime is an important driver of homicide trends,<sup>98</sup> also supports the hypothesis that trends in organized crime-related homicide may have been relatively unaffected by the lockdowns. Using weekly crime data for 2019 and 2020 from 16 districts in Mexico City, the study found no evidence that the lockdowns had a discernible effect on homicide trends, while other types of crime such as domestic violence, burglary and vehicle theft reported to the authorities decreased sharply. However, the decrease in reported domestic violence was not interpreted as an actual decrease in victimization.

By contrast, evidence from Bihar (India) suggests that the lockdowns resulted in a significant (60 per cent) decrease in homicides recorded by police departments;<sup>99</sup> studies in Peru<sup>100</sup> and South Africa<sup>101</sup> also point to significant short-term reductions in homicidal violence. The short-term decrease in South Africa has been linked to a nationwide ban on alcohol sales implemented in March 2020 that, according to a recent study,<sup>102</sup> reduced recorded homicides by 21 per cent and injury-induced mortality by at least 14 per cent. In this regard, it is important to note that decreases in recorded or reported homicide during the lockdowns may also reflect the reduced capacity of the criminal justice and health registration systems to record homicide victims accurately in that period.<sup>103</sup>

### Spotlight on Colombia and Guatemala

#### Colombia

In Colombia, the COVID-19 pandemic had a significant short-term impact on homicide trends. Initially, the strict lockdown measures implemented in March 2020 resulted in a notable reduction in the number of homicide victims. In April 2020, there were 32 per cent fewer victims than the average recorded in the same month over the period 2015–2019. This decline in homicides was short-lived, however, as the monthly number of victims had returned to pre-pandemic levels by June. As a result, Colombia recorded 11,452 victims of intentional homicide in 2020, a slight decrease of 300 victims from the 2019 figure. This was followed by a significant surge in homicides in 2021, with the number rising to 13,223 victims, a 15.5 per cent increase from the previous year.

A study exploring the impact of the pandemic on homicide rates in Colombia found that in municipalities where there was a high number of COVID-19 infections and organized criminal groups had a strong presence, there was an increase in homicide during the first five months of the pandemic, whereas in those where there was a low number of infections and organized criminal groups had a weak presence, the opposite occurred.<sup>104</sup> Organized

criminal groups seem to have displayed adaptability during the pandemic by adjusting their operations to bypass lockdown measures. This suggests that certain criminal opportunities persisted despite the measures, enabling organized criminal activities to remain relatively stable.

The lockdown measures also provided criminal groups with opportunities to consolidate their control over territories and communities by exploiting pandemic-induced vulnerabilities.<sup>105</sup>

Similar to the total number of intentional homicides, the number of killings of women because of their gender, or “femicides”, also dropped in the initial aftermath of the implementation of the lockdown measures. Information collected online by Colombia’s Femicide Observatory showed a decrease in the number of such killings of women in April and May 2020 (monthly average of 29), both compared with during the first quarter of the year (monthly average of 42) and during April and May 2019 (monthly average of 62).<sup>106</sup> Subsequently, however, the number of “femicides” gradually increased during the rest of the lockdown, which was lifted at the end of August.

Another violence dynamic visible during the COVID-19 pandemic in Colombia was a surge in killings of social leaders and vulnerable groups in 2020, possibly because police resources and access to support were limited during the pandemic, although other, non-pandemic-related factors likely played a role also, including disputes over territories considered to have been abandoned by the Fuerzas Armadas Revolucionarias de Colombia (FARC), and the vulnerabilities of rural inhabitants involved in government programmes aimed at curbing drug trafficking.<sup>107</sup> The strict lockdown measures initially reduced these killings, but as the health crisis continued, the security situation in rural areas deteriorated, leading to a resurgence in attacks.

The department of Antioquia, a long-term criminal hotspot,<sup>108</sup> reportedly accounted for the majority of the decrease in homicides in the country in 2020, but the department continued to see active operations by various criminal groups, reflecting their efforts to maintain control and dominance during the pandemic.<sup>109</sup>

### Guatemala

In 2020, Guatemala experienced a substantial fall in its annual number of homicides to a total of 3,292 victims from 4,387 in 2019, representing a decrease of 25 per cent. This positive development occurred in the context of the measures implemented from mid-March to the end of June to contain the spread of COVID-19 and their impact on crime reported to the police. Between January and June 2020, the total crime rate in the country underwent a decline of 12.2 per cent compared with during the same period in the previous year.<sup>110</sup> This reduction was

mainly driven by a significant decrease in crime in the public sphere, such as property crime, although there was an increase in crime in the private sphere, in particular incidents of domestic violence.<sup>111</sup>

During the lockdown period, there was a turning point in June 2020 as the number of incidents rose compared with during the previous months, reflecting an easing of lockdown measures. Although the increase in homicides that month represented the largest number since the implementation of lockdown measures, it remained below the figure for June of the previous year.<sup>112</sup>

Municipalities with higher levels of urbanization saw the steepest decline in homicide during the first half of 2020 (January–June) as the containment measures were more strictly implemented and there were more serious reductions in mobility in such areas.<sup>113</sup>

However, the available evidence points to an increase of 26.3 per cent in the number of cases of domestic violence handled by the National Civil Police between January and June 2020. Moreover, the Public Prosecutor’s 1572 hotline reported an increase in emergency calls related to physical violence during the same period.<sup>114</sup>

Guatemala registered a relatively small number of “femicides” in 2020, although there may have been delays in recording them that can be attributed to the impact of the COVID-19 pandemic. Submissions from women’s organizations and other civil society actors to the United Nations Femicide Watch Initiative back up this interpretation, suggesting that the recording of “femicide” cases by authorities may have been negatively affected in several countries during the first year of the pandemic.<sup>115</sup> Delays in recording cases may have skewed the reported figures and obscured the true extent of the problem. Authorities documented at least 455 “femicides” in 2020, a decrease from the 701 cases reported in the previous year. Nonetheless, the number of “femicide” cases increased substantially in 2021.<sup>116</sup>

The decrease in the number of homicides during the lockdown period can be attributed to the restrictions of mobility and economic activities, which hindered the capacity and opportunities of criminal groups to commit murder and engage in extortion. However, with the restoration of economic activity and mobility once lockdown restrictions were lifted, criminal violence began to increase again and criminal groups adapted to the new circumstances. Extortion rackets intensified and gangs found alternative ways to generate revenue, resulting in a rebound in homicide in the subsequent months.<sup>117</sup> Homicides related to organized criminal groups or gangs increased from 2019 to 2020. Firearms and explosives, which are often indicative of violence triggered by gangs and organized crime, were the most prevalent means of committing homicide.<sup>118</sup>

The reduction in crime during the lockdown period in Guatemala may also be partly attributed to factors external to the COVID-19 pandemic related to the implementation of new crime policies introduced in January 2020. These policies included intelligence-led initiatives, cross-border operations to counter drug trafficking and the establishment of regional and municipal commissions for community outreach, which were having positive outcomes even before the implementation of strict lockdown measures.<sup>119</sup>

### Evidence on the longer-term impact of the COVID-19 pandemic on homicide

Assessing the longer-term impact of the COVID-19 pandemic on homicide trends is challenging, given that an increasing number of causal factors are likely to intervene and moderate the relationship as time passes. These causal factors, which include food price increases or inflationary pressure, may be only marginally related to the COVID-19 pandemic and associated lockdowns or largely unrelated to the pandemic. The eruption of sociopolitical conflicts, for example, is likely associated with a combination of economic, social and cultural changes that were already in motion before the onset of the pandemic. Moreover, conclusions about the longer-term impact of the pandemic may change and some patterns in homicide will only become visible in the years to come.

With these caveats in mind, it is possible to shed some light on the possible longer-term impact of the COVID-19 pandemic on homicide trends by comparing year-on-year changes in homicide trends observed in 2019, 2020 and 2021, with year-on-year changes observed over the

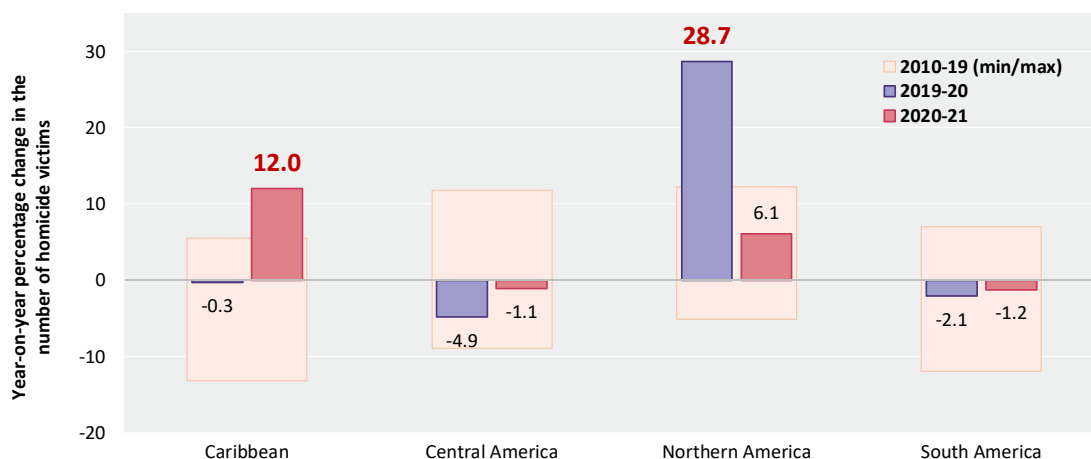
previous decade, starting in 2010. This approach makes it possible to establish whether homicide trends in the first two years of the COVID-19 pandemic (2020 and 2021) were “exceptional” in comparison with those observed over the period 2010–2019, although directly attributing such exceptional changes to the impact of COVID-19-related lockdowns is not possible with this approach.

### Americas

The available evidence suggests that the onset of the COVID-19 pandemic had heterogeneous impacts on homicide trends in the different subregions of the Americas (figure 26). Between 2019 and 2021, in both Central America and South America, year-on-year changes in the estimated total number of homicide victims were recorded that were well within the range of year-on-year changes observed over the previous decade. In Northern America, by contrast, an extremely “unusual” increase of almost 30 per cent in the number of homicide victims was recorded during the first year of the COVID-19 pandemic, and a further, more modest increase of roughly 6 per cent in 2021. The reasons behind this sudden surge in homicidal violence in Northern America, and in the United States in particular, remain contested, but it is likely that lockdown-related factors, including a surge in unemployment, increased gun ownership, as well as COVID-19-related anxiety and stress, played an important role.<sup>120</sup> Nonetheless, recently released estimates indicate that homicides in the United States decreased nationwide by 6.1 per cent from 2021 to 2022.<sup>121</sup>

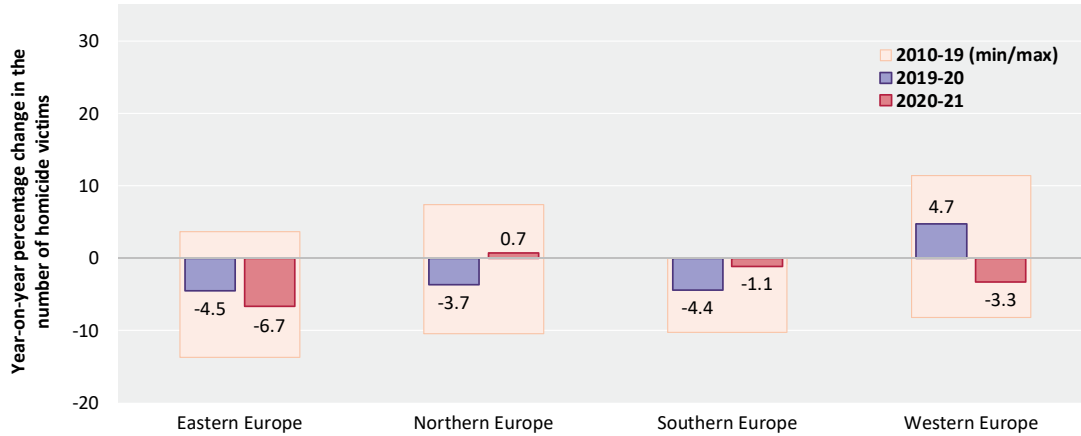
In the Caribbean, the percentage change in the number of homicide victims observed between the end of 2019 and the

**FIG. 26** Year-on-year percentage change in the number of homicide victims in the Americas in 2020 and 2021 compared with the largest year-on-year percentage change between 2010 and 2019, by subregion



Source: Estimates based on UNODC homicide statistics.

**FIG. 27** Year-on-year percentage change in homicide in Europe in 2020 and 2021 compared with the largest year-on-year percentage change between 2010 and 2019, by subregion



Source: Estimates based on UNODC homicide statistics.

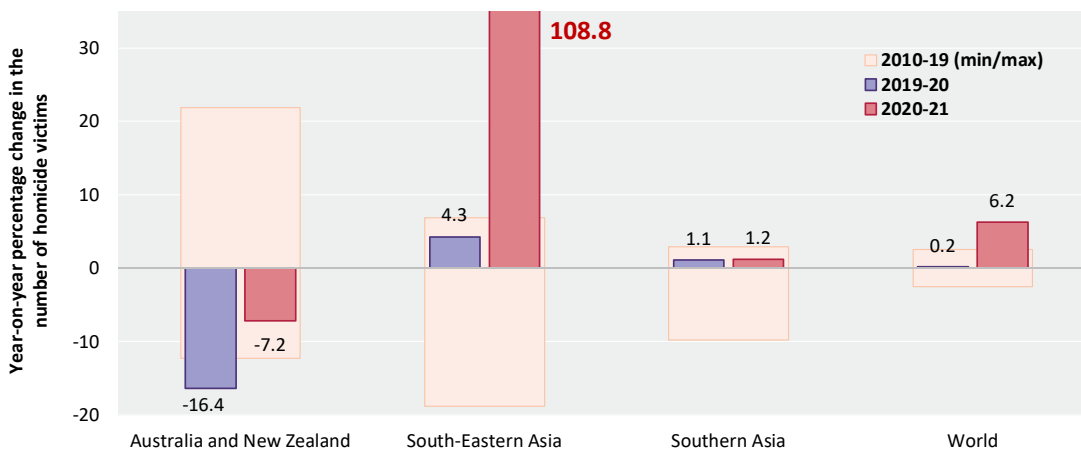
end of 2020 does not appear to have been “exceptional”. However, the increase of 12 per cent observed between the end of 2020 and the end of 2021 was significantly larger than any year-on-year changes observed over the previous decade (figure 26). While a surge in organized-crime related homicide in the subregion can explain some of this year-on-year variation,<sup>122</sup> it may also indicate that some of the “strain”-related causal mechanisms associated with the lockdowns, such as unemployment, loss of income, etc., started to push up homicide rates in the Caribbean some two years into the pandemic.

## Europe

In contrast to the situation observed in the Americas, the evidence available for Europe suggests that the onset

of the COVID-19 pandemic had a relatively limited longer-term impact on overall homicide trends in Europe’s four subregions (figure 27). Between 2019 and 2021, all four subregions recorded year-on-year changes in the estimated total number of homicide victims that were well within the range of year-on-year changes observed over the previous decade (figure 27). Western Europe was the only European subregion to record an increase (4.7 per cent) in homicides during the first year of the COVID-19 pandemic, driven by an increase in killings in Germany. That said, the previous year-on-year fluctuations observed in the subregion in 2015, 2016 and 2019 were significantly larger, suggesting that the impact of the COVID-19 pandemic did not bring about a major change in the homicide rate (figure 27).

**FIG. 28** Year-on-year percentage change in homicide in selected subregions and globally in 2020 and 2021, compared with the largest year-on-year percentage change between 2010 and 2019



Source: Estimates based on UNODC homicide statistics.



## Asia and Oceania

Beyond the Americas and Europe, the limited availability of reliable national trend data means that sufficiently precise trend estimates can only be reported for a selected number of subregions and countries. In Australia, the change in the total number of homicide victims observed between the end of 2019 and the end of 2020 was marginal, while in New Zealand, the year-on-year decrease in the total number of homicide victims over the same period was significantly larger than any change observed in the previous decade (figure 28). Rather than indicating that the COVID-19-related lockdowns reduced homicides, however, the drastic change in New Zealand is largely a reflection of the spike in homicides recorded in 2019 after the Christchurch mosque shootings in March of that year.

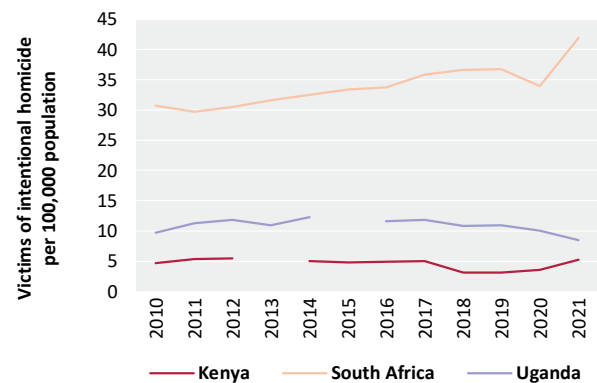
In South-Eastern Asia, the change in the estimated total number of homicide victims observed between the end of 2019 and the end of 2020 does not appear to have been “unusual” in comparison with changes observed in the previous decade, but the massive increase, of more than 100 per cent, in killings observed in the subregion between the end of 2020 and the end of 2021 was indeed “exceptional” (figure 28). In this case, however, the increase can be mainly attributed to a spike in sociopolitical violence in Myanmar and is largely unrelated to the onset of the COVID-19 pandemic.

In Southern Asia, the impact of the COVID-19 pandemic on subregional homicide trends also appears to have been relatively muted, as year-on-year changes in the total number of homicides observed between 2019 and 2021 were well within the range of changes observed in the previous decade (figure 28). It should be noted, however, that India and Pakistan, the two most populous countries in the subregion for which time series data are available, have both recorded slight increases in homicide (Pakistan in particular) since the onset of the COVID-19 pandemic, following a decade of continuous decline. This may indicate that “strain”-related causal mechanisms associated with the lockdowns have been gradually pushing up homicide rates in Southern Asia, although more research is needed if the factors that have driven this increase are to be understood.

## Africa

In Africa, the limited availability of reliable trend data makes drawing firm conclusions about the longer-term impact of COVID-19 lockdowns on homicide trends very difficult, with the evidence available for three populous countries in the region not painting a clear picture. For example, both Kenya and South Africa recorded significant increases in homicides two years into the COVID-19 pandemic, which may indicate that “strain”-related mechanisms such as unemployment and loss of income have been pushing up homicide rates in those countries as well as a rise in crime-related homicides in South Africa, whereas Uganda

**FIG. 29** Homicide trends in Kenya, South Africa and Uganda, 2010–2021



Source: UNODC homicide statistics.

recorded a continuous decline in the homicide rate during the first two years of the pandemic. This suggests that the impact of the COVID-19 pandemic on homicide trends in Africa has been highly heterogeneous and context-specific (figure 29).

### Spotlight on South Africa

In 2021, the number of victims of homicide in South Africa reached a total of almost 25,000, or roughly 5,000 more than in 2020,<sup>123</sup> representing the largest increase in Africa in absolute numbers in 2021. Data on homicide offences in the country show that the increase continued in 2022.<sup>124</sup>

After the onset of the COVID-19 pandemic, South Africa initially experienced a decline in homicide, with 35.8 per cent fewer homicides occurring in the period April–June 2020 than during the same period in 2019.<sup>125</sup> From June to September 2020, the number of homicides in the country continued to be lower than during the same period in 2019, by 6.2 per cent. COVID-19-related measures such as a ban on alcohol sales may have contributed to the short-term decrease in homicide after the onset of the pandemic,<sup>126</sup> but the number of homicides began to increase beyond the level recorded in the same period in the previous year from October 2020.<sup>127</sup> In 2022, the number of homicides continued to surpass pre-pandemic levels, with an alarming increase of approximately 25 per cent from the 2019 level and an increase of 14 per cent from the 2021 level. Economic challenges, including the impact of the COVID-19 pandemic, have negatively affected both the legal and illegal economies in South Africa,<sup>128</sup> which has led to greater competition between criminal groups and an increase in violence. The pandemic’s far-reaching consequences, including travel restrictions and a reduction in economic activity, have led to job losses, declining incomes and financial hardship for many individuals and businesses. In turn, the subsequent expansion of organized crime is having a negative impact on the economy of South Africa.<sup>129</sup>

Although the youth unemployment rate and total unemployment rate have varied by around 1 per cent each year during the past decade, both increased much more sharply in 2021. The youth unemployment rate (people aged 15–24 years) rose from 43.5 per cent in 2020 to 49.9 per cent in 2021, representing an increase of 6.4 percentage points, and the total unemployment rate rose from 24.3 per cent to 28.8 per cent, or 4.5 percentage points, over the same period.<sup>130</sup> Since youth unemployment has been linked to increases in homicide,<sup>131</sup> the increase in unemployment and in youth unemployment in particular, may have contributed to the surge in homicides in South Africa in 2021.

Data on the situational context of homicides in South Africa are available for less than half of all offences, so it is difficult to assess the type of homicide that most contributed to the surge in homicides between the end of 2020 and the end of 2021. Nevertheless, evidence shows that crime experienced by households has increased since 2020,<sup>132</sup> reversing the decreasing trend from 2018 to 2020,<sup>133</sup> which could indicate an increase in gang-related and other crime-related homicides such as killings linked to robberies. Furthermore, although targeted killings only account for a small share of the overall homicide rate, there has been a reported increase of 33 per cent in political killings, with 30 cases in 2021 and 40 cases in 2022, driven by increasing competition for local municipal office positions.<sup>134</sup>

Trends in the homicide rate vary across the country and the impact of COVID-19 measures and subsequent economic hardship differs from one province to the next. High unemployment, for example, coupled with economic inequalities and other factors contributed to unrest in KwaZulu-Natal and Gauteng in July 2021. The unrest, which included high levels of violence, led to at least 354 deaths, although not all of them were intentional homicides, and extensive destruction of property.<sup>135</sup>

Meanwhile, the profile of and trends in homicides in the Western Cape differ significantly from those in the rest of the country, with other provinces tending to experience a higher incidence of homicide resulting from interpersonal disputes and vigilantism, while gang-related killings and other crime-related homicides are more prevalent in the Western Cape, where there is a history of taxi violence and related killings. A split between the Cape Organisation for the Democratic Taxi Association and the Cape Amalgamated Taxi Association in 1999 led to rivalry between the two factions that resulted in violent confrontations over routes in which both employed “hit squads”. Cape Town gangs became involved in 1998, engaging in shootings, extortion and operating their own taxis. Although violence between and within these groups has been intermittent, with short-lived truces, killings have surged, with the death toll increasing from 116 in 2020 to 123 in 2021.<sup>136</sup> Despite an agreement in August 2021, taxi drivers continue to be

killed and the lack of a lasting peace indicates that the taxi dispute continues to be a driver of homicide trends in the Western Cape.<sup>137</sup>

The Eastern Cape has been grappling with a high homicide rate for years, with a projected annualized rate of 75 homicides per 100,000 in 2022/23, making it the province of South Africa with the highest rate of homicidal violence.<sup>138</sup> By contrast, Northern Cape and Free State have experienced a decline in the homicide rate over the past decade, while in Gauteng the homicide rate rose in tandem with population growth in the province, although the per capita increase has been lower than in the Eastern Cape, KwaZulu-Natal and Western Cape.

Broader, systemic issues may have contributed to the escalating homicide rate in South Africa. The ability of the police to solve homicide cases has declined since 2012, with the detection rate<sup>139</sup> falling from 31.1 per cent in 2011/2012<sup>140</sup> to just 14.5 per cent in 2021/2022.<sup>141</sup> The effectiveness of law enforcement and the criminal justice system has been hindered by both a decrease in the budget of the South African Police Service and a lack of comprehensive trend analysis, resulting in the ineffective allocation of police resources and a limited capacity to understand and address the increasing homicide rate.<sup>142</sup> This suggests that strengthening law enforcement and the criminal justice system is key to reversing the current homicide trend in South Africa.

## REFERENCES

- 1 According to the ICCS classification, deaths caused by legal interventions refer to “deaths inflicted upon a person by the police or other law-enforcement agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order, and other legal action when the use of force by law enforcement is necessary to protect life”. See UNODC, *International Classification of Crime for Statistical Purposes (ICCS): Version 1.0* (Vienna, 2015), p. 33.
- 2 According to the ICCS classification, unlawful killings by State authorities refer to deaths resulting from “the use of force by law enforcement or other State officials that exceeded the limits, set by national and international standards, of what is strictly necessary and required for the performance of their duty”. *Ibid.*
- 3 *Ibid.*
- 4 See box on considerations for classifying conflict-related deaths and intentional homicides, and their overlap in conflict situations of this chapter.
- 5 *Ibid.*
- 6 Kanis, S. et al., “A cautionary note about the use of estimated homicide data for cross-national research”, *Homicide Studies*, vol. 21, No. 4 (November 2017), pp. 312–324.
- 7 UNODC, *International Classification of Crime for Statistical Purposes (ICCS)* (Vienna, 2015), p. 102.
- 8 The United Nations does produce a list of individuals and groups against which the Security Council has agreed to levy sanctions: the “1267 List” (named after Security Council resolution 1267 (1999)). However, this list is limited to Islamic State in Iraq and the Levant (Da’esh), Al-Qaida and affiliated groups and individuals. Many countries regard militant nationalist groups within their borders as “terrorist” organizations, but there is no universal consensus on these classifications.
- 9 It is important to note that there is definitional overlap between intentional homicide, conflict-related deaths and terrorist killings. For example, according to ICCS, death as a result of terrorist activities is counted as intentional homicide, while some types of killings committed in the context of armed conflict (such as targeted killings by combatants of civilians or others not during combat operations) are also classified as intentional homicide. This means that, for statistical purposes, categories of killings are not mutually exclusive.
- 10 Terrorist killings estimates are from the Global Terrorism Database. Available at <https://www.start.umd.edu/gtd/>. The Global Terrorism Database defines a terrorist attack as “the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation.” This definition does not coincide with the United Nations definition (United Nations International Convention for the Suppression of the Financing of Terrorism, 1999: E/RES/54/109).
- 11 Conflict death estimates are from the UCDP/PRIO Armed Conflict Dataset (available at <https://ucdp.uu.se/exploratory/>), and include deaths resulting from state-based violence, non-state violence and one-sided violence.
- 12 Conflict death estimates are from the Uppsala Conflict Data Program/Peace Research Institute Oslo (UCDP/PRIO) Armed Conflict Dataset. Conflict deaths include deaths from state-based violence, non-state violence, and one-sided violence. Deaths from state-based armed conflict and non-state conflict refers to deaths where there is use of armed force between warring parties in a conflict dyad. This includes traditional battlefield fighting, guerrilla activities (e.g. hit-and-run attacks / ambushes) and all kinds of bombardments of military units, cities and villages etc. Both deaths of military and civilians are included. One-sided violence deaths refer to deaths stemming from attacks carried out by organized actors, targeting unarmed civilians.
- 13 For population data on urban agglomerations, see United Nations, “The world’s cities in 2018”, Data booklet. Available at [https://www.un.org/en/development/desa/population/publications/pdf/urbanization/the\\_worlds\\_cities\\_in\\_2018\\_data\\_booklet.pdf](https://www.un.org/en/development/desa/population/publications/pdf/urbanization/the_worlds_cities_in_2018_data_booklet.pdf).
- 14 The global and regional estimates are produced based on available national data and through a statistical model imputing missing values at the country level. They are complemented by an interval of uncertainty that accounts for possible estimation errors due to the imputation of missing values at the country level. The bands do not represent probabilistic confidence intervals. For more information, see the methodological annex to this report.
- 15 For a more detailed discussion about homicide in Brazil and Nigeria, see chapter 4 of the present study.
- 16 The 10 countries with the largest absolute number of homicide victims are, in order of magnitude, Brazil, Nigeria, India, Mexico, South Africa, United States of America, Myanmar, Colombia, Russian Federation and Pakistan.
- 17 The term “homicide rate” is used throughout the present study as a shorthand to refer to the total number of homicide victims per 100,000 population.
- 18 The 2021 estimate of a global homicide rate of 5.8 per 100,000 population is not directly comparable to the 2017 figure (6.1) published in the *Global Study on Homicide 2019* and the 2012 figure (6.2) published in the *Global Study on Homicide 2013* because of an improvement in the coverage of national data and refinements in the statistical model.
- 19 For further information about homicidal violence at the national level in different regions, see the sections on regional trends in this chapter and in chapter 4 of the present study.
- 20 Given that they experience large year-on-year fluctuations in homicide rates owing to their small population, countries and territories with a population of less than 1 million are excluded from the comparison of national homicide rates.
- 21 For further information about the number of homicides in countries in the Caribbean in 2022, see chapter 4 of the present study.
- 22 UNODC, “Research brief: Effect of the COVID-19 pandemic and related restrictions on homicide and property crime” (Vienna, 2020). Available at [https://www.unodc.org/documents/data-and-analysis/covid/Property\\_Crime\\_Brief\\_2020.pdf](https://www.unodc.org/documents/data-and-analysis/covid/Property_Crime_Brief_2020.pdf).
- 23 See, for example, Gutiérrez-Romero, R., “Conflicts increased in Africa shortly after COVID-19 lockdowns, but welfare assistance reduced fatalities”, *Economic Modelling*, vol. 116 (August 2022). Available at <https://doi.org/10.1016/j.econmod.2022.105991>.
- 24 Between 2000 and 2021, the global population increased from 6.1 to 7.9 billion, representing an increase of around 29 per cent. See United Nations Department of Economic and Social Affairs, Population Division, “World population prospects 2022”. Available at <https://population.un.org/wpp/>.
- 25 The year 2021 is not included in the projection.
- 26 See UNODC, *Global Study on Homicide 2019*, Booklet 2, *Homicide: Extent, Patterns, Trends and Criminal Justice Response* (Vienna, 2019).
- 27 UNODC, *Global Study on Homicide 2019*, Booklet 2, *Homicide: Extent, Patterns, Trends and Criminal Justice Response* (Vienna, 2019).
- 28 The homicide series in Brazil is based on vital registration data from the Ministry of Health. Available at <https://datasus.saude.gov.br/>. An alternative source of data on homicide in Brazil is the Ministry of Justice, which recorded a similar decline over the same period, albeit at a lower absolute level. Available at: <https://dados.mj.gov.br/dataset/sistema-nacional-de-estatisticas-de-seguranca-publica>.
- 29 See, for example, Forum Brasileiro de Segurança Pública, *Anuário Brasileiro de Segurança Pública 2022*. Available at: <https://forumseguranca.org.br/anoario-brasileiro-seguranca-publica/>.
- 30 For a more detailed discussion, see the section on organized crime as a driver of homicide trends in chapter 4 of the present study.
- 31 The out-migration of a large share of its youth population has been identified as one of the key drivers behind the decline in reported homicides in the Bolivarian Republic of Venezuela in recent years. See, for example, Observatorio Venezolano de Violencia, “Informe anual de violencia 2021”. Available at <https://observatoriodeviolencia.org.ve/news/informe-annual-de-violencia-2021/>.
- 32 For more information on homicides linked to organized crime, see chapter 4 of the present study.



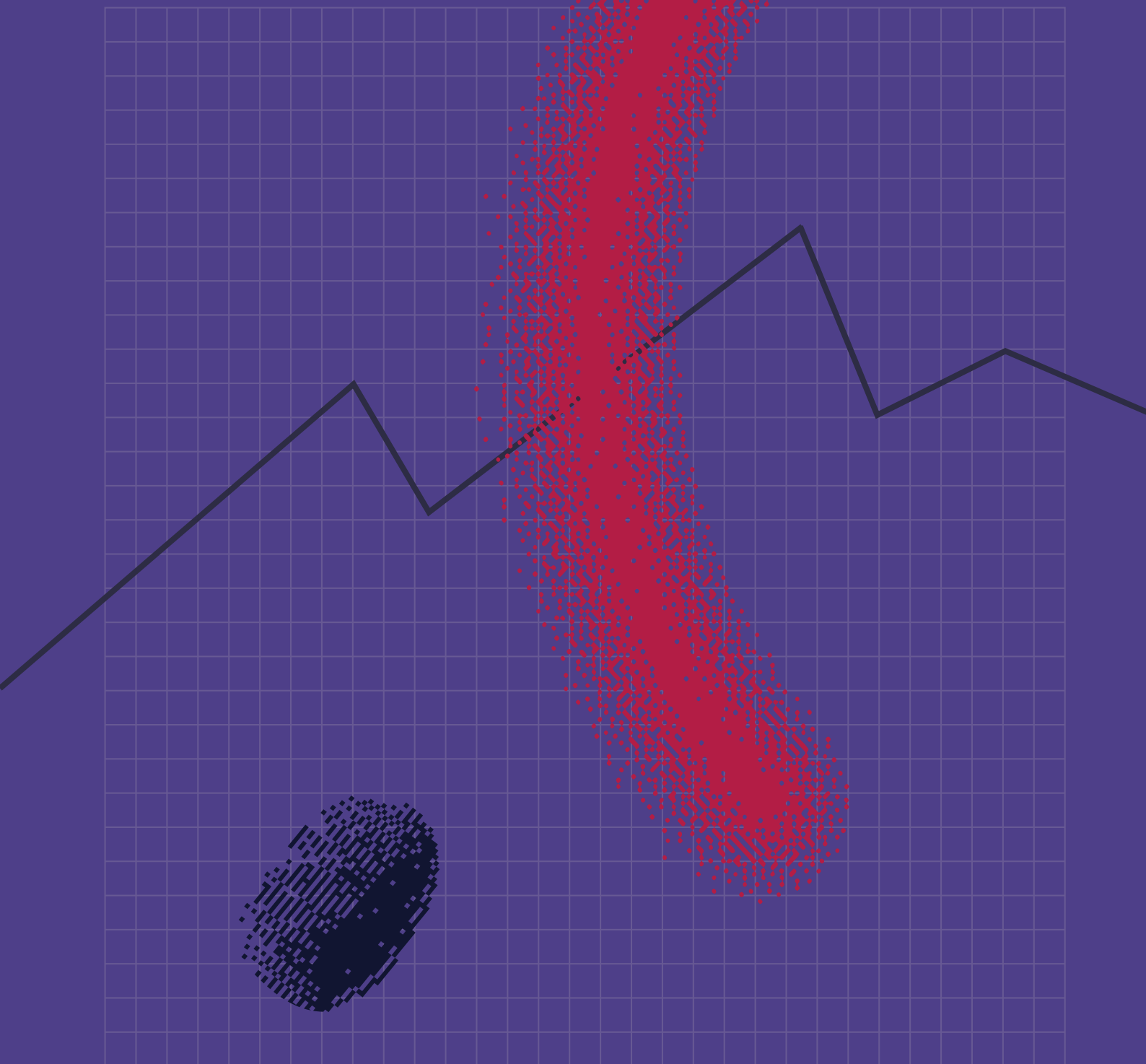
- 33 UNODC. *Haiti's criminal markets: Mapping Trends in Firearms and Drug Trafficking* (2023).
- 34 The national trend in the United States is also affected by the transition to the new National Incident-Based Reporting System (NIBRS). The 2020 figures used are based on the previous reporting system, while the 2021 figures used are based on NIBRS. NIBRS homicide estimates are published with confidence intervals, which, in 2021, ranged from 21,300 to 24,600 victims. For more information, see United States Department of Justice, Federal Bureau of Investigation, "The transition to the national incident-based reporting system (NIBRS): a comparison of 2020 and 2021 NIBRS estimates", 2022.
- 35 Johns Hopkins Center for Gun Violence Solutions, "A year in review: 2020 gun deaths in the U.S.", 2022; Centers for Disease Control and Prevention (CDC), National Center for Health Statistics, "The record increase in homicide during 2020", 2021. The association between firearm availability and homicide is contested in the literature (see, for example, Hepburn, L. M. and Hemenway, D., "Firearm availability and homicide: a review of the literature", *Aggression and Violent Behavior* (2004), pp. 417–40. Available at [https://doi.org/10.1016/S1359-1789\(03\)00044-2](https://doi.org/10.1016/S1359-1789(03)00044-2); Schleimer, J.P. et al., "Firearm purchasing and firearm violence during the coronavirus pandemic in the United States: a cross-sectional study", *Inj. Epidemiol.* Vol 8, No. 43 (2021). Available at <https://doi.org/10.1186/s40621-021-00339-5>). However, there is consensus that firearm accessibility in the home is a risk factor for domestic homicides (see Anglemyer, A. et al. "The accessibility of firearms and risk for suicide and homicide victimization among household members: a systematic review and meta-analysis", *Annals of Internal Medicine* (2014), pp. 101–110).
- 36 Federal Bureau of Investigation, FBI Releases 2022 Crime in the Nation Statistics, 16 October 2023. Available at <https://www.fbi.gov/news/press-releases/fbi-releases-2022-crime-in-the-nation-statistics>.
- 37 Council on Criminal Justice, "Crime trends in U.S. cities: mid-year 2023 update", 2023. Available at: <https://counciloncj.org/mid-year-2023-crime-trends/> (Accessed: 22 September 2023).
- 38 Despite diverging approaches to criminal justice, homicide trends in Canada have closely followed developments in the United States. See Rennó Santos, M., Lu, Y. and Fairchild, R. E., "Age, period and cohort differences between the homicide trends of Canada and the United States", *The British Journal of Criminology*, vol. 61, No. (March 2021), pp.389–413.
- 39 See the section on organized crime as a diver of homicide trends in chapter 4 of the present study. For more information on the situation in Mexico, see Calderón, L. Y. et al., eds., *Organized Crime and Violence in Mexico: 2021 Special Report*, Justice in Mexico (University of San Diego, October 2021).
- 40 For a more detailed discussion, see the section on organized crime as a diver of homicide trends in chapter 4 of the present study.
- 41 For a more detailed discussion, see the section "Spotlight on Myanmar" in the present chapter.
- 42 UNODC, *Myanmar Opium Survey 2022 – Cultivation, Production, and Implications* (Vienna, January 2023).
- 43 The relatively low homicide rate in Indonesia may reflect the lower capacity to record homicide in that country than in other countries. See UNODC, *Global Study on Homicide 2019*, Booklet 2, *Homicide: Extent, Patterns, Trends and Criminal Justice Response* (Vienna, 2019), p. 30.
- 44 "Situation of human rights in Myanmar" – Report of the United Nations High Commissioner for Human Rights, United Nations General Assembly A/HRC/48/67.
- 45 "Report of the Independent Investigative Mechanism for Myanmar" – United Nations General Assembly A/HRC/48/18.
- 46 "Reports of the Working Group on Situations on its twenty-eighth and twenty-ninth sessions" – United Nations General Assembly A/HRC/51/21.
- 47 The Billion Dollar Death Trade: The International Arms Networks that Enable Human Rights Violations in Myanmar"- Conference room paper of the Special Rapporteur on the situation of human rights in Myanmar A/HRC/53/CRP.2.
- 48 "Situation of human rights in Myanmar" – Report of the United Nations High Commissioner for Human Rights, United Nations General Assembly A/HRC/48/67, para 49.
- 49 "Situation of human rights in Myanmar" – Report of the United Nations High Commissioner for Human Rights A/HRC/54/59.
- 50 "Report of the Independent Investigative Mechanism for Myanmar" – United Nations General Assembly A/HRC/51/4.
- 51 For more information on this topic, see "Considerations for classifying conflict-related deaths and intentional homicides, and their overlap in conflict situations topic" at the beginning of this chapter.
- 52 The Armed Conflict Location & Event Data Project (ACLED) reported a 16-fold increase in fatalities related to violence against civilians, battles, explosions/remote violence, protests, and riots from about 680 in 2020 to just over 11,000 in 2021.
- 53 ACLED recorded more than 2,000 fatalities related to violence against civilians, riots and protests in both 2021 and 2022, as well as an increase in fatalities related to battles and explosions, from 8,700 killings in 2021 to 17,200 killings in 2022.
- 54 UNODC, *Monitoring the Impact of Economic Crisis on Crime* (Vienna, 2012).
- 55 International Labour Organization, "Employment in Myanmar in 2021: a rapid assessment", ILO Brief, January 2022.
- 56 Yuzana, "Crime surges under Myanmar Junat as rule of law crumbles", *The Irrawaddy*, 7 November 2022; Thai PBS World, "Crime rate rising in Myanmar's business capital", 15 September 2022.
- 57 Gallup, "Post-coup Myanmar: confidence in government crashes", 1 February 2022. Available at <https://news.gallup.com/poll/389321/post-coup-myanmar-confidence-government-crashes.aspx>.
- 58 Gallup, "Post-coup Myanmar: confidence in government crashes", 1 February 2022.
- 59 Ibid.
- 60 UNODC, *Myanmar Opium Survey 2022: Cultivation, Production, and Implications* (Vienna, 2022).
- 61 UNODC, *Transnational Organized Crime in Southeast Asia: Evolution, Growth and Impact* (Vienna, 2019).
- 62 UNODC, *Myanmar Opium Survey 2022: Cultivation, Production, and Implications* (Vienna, 2022).
- 63 Note that according to ICCS, death as a result of terrorist activities is counted as intentional homicide.
- 64 See "Spotlight on South Africa" at the end of this chapter.
- 65 UNODC, *Global Study on Homicide 2019*, Booklet 2, *Homicide: Extent, Patterns, Trends and Criminal Justice Response* (Vienna, 2019), p. 60.
- 66 Verkko, V., "Homicides and suicides in Finland and their dependence on national character", *Scandinavian Studies in Sociology*, No. 3 (Copenhagen, G. E. C. Gads Forlag, 1951).
- 67 UNODC, *Global Study on Homicide 2019*, Booklet 2, *Homicide: Extent, Patterns, Trends and Criminal Justice Response* (Vienna, 2019), p. 62.
- 68 *Global Study on Homicide 2019*, Booklet VI, *Killing of Children and Young Adults* (United Nations publication, 2019).
- 69 Ibid.
- 70 For more information on trends by type of homicide, see chapter 4 of the present study.
- 71 Ibid.
- 72 *Global Study on Homicide 2019*, Booklet VI, *Killing of Children and Young Adults* (United Nations publication, 2019).
- 73 Ibid.
- 74 Ibid.
- 75 Ibid.
- 76 Under the age of 18 years.
- 77 For reference, the share of children in the global population is estimated to have been 30.2 per cent in 2021.
- 78 *Global Study on Homicide 2019*, Booklet VI, *Killing of Children and Young Adults* (United Nations publication, 2019).
- 79 Ibid.

- 80 Stöckl, H. et al., "Child homicide perpetrators worldwide: a systematic review", *BMJ Paediatrics Open*, vol.1, No.1 (August 2017).
- 81 In addition to general challenges in establishing the age of victims in homicide cases, the killing of very young children perpetrated by parents or other family members can go undetected, as such cases lend themselves more readily to the reporting of a false cause of death. See *Global Study on Homicide 2019*, Booklet VI, *Killing of Children and Young adults* (United Nations publication, 2019).
- 82 Eisner, M. and Nivette, A., "Violence and the pandemic: urgent questions for research and policy", HFG Research and Policy Brief (April 2020).
- 83 Ibid.
- 84 Ibid.
- 85 Nivette, A. et al., "A global analysis of the impact of COVID-19 stay-at-home restrictions on crime", *Nature Human Behaviour* (June 2021).
- 86 Aside from the "opportunity" and "strain" mechanisms, the transformation of routine activity patterns during lockdowns is likely to represent another crucial causal mechanism affecting homicide trends, as well as changes in the price and availability of goods, and the (perceived) costs of social interaction due to the risk of infection. See Eisner, M. and Nivette, A., "Violence and the pandemic: urgent questions for research and policy", HFG Research and Policy Brief (April 2020).
- 87 UNODC, "Research brief: Effect of the COVID-19 pandemic and related restrictions on homicide and property crime" (Vienna, 2020).
- 88 Sui, X. et al., "Violence exposure in South African adolescents: differential and cumulative effects on psychological functioning", *Journal of Interpersonal Violence*, vol. 36, No. 9-10 (July 2018); Dewet, Z. T., Kotzé, C. and Sokudela, F., "State patients who committed violent crimes and were admitted to Weskoppies Hospital from 2005 to 2014: profiles and trends", *South African Journal of Psychiatry*, vol. 26 (November 2020).
- 89 WHO, "Mental health and COVID-19: early evidence of the pandemic's impact", Scientific brief, 2 March 2022.
- 90 Duden, G. S, Gersdorf, S. and Stengler, K., "Global impact of the COVID-19 pandemic on mental health services: a systematic review", *Journal of Psychiatric Research*, vol. 154 (October 2022).
- 91 Donenberg, G. et al., "Pathways from witnessing community violence to mental health problems among South African adolescents", *SAMJ: South African Medical Journal*, vol. 110, No. 2 (February 2020), pp. 145-153.
- 92 UNODC, "Research brief: Effect of the COVID-19 pandemic and related restrictions on homicide and property crime" (Vienna, 2020).
- 93 Ibid.
- 94 Ibid.
- 95 Nivette, A. et al., "A global analysis of the impact of COVID-19 stay-at-home restrictions on crime", *Nature Human Behaviour* (June 2021).
- 96 Ibid.
- 97 Balmori de la Miyar, J. R., Hoehn-Velasco, L. and Silverio-Murillo, A., "Druglords don't stay at home: COVID-19 pandemic and crime patterns in Mexico City", *Journal of Criminal Justice*, vol. 72 (2021).
- 98 See the section on organized crime as a diver of homicide trends in chapter 4 of the present study.
- 99 Poblete-Cazenave, R., "The great lockdown and criminal activity: evidence from Bihar, India", *COVID Economics: Vetted and Real-Time Papers*, No. 29 (June 2020).
- 100 Calderon-Anyosa, R. and Kaufman, J., "Impact of COVID-19 lockdown policy on homicide, suicide, and motor vehicle deaths in Peru", *Preventive Medicine*, vol. 143 (February 2021).
- 101 Navsaria, P. H., et al., "The effect of lockdown on intentional and nonintentional injury during the COVID-19 pandemic in Cape Town, South Africa: a preliminary report", *South African Medical Journal*, vol. 111, No. 2 (2021), pp. 110-113.
- 102 Barron, K. et al., "Alcohol, violence and injury-induced mortality: evidence from a modern-day prohibition", CESifo Working Papers, February 2022.
- 103 See, for example, Esposito, M., et al., "The impact of the COVID-19 pandemic on the practice of forensic medicine: an overview", *Healthcare*, vol. 10, No. 2 (February 2022).
- 104 Martínez, L. I., "Chronicles of an announced pandemic: homicides in Colombia", Universidad de los Andes, December 2020.
- 105 Gomez, C. T. "Organised crime governance in times of pandemic: the impact of COVID-19 on gangs and drug cartels in Colombia and Mexico", *Bulletin of Latin American Research*, vol. 39, No. 1 (December 2020), pp. 12-15.
- 106 Observatorio feminicidios Colombia, Reporte Dinámico Feminicidios Colombia.
- 107 Castro, C. et al., "Understanding the killing of social leaders in Colombia during COVID-19", Latin America and Caribbean Centre, 6 October 2020. Available at <https://blogs.lse.ac.uk/latamcaribbean/2020/10/06/understanding-the-killing-of-social-leaders-in-colombia-during-covid-19/>.
- 108 Caracol Radio Medellín, "Antioquia aportó el 55% de la reducción de homicidios del país en el 2020", 19 January 2021.
- 109 Alsema, A., "Medellin's violent crime statistics drop significantly", Colombia Reports, 17 August 2022. Available at <https://colombiareports.com/medellin-violent-crime-rates-drop-significantly/>.
- 110 InfoSegura, Guatemala Analysis of the State of Violence and Citizen Security First Semester 2020 (1S-2020).
- 111 Gobierno de Guatemala, Secretari Tecnica del Consejo Nacional de Seguridad, "Reporte Estadístico Junio 2020".
- 112 Ibid.
- 113 InfoSegura, Citizen Security Analysis First Half of 2020, Central America and the Dominican Republic, August 2020.
- 114 InfoSegura, Guatemala Analysis of the State of Violence and Citizen Security First Semester 2020 (1S-2020).
- 115 UNODC and UN Women, *Gender-related Killings of Women and Girls (Femicide/Feminicide)* (Vienna, 2022).
- 116 Asmann, P. and Jones, K., "InSight Crime's 2020 homicide round-up", 29 January 2021. Available at <https://insightcrime.org/news/analysis/2020-homicide-round-up/>.
- 117 International Crisis Group, "Virus-proof violence: crime and COVID-19 in Mexico and the Northern Triangle, 13 November 2020. Available at <https://www.crisisgroup.org/latin-america-caribbean/83-virus-proof-violence-crime-and-covid-19-mexico-and-northern-triangle>.
- 118 Gutiérrez-Romero, R. and Salgado, N., "New trends in south-south migration: the economic impact of COVID-19 and immigration enforcement", *Applied Geography*, Vol. 154 (May 2023).
- 119 The Economist Group, "Guatemala sharp drop in homicides likely to reverse in 2021", 27 January 2021.
- 120 Johns Hopkins Center for Gun Violence Solutions, *A Year in Review: 2020 Gun Deaths in the U.S.* (April 2022).
- 121 Federal Bureau of Investigation, FBI Releases 2022 Crime in the Nation Statistics (16 October 2023). Available at <https://www.fbi.gov/news/press-releases/fbi-releases-2022-crime-in-the-nation-statistics>.
- 122 See the section on organized crime as a diver of homicide trends in chapter 4 of the present study.
- 123 South African Police Service crime statistics are reported by financial year (April 2021 – March 2022).
- 124 South African Police Service. Available at [https://www.saps.gov.za/services/older\\_crimestats.php](https://www.saps.gov.za/services/older_crimestats.php).
- 125 South African Police Service. Available at: [https://www.saps.gov.za/services/April\\_June%202020\\_2021.pdf](https://www.saps.gov.za/services/April_June%202020_2021.pdf).
- 126 Barron, K. et al., "Alcohol, violence and injury-induced mortality: evidence from a modern-day prohibition", CESifo Working Paper No. 9595, 25 February 2022. Available at SSRN: <https://ssrn.com/abstract=4043319> or <http://dx.doi.org/10.2139/ssrn.4043319>.
- 127 South African Police Service. Available at [https://www.saps.gov.za/services/older\\_crimestats.php](https://www.saps.gov.za/services/older_crimestats.php).
- 128 Arndt, C., Robinson, S. and Gabriel, S., "Who has been hit hardest by

- South Africa's lockdown? We found some answers", *The Conversation* (11 June 2020).
- 129 *The Economist*, "How organized crime is blighting South Africa's economy", 20 October 2022.
- 130 International Labour Organization, "Labour force statistics database (LFS)", ILOSTAT.
- 131 Mazorodze, B. T., "Youth unemployment and murder crimes in KwaZulu-Natal, South Africa", *Cogent Economics & Finance* (7 August 2020).
- 132 Data refer to the fiscal year: April to March.
- 133 Statistics South Africa, "Governance, public safety, and justice survey", 2023. Available at <https://www.statssa.gov.za/publications/P0341/P03412023.pdf>.
- 134 Matamba, R., "The business of killing in South Africa, assassinations in South Africa", Global Initiative Against Transnational Organized Crime, April 2023.
- 135 The Presidency, Republic of South Africa, "Report of the expert panel into the July 2021 civil unrest", 29 November 2021.
- 136 Global Initiative Against Transnational Organized Crime, *Strategic Organized Crime Risk Assessment: South Africa* (Geneva, 2022).
- 137 Ibid.
- 138 Bruce, D., "Soaring murder rates underline the lack of sound direction for policing", *Institute for Security Studies*, 9 February 2023.
- 139 Here, "detection rate" means the proportion of charges investigated that are either referred to court, added to charges withdrawn before court, or closed as unfounded.
- 140 South African Police Service, "Annual report 2011/2012". Available at [https://www.gov.za/sites/default/files/gcis\\_document/201409/sapsanrep11-12.pdf](https://www.gov.za/sites/default/files/gcis_document/201409/sapsanrep11-12.pdf).
- 141 South African Police Service, "Annual report 2021/2022". Available at [https://www.saps.gov.za/about/stratframework/annual\\_report/2021\\_2022/Annual-Report-2021-22-latest.pdf](https://www.saps.gov.za/about/stratframework/annual_report/2021_2022/Annual-Report-2021-22-latest.pdf).
- 142 Bruce, D., "Soaring murder rates underline the lack of sound direction for policing", *Institute for Security Studies*, 9 February 2023.

# CHAPTER 3

## MEGATRENDS AND HOMICIDE



## Chapter 3

# MEGATRENDS AND HOMICIDE

---

### Background

Despite the annual number of homicides registered worldwide reaching a peak in 2021, the long-term trend in the homicide rate is one of gradual decline. Although the uneven coverage and quality of data mean that caution should be exercised when making direct comparisons across years, there has been a noticeable decrease in the homicide rate over the past two decades, from 6.9 homicides per 100,000 in 2000 to 5.8 in 2021.<sup>1</sup> Moreover, scholars estimate that the global homicide rate has declined significantly over the past several hundred years,<sup>2</sup> an example being the decline of more than 90 per cent in lethal interpersonal violence across Europe between the fifteenth and twentieth centuries.<sup>3</sup>

Based on historical trends, the downward movement in the global homicide rate is projected to continue until 2030. As seen in chapter 2 of the present study, based on the trend observed over the period 2015–2020, the global homicide rate is projected to decrease from 5.8 per 100,000 population in 2021 to 4.7 in 2030. Although this projection would fall short of Sustainable Development Goal target 16.1 of significantly reducing all forms of violence, which can be translated as a decrease in the homicide rate of at least 50 per cent by 2030, it is still a promising trend. The story is not a straightforward one, however. For one thing, given continued population growth, the absolute annual number of homicides could increase by 2030, even if the homicide rate continues falling. Furthermore, when considering a range of demographic, socioeconomic and climate-related factors, it is conceivable that the homicide rate could increase in certain regions, including Africa and Latin America and the Caribbean,<sup>4</sup> even as it decreases in other parts of the world. Nevertheless, there are grounds to project a continued decline in the homicide rate up until 2100.

The future landscape of homicide will surely look different from today's, as various trends with an impact on a global scale, so-called "megatrends", will affect homicides. At a minimum, geographic and demographic patterns of lethal violence will transform as populations live longer,<sup>5</sup> fertility rates decline,<sup>6</sup> patterns of urbanization shift and socioeconomic dynamics change. For example, certain areas in Latin America and the Caribbean that are presently homicide hotspots may become less at risk of homicidal violence than others in Sub-Saharan Africa and Southern Asia that have yet to undergo major demographic and socioeconomic transitions.

Although critical for policymaking and resource allocation, the projection of lethal violence is an imprecise science. Statistical modelling should not rely exclusively on historical homicide data to infer trends, as new dynamics continue to emerge. Indeed, fundamental characteristics and dynamics of homicide are prone to being influenced by an array of megatrends, some predictable such as ageing populations, rapid and irregular urbanization, and social and economic inequalities, and others emerging more recently, such as digital transformation and automation and climate-related factors.

This chapter considers the real and potential influence on future patterns of homicide of five megatrends identified by the United Nations as having a significant impact on economic, social and environmental outcomes.<sup>7</sup> An overview of the impact of these megatrends on intentional homicide is followed by detailed discussions of projections of homicide to 2100 that reflect three selected megatrends: (1) future demographic structures; (2) the impact of climate change; and (3) changing income inequalities. Given the uncertainties associated with predictive modeling, the intention is to stimulate avenues for future research in order to test the correlates of homicide, rather than to offer definitive projections.



## Overview

### Ageing populations reduce risk of homicide but a large youth population can lead to a short-term increase

Across time and space, the incidence of homicidal violence is highly concentrated among specific populations. Gender and age are robust predictors of the likelihood of falling victim to homicide, with young males being at greater risk than any other demographic group. However, the extent of homicide is also an important factor: in countries with high homicide rates, such as Brazil, Colombia, Jamaica and Nigeria, male victims significantly outnumber female victims, while in countries with low homicide rates, such as China, Germany, Japan, the Republic of Korea and Switzerland, males and females have a more equal risk of homicide.

Across most settings, young males aged 15–29 account for a disproportionate share of offenders. In the 68 countries with data on offenders by age, they represented 40 per cent of the total in 2021, despite making up just 12 per cent of the global population.<sup>8,9</sup> Thus, a large proportion of young males in the population, often described as a “male youth bulge”, is linked to a comparatively higher homicide rate. This is particularly the case in countries with a strong presence of organized crime because, while the leadership of organized criminal organizations may be older, the rank and file of drug trafficking fractions, militia groups, street gangs and other criminal entities is typically made up of young males.<sup>10</sup> According to empirical research, male youth from unstable, dysfunctional family environments, associated with poverty and high crime neighbourhoods, have an elevated risk of being recruited by gangs.<sup>11</sup>

Several empirical studies link changes in the age structure of populations to decreases or increases in homicide.<sup>12</sup> Specifically, as populations get older, the incidence of lethal violence reportedly declines.<sup>13</sup> Likewise, as the share of the population aged 15–29 grows, the risk of homicide increases. One hypothesis for this is that age composition is among the strongest predictors of individual criminal offending and victimization, with likely involvement decreasing as individuals age. With most populations now living longer as a result of improved health conditions and families having fewer children, it stands to reason that the proportion of the global population aged 15–29 is declining, thus reducing lethal violence.

Impending global shifts in demography may have an influence on future patterns of homicidal violence, but not all populations are ageing at the same speed.<sup>14</sup> In most middle- and upper-income countries, there is a trend in declining fertility rates and extended life expectancy, resulting in the emergence of older populations. The median age in Organisation for Economic Co-operation

and Development (OECD) member countries, for example, was 40 years in 2019 and above 40 in many of them,<sup>15</sup> and is likely to increase further. For example, the median age in the Republic of Korea is projected to rise from 43.4 in 2021 to 56.7 in 2050.<sup>16</sup>

The effect of ageing is visible in countries that had a high number of homicides in 2021. In Brazil, the share of the population aged under 30 is declining while the share of the population aged over 60 is growing. By 2050, the median age in Brazil, at 43.6 years, will be just two years younger than in OECD member countries.<sup>17</sup> Likewise, in India, the share of the population aged under 30 will decline from roughly 53 per cent in 2021 to 43 per cent by 2036.<sup>18</sup> Meanwhile, the under-30 cohort makes up 70 per cent of the population in Nigeria, but with the fertility rate slowing and life expectancy increasing in the country,<sup>19</sup> this is projected to decrease to 62 per cent by 2050.<sup>20</sup>

Other countries in Africa also anticipate life expectancy to increase and the fertility rate to decrease over time. Unlike the rest of the world, however, Africa will see the share of its population aged 15–29 increase from 26.9 per cent in 2021 to 28 per cent by 2035, before decreasing slowly thereafter.<sup>21</sup> This is due to the large share of the population aged 0–14 in the continent. With the population aged 15–29 being the most at risk of homicidal violence, this may lead to a higher homicide rate in Africa up until 2035.

Based purely on age composition, a decline in the homicide rate by more than 23.3 per cent worldwide by the end of the century could be expected, as shown in Projection 1 below. Although statistical projections have their limitations, the homicide rate could decline by up to 22.9 per cent in Africa, 30.1 per cent in Asia, 31.1 per cent in the Americas and 23.6 per cent in Oceania by 2100, meaning that that as many as 6.4 million lives could be saved over the next eight decades due to the effect of population ageing on homicide. These positive outcomes will gradually diminish as population ageing advances and populations become more balanced and stable. In the shorter term, however, regions with a higher proportion of youth could see an increase in homicide if lethal violence continues to affect young people more than those in other age groups. This is particularly the case in Africa, where the proportion of young people in the population is expected to grow in the near future.

### Climate change: increasing number of hot days could impact homicide

Climate change, if left unchecked, could impede the progress in development made in recent years. Goal 13 of the 2030 Agenda for Sustainable Development is therefore aimed at urgent global action to combat climate change and its impact. The relationship between climate change and homicidal violence is complex and uncertain, however.<sup>22</sup> The precise impact depends in part on the type of

climate change involved, be it in terms of short-term shocks such as wildfires, cyclones and floods, or longer-term stresses such as rises in temperatures and sea level. The overwhelming scientific consensus is that climate change and the associated shocks and stresses are increasing in intensity and frequency. Researchers have identified moderate and strong causal relationships in the United States between various types of climate-related shocks and stresses and violent crime, concluding that changes in the climate and environment could generate a sharp increase in urban criminal violence, in vulnerable neighbourhoods and households in particular.<sup>23</sup>

There are several theoretical perspectives on the criminogenic impacts of climate change. Criminologists have long drawn on routine activity and social interaction theory to explain how changes in weather can influence the behaviour of would-be offenders, victims and guardians.<sup>24</sup> The “heat-crime” hypothesis proposes that changes in temperature can shape the opportunity for crime. In other words, the warmer the weather, the more likely people are to be outdoors and the closer their proximity.<sup>25</sup> Another approach, drawn from behavioural science and neurology, is that changes in the environment, including an increase in heat and exposure to pollutants, can result in changes in cognition and exacerbate mental health issues,<sup>26</sup> impulsiveness, aggressive behaviour and the disposition to commit crime.<sup>27</sup> Researchers likewise draw on social disorganization theory to predict the outcomes of shocks on social cohesion and efficacy.

Ultimately, countries in different regions will both experience different levels of exposure and vulnerability to climate shocks and stresses and differences in violent outcomes. On the one hand, mean temperatures are expected to increase, with extremes of heat in inhabited areas expected to become more intense and frequent and the number of hot days to increase, not least in tropical regions.<sup>28</sup> On the other hand, high temperatures, precipitation and drought are expected to hit some areas harder than others, most notably in Latin America and the Caribbean, Africa and Asia.<sup>29</sup> The location of countries and their overall governance, economic stability and social resilience are all key determinants of their vulnerability to homicide, and given their varying capacities to cope and bounce back, the implications for violent crime will be diverse.

Several empirical studies have detected a direct positive relationship between rising temperatures and lethal violence. One study that examined over 60 countries estimated that for every change of one degree Celsius in the global temperature, there is a potential increase of six per cent in the homicide rate.<sup>30</sup> Another assessment of more than 170 countries between 2000 and 2018 not only noted a direct positive relationship between higher temperatures and homicide but also an indirect pathway between more rainfall and homicide.<sup>31</sup> Yet closer inspection of the

data within countries challenges the “heat hypothesis”,<sup>32</sup> although research into the correlations between pollution and aggressive behaviour is ongoing.<sup>33</sup> That said, there is growing evidence of the complex relationships between extreme weather, socioeconomic stress and homicide<sup>34</sup> and the uneven impacts that climate change will have on vulnerable populations.<sup>35</sup>

According to Projection 2 below, there is no average association between the mean temperature and the homicide rate. However, the projection does suggest a possible positive association between the number of hot days and the homicide rate. The projection of homicide trends based on future estimates of the number of hot days in a year indicates that the homicide rate may increase in the future in all the regions, especially Africa and the Americas.

Furthermore, resource scarcity and climate change have been linked to outbursts of violence and conflict by acting as “threat multipliers” that interact with other risk factors and drivers, such as weak governance structures and poverty, contributing to the outbreak and perpetuation of violence.<sup>36</sup> Owing to the effects of climate change, the depletion of natural resources is increasingly becoming an issue because the rate of regeneration is higher than the rate of consumption.<sup>37</sup> One of the most devastating impacts of climate change is how it exacerbates water scarcity and water-related hazards, be they floods and droughts, as rising temperatures cause disruptions in the natural water cycle.<sup>38</sup>

A causal empirical link between the likelihood of local conflict, manifested as organized intercommunal conflict, repression and political conflict, among other things, and water mass depletion has been established by a recent study looking at the distribution of conflicts in Africa, Central America and the Caribbean over a period of 15 years.<sup>39</sup> Other analysts have also pointed out how water shortages driven by climate change can heighten the risk of interstate conflict in Southern Asia, where several populous countries rely on a shared river system.<sup>40</sup>

Causal pathways in the relationship between resource scarcity and civil violence are less clear since the interaction involves multiple actors both at the national and local levels. Grievances resulting from resource scarcity may escalate into violence in a context in which political elites or other groups in society manipulate state policies in their favour, weakening or hampering institutional responses to perceived grievances.<sup>41</sup>

### Deepening income inequality may exacerbate vulnerability to homicide

As highlighted by Sustainable Development Goal 10 on reducing inequality within and among countries, inequal-



ities based on income, sex, age and other factors remain entrenched across the world. Income inequality in particular is a widely accepted predictor of differences in homicide between and within countries. Countries with a high level of income inequality often suffer from a high homicide rate, while those with a low level of income inequality experience a lower level of homicide. Studies of the relationship between the Gini index, which measures inequality, and the homicide rate demonstrate this relationship emphatically.<sup>42</sup> The underlying causal explanations typically focus on the way inequality exacerbates relative deprivation because individuals are frustrated about their lack of access to the status and wealth of others, thus driving (violent) crime. Conversely, a more equitable society with equal access to wealth will tend to have less status frustration, which will translate into a lower level of crime. Other research has focused on a range of different types of inequality, including how it relates to employment, education and other opportunities.<sup>43</sup>

Around the world, societies with high income inequality typically register high levels of violence. In Latin America and the Caribbean, for example, the subregion with the highest homicide rates worldwide, the richest 10 per cent of the population earns 22 times more than the poorest 10 per cent, making the gap between rich and poor double that in advanced economies. High inequality also increases vulnerability to crises and disruptions, generating additional potential knock-on effects for (violent) crime.<sup>44</sup>

Downward trends in inequality will have a dampening effect on homicidal violence in the future. Global inequality increased steadily during the 1980s and 1990s, before starting to wane in the 2000s.<sup>45</sup> Scholars anticipate a potential convergence of inequality across regions, other than Africa, where the decline is less marked. The projection of the impact of income inequality on future homicide trends made as part of Projection 3 below anticipates declines in intentional lethal violence across all regions, particularly the Americas, where the homicide rate could decline by as much as 46.2 per cent by 2100. Likewise, in Asia, the homicide rate could decline by 43 per cent over the same period. In Europe, however, given the more limited decline in income inequality, the decline is expected to be modest, at some 9.1 per cent, and in Africa, even more so, at just 5.3 per cent.

### Rapid urbanization and associated urban deprivation influence homicide

Today, over 54 per cent of the global population is urban, a figure that will rise to roughly 68 per cent by 2050.<sup>46</sup> The specific relationship between urbanization and homicide is a contested one. Previous UNODC research has found that differences between city homicide rates and national averages vary, with certain cities offering protective factors against violence and others enabling factors for violence.<sup>47</sup>

Similarly, some scholars stress that there is no positive correlation between urbanization and violence,<sup>48</sup> while others find that urbanization can actually reduce specific types of lethal violence, including femicide.<sup>49</sup> Meanwhile, other researchers have identified a statistically significant relationship between urban growth and violence, owing to resource scarcity, limited economic opportunities and reduced informal social control.<sup>50</sup>

The fact of living in an urban setting, and even the level of urbanization itself, may not be the most important determinants of homicide. Rather, the underlying conditions in fast-growing cities and associated urban inequalities and deprivations are the criminogenic factors.<sup>51</sup> The risk of homicide may intensify when urbanization occurs rapidly and irregularly, reinforces spatial and socioeconomic segregation<sup>52, 53, 54</sup> and is not accompanied by public services.<sup>55</sup>

Looking to the future, the highest homicide risks are likely to occur in settings yet to undergo rapid urbanization and with few safeguards and support networks for residents. Most middle- and upper-income countries have already undergone urban transition, even though the urban population is still growing,<sup>56</sup> and the vast majority of future urbanization is set to occur in the lower-income settings of Africa and Asia.<sup>57</sup> Between them, those two regions are projected to account for close to 90 per cent of the 2.2 billion increase in the urban population globally by 2050.<sup>58</sup> A sizeable share of the urbanization in many less-developed areas will be uncontrolled and not necessarily accompanied by the provision of services and social welfare.

The areas in low- and middle-income settings where the rate of urbanization is most rapid thus face the highest risk of homicide. During the past five decades, the subregions with the most rapid urbanization have included Latin America and the Caribbean, followed by Northern Africa and Western Asia.<sup>59</sup> In future, however, Sub-Saharan Africa will have the most rapid rate of urbanization, the population increasing by over 950 million by 2050, not only in mega-cities but also in small and medium-sized cities.<sup>60</sup> Southern Asia will also experience rapid urban growth, doubling its urban population and increasing by some 1.2 billion overall, mostly as a result of rural to urban migration and re-classification.<sup>61</sup>

### Digital transformation and automation could increase risk of homicide

Relentless digital transformation is reshaping governance, economics and social relations. This is not a new phenomenon, however, as new technologies that enable the increasing use of machinery have been reshaping societies for centuries, irrevocably changing people's lives.<sup>62</sup>

A prime example of this is the Industrial Revolution and its impact on communities and economies across the world. Starting around the mid-eighteenth century, the Industrial Revolution produced a shift from an agrarian to a manufacturing economy in many countries.

Nowadays, most countries are actively expanding digital connectivity and dependence on the Internet and digital devices are widespread. In the process, social media, instant messaging, chat rooms and gaming sites have become widely used. Researchers have examined the relationships between the Internet and homicide by focusing on the Internet as a broadcasting platform, as a hunting ground, as a means of acquiring the tools to commit violence, as a trigger and as a tool to facilitate organized crime.<sup>63</sup>

The relationship between digital connectivity, new technologies and homicide runs in various directions. In one sense, access to and use of digital tools and new technologies may be impacting the behaviour of perpetrators of lethal violence. For example, sustained exposure to online harms<sup>64</sup> may generate a greater risk of violence, including through stress and emulation, and may lead to the proliferation and diversification of cybercrime.<sup>65</sup> To date, limited empirical research has been conducted on cyber-related homicide,<sup>66</sup> despite its disturbing nature. Moreover, since existing national data collection systems do not disentangle cyber-related homicides from other types of homicide, it is difficult to assess the extent of this specific type of lethal violence. Current studies highlight the need for further research to improve understanding of how an online interaction may escalate into an offline aggression.<sup>67</sup>

In another sense, new technologies for predicting, detecting and disrupting criminal violence are also being developed and deployed that could also reduce homicide.<sup>68</sup> On a more basic level, however, the massive automation of jobs could also generate stresses and strains that could exacerbate homicide risks by increasing the financial vulnerability of workers, especially when social welfare is lacking.

There are also multiple ways in which deepening digital penetration and new technologies can influence the threat and risk of homicide.<sup>69</sup> For example, the digital coercion of victims is more likely to occur in the context of online campaigns. Likewise, the online environment can stimulate heightened aggression and argument escalation, facilitate monitoring and relationships with prospective victims, and allow for impersonation and anonymity.<sup>70</sup> The risk is likely to be particularly high in environments already characterized by a high homicide rate, areas with a high level of male use of the Internet, and settings with rapidly digitizing populations that have a comparatively low level of digital hygiene, including an absence of safeguards to protect people's digital identities.

More fundamentally, digital transformation and artificial intelligence- (AI) enabled systems are also likely to generate profound shifts in productivity and employment. Studies have presented mixed evidence of both gloomy and more optimistic predictions about the impact of AI technologies on the economy and labour market. Existing assessments indicate that heavily regulated sectors of the economy such as education may be more prone to AI-induced automation than others.<sup>71</sup> Estimates vary, but some 300 million full time jobs are at risk of automation by 2030 as a result of recent developments in AI.<sup>72</sup> In OECD member countries, 27 per cent of jobs are in sectors at high risk of automation.<sup>73</sup> In Asia, up to 20 per cent of jobs are at risk of automation by 2040, as are 69 per cent of jobs in India.<sup>74</sup> The risk of job losses in Africa varies,<sup>75</sup> with countries such as Kenya, Namibia and South Africa particularly at risk.<sup>76</sup> Automation in Latin America and the Caribbean is also a major risk,<sup>77</sup> with many people employed in the informal sector lacking social welfare cover.<sup>78</sup> In short, automation exacerbates unemployment and inequality and indirectly increases vulnerability to violence by placing strain on workers who lack employment stable enough to meet their financial needs.

On a positive note, digital transformation is also increasing the computational capacity of crime mapping and forecasting and real-time data to drive police operations and improve criminal justice. A wide range of technologies are being applied, including predictive policing, data-driven mapping and biometric monitoring. While this is generating some promising improvements in public security efficiency and effectiveness, the limitations of the underlying data and algorithms are also raising legitimate questions about fairness and discrimination as well as data protection and privacy.<sup>79</sup>

Moreover, even though the processes of digital transformation and automation have been ongoing for quite a while, the existing evidence in terms of how AI-led automation may transform societies and implicitly influence crime and homicide remains patchy.

### Effects of megatrends on homicide likely to vary by location

Caution needs to be applied when making predictions about the impact of megatrends on homicide around the world. Significant theoretical assumptions about cause-effect relationships remain unresolved in the academic literature and historical data coverage and quality, including at the national and subnational levels, are variable. Estimating future trends is challenging, particularly in the case of many vulnerable parts of the world that are expected to undergo significant transformations, most notably in Africa and Asia. As such, statistical projections based on modeling are freighted with uncertainty and must be inter-

preted with care. Nevertheless, speculation about possible relationships is warranted, not least to draw attention to potential scenarios and test hypotheses.

Several megatrends will likely contribute to a continued general decline in homicide over time. The decline will not be linear, however, with homicide pathways directly and indirectly influenced by a host of factors. Yet while they are likely to be highly consequential and disruptive, the megatrends associated with demographic, economic, technological and even climatic trends do not necessarily point to rising homicide around the world.

Moreover, the effects of megatrends on homicide will vary by location, with certain regions undergoing a less pronounced decrease in homicide rates than others. Some regions may register a temporary increase in homicide before experiencing a decline. Africa and Southern Asia in particular are likely to see a less dramatic reduction in homicidal violence than other parts of the world.

Indeed, it is important to note that all three of the following homicide projections to 2100 point to the particular vulnerability of Africa compared with the other regions in terms of the future trend in homicide. Africa stands out as the continent with the largest proportion of young people, the highest number of projected hot days and with the lowest projected decrease in income inequality. This nexus of vulnerability may necessitate targeted interventions for addressing the potential future increase in the homicide rate in Africa.

## Projections of homicide to 2100

### Projection 1: A theoretical projection of the homicide trend based on the age composition of populations

In all likelihood, most predictions of future homicide trends are incorrect. Crime is so complex, with so many interrelated causes that are still not well understood. In addition, crime is not particularly amenable to predictions, as trends are so sensitive to small-term shocks that can disrupt long-term patterns. Such disruptions can include a drug epidemic that turns violent,<sup>80</sup> a conflict or terrorist attack that leads to the killing of innocent civilians,<sup>81</sup> or a global pandemic that impedes social life.<sup>82</sup>

There is little consensus among scientists on the association between age composition and homicide trends.<sup>83</sup> In the case of crime predictions based on age composition, another complexity is that two groups of theories describe slightly different mechanisms and associations.<sup>84</sup> Both perspectives concur that societies tend to experience more violence when a greater proportion of their populations are in the age groups most prone to this type

of behaviour, specifically during the late teens and early adulthood, in other words 15 to 29 years of age. On the one hand, a strictly compositional perspective argues that this association exists simply because an increase in the youth population directly increases the relative supply of potential offenders. Based on this perspective, homicide trends could be projected simply by extrapolating the homicide rate of each age group into the future, relative to the proportion of each age group in the population. On the other hand, a theoretical perspective, regarding the relative size of cohorts,<sup>85</sup> posits that societies tend to be more disorderly when young people make up a disproportionately large share of the population, as they have to compete for a limited number of opportunities yet lack the support and supervision that a larger contingent of older adults would provide. Consequently, society as a whole tends to become less stable, orderly and peaceful.

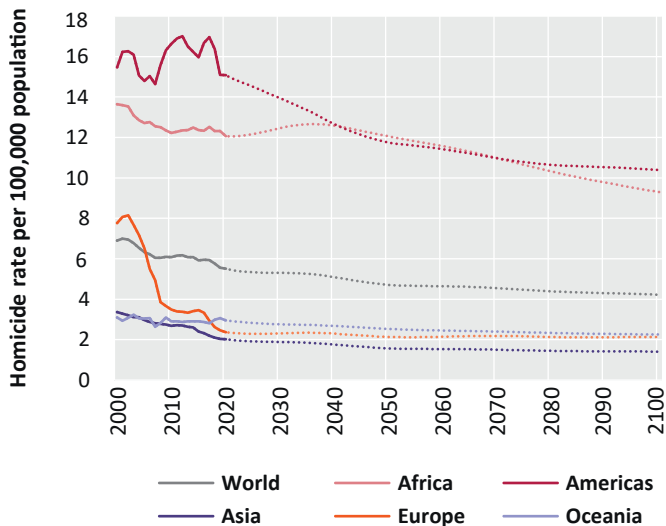
Despite the abovementioned complexities and caveats, it is useful to attempt a simple projection of future homicide trends based solely on trends in the age structure of the population to find out the homicide rate in each region if age composition is the only factor that changes. With this in mind, a general estimate of the relationship between age composition and homicide trends could be considered.<sup>86</sup>

By looking at this relationship, it can be assumed that when countries are relatively stable, for example, without sudden disruptions such as a drug epidemic leading to violence, an increase of one percentage point in the population aged 15–29 (youth population) corresponds to an increase of roughly 4.6 per cent in the homicide rate.<sup>87</sup> By simply applying this estimate to United Nations population projections, it is possible to project the homicide trend for each region up until 2100. Although such an approach is based on simple assumptions that are unlikely to materialize precisely as assumed today,<sup>88</sup> a theoretical projected homicide trend can highlight possible regional megatrend peculiarities that require attention.<sup>89</sup>

The solid lines in figure 1 correspond to the trend in the homicide rate in each region (and globally) during the period 2000 to 2020 and the dotted lines represent the projections of those trends up to 2100. This indicates that, purely on the basis of age composition, all of the regions will experience a decrease in the homicide rate, with the exception of Africa, where the large youth population will continue to drive homicide until the mid-2030s, when it will start to decline. In Europe, where population ageing is already at an advanced stage and most of the safety benefits of that process have already taken effect, the homicide rate is projected to decline by just 9.8 per cent between 2020 and 2100. Other regions may see far more drastic changes during that period, however. Specifically, the homicide rate is projected to decline by 22.9 per cent in Africa by 2100, by 31.1 per cent in the Americas, by 30.1 in Asia and by 23.6 per cent in Oceania, resulting in an

overall global decline of 23.3 per cent. If true, this would result in 133,000 fewer homicide victims worldwide in 2100 than if the regional homicide rates were to remain at their 2020 level, as well as population ageing sparing the lives of almost 6.4 million people over the course of the next 80 or so years.

**FIG. 1** Projected homicide rate by region and globally, 2000–2100



Sources: UNODC and UNDESA, Population Division, "World population prospects 2022", 2022.

The above findings indicate that demographic forces will put downward pressure on the global homicide trend in the long term. This will gradually disappear, however, as the ageing process advances and age distribution in countries becomes more balanced and stable. Of note is the worrying increase in homicide projected in Africa up until 2035, as the region will see its share of the population aged 15–29 increase until then, which could drive an increase in phenomena that are particularly acute among youth populations, such as homicidal violence.<sup>90</sup> The projection indicates that the increase in the homicide rate resulting from the increase in the share of the population aged 15–19 in Africa could lead to an additional 11,000 victims of intentional homicide in the region in 2035. Most importantly, despite the effect of demographic forces, if the projection is correct, by the end of the century there will still be around 437,000 victims of homicide globally each year.

### Projection 2: A theoretical projection of the impact of climate change on future homicide trends

Another concerning trend that could impact populations on a global scale is climate change. According to data from the Climatic Research Unit (CRU),<sup>91</sup> the average global temperature has already increased by over one degree

Celsius since 1980 and is projected to continue to rise until the end of the century as countries maintain high levels of carbon emissions. The expected consequences of rising temperatures, including food insecurity, displacement and ecosystem degradation are severe and far reaching.<sup>92</sup> Such consequences will be most hard-felt in island nations and in lower-income countries, many of which are in warmer regions and lack the resources to adapt and/or offset the negative consequences of climate change on their populations.<sup>93</sup>

Many of the consequences of climate change are still being investigated by researchers, one of which is the possible impact of climate change on crime trends. Existing theories about that relationship have proposed that higher temperatures may be associated with higher levels of crime.<sup>94</sup> Despite there being multiple theories on this subject, however, existing empirical evidence on the relationship between temperature and crime trends has been ambiguous, providing mixed support to the proposition that changes in temperature may impact crime trends.<sup>95, 96, 97</sup>

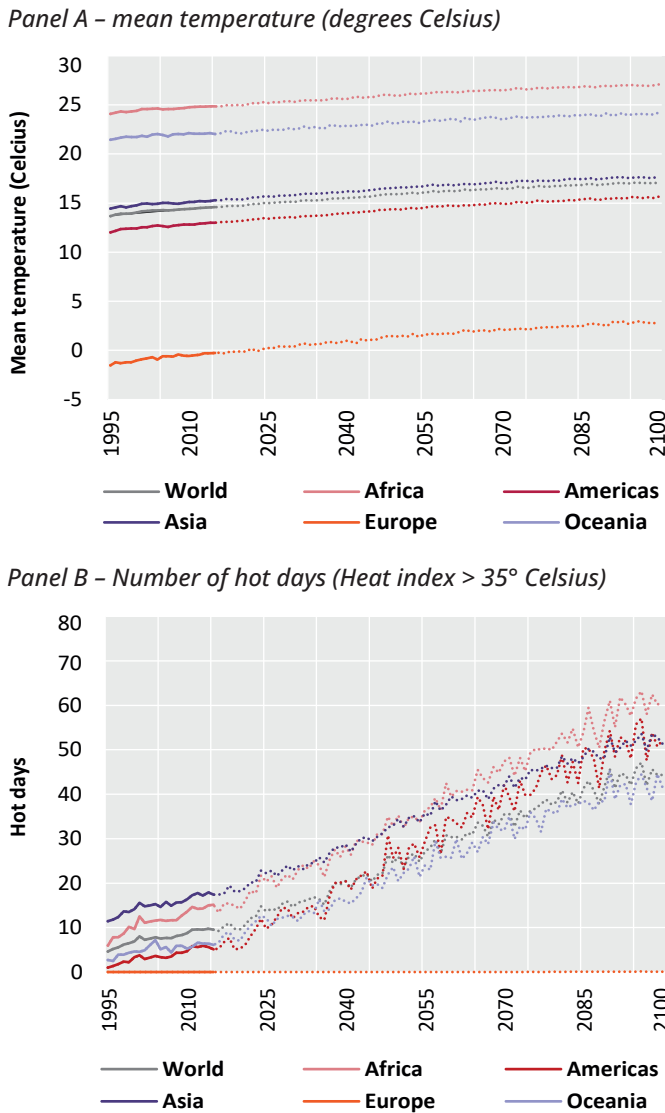
By considering existing theories and the evidence currently available, it is possible to estimate the cross-sectional association between temperature and homicide rates using climate forecasts to consider the possible impacts that climate change may have on future trends in homicide. Using the World Bank's Climate Change Knowledge Portal (CCKP),<sup>98</sup> in particular its third, median scenario,<sup>99</sup> together with forecasted climate data, figures 2 and 3 describe the regional and global trends in the indicators mean temperature and number of hot days up to 2100.

The temperature is expected to continue to increase at an almost constant rate in the future, only slowing near the end of the century. The increase is expected to be virtually identical across all the regions in terms of absolute degrees Celsius, reflecting the global interconnectedness of the climate. Yet, while the temperature increase may result in a milder climate in the more temperature regions, most notably Europe, in regions such as Africa the same increase could push the average temperature well above 25 degrees Celsius, towards extreme levels of heat.

The increase in the number of hot days is projected to be most extreme in Africa, where two months in every year could be dangerously hot by 2100. By contrast, Europe (based on the average of all the countries in the region grouped together) will most likely never experience extreme hot temperatures.



**FIG. 2** Observed and forecasted mean temperature and number of hot days (country average), by region and globally, 1995–2100



Sources: World Bank Climate Change Knowledge Portal (CCKP).

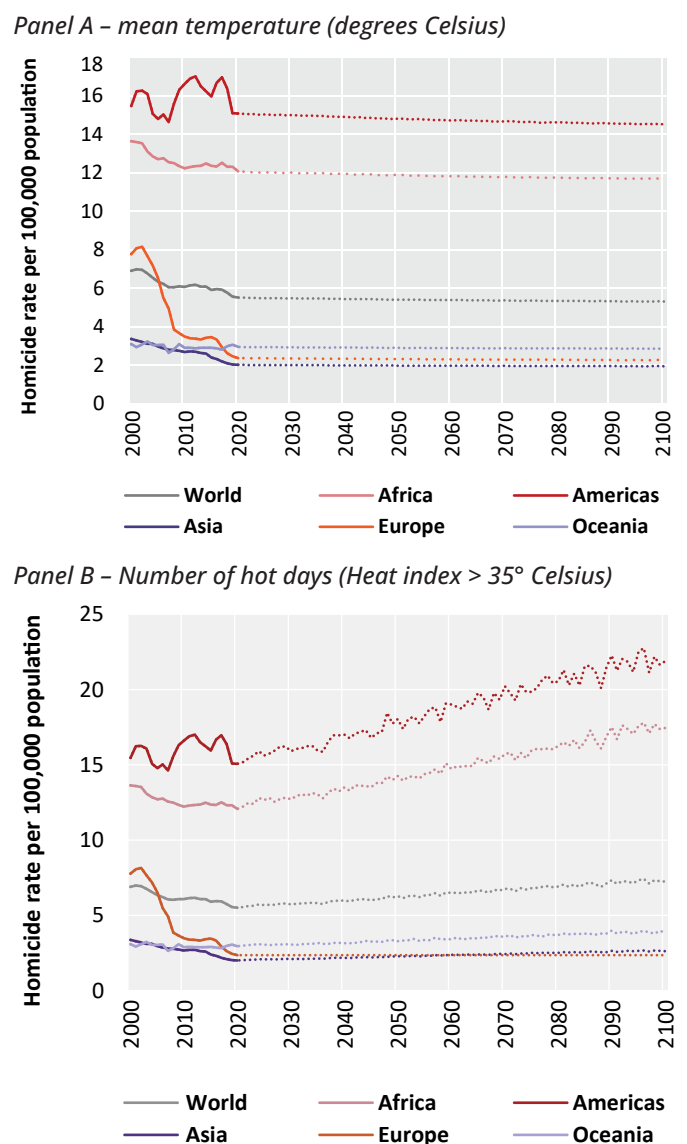
Regional trends were generated by aggregating data at the country level, which was weighted by the surface area of countries in 2020. The solid lines represent the trends observed, while the dotted lines represent the forecasts. “Mean temperature in degrees Celsius” represents the average across each region in each year. The number of hot days represents the number of days in each country each year when the heat index surpasses 35 degrees Celsius.<sup>100</sup>

When combining these two climate indicators with homicide data at the country level it can be seen that neither of the two indicators has a clear linear association with the homicide rate. Indeed, the relationship between climate change and homicide can take many forms other than a simple linear association. The relationship can even occur indirectly through the impact of climate change on other

issues such as natural disasters, inequality or conflicts related to deteriorating natural resources, such as land.

That said, figure 3 shows a theoretical projection of trends in the homicide rate based on future estimates of the two climate change indicators, mean temperature and number of hot days. Although the projections are based on rigid and somehow unrealistic assumptions,<sup>101</sup> the estimated trends give indications of possible future scenarios.

**FIG. 3** Projected homicide rate based on forecasted mean temperature and number of hot days, by region and globally, 2000–2100



Sources: UNODC homicide statistics, World Bank Climate Change Knowledge Portal (CCKP) and UNDESA, Population Division, “World population prospects 2022”, 2022.

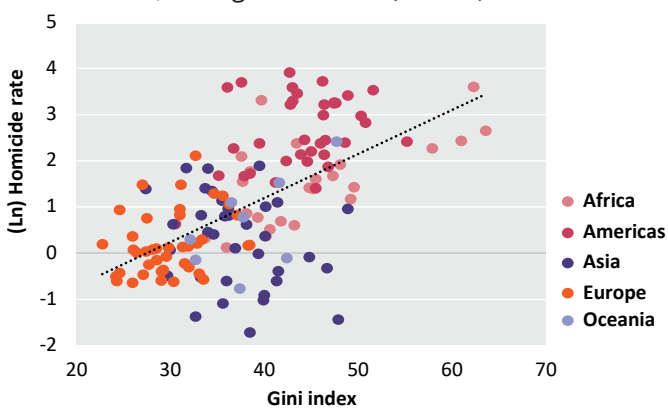
Note: A Pooled Cross-Sectional Ordinary Least Squares (OLS) Regression model was used to predict the homicide rates using each of the two selected climate indicators, while also accounting for the influence of other macro level correlates of homicide trends such as income inequality (Gini index), wealth (GDP per capita) inflation, deprivation (infant mortality), unemployment and a policy score. Demographic factors, namely countries' age composition, sex composition and urbanization, are also accounted for.

The projected homicide trends based on the two climate change indicators, mean temperature and number of hot days, are different. On the one hand, since no average association was found between mean temperature and the homicide rate, the forecast is for stable homicide trends that are insensitive to the global rising temperatures illustrated in figure 3. On the other hand, the positive association between the number of hot days and the homicide rate<sup>102</sup> projects an increase in the homicide rate across most of the regions. An increasing homicide rate owing to a rising number of dangerously hot days is particularly marked in Africa and the Americas. The two regions with the highest homicide rates worldwide, Africa and the Americas are also likely to experience extreme weather because of global warming. By contrast, Europe, which already has a relatively low level of homicide, is likely to remain largely unaffected by the increase in extreme hot temperatures.

Temperatures are expected to increase by 2 to 3 degrees Celsius across all the regions, but the increase will be felt very differently around the world. In Africa, the average temperature is forecasted to increase from 24.4 degrees Celsius in 2000 to 27.1 in 2100, pushing an already warm climate to levels of extreme heat, whereas in Europe, the average temperature is forecasted to increase from -1 degrees Celsius in 2000 to 2.92 in 2100. Consequently, countries in Africa are expected to see an average of 60 days with a heat index above 35 Celsius by the end of the century, while countries in Europe are expected to see no such days, irrespective of climate change.<sup>103</sup> Hence, the consequences of climate change are likely to be most severe in the regions that already have both higher average temperatures and homicide rates.

Temperature increases are already very notable across the globe, yet while climate change may well be one of the major factors to impact the world this century, its effect on homicide trends is still unclear and needs to be researched in greater depth.

**FIG. 4** Scatterplot of countries' (Ln) homicide rate by Gini index, average 2016–2020 (n = 144)



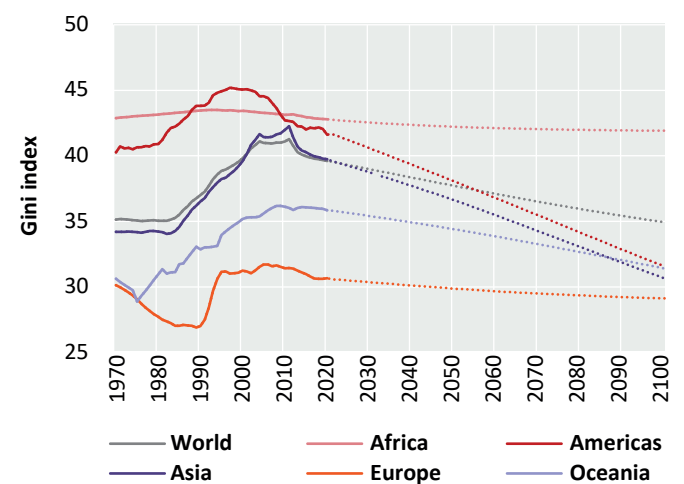
Sources: UNODC homicide statistics, Standardized World Income Inequality Database (SWIID) and UNDESA, Population Division, "World population prospects 2022", 2022

### Projection 3: A theoretical projection of the impact of income inequality on future homicide trends

Inequality is a well-known predictor of differences in the homicide rate between countries.<sup>104, 105, 106</sup> Figure 4 illustrates this association in the form of a scatterplot comparing the homicide rate<sup>107</sup> and the Gini index of income inequality of all 144 countries with available data on both variables.<sup>108</sup>

By using past trends in homicide and inequality, it is possible to project a hypothetical homicide rate that only considers possible future changes in inequality. Although the trends in inequality have not been linear since 1970, since the 2000s the global increase in inequality has not only waned but also initiated a reversal which, while relatively modest, has been ongoing for the past 5 to 10 years. Nonetheless, preliminary data seem to show another reversal in this trend since the onset of the COVID-19 pandemic in 2020, with rising inequality in emerging market and developing economies owing to job and income losses among the poorer segments of the population.<sup>109</sup> It remains to be seen whether this is just a temporary reversal resulting from the exceptional measures implemented to control the COVID-19 pandemic, or whether it signals a change in the longer term trend in decreasing inequality.

**FIG. 5** Observed and forecasted Gini index by region and globally, 1970–2100



The solid line corresponds to the trend in income inequality observed in each region, while the dotted lines reflect the forecasts.

Sources: Standardized World Income Inequality Database (SWIID) and UNDESA, Population Division, "World population prospects 2022", 2022.

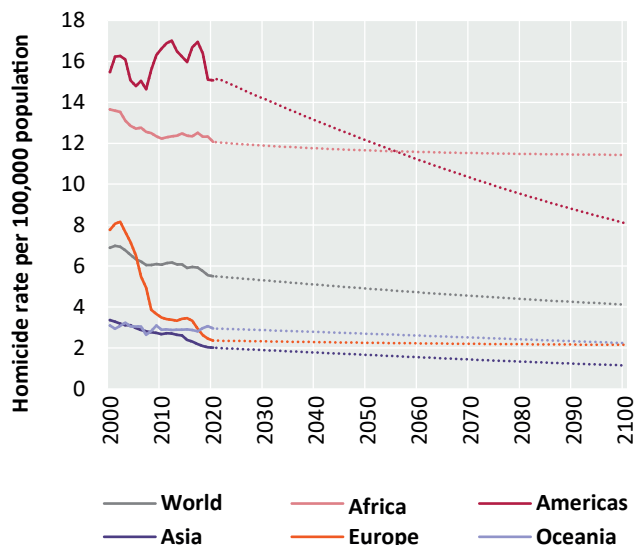
*Note: The Gini index was forecasted using data published by the Standardized World Income Inequality Database (SWIID), which are broadly available until 2020.<sup>110, 111</sup> Considering that the Gini index for income inequality tends to be remarkably stable over time (declines and increases tend to be incremental), the last five years of data (2016–2020) were used to develop a linear forecast of the future inequality trend of each individual country. This forecast assumes that whichever average change occurred in the Gini index within that country within the last five years would continue into the future. The inequality data and forecasts were collapsed to the regional and global levels and the contribution of each country to the regional aggregates was weighted population size.*

The inequality forecast shown in figure 5 reflects the latest declining trend documented in the data up to 2020 and does not include the preliminary data for later years that suggest a reversal of the declining trend. The forecast therefore implicitly assumes that the declining trend will continue until 2100.

The homicide rate that can be projected using the past association between inequality and homicide and the forecasted inequality shows that a continuing decline in income inequality would place further downward pressure on the homicide rates in all the regions, most notably the Americas, where homicide and inequality are particularly high at present. This projection remains a theoretical exercise with simple assumptions that are unlikely to hold,<sup>112</sup> but the overall trend is encouraging, as it indicates that the homicide rate in the Americas will decline by 46.2 per cent by 2100. The overall global projection reflects, as expected, those of the most populous regions over the period up to 2100: present-day Asia, home to 59.1 per cent of the global population; and Africa, which will go from accounting for 18 per cent of the global population in 2023 to 37.8 per cent in 2100. In Asia, the inequality-based projection in figure 5 forecasts a remarkable decline of 43 per cent in the homicide rate, whereas in Africa it is projected to decline by just 5.3 per cent, indicating that the region will not accrue a substantial reduction in its homicide rate based on the association with income inequality.

In Oceania, where the homicide rate has been somewhat stable since 2000, the projection is for a decline of 25.1 per cent by 2100. Finally, in Europe a relatively modest decline in a Gini index that is already the world's lowest would correspond to a reduction of just 9.1 per cent in the homicide rate by 2100. Altogether, these regional trends would amount to a reduction of 25.1 per cent in the global homicide rate, which would result in an annual number of around 143,000 fewer homicide victims in 2100 than if the present-day homicide rates were to remain constant (see appendix L).

**FIG. 6** Projected homicide rate based on forecasted inequality, by region and globally, 2000–2100



Sources: UNODC homicide statistics, Standardized World Income Inequality Database (SWIID) and UNDESA, Population Division, “World population prospects 2022”, 2022.

*Note: The future homicide trends have been projected on the basis of existing and forecasted trends in inequality. A simple estimate of the cross-national association between the Gini index and homicide rate was generated using a multivariate ordinary least squares (OLS) regression model of the association between the Gini index and the natural logarithm of the homicide rate, while accounting for other important characteristics of each country such as their economic development, inflation, infant mortality, demographic composition and political system. The complete model is shown in appendix L of the present chapter. The resulting model estimated that each one-unit increase in the Gini index is associated with an average increase of 6.6 per cent in the homicide rate in each country.*

This projection shows that the global decline in income inequality, which has been impacting all regions, could result in a lower level of homicide at the global level, assuming that the decline in inequality will continue and that the recent reversal caused by the COVID-19 pandemic is only temporary. This scenario will only be achieved if distributive policies that are effective and comprehensive are implemented worldwide.



## APPENDIX

### Appendix A: Percentage of population aged 65 or over: projections

	2022	2030	2050	2100
Sub-Saharan Africa	3	3.3	4.8	13.5
Northern Africa and Western Asia	5.6	7.1	12.7	22.9
Central and Southern Asia	6.5	8.2	13.6	26.7
Eastern and South-Eastern Asia	13.0	16.7	25.9	34.2
Latin America and the Caribbean	9.2	11.7	19.0	32.0
Oceania	12.9	15.0	18.5	26.6
Europe and Northern America	18.9	22.2	27.0	31.9
Global	9.8	11.8	16.5	24.0

Source: UNDESA, Population Division, "World population prospects 2022: summary of results", 2022.

### Appendix B: Life expectancy at birth: projections

	1990	2021	2050	2100
Sub-Saharan Africa	49.2	59.7	66.7	73.8
Northern Africa and Western Asia	64.3	72.1	78.3	84.2
Central and Southern Asia	58.9	67.7	77.1	84.2
Eastern and South-Eastern Asia	68.1	76.5	81.7	87.4
Latin America and the Caribbean	67.7	72.2	80.6	87.2
Oceania	73.2	79.4	82.1	87.2
Europe and Northern America	73.6	77.2	83.8	90.0
Global	64.0	71.1	77.3	82.1

Source: UNDESA, Population Division, "World population prospects 2022: summary of results", 2022.

### Appendix C: Percentage of population aged 15–29: projections

	2022	2030	2050	2100
Africa	26.96	27.75	26.73	20.96
Americas	22.59	21.36	20.00	14.87
Asia	22.78	22.12	17.96	15.67
Europe	16.22	16.47	14.48	14.60
Oceania	21.85	20.97	19.04	16.49
World	22.88	22.63	19.91	17.53

Source: UNDESA, Population Division, "World population prospects 2022: summary of results", 2022.

**Appendix D: Average annual rate of change of urban population (1990–2050)**

	1990–1995	2020–2025	2045–2050
Sub-Saharan Africa	4.18	3.82	2.89
Northern Africa	2.94	2.05	1.76
Eastern Asia	3.23	1.47	-0.04
Southern Asia	2.99	2.33	1.55
Western Asia	2.72	1.90	1.21
Europe	0.34	0.3	0.17
Northern America	1.52	0.96	0.62
Latin America and the Caribbean	2.45	1.15	0.47
Oceania	1.25	1.30	1.07
Global	2.35	1.73	1.13

Source: United Nations Population Division.<sup>113</sup>

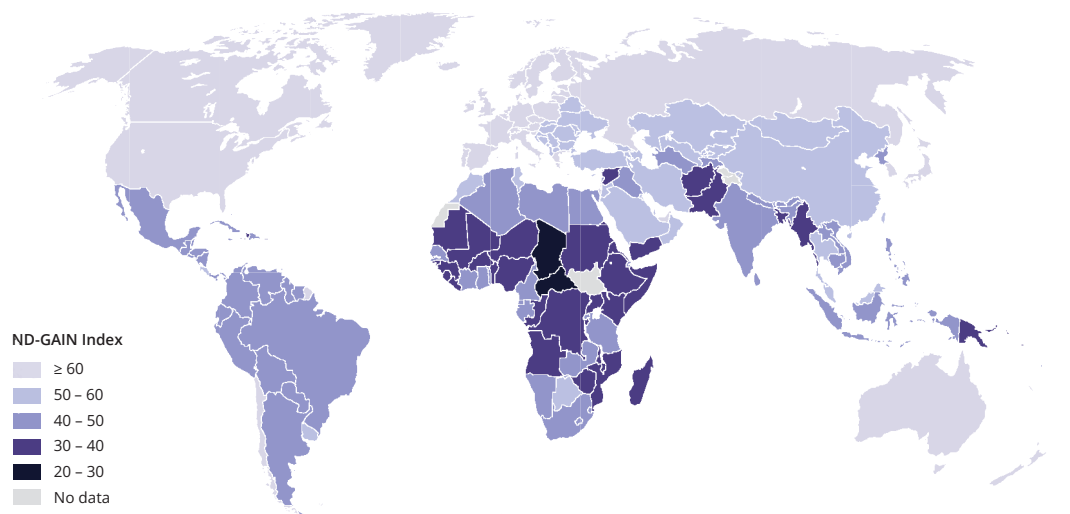
**Appendix E: Annual share of population residing in urban areas (1990–2050)**

	1990	2020	2050
Sub-Saharan Africa	27.5	41.4	58.1
Northern Africa	45.7	52.5	64.1
Eastern Asia	33.9	64.8	81.4
Southern Asia	26.5	36.6	53.8
Western Asia	61.1	72.3	81.4
Europe	69.9	74.9	83.7
Northern America	75.4	82.6	89.0
Latin America and the Caribbean	70.7	81.2	87.8
Oceania	70.3	68.2	72.1
Global	43	56.2	68.4

Sources: UNDESA, Population Division.<sup>114</sup>

## Appendix F: Estimated climate vulnerability by country

Map 1 Estimated climate vulnerability by country, 2021



Sources: Notre Dame Global Adaptation Initiative Index.<sup>115</sup>

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. 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. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

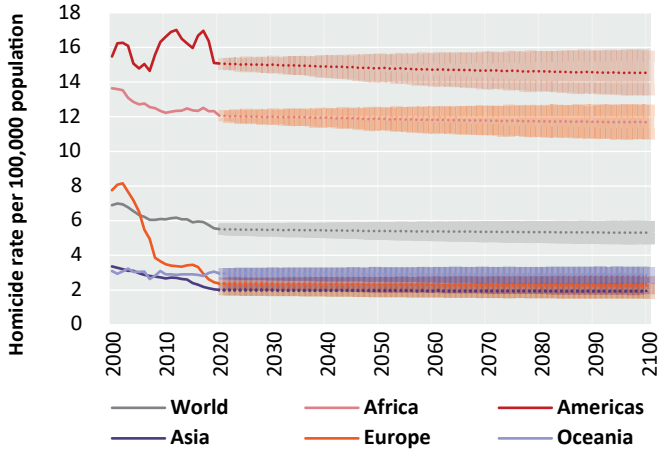
## Appendix G: Pooled cross-sectional OLS regression estimates predicting the (ln) homicide rate

Variables	Mean temperature		Hot days	
	Bivariate	Multivariate	Bivariate	Multivariate
Mean temperature	1.052*** (0.0196)	0.985 (0.0141)		
Hot days			0.999 (0.00576)	1.008 (0.00494)
Controls				
Gini index		1.074*** (0.0134)		1.066*** (0.0117)
GDP per capita (\$1k)		0.988*** (0.00461)		0.989** (0.00428)
Inflation (%)		1.003** (0.00113)		1.003** (0.00118)
Infant mortality (1k births)		1.010* (0.00521)		1.008* (0.00466)
Per cent unemployed		0.987 (0.0107)		0.994 (0.0107)
Per cent youth		1.096*** (0.0319)		1.102*** (0.0322)
Per cent male		0.866** (0.0553)		0.821*** (0.0492)
Per cent urban		1.010** (0.00474)		1.012** (0.00502)
Political score		1.047** (0.0214)		1.046** (0.0220)
Constant	1.560 (0.443)	18.57 (54.86)	3.334*** (0.470)	184.4* (512.0)
Observations	1,431	1,431	1,431	1,431
R-squared	0.111	0.618	0.000	0.619

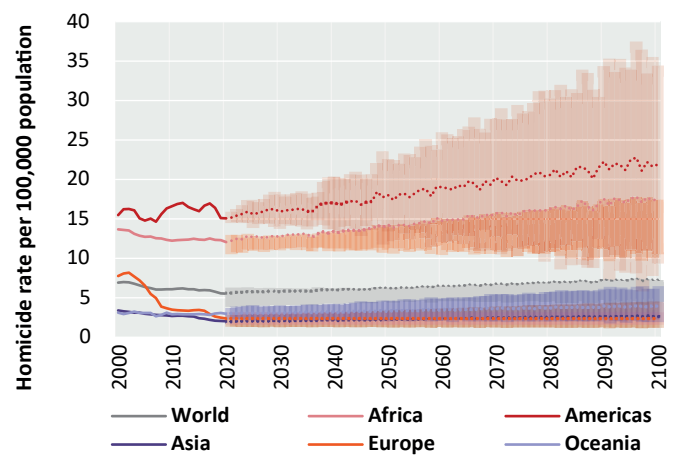
Note: The multivariate estimate was used in the projections. Coefficients are exponentiated and correspond to the proportional change in the homicide rate for each one-unit increase in that respective independent variable. The asterisks denote statistical significance; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Clustered standard errors by country are in parenthesis.

**Appendix H:** Projected homicide rate based on forecasted climate by region and globally, 2000–2100

*Panel A – Mean temperature (degrees Celsius)*



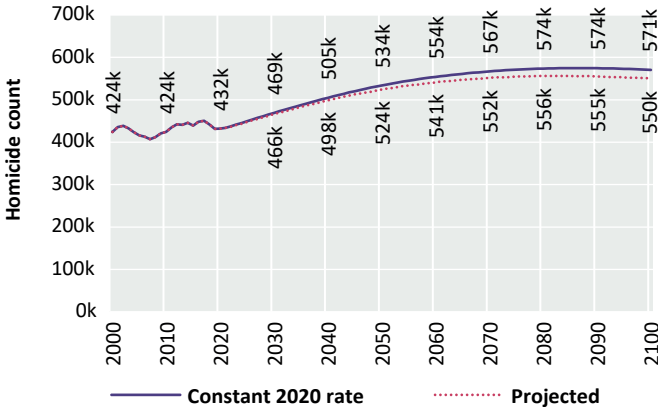
*Panel B – Number of hot days (Heat index > 35° Celsius)*



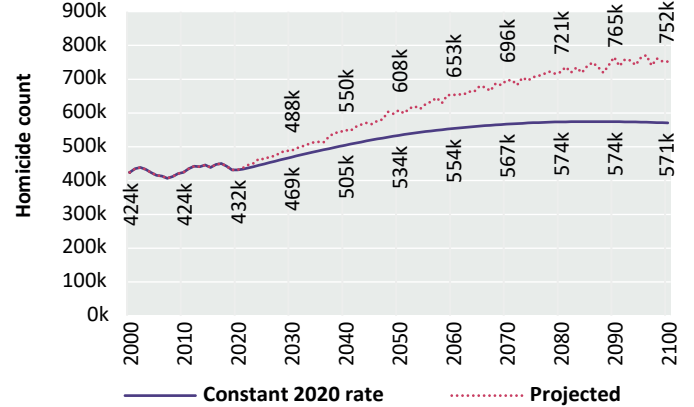
Sources: UNODC homicide statistics, World Bank Climate Change Know-ledge Portal (CCKP) and UNDESA, Population Division, “World population prospects 2022”, 2022. The confidence intervals are based on the bounds of the estimated associations, with a confidence level of 95 per cent.

**Appendix I:** Projected homicide counts if the homicide rate remains constant at its 2020 rate, and projected for 2000–2100

*Panel A – Mean temperature*



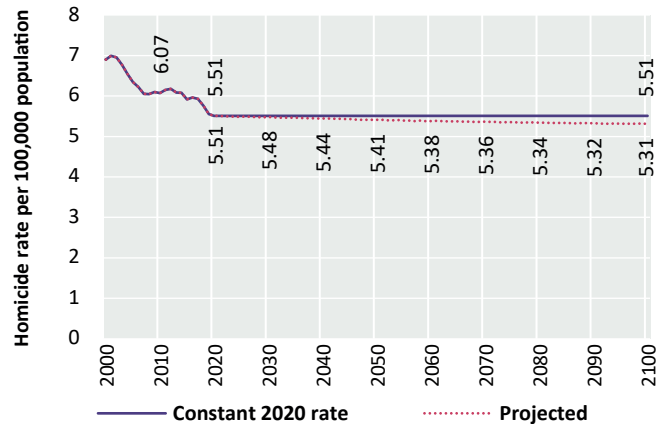
*Panel B – Number of hot days*



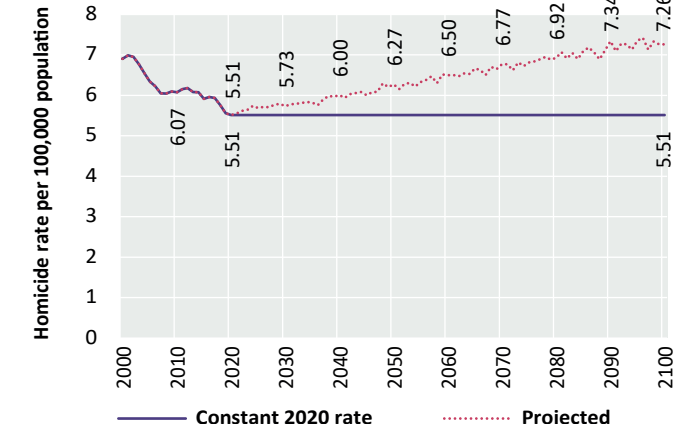
Sources: UNODC homicide statistics, World Bank Climate Change Know-ledge Portal (CCKP) and UNDESA, Population Division, “World population prospects 2022”, 2022.

**Appendix j:** Projected homicide rate if the homicide rate remains constant at its 2020 rate, and projected for 2000–2100

*Panel A – Mean temperature*



*Panel B – Number of hot days*



Sources: UNODC homicide statistics, World Bank Climate Change Knowledge Portal (CCKP) and UNDESA, Population Division, “World population prospects 2022”, 2022.

**Appendix K: Measures and Definitions**

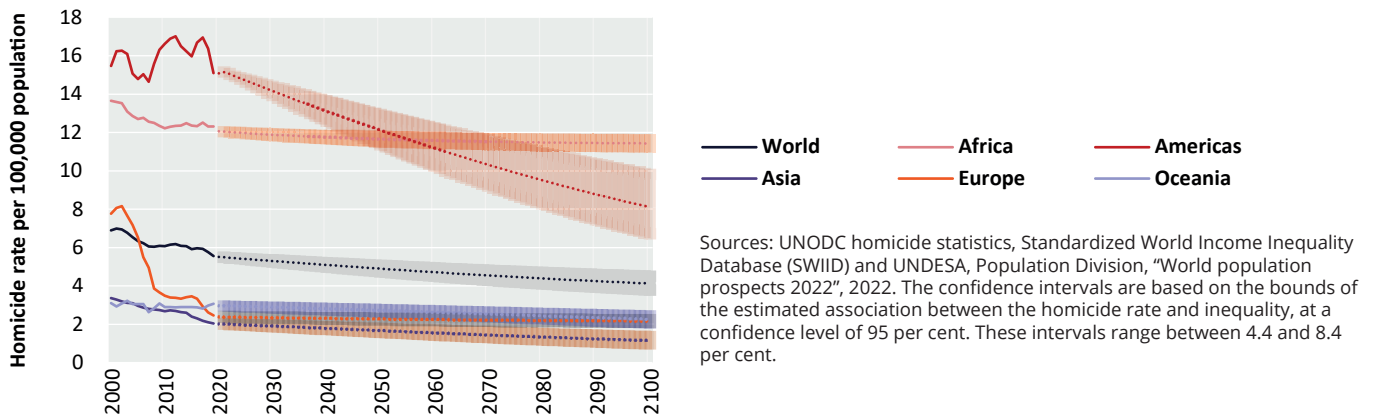
Measure	Source	Definition
Homicide rate	United Nations Office on Drugs and Crime	Intentional homicides per 100,000 population
(Ln) Homicide rate	United Nations Office on Drugs and Crime	Natural logarithm of the homicide rate
Mean temperature	Climatic Research Unit	Mean temperature in degrees Celsius
Hot days	Climatic Research Unit	Number of days with a heat index above 35 degrees Celsius; the heat index measures how temperature is felt by humans based on temperature and humidity
Gini index	Standardized World Income Inequality Database	Summary measure of income inequality ranging from perfect equality (0) to perfect concentration (100)
GDP per capita (\$1k)	World Bank Open Data	Gross domestic product per capita in thousands of constant 2015 United States dollars
Inflation (%)	World Bank Open Data	Annual inflation in consumer prices in percentage points
Infant mortality (1k births)	World Bank Open Data	Number of deaths per 1,000 live births of children under one year of age
Per cent unemployed	World Bank Open Data	Percentage of the labour force that is without work but available for and seeking employment
Per cent youth	UN World Population Prospects	Percentage of total population aged 15 to 29
Per cent male	UN World Population Prospects	Percentage of total population who are males
Per cent urban	UN World Population Prospects	Percentage of total population residing in urban rather than rural areas
Policy score	Center for Systemic Peace	Political regime authority spectrum

**Appendix L: Pooled cross-sectional OLS regression estimates predicting the (ln) homicide rate**

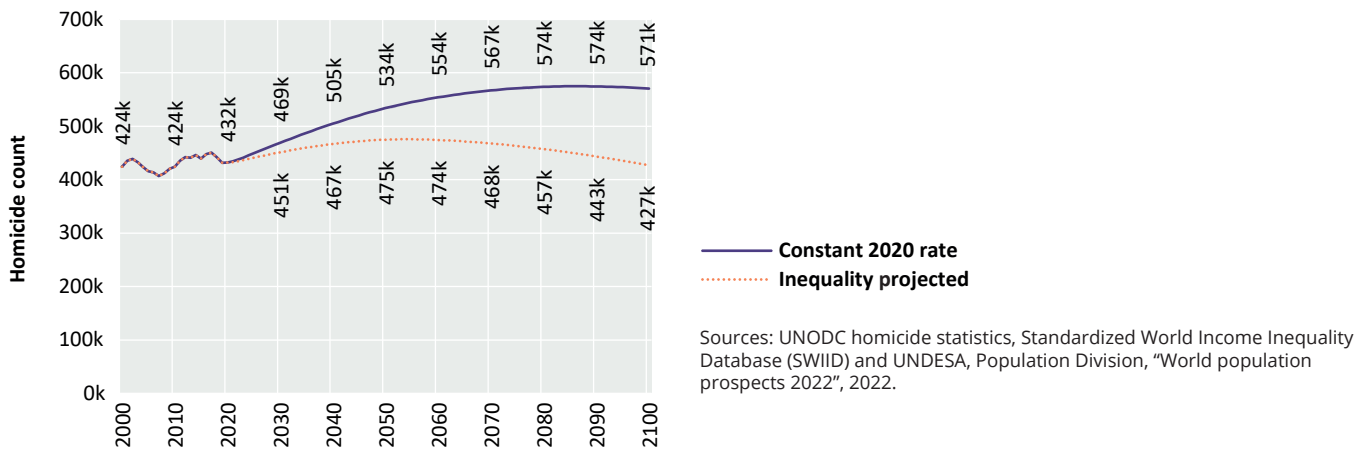
Variables	Bivariate	Multivariate
Gini index	1.104*** (0.0105)	<b>1.066***</b> <b>(0.0110)</b>
<i>Controls</i>		
GDP per capita (\$1k)		0.988*** (0.00418)
Inflation (%)		1.000 (0.000253)
Infant mortality (1k births)		1.009* (0.00525)
Per cent unemployed		0.987 (0.0109)
Per cent youth		1.104*** (0.0305)
Per cent male		0.836** (0.0607)
Per cent urban		1.011** (0.00461)
Policy score		1.046** (0.0230)
Constant	0.0887*** (0.0296)	88.55 (301.6)
Observations	1,924	1,924
R-squared	0.424	0.604

*Note: The multivariate estimate was used in the projections. Coefficients are exponentiated and correspond to the proportional change in the homicide rate for each one-unit increase in that respective independent variable. The asterisks denote statistical significance; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . Clustered standard errors by country are in parenthesis.*

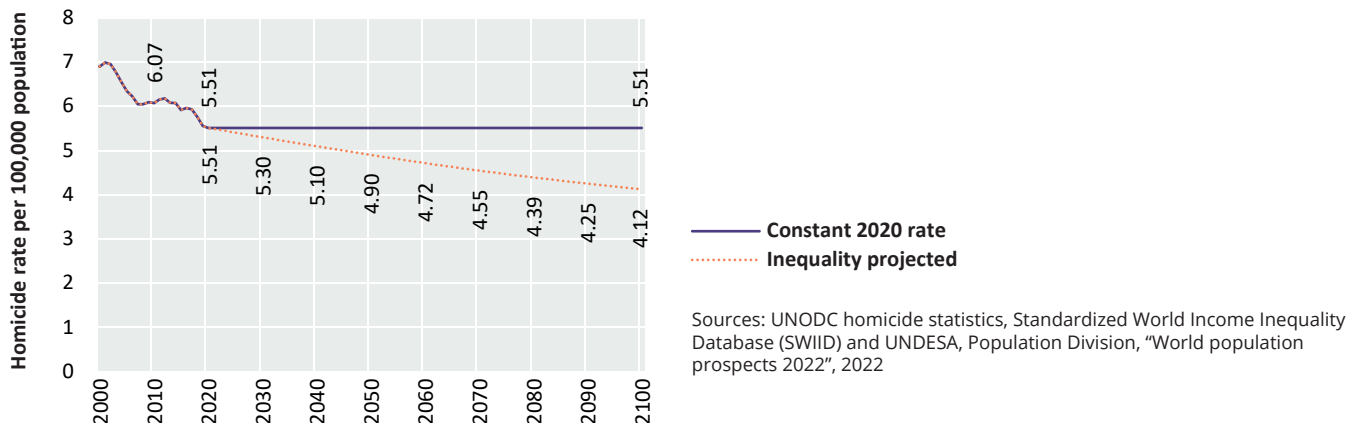
**Appendix M:** Projected homicide rate based on forecasted inequality by region and globally, 2000–2100



**Appendix N:** Projected homicide counts if the homicide rate remains constant at its 2020 rate, and projected using inequality, 2000–2100



**Appendix O:** Projected homicide rate if the homicide rate remains constant at its 2020 rate, and projected using inequality, 2000–2100





## REFERENCES

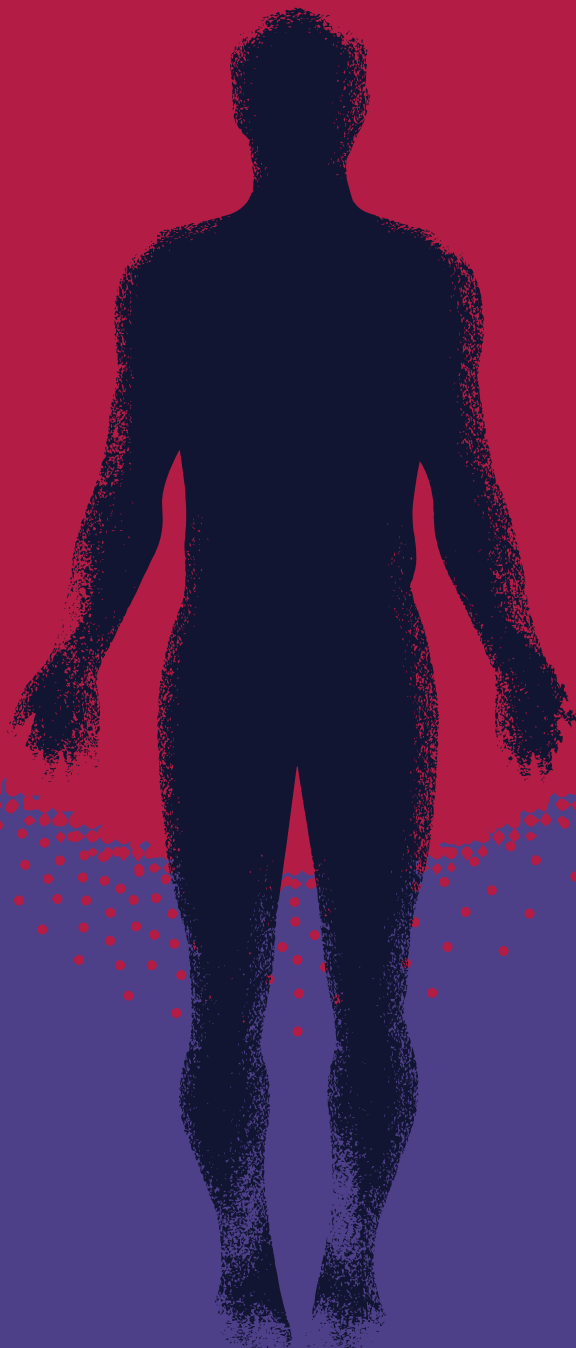
- 1 *Global Study on Homicide* (United Nations publication, 2019).
- 2 For homicide trends since 1990, see *Global Study on Homicide* (United Nations publication, 2019).
- 3 See Eisner, M., "Long-term historical trends in violent crime", *Crime and Justice*, vol. 30 (2003), pp. 83–142.
- 4 Using simple statistical projections based on historical trends, areas in which the homicide rate could increase include Latin America and the Caribbean and Sub-Saharan Africa, by up to 48 and 7 per cent respectively by 2030. See Vilalta, C. and Muggah, R., *Future trends in homicide – Extrapolations from 2019 to 2030, SDG16.1 Notes* vol. 2 (New York, Center on International Cooperation, 2020).
- 5 United Nations, Department of Economic and Social Affairs (UNDESA), Population Division, "World population prospects 2022", 2022.
- 6 UNDESA, Population Division, "World population prospects 2022", 2022.
- 7 *Report of the UN Economist Network for the UN 75<sup>th</sup> Anniversary: Shaping the Trends of Our Time* (United Nations publication, 2020).
- 8 For further information, see chapter 5 of the present report.
- 9 There are some indications that individuals aged 15–29 are particularly at risk. In the United States, for example, this age group makes up just 20 per cent of the population but accounts for 50 per cent of those arrested for violent crimes. Each one per cent increase in the proportion of 15–29 year olds in the population translates into a 4.6 per cent increase in the homicide rate when controlling for other factors. See *Global Study on Homicide* (United Nations publication, 2019) and Santos, M. R., "The impact of age composition in explaining the international homicide decline: a seven-decade longitudinal study", PhD dissertation, University of Maryland, 2018.
- 10 See Chavez, C., "What we know and what we don't know about youth gangs in Latin America", UNICEF, 27 September 2018; Jutersonke, O., Muggah, R. and Rodgers, D., "Gangs, urban violence and security interventions in Central America", *Security Dialogue*, vol. 40, No. 4/5 (August/October 2009), pp. 373–397.
- 11 Hesselink, A. and Bougard, N. B., "Risk factors associated with youth gang involvement: an explanatory criminological case study analysis", *Journal of Psychology in Africa*, vol. 30, No. 5 (2020), pp. 459–465.
- 12 See *Global Study on Homicide* (United Nations publication, 2019), p. 15; and Oliver K. Roeder et al., "What caused the crime decline?", Columbia Business School research paper, No. 15–28 (February 2015). It is worth noting that some other studies do not find a similar level of influence on country-level crime. See Levitt, S. D., "Understanding why crime fell in the 1990s", *Journal of Economic Perspectives*, vol. 18, No.1 (2004) and Rogers, M., "A descriptive and graphical analysis of the (lack of) association between age and homicide cross-nationally", *International Criminal Justice Review*, vol. 24, No. 3 (August 2014).
- 13 Brooks, J., et al., "The demographic transition theory of war: why young societies are conflict prone and old societies are the most peaceful," *International Security*, vol. 43, No. 3 (2019).
- 14 Rouzet, D. et al., "Fiscal challenges and inclusive growth in ageing societies", *OECD Economic Policy Papers*, No. 27 (Paris, OECD publishing, 2019).
- 15 OECD, *Ageing and Employment Policies Working Better with Age Overview* (Paris, OECD Publishing, 2019).
- 16 UNDESA, Population Division, "World population prospects 2022", 2022.
- 17 Ibid.
- 18 See Rampal, N., "India to lose 'demographic dividend'? Government report says over-30s to outnumber 'young' by 2036", *The Print*, 20 July 2022; UNDESA, Population Division, "World population prospects 2022", 2022.
- 19 See Nigeria, Federal Government of Nigeria, "National policy on population for sustainable development" (Abuja, 2021).
- 20 UNDESA, Population Division, "World population prospects 2022", 2022.
- 21 Ibid.
- 22 See Muggah, R., "Climate change and crime in cities", *Global Bulletin Igarape* (Igarape Institute, 2021).
- 23 See Harp, R. and Karnauskas, K. B., "Global warming to increase violent crime in the United States", *Environmental Research Letters*, vol. 15, No. 3 (March 2020).
- 24 For a review of the literature, see Muggah, R., "Climate change and crime in cities", *Global Bulletin Igarape* (Igarape Institute, 2021).
- 25 Miles-Novelo, A. and Anderson, C. A., "Climate change and psychology: effects of rapid global warming on violence and aggression", *Current Climate Change Report*, vol. 5 (January 2019).
- 26 See Rezaeian, M., "The association between natural disasters and violence: a systematic review of the literature and a call for more epidemiological studies", *Journal of Research Medical Science*, vol. 18, No.12 (December 2013).
- 27 See Marcus, D. K., Fulton, J. J. and Clarke, E. J., "Lead and conduct problems: a meta-analysis", *Journal of Clinical Adolescent Psychology*, vol. 39, No. 2 (March 2010); Science Daily, "Increased air pollution linked to bad teenage behavior", 13 December 2017; Burkhardt, J. et al., "The effects of pollution on crime: evidence from data on particulate matter and ozone", *Journal of Environmental Economics and Management*, vol. 98 (November 2019).
- 28 Buis, A., "A degree of concern: why global temperatures matter, NASA's *Global Climate Change Website*, 2019.
- 29 While climate models project differential impacts, it appears that Africa and Southern Asia in particular are expected to be the most vulnerable to climate change and the least prepared to adapt. A composite index measuring level of exposure, sensitivity and adaptive capacities across six sectors (food, water, health, ecosystem services, human habitat and infrastructure) capturing the spatial variability provides an indication of which geographic areas are likely to be most vulnerable; World Bank, *Turn Down the Heat, Confronting the New Climate Normal* (Washington D.C, 2014).
- 30 See Mares, D. M. and Moffett, K. W., "Climate change and interpersonal violence: a "global" estimate and regional inequities", *Climatic Change*, vol. 135 (March 2016).
- 31 Wei, J. et al., "Climate change and homicide: global analysis of the moderating role of information and communication technology", *Weather, Climate, and Society*, vol. 14, No. 4 (September 2022).
- 32 For example, in a study of nine cities in the United States, just two – Chicago and New York – were found to have a positive relationship between temperature and intentional homicide between 2007 and 2017. See Xu, R. et al., "Ambient temperature and intentional homicide: a multi-city case-crossover study in the US", *Environment International*, vol. 143 (October 2020).
- 33 See Mahednra, R. et al., "Interpersonal violence associated with hot weather", *Lancet Planetary Health*, vol. 5, No.8 (September 2021).
- 34 See Barlett, C.P. et al., "Hot temperatures and even hotter tempers: sociological mediators in the relationship between global climate change and homicide", *Psychology of Violence*, vol. 10, No. 1 (2020).
- 35 See Muggah, R., "Climate migration and displacement: no place to run", *Global Futures Bulletin* (Instituto Igarapé, 2022), and Muggah, R., "Climate change and crime in cities", *Global Futures Bulletin* (Instituto Igarapé, 2021).
- 36 Evans, A. et al., "Resource scarcity, climate change and the risk of violent conflict", *World Bank Development Report* (2011).
- 37 Di Santo, N., Russo, I. and Sisto, R., "Climate change and natural resource scarcity: a literature review on dry farming", *Land MDPI*, vol. 11, No. 12 (November 2022).
- 38 UN-Water, "Climate change and water", policy brief, September 2021.
- 39 Unfried, K., Kis-Katos, K. and Poser, T., "Water scarcity and social conflict", *Journal of Environmental Economics and Management*, vol. 113, No. 14,707 (May 2022).
- 40 Klare, M., "Climate change, water scarcity and the potential for interstate conflict in South Asia", *Journal of Strategic Security*, vol. 13, No. 4 (2020).
- 41 Theisen, O. M., "Blood and soil? Resource scarcity and internal armed conflict revisited", *Journal of Peace Research*, vol. 45, No. 6 (November 2008).
- 42 See Nivette, A. E., "Cross-national predictors of crime: a meta-analysis", *Homicide Studies*, vol. 15, No. 2 (April 2011), pp. 103–131; Santos, M. R., "How changing inequality predicts homicide trends: a longitudinal analysis across 126 countries, 1990–2018", in International Association of Universities and UNODC, Eds., *Higher Education Engages with SDG 16: Peace, Justice and Strong Institutions* (International Association of Universities, 2021).

- 43 See Augusta de Lima Friche, A. et al., "Variation in youth and young adult homicide rates and their association with city characteristics in Latin America", *The Lancet* (March 2023). See also *Global Study on Homicide 2019*, Booklet 3, *Understanding Homicide* (United Nations publication, 2019).
- 44 See UNDESA, *World Social Report 2020: Inequality in a Rapidly Changing World* (2020).
- 45 Piketty, T., "About capital in the twenty-first century", *American Economic Review*, vol. 105, No. 5 (2015), pp. 48–53.
- 46 UNDESA, Population Division, *World Urbanization Prospects 2018*.
- 47 *Global Study on Homicide* (United Nations publication, 2019), Booklet 1, p. 9.
- 48 See Urdal, H. and Hoelscher, K., "Urban youth bulges and social disorder: an empirical study of Asian and Sub-Saharan African cities", World Bank Policy Research Working Paper No. 5110, 1 November, 2009, who studied 55 cities in Asia and Sub-Saharan Africa; See also *Global Study on Homicide 2019* (United Nations publication 2019), Booklet 4, for a review of urban growth and homicide in 68 cities.
- 49 See Forrest, W., "The drop in female homicide victimization in Australia", *Journal of Criminology*, vol. 55, No. 4 (October 2022) and Clement, M. T., Pino, N. W. and Blaustein, J., "The persistent countervailing consequences of urbanization: a longitudinal study of homicide rates", *European Journal of Criminology*, vol. 20, No.6 (May 2022).
- 50 See Levchak, P. J., "The relationship between urbanization and cross-national homicide rates; robustness across multiple estimation methods", *International Journal of Comparative and Applied Criminal Justice*, vol. 40, No. 3 (March 2016).
- 51 Weatherburn, D., "What causes crime? NSW Bureau of Crime Statistics and Research", *Contemporary Issues in Crime and Justice*, No. 54 (February 2001).
- 52 Dos Santos, M. I., "Urban income segregation and homicides: An analysis using Brazilian cities selected by the Salurbal project", *SSM Population Health*, vol.14 (June 2021).
- 53 Nivette, A., E., "Cross-national predictors of crime: a meta-analysis", *Homicide Studies*, vol. 15, No. 2 (April 2011), pp. 103–131.
- 54 Koeppl, M. D. H., Rhineberger-Dunn, G. M. and Mack, K. Y., "Cross-national homicide: a review of the current literature", *International Journal of Comparative and Applied Criminal Justice*, vol. 39, No. 1 (September 2015), pp. 47–85.
- 55 Sipsma, H. L. et al., "Spending on social and public health services and its association with homicide in the USA: an ecological study", *BMJ Open* 2017, vol.7, No.12 (October 2017).
- 56 Europe is already 76 per cent urban and will be 83 per cent urban by 2050. North America is also 83 per cent urban and will be 89 per cent urban by 2050. Latin America is 82 per cent urban and will be 87 per cent urban by 2050. See *World Cities Report 2022: Envisaging the Future of Cities* (United Nations publication, 2022).
- 57 Africa is currently just 43 per cent urban and will be 65 per cent urban by 2050. Asia is 51 per cent urban and will be 66 per cent urban by 2050. Less developed regions are on average 51 per cent urban and will grow to 65 per cent urban by 2050. See *Envisaging the future of cities, World Cities Report 2022* (United Nations publication, 2022).
- 58 See *Envisaging the future of cities, World Cities Report 2022* (United Nations publication, 2022).
- 59 See UNDESA, "The speed of urbanization around the world", Population Facts No. 2018/1 (December 2018).
- 60 See OECD, *Africa's Urbanization Dynamics 2020*, West African Studies (Paris OECD publishing, 2020). See also Muggah, R. and Hill, K., "African cities will double in population by 2050", World Economic Forum, 27 June 2018; "Here are 4 ways to make sure they thrive", World Economic Forum (27 June 2018) and *The Economist*, "Africa's population will double by 2050", 26 March 2020.
- 61 See World Bank, *Demographic Trends and Urbanization* (The World Bank, 2021). See also UNHabitat (ND) "Asia and the Pacific region".
- 62 Fleming, S., "A short history of jobs and automation", *World Economic Forum* (3 September 2020).
- 63 See Liem, M. and Geelan, M. E. F., "The interface between homicide and the internet, a classification", *Aggression and Violent Behavior*, vol. 48 (August 2019).
- 64 Online behaviour that may hurt a person physically or emotionally, for example, harmful information that is posted online, or information sent to a person. Source: United Kingdom of Great Britain and Northern Ireland, Home Office, Department for Digital, Culture, Media and Sport, "Online Harms White Paper".
- 65 Islam, R., "AI and cybercrime unleash a new era of menacing threats", *Forbes* (23 June 2023).
- 66 Cyber-related homicide is defined in this context as a homicide event that occurs during the first face-to-face meeting between two or more people who became acquainted online. For further information see Gerard, F.J. et al., "Exploration of crime scene characteristics in cyber-related homicides", *Homicide Studies*, vol. 24, No. 1 (2019).
- 67 Gerard, F.J. et al., "Exploration of crime scene characteristics in cyber-related homicides", *Homicide Studies*, vol. 24, No. 1 (2019), pp. 45–68.
- 68 See Aguirre, K., Badran, E. and Muggah, R., *Future Crime: Assessing Twenty First Century Crime Prediction*, Strategic note (Igarape Institute, 2019).
- 69 Likewise, increased access to restricted or prohibited tools of violence, from 3D printed firearms to drone swarms, may exacerbate future threats of homicide.
- 70 See McLachlan, F. and Harris, B., "Intimate risks: examining online and offline abuse, homicide flags and femicide", *Victims and Offenders*, vol. 17, No.5 (June 2022) and Todd, C., Bryce, J. and Franqueira, V., "Technology, cyberstalking and domestic homicide", *Policing and Society*, vol. 31, No.1 (2021).
- 71 *The Economist*, "Your job is (probably) safe from artificial intelligence", 7 March 2023.
- 72 See, for example, Goldman Sachs, "Generative AI could raise global GDP by 7%", 5 April 2023. The World Economic Forum estimates that as many as 14 million jobs could be lost by 2027. See World Economic Forum, *The Future of Jobs Report 2023* (Cologne/Geneva, World Economic Forum, 2023).
- 73 See OECD, "Artificial intelligence and jobs: An urgent need to act", *Employment Outlook* (2023).
- 74 See Forrester, "Future of jobs forecast", 7 August 2022.
- 75 See Millington, K.A., *How Changes in Technology and Automation Will Affect the Labour Market in Africa*, K4D Helpdesk Report (United Kingdom, 2017)
- 76 See Norbrook, N., "Tech in Africa: job killer, or job creator", *The Africa Report*, 24 September 2019.
- 77 See Brambilla, I. et al., "The asymmetric risks of automation in Latin America", *Desarrollo Economico*, vol. 62, No.235.
- 78 See Herrera, A. et al., *El futuro del trabajo en America Latina y el Caribe*, Banco Interamericano de Desarrollo (April 2019).
- 79 Human Rights Council, "The right to privacy in the digital age", 4 August 2022, A/HRC/51/17.
- 80 Blumstein, A., "Youth violence, guns, and the illicit-drug industry", *Journal of Criminal Law and Criminology*, vol. 86, No. 1 (1995), pp. 10–36.
- 81 Kamprad, A. and Liem, M., "Terror and the legitimization of violence: A cross-national analysis on the relationship between terrorism and homicide rates", *Terrorism and Political Violence*, vol. 33, No. 1 (2021), pp. 96–118.
- 82 Lopez, E. and Rosenfeld, R., "Crime, quarantine, and the US coronavirus pandemic", *Criminology & Public Policy*, vol. 20, No. 3 (September 2021), pp. 401–422.
- 83 Rogers, M. L. and Pridemore, W. A., "The (null) effects of percent young on 15 to 24 age-specific and male-and female-specific cross-national homicide. rates", *Homicide Studies*, vol. 20, No. 3 (2016), pp. 257–292.
- 84 Phillips, J. A., "The relationship between age structure and homicide rates in the United States, 1970 to 1999", *Journal of Research in Crime and Delinquency*, vol. 43, No. 3 (August 2006), pp. 230–260.
- 85 Easterlin, R. A., *Birth and fortune: The impact of numbers on personal welfare*. (University of Chicago Press, 1987).
- 86 Santos, M. R. et al., "The contribution of age structure to the international homicide decline", *PLOS ONE*, vol. 14, No. 10 (October 2019).
- 87 This estimate was developed using a quantile regression with fixed effects with controls for other social indicators such as sex composition, inequality, urbanization, and economic development. Estimates are from the 10<sup>th</sup> percentile of the homicide rate distribution, which as explained in the referenced article, better isolate the impact of population ageing from other unobserved criminogenic forces by focusing on countries with fewer such forces, where the impact of demographics becomes most notable. Details of the estimate can be found in the article and its supporting information files in: Santos, M. R. et al., "The contribution of age structure to the international homicide decline", *PLOS ONE*, vol. 14, No. 10 (October 2019).
- 88 The main assumptions that underly the projected homicide trend are: i) both the estimated association between age composition and

- homicide rates, as well population projections, are valid to a reasonable extent; ii) the average association between age composition and homicide trends will be similar in the future as it was in the recent past; iii) this association applies equally to all regions and periods; iv) this association is direct and, therefore, is not affected by other social forces influencing countries over time. This latest assumption is probably the weakest of the entire projection as it ignores the possibility of external shocks such as epidemics, conflicts, and crises that, as seen in the case of the COVID-19 pandemic, can have a major impact on crime (see Nivette, A. E. et al., "A global analysis of the impact of COVID-19 stay-at-home restrictions on crime", *Nature Human Behaviour*, vol. 5, No.7 (June 2021), pp. 868-877).
- 89 For more information on the methodology used to produce the projections, please consult the methodological annex.
- 90 When using a similar theoretical approach to project drug use based only on the age structure of the population, Africa emerges as the continent that could experience the highest increase in drug use due to the region having the largest proportion of young people in the population (*World Drug Report 2021* (United Nations publication, 2021)).
- 91 Harris, I. "Version 4 of the CRU TS monthly high-resolution gridded multivariate climate dataset", *Scientific Data*, vol. 7, No. 1, article number 109 (April 2020).
- 92 World Meteorological Association, *State of the Global Climate 2022* (2023).
- 93 Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (United Nations Environment Programme, 2023).
- 94 Corcoran, J. and Zahnow, R., "Weather and crime: a systematic review of the empirical literature", *Crime Science*, vol. 11, No. 1, article 16 (December 2022).
- 95 Ibid.
- 96 Lynch, M. J., Stretesky, P. B. and Long, M. A., "Climate change, temperature, and homicide: a tale of two cities, 1895–2015", *Weather, Climate, and Society*, vol. 12, No. 1 (January 2020), pp. 171–181.
- 97 Wei, J. et al., "Climate change and homicide: global analysis of the moderating role of information and communication technology", *Weather, Climate, and Society*, vol. 14, No. 4 (October 2022), pp. 1025–1037.
- 98 The Climate Change Knowledge Portal publishes historical data on climate at the country-level from several high-quality sources. These include data from the Coupled Inter-comparison Project, Phase 6 (CMIP6), which is overseen by the World Climate Research Program. The project utilizes climate observations from facilities around the globe, combined with experimental designs to investigate historical trends in climate and generate forecast scenarios for the future.
- 99 Which assumes that emissions will remain around current levels until the middle of the century (i.e., 2050), when global emissions begin a decline, although without achieving net-zero by 2100.
- 100 The Heat index is a product of the air temperature and of relative humidity, reflecting how the temperature is felt by humans.
- 101 The following assumptions are used in the projections: i) the forecasted climate indicators are accurate; ii) the estimate of the association between the two climate indicators and the homicide rate is correct, remains constant overtime, and is the same across all countries; iii) no other factor besides climate change will impact homicide trends.
- 102 This association is not statistically clear (as illustrated in the confidence intervals in appendix G of the methodological annex).
- 103 Figures based on data from World Bank Climate Change Knowledge Portal (CCKP).
- 104 Nivette, A., "Cross-national predictors of crime: A meta-analysis", *Homicide Studies*, vol. 15, No. 2 (April 2011), pp. 103–131.
- 105 Koeppel, M. D., Rhineberger-Dunn, G. and Mack, K. Y., "Cross-national homicide: a review of the current literature", *International Journal of Comparative and Applied Criminal Justice*, vol. 39, No. 1 (2015), pp. 47–85.
- 106 Santos, M. R., "How changing inequality predicts homicides trends: A longitudinal analysis across 126 Countries, 1990–2017", In International Association of Universities & United Nations Office on Drugs and Crime (Eds.), *Higher Education Engages with SDG 16: Peace, Justice and Strong Institutions* (International Association of Universities, 2021), pp. 37–52.
- 107 The rate is visualized in the graph through the natural logarithm, which is a common transformation used to reduce the influence of extreme values on estimates.
- 108 The Pearson correlation coefficient of the association between the two variables is 0.598.
- 109 World Bank, *Global Economic Prospects – Impact of COVID-19 on Global Income Inequality* (Global Economic Prospect, 2022).
- 110 Solt, F., "The Standardized World Income Inequality Database, Versions 8-9" (2019). Available at <https://doi.org/10.7910/DVN/LM4OWF>.
- 111 Solt, F., "Measuring income inequality across countries and over time: The standardized world income inequality database", *Social Science Quarterly*, vol. 101, No. 3 (May 2020), pp. 1183–1199.
- 112 The underlying assumptions used in the projections are: i) the forecasted inequality is accurate; ii) the estimate of the association between the Gini index and the homicide rate is accurate, applies to all countries equally, and will remain constant overtime; iii) no other factor will impact homicide trends.
- 113 See UNDESA, World Urbanization Prospects 2018, "Urban and rural populations".
- 114 See UNDESA, World Urbanization Prospects 2018, "Urban and rural populations".
- 115 See University of Notre Dame, Notre Dame Global Adaptation Initiative (ND-GAIN). Available at <https://www.gain.nd.edu> (last accesses 12 November 2023).



**CHAPTER 4**  
**UNDERSTANDING**  
**HOMICIDE**





## Chapter 4

# UNDERSTANDING HOMICIDE

---

### Homicide typologies explained

To improve understanding of fluctuations in homicide trends and help design targeted homicide prevention policies, it is important to disaggregate homicides into different typologies. Previous editions of the *Global Study on Homicide* have highlighted the prominence of different types of homicide in different countries.<sup>1</sup> In some countries, most homicides are related to disputes between individuals who know one another, including members of the same household, while in other countries, a large share of homicides is associated with criminal activities, including those of organized crime groups or gangs. In recognition of these differences, the *International Classification of Crime for Statistical Purposes (ICCS)* provides a typology for disaggregation according to the “situational context” of homicides.<sup>2</sup> This typology is reflected in the way UNODC collects data from Member States through the United Nations Survey on Crime Trends and the Operation of Criminal Justice Systems (UN-CTS),<sup>3</sup> which divides homicide into three broad categories (figure 1):

1. Homicide related to criminal activities
2. Interpersonal homicide
3. Sociopolitical homicide

Each of these three broad categories of homicide types is further subdivided:

- a. Homicide related to criminal activities is divided into homicide related to organized criminal groups and gangs, on the one hand, and homicide related to other criminal activities (for example, robbery), on the other.
- b. Interpersonal homicide is divided into homicide perpetrated by intimate partners or other family members and other interpersonal homicide perpetrated outside the family context (for example, killings perpetrated by acquaintances or neighbours).

- c. Sociopolitical homicide is divided into homicide related to social prejudice, political aims, civil unrest and other sociopolitical agendas (for example, vigilante killings, unlawful killings by the police, or killings resulting from communalism, casteism and class conflict).

This chapter looks at the three main categories of homicide separately and unpacks them in order to analyse their respective importance in the different regions of the world, as well as the trends in and levels of the selected types of homicide included within them (for example, terrorist killings in sociopolitical homicide).

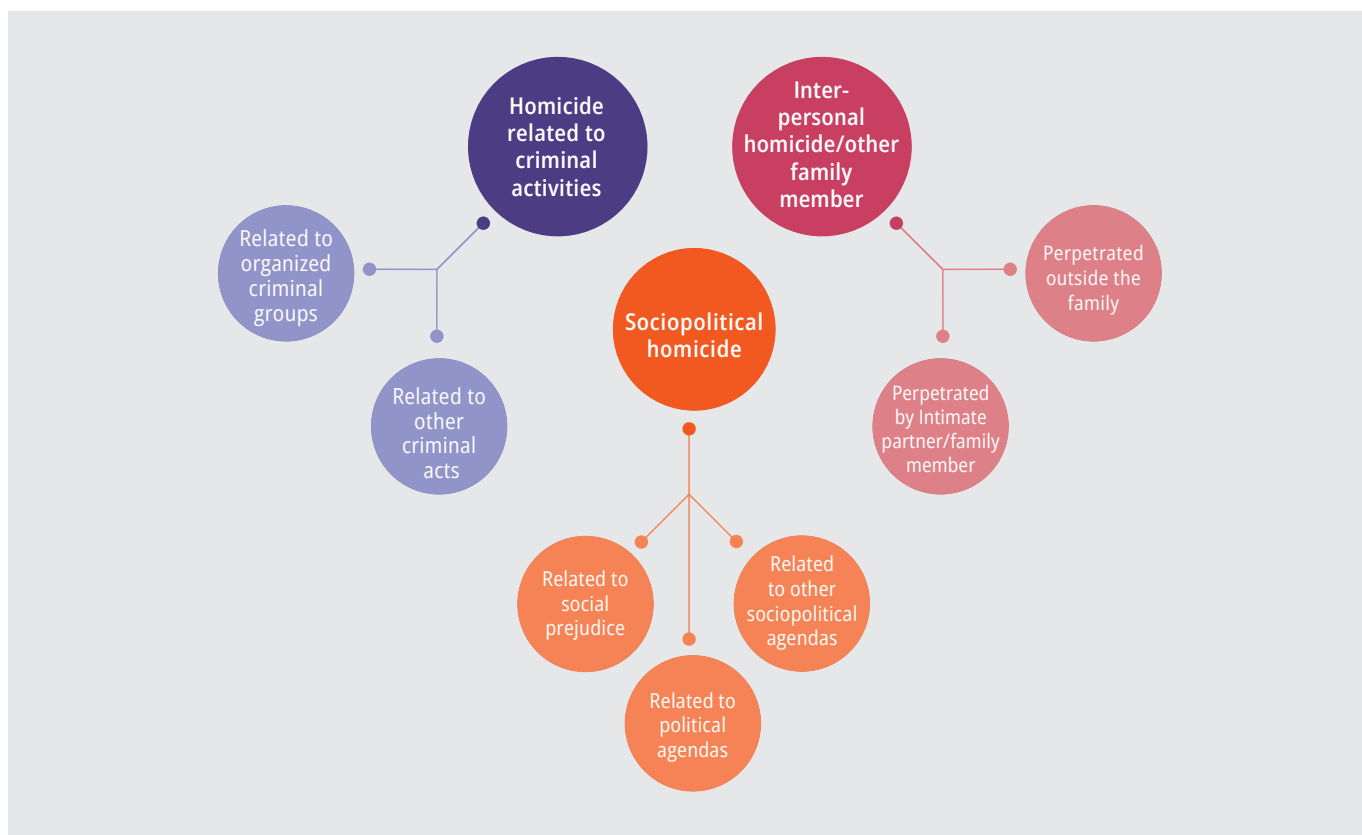
### Data limitations related to homicide types

Producing global estimates of homicides by type is challenging due to several interrelated data limitations. First, data on homicide types remain very limited in regions other than the Americas and Europe: of the 66 countries with at least one data point on organized crime-related homicides, 25 are in the Americas and 22 are in Europe, jointly amounting to 70 per cent of the sample. The low coverage in other regions means that regional estimates are skewed towards the homicide characteristics of the few countries that have data in those regions.

Second, many countries report large shares of homicides as “unknown” or “other (unspecified)” types of homicide, which adds considerable uncertainty to national figures on homicide by type. Finland, for example, a country with a robust crime data collection system, reports roughly 50 per cent of its homicides as “unknown” types of homicide. This issue means that regional and global aggregations of homicide by type come with a considerable degree of uncertainty.



**FIG. 1** A classification of intentional homicide by situational context



Third, countries may have different reasons for focusing their recording and reporting on specific types of homicide (such as intimate partner or organized-crime homicides) as they may be particularly relevant in the national context. This creates selection bias and reduces the representativeness of the available data. It also means that it is difficult to make assumptions about the distribution of homicide types among “unknown” homicides, as this distribution may differ substantially from the distribution of homicide types among all “known” homicides.<sup>4</sup>

Fourth, national classifications of homicide by situational context may not always neatly correspond to the international classification proposed in ICCS and the frame used by UNODC to collect the data (UN-CTS). In India, for example, the National Crime Records Bureau reports on 28 different “motives of murder”, some of which, such as “dacoity/robbery”, are not readily mapped onto the international classifications of homicide types.<sup>5</sup> This means that many countries will only report at the international level on those categories that are more easily mapped onto the international classification, such as intimate partner/family-related homicide, and leave other categories blank.

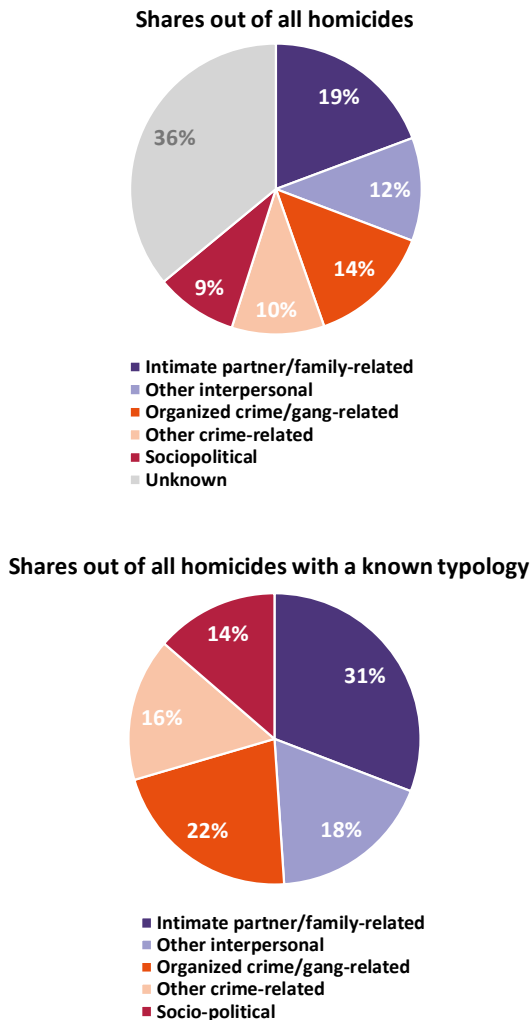
Globally, the most comprehensive and comparable data on homicide by type are available for intimate partner/family-related homicide (103 countries with at least one

data point).<sup>6</sup> Data on homicide related to other criminal activities and organized crime are available for a more limited number of countries (80 and 66 countries respectively).

### Homicide types at the global and regional levels

The available data suggest that, in 2021, at least one in five homicide victims globally (19 per cent) were killed by intimate partners or other family members (figure 2), while at least 1 in 10 victims were killed as a result of another form of interpersonal homicide, such as a means of resolving a conflict or following a dispute between neighbours. Crime-related activities were responsible for at least a quarter of all homicides worldwide in 2021. This includes homicides related to organized criminal groups or gangs, which accounted for at least 13.9 per cent of all homicides. Homicides linked to other crime-related activities, such as robbery, accounted for at least 10.3 per cent of all homicides. However, information on situational context is lacking for 36 per cent of all homicides. When exclusively considering homicides with such information, the share of organized crime/gang-related homicides increases to 22 per cent and the share related to other types of crime to 16 per cent.

**FIG. 2** Global distribution of homicide by situational context, 2021 or latest year available



Source: UNODC homicide statistics.

*Note: Estimates based on data are from 108 countries that reported at least one data point on a homicide type. Missing values for homicide types are set to zero and the difference between reported total homicides and reported homicide types is assigned to the unknown homicide category. The shares of homicides by situational context (including unknown) refer to the proportion of a reported homicide type divided by the total number of reported homicides. This represents "lower bound" estimates of shares by type as all unknown homicides are assumed to not be of the type under consideration. To obtain a global estimate, firstly, regional shares are computed by using the simple average shares of countries with data for countries without data. The global shares are subsequently computed as the average national shares weighted by the number of estimated homicides in each country for the year 2021. The regional shares of organized crime/gang-related homicides and other crime-related homicides out of all crime-related homicides are based on the simple average of countries with data on both categories. The shares out of all homicides with a known typology refer to the proportion of a reported homicide type divided by the sum of all reported homicide types (excluding the unknown homicides). This corresponds to the "best estimate". The total is not equal to 100 per cent due to rounding.*

Sociopolitical homicide, which includes terrorist killings that meet the ICCS criteria<sup>7</sup> and homicide related to civil unrest, accounted for at least 9 per cent of all homicides globally in 2021. Unlike other categories of homicide, socio-political homicides are recorded by a much more limited set of countries and they are much more difficult to estimate at the global level. As highlighted by the examples of Mali and Nigeria later in this chapter, however, they can represent an important share of homicidal violence in countries subject to political instability and/or facing the threat of terrorism.<sup>8</sup>

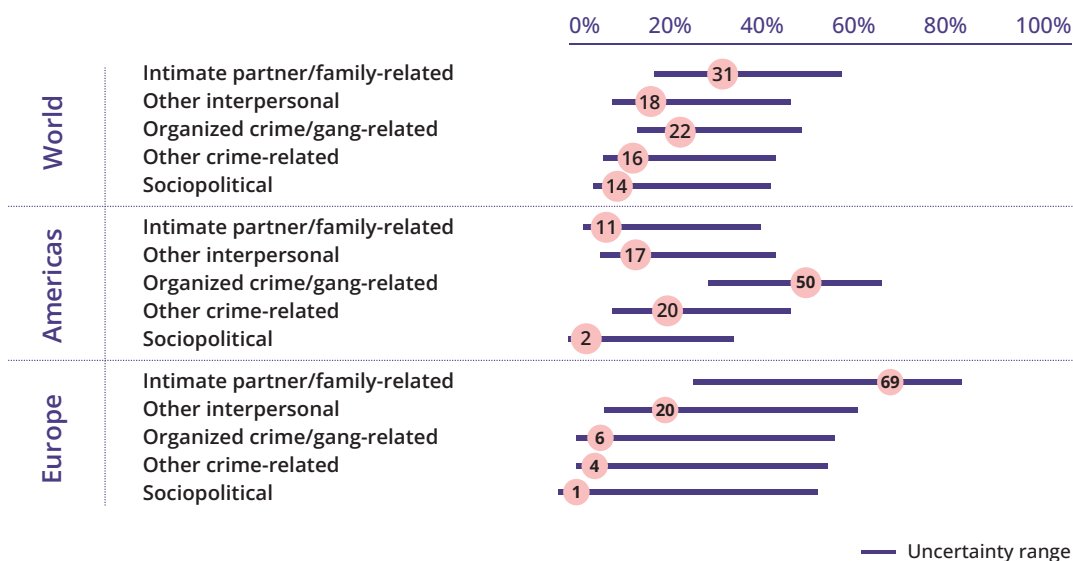
The data in figure 2 on the share of homicide by situational context out of all homicides (including unknown) are based on roughly two thirds of homicides globally. The share of homicide by situational context is calculated by dividing the number of homicides reported for each situational context by the total number of homicides, giving an indication of the lowest plausible share of all homicides that can be attributed to each type at the global level. This method gives a conservative estimate of the respective share of different homicide types as it assumes homicides with an "unknown" situational context do not belong to any of the categories of "known" situational context.<sup>9</sup> Indeed, homicides with "unknown" situational context represent slightly more than one third of all homicides in countries with data.

The best estimates shown in figure 3 are obtained by redistributing homicides with an "unknown" situational context under the assumption that they are as likely to fall under one of the "known" categories as the homicides that have information on the situational context. This may not be true for all categories, however, as it may be more difficult to find information on homicides committed by organized criminal groups or gangs than by intimate partners/other family members, thus making the former more likely to be categorized as having an "unknown" situational context. For this reason, figure 3 also includes "upper bounds" for all categories, which correspond to the theoretical situation that all "unknown" homicides correspond to one category only.

The situational context of homicides varies significantly between the different regions of the world, as highlighted in figure 3 by the two regions with good coverage of homicides by situational context, namely the Americas and Europe. The lack of sufficient coverage of homicides by situational context in Africa, Asia and Oceania means that regional estimates of homicide by situational context are not reliable enough to be published for those regions.<sup>10</sup>

Intimate partner/family-related homicide is by far the most common type of homicide in Europe, accounting for about 7 out of 10 homicides for which a situational context

**FIG. 3** Share of homicides, by type and selected regions, 2021 or latest year available



Source: UNODC homicide statistics.

Note: Data are from 108 countries that reported at least one data point on a homicide type. Missing values for homicide types are set to zero and the difference between reported total homicides and reported homicide types is assigned to the unknown homicide category. The lower bound share refers to the proportion of a reported homicide type divided by the total reported homicides. The best estimate share refers to the proportion of a reported homicide type divided by the sum of all reported homicide types (excluding the unknown homicides). The upper bound share refers to the proportion of the sum of a reported homicide type plus the unknown homicides divided by the total reported homicides. Unknown homicides are “re-assigned” at the regional level rather than the country level. Regional shares are computed by using the simple average shares of countries with data for countries without data. The global share refers to the average national shares weighted by the number of estimated homicides in each country for the year 2021. The total is not equal to 100 per cent due to rounding.

was recorded. Other interpersonal homicide accounts for 2 out of 10 homicides with a known situational context, while the rest (1 in 10) are mostly crime-related homicides.

By contrast, most homicides in the Americas are crime related. Organized crime/gang-related homicide accounts for half of homicides with a known situational context, and other crime-related homicide (for example, robbery) represents 2 out of 10 homicides with a known situational context. Interpersonal homicide, both perpetrated by intimidated partners/other family members and by other perpetrators constitutes just under 30 per cent of homicides with a known situational context in the region.

Improved data quality and coverage means that the 2021 estimates used in this study are not directly comparable with the 2017 estimates published in the previous edition of the *Global Study on Homicide*. However, the available data suggest that the regional profile of homicidal violence in the Americas and Europe has not changed dramatically in recent years: in the Americas, crime-related homicide continues to be the main killer, while in Europe, domestic homicide accounts for the largest share of killings. Nonetheless, given the far larger overall number of homicides in the Americas than in Europe, this means that, for example, the number and rate of female intimate partner/family-related homicides (a sub-type of interpersonal homicide) in the Americas greatly exceed those recorded in Europe:

around 7,500 such killings (1.4 per 100,000 female population) were recorded in the Americas in 2021, while around 2,500 such killings (0.6 per 100,000 female population) were recorded in Europe.

### Homicide types at the national level

Global and regional estimates of different types of homicide mask considerable variations across countries, including within the same region or subregion. However, a distinct pattern is clearly visible when considering country-level homicide typologies together with country-level homicide rates: countries with a relatively high overall homicide rate, such as Belize, El Salvador and Jamaica, also tend to have a larger share of organized crime-related or other crime-related homicide (figure 4).

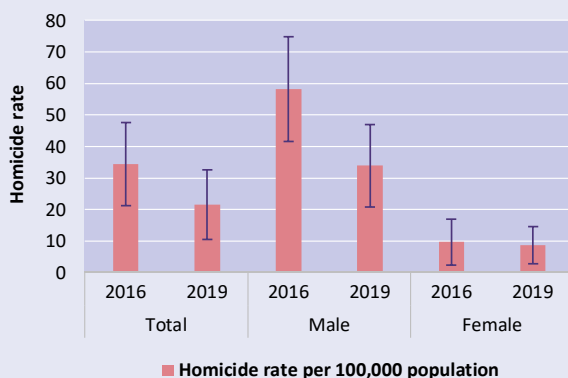
By contrast, countries with a relatively low homicide rate, such as Germany, Spain and the Republic of Korea, tend to have a larger share of intimate partner/family-related homicide (figure 4), a pattern that appears to hold across regions and countries with available data. Many countries, regardless of whether they have a low or high homicide rate, report large shares of homicides in the “unknown” category (figure 4). This suggests there is a need to improve national methodologies for classifying homicide and to align them more closely with the international standards of ICCS.

## Nigeria: homicide estimates by homicide type using population surveys

Collaboration between UNODC and National Bureau of Statistics (NBS) of Nigeria culminated in two editions of the National Survey on Quality and Integrity of Public Services, the findings of which were described in detail in two published reports.<sup>a, b</sup> The surveys were major collections of data from representative samples of the residents of Nigeria (33,067 in 2016 and 32,689 in 2019) on topics such as their experiences with public services, their attitudes to government, and crime victimization. As a key part of the surveys, UNODC and NBS developed and implemented an innovative methodology for estimating homicide victimization. Specifically, respondents were asked a series of questions about homicide victimization involving their household members in the three years preceding the data collection. In addition, the survey contained follow-up questions about the legality and context of such killings, which enabled their alignment with the ICCS definition of intentional homicide to be verified.

The figure below presents the total homicide rate in Nigeria calculated using data from the 2016 and 2019 surveys, in addition to sex-specific rates.<sup>c</sup>

Total and sex-specific homicide rate per 100,000 population, Nigeria, 2016 and 2019



Source: UNODC and National Bureau of Statistics (NBS), Nigeria.

It is estimated that the total homicide rate in Nigeria in 2016 was 34.4 per 100,000 population. A comparatively high rate that placed Nigeria among the countries with the highest homicide rates in the world. The estimated rate declined in the 2019 edition of the survey, however, to 21.5 per 100,000 population; while still high, some 37.5 per cent lower than in 2016. The homicide rate by sex clearly shows that the decrease

a UNODC and NBS, *Corruption in Nigeria: Patterns and Trends. Second Survey on Corruption as Experienced by the Population* (United Nations publication, 2019).

b UNODC and NBS, *Corruption in Nigeria – Bribery: Public Experience and Response* (United Nations publication, 2017).

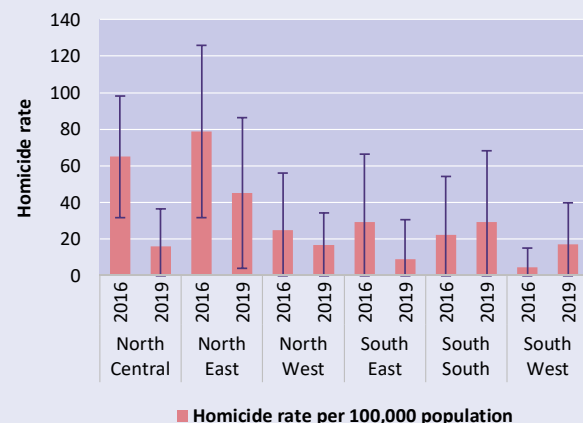
c The year 2016 reflects a yearly average between May 2013 and April 2016, while 2019 is a yearly average between June 2016 and 2019. Confidence intervals are at a confidence level of 95 per cent.

d Note the very wide confidence intervals around the estimates. In a strictly statistical sense, homicides are such relatively rare events that the probability that any given household will contain a homicide victim is low. Consequently, a survey-based estimate of homicide will be invariably imprecise, as these estimates rely on a small sample of killings. In fact, it is only possible to generate any estimate for homicides in Nigeria because the samples are large enough, at over 30,000 respondents per data collection, and because the samples identified a substantive count of intentional homicides.

was mostly in the male rate, which decreased from 58.2 per 100,000 male population in 2016 to 33.9 in 2019, a decline of 41.6 per cent. By contrast, the female homicide rate underwent a more modest decline of 11.3 per cent, from 9.7 per 100,000 female population to 8.6 over the same period.<sup>d</sup>

The figure below disaggregates the total homicide rate across each of Nigeria's six geopolitical zones. Since the sub-samples by zone are relatively small, the estimates are more imprecise, nonetheless, point-estimates indicate a decrease in the homicide rate in the North East (-42.6 per cent), North West (-32.7 per cent) and, most intensively, North Central (-75.3 per cent). By contrast, the picture is mixed in the south, with a steep decline in the South East (-69.5 per cent) but with an increase in South South (31.9 per cent) and South West (283.2 per cent), which includes Lagos. The decrease in the estimated homicide rate, in particular in the northern zones of Nigeria, mirrors a decline in the number and lethality of terrorist incidents attributable to Boko Haram, Fulani extremists and other armed groups.<sup>e</sup> One factor contributing to the decreasing fatalities in the period covered by the surveys is that Boko Haram shifted from highly lethal bombings towards armed assault and hostage taking. As a result, the lethality of Boko Haram's attacks fell dramatically, from 15 deaths per attack in 2014 to 4 per attack in 2019.<sup>f</sup>

Homicide rate per 100,000 population by geopolitical zone of Nigeria, 2016 and 2019



Source: UNODC/NBS, Nigeria.

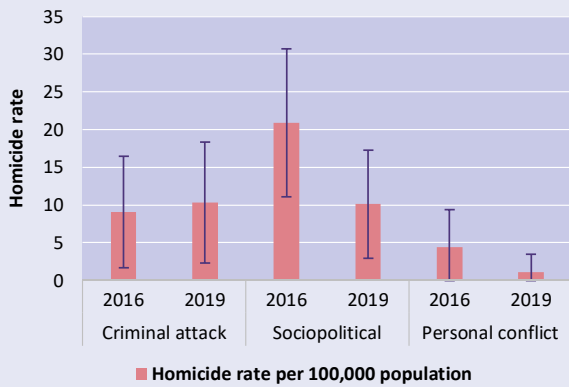
Killings defined as intentional homicide fall under three possible categories in relation to their situational context. Killings stemming from criminal attack include killings related to another crime such as a robbery, assault, gang fight, illegal ritual, etc. The rate of this type of homicide increased slightly (13.7 per cent) from 2016 to 2019, from 9.1 to 10.3 per 100,000. In 2019, such attacks were actually the most common situational context for homicides in Nigeria. Sociopolitical killings, such as those resulting from political disputes, inter-ethnic violence and terrorist attacks underwent a steep decline from 2016 to 2019, from 20.9 to 10.1 per 100,000 (-51.8 per cent). Killings stemming from personal conflict (for example, revenge or

e Institute for Economics & Peace (IEP), *Global Terrorism Index Report* (2020).

f Ibid.

family-related), the least prevalent of the three in 2016, also declined, from 4.4 to 1.1 per 100,000 in 2019 (-74.9 per cent).

Homicide rate per 100,000 population by situational context, Nigeria, 2016 and 2019

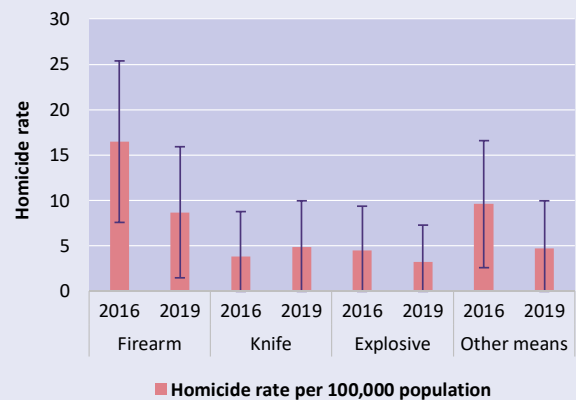


Source: UNODC/NBS, Nigeria.

When looking at the rate of intentional homicide by mechanism of killing in Nigeria in 2016 and 2019, the most prevalent were killings committed using firearms, at a rate of 16.5 per 100,000 in 2016, although firearm homicides underwent a steep decline to 8.7 per 100,000 in 2019 (-47.3 per cent). Homicides committed using an explosive or another non-specified means were

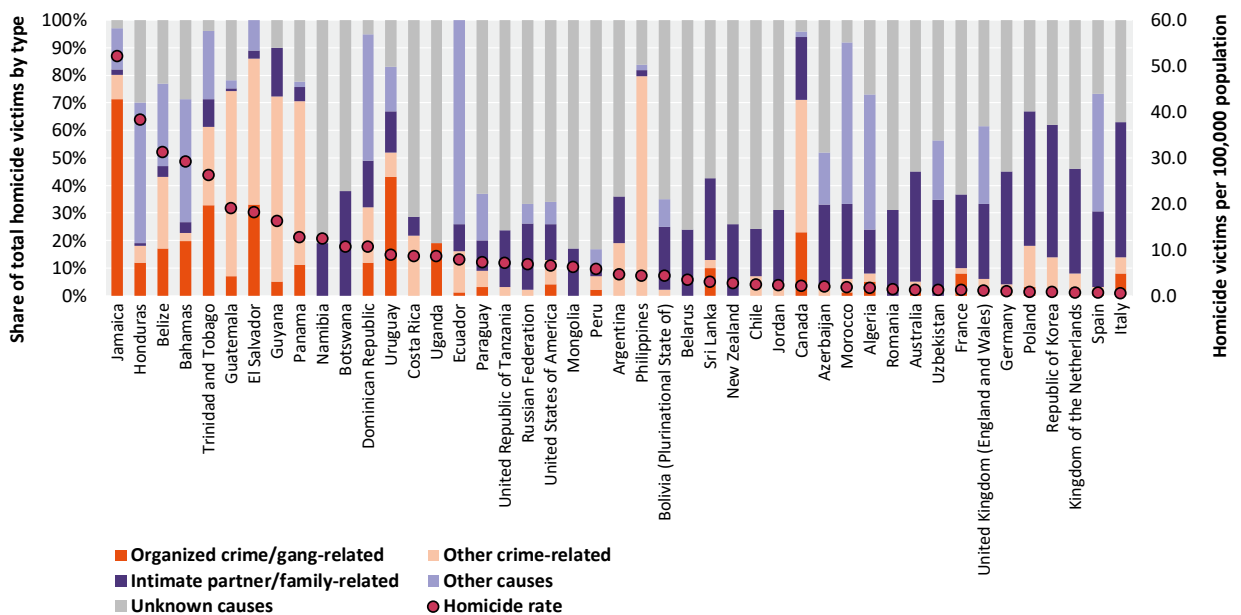
much less prevalent than firearm homicides in 2016, at 4.5 and 9.6 per 100,000, respectively, but they also underwent a steep decline in 2019, when homicide by explosives decreased to 3.2 per 100,000 (-28.8 per cent) and homicide by another non-specified means decreased to 4.7 per 100,000 (-51.2 per cent). The single homicide mechanism that increased between 2016 and 2019 was homicide committed using knives, which increased from 3.8 to 4.9 per 100,000, an increase of 29.3 per cent.

Homicide rate, by mechanism of killing, Nigeria, 2016 and 2019



Source: UNODC/NBS, Nigeria.

FIG. 4 Share of homicides by type, selected countries, 2021 or latest available year



Source: UNODC homicide statistics.

Note: Countries and territories with fewer than 100 homicides in 2021 or latest available year, or with more than 85 per cent of all homicides recorded as having “unknown causes” have been removed.



## Statistical framework for measuring the gender-related killing of women and girls (also referred to as “femicide/feminicide”)

If gender-related killings of women and girls are to be prevented and brought to an end, the full extent of this crime needs to be grasped and its complexity untangled. Gender-related killings often go unrecorded as such and when they are, often lack consistency and completeness. Improving the availability, quality and timeliness of data on this phenomenon helps assess progress and setbacks in reducing such killings and support evidence-based policymaking and an effective criminal justice response. Identifying and recording gender-related killings of women and girls and producing statistics on them require a granular system of data collection and reporting in which all data providers follow a standardized approach when collecting and integrating the data.

In March 2022, at its fifty-third session, the United Nations Statistical Commission approved a statistical framework that guides countries in the development of such a system. The process that resulted in the approval of the framework started in 2019, when the Commission stressed the need to improve data on the characteristics of victims and perpetrators of gender-based violence and to measure and monitor the effectiveness of State responses to the phenomenon. Following a request by the Commission, UNODC and UN Women jointly launched a global consultation to assess the validity of the characteristics for determining the gender-related motivation of crime, their relevance to the development of evidence-based prevention policies and their feasibility in terms of the technical and operational capacity of national institutions to produce corresponding data. Some 54 countries responded to the call and participated in the global consultation.

Based on the results of the global consultation, in 2022, the United Nations Statistical Commission endorsed the “Statistical framework for measuring the gender-related killings of women and girls (femicide/ feminicide)” developed by UNODC and UN Women,<sup>a</sup> with support from the UNODC-INEGI Center of Excellence on Statistical Information on Government, Crime,

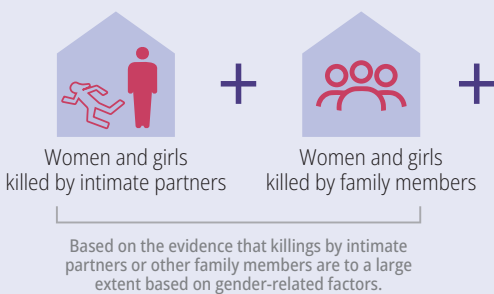
Victimization and Justice and the UN Women-INEGI Global Centre of Excellence on Gender Statistics. The Statistical framework recognizes the structural causes resulting in gender-related killings, including unequal power relations, and acknowledges that “femicide/feminicide” may take place both in the private and public spheres, or even when there is no existing relationship between victim and perpetrator. Moreover, the framework ensures the international comparability of data on “femicide/feminicide”, since it provides a standard statistical definition of gender-related killings of women and girls (femicide/feminicide) and identifies the “data blocks” that can characterize killings that are gender motivated, independently from the specific national legislation related to such killings. The framework builds on the International Classification of Crime for

Statistical Purposes (ICCS) by disaggregating variables on the victims, perpetrators, contexts and mechanisms of killings.

The Statistical framework is aimed at assisting national statistical offices, institutions within the criminal justice and public health systems, mechanisms for the advancement of women and gender equality, civil society organizations and academia in harmonizing data collection both within countries and across countries and regions.



### Data blocks for collecting and aggregating statistics on gender-related killings



Women and girls killed by other known/unknown perpetrator where the homicide modus operandi meets at least one of these criteria



Operational criteria to capture the gender-related factors

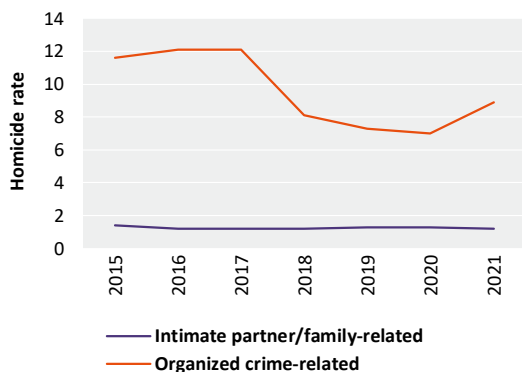
<sup>a</sup> United Nations Statistical Commission, “Report on the fifty-third session”, 28 February–2 March and 4 March 2022, E/2022/24-E/CN.3/2022/41.



### Trends in homicide types

Relatively limited national time series data on homicide types mean that a global trend analysis is not possible. Nevertheless, available time series data on homicide types from several countries in the Americas and Europe suggest both commonalities and differences across the two regions. In the Americas, the available data suggest that trends in homicide related to organized crime and gangs are significantly more volatile than trends in homicide perpetrated by intimate partners or other family members. In the sample of countries in the region with complete time series data for the period 2015–2021 (six countries), the average rate of homicide related to organized crime and gangs dropped significantly, from roughly 12 victims per 100,000 population in 2015 to 7 victims in 2020 (followed by an uptick in 2021 to 9 victims). Much of the decline can be attributed to a reduction in organized crime-related homicides in countries in Central America such as El Salvador and Jamaica up until the end of 2019 (figure 5). By contrast, the average rate of intimate partner/family-related homicide remained comparatively stable in the six countries in the Americas with complete time series data.

**FIG. 5** Trends in homicide types in six countries in the Americas with available data, 2015–2021

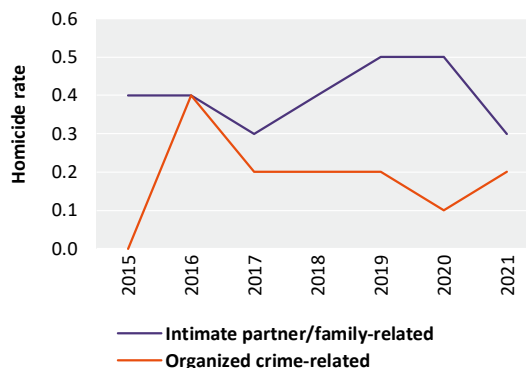


Source: UNODC homicide statistics.

*Note: Based on a simple average of homicide rates in six countries with complete time series data for the period 2015–2021 (Bahamas, Canada, Grenada, Jamaica, El Salvador and Uruguay).*

In Europe, trends in organized crime-related homicide exhibit less volatility than in the Americas and trends in intimate partner/family-related homicide are comparably stable (figure 5). In the sample of European countries with complete time series data (six countries), the average rates of intimate partner/family-related homicide remained relatively stable over the period 2015–2021, at around 0.4 victims per 100,000 population per year. The average rate of organized crime-related homicides also remained relatively stable over the period, albeit with an increase around 2016, which was driven by an increase in such killings in France and Italy, and thereafter declined until 2020 (figure 6).

**FIG. 6** Trends in homicide types in six countries in Europe with available data, 2015–2021



Source: UNODC homicide statistics.

*Based on a simple average of homicide rates from six countries with complete time series data for the period 2015–2021 (Croatia, France, Iceland, Italy, Montenegro and Spain).*

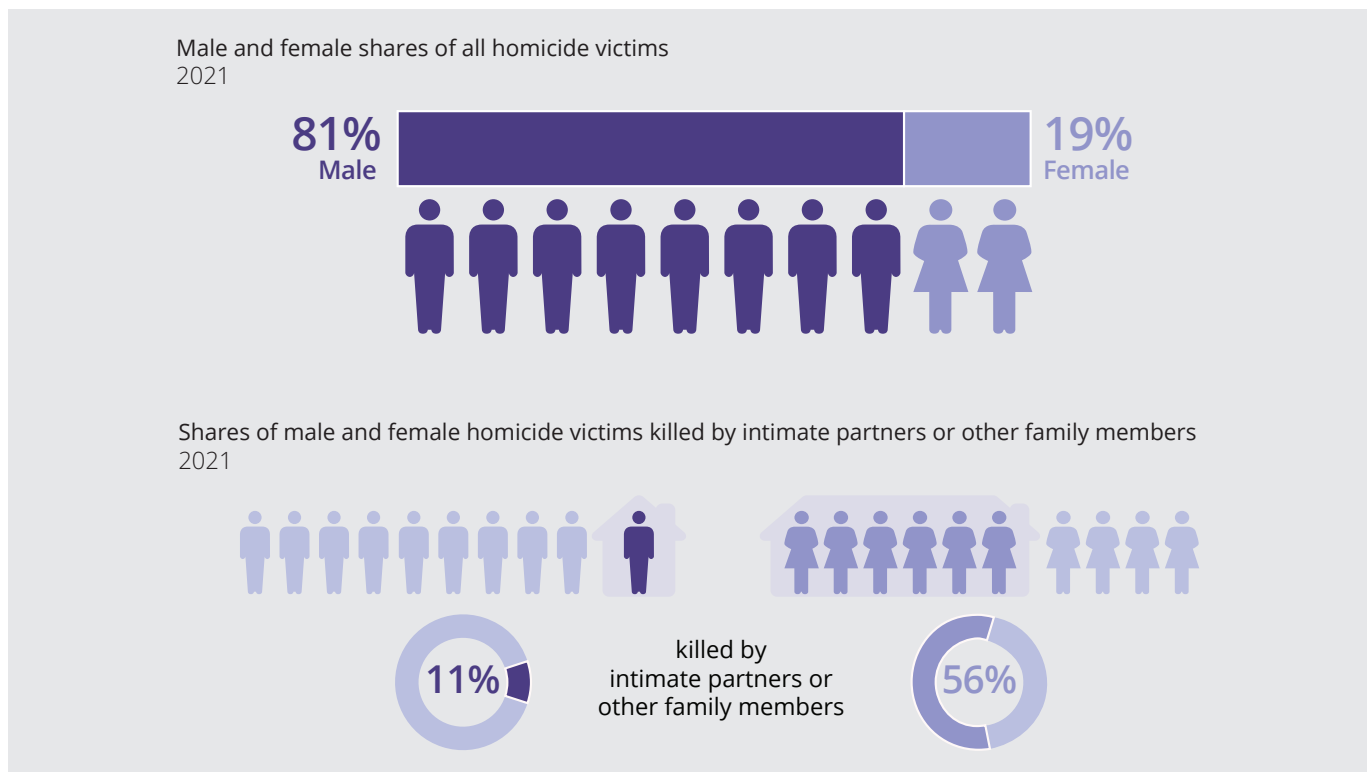
The main difference between Europe and the Americas in terms of trends in homicide by type is that, in European countries with available trend data, intimate partner/family-related homicide consistently accounts for a significantly larger number of victims (by a factor of five) than organized crime-related homicide. By contrast, in the Americas, organized crime-related homicide consistently accounts for a larger number of victims than intimate partner/family-related homicide, despite the highly volatile trend exhibited by the former (figure 5).

### Interpersonal homicide

Interpersonal homicide manifests itself in the context of violent interactions between people, be they intimate partners, family members, acquaintances or even strangers. The defining characteristic of interpersonal homicide is that the intentional killing of another person is a means of resolving a conflict and/or punishing the victim rather than of pursuing a secondary goal such as another crime or political agenda.<sup>11</sup> The relationship between victim and perpetrator can be used to distinguish between different types of interpersonal homicide, specifically between interpersonal homicide within the family – committed by intimate partners or other family members – and interpersonal homicide outside the family – committed, for example, by neighbours, acquaintances or people unknown to the victim.<sup>12</sup>

The global availability of data on interpersonal homicide perpetrated by intimate partners or other family members has improved in recent years,<sup>13</sup> but the extent of other types of interpersonal homicide perpetrated outside the family remains difficult to assess because of the limited coverage and comparability of data. Moreover, national homicide recording systems and classifications can vary

**FIG. 7** Share of male and female homicide victims, overall and killed by intimate partners or other family members, 2021



Source: UNODC homicide statistics.

Note: The share of male and female homicide victims killed by intimate partner or other family members could be higher as data on the victim-perpetrator relationship are not available in all cases.

considerably across countries, meaning that, within the broader category of intentional homicide, it is not always possible to distinguish victims of interpersonal homicide perpetrated outside the family sphere from, for example, victims of sociopolitical or crime-related homicide.

### Interpersonal homicide within the family

Interpersonal homicide occurring within the family has a clear gender dimension. Although roughly 8 out of 10 homicide victims worldwide in 2021 were men and boys (81 per cent) and 2 out of 10 were women and girls, the available data show that women and girls are disproportionately affected by homicidal violence within the family, perpetrated by intimate partners or other family members (figure 7). Out of all female homicide victims worldwide in 2021, some 56 per cent were killed by intimate partners or other family members, clearly indicating that the most dangerous place for women and girls remains the home.<sup>14</sup> Moreover, since there is no information on the victim perpetrator relationship in around 4 out of 10 killings of women and girls, the share could be much larger.

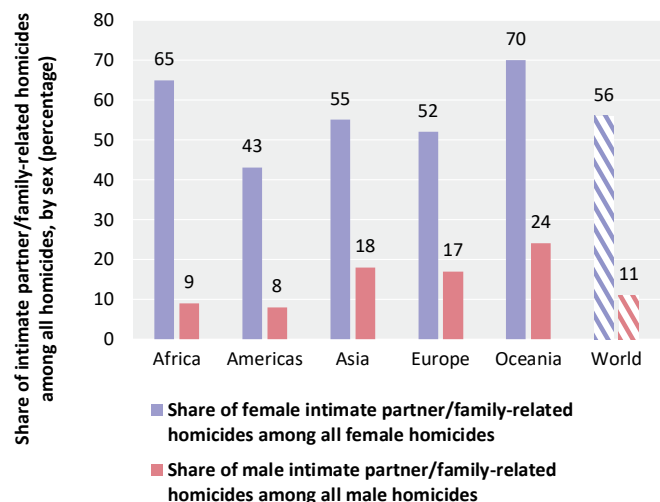
By contrast, men and boys are primarily at risk of being killed by someone outside their family. Out of all male homicide victims in 2021, around 11 per cent were killed

by intimate partners or other family members, although the share could also be larger as in many cases there is likewise no information on the victim-perpetrator relationship in killings of men and boys.

Women and girls being disproportionately affected by homicidal violence in the family is a pattern observed in all regions of the world, although some regional differences are observable in the female and male burdens of homicidal violence within the family. In regions with overall lower levels of intentional homicide (both within and outside the family sphere) such as Europe and Asia, the share of male homicides related to violence within the family is larger, at nearly 20 per cent, than in regions with very high levels of homicidal violence such as Africa, where the share is less than 10 per cent (figure 8).

The gender dimension of lethal violence within the family is even more apparent when exclusively considering homicides committed by current or former intimate partners and excluding those committed by other family members. In such cases, women and girls bear an even more disproportionate burden, accounting for an average of 7 out of 10 (71 per cent) of all victims of intimate partner homicides<sup>15</sup> in the 75 countries and territories with available data.<sup>16</sup>

**FIG. 8** Share of intimate partner/family-related homicides among all male and female homicides, by region (2021)



Source: UNODC homicide statistics.

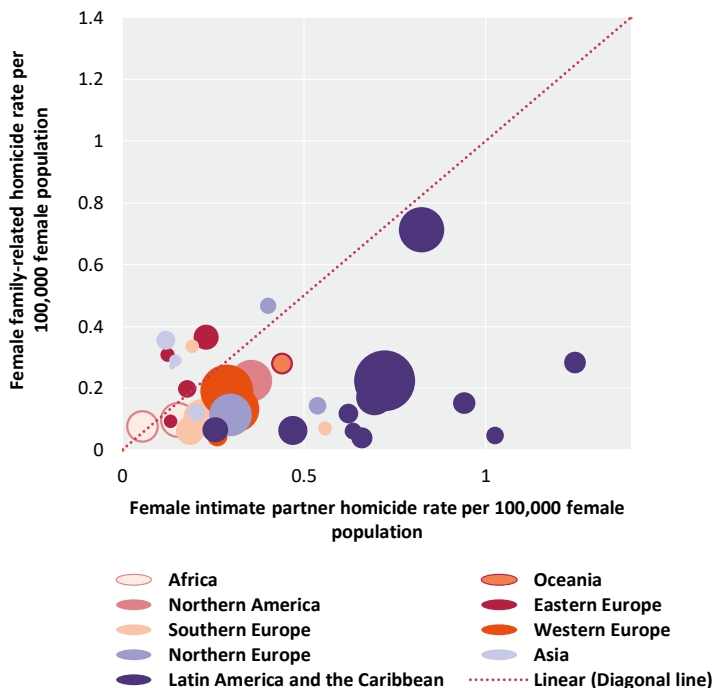
Note: The share of male and female homicide victims killed by intimate partners or family members could be higher as data on the victim-perpetrator relationship are not available for all cases.

The killing of women and girls by intimate partners and other family members is used as an indicator for gender-related killing of women and girls, also known as “femicide/feminicide”. Gender-related killings are committed in a variety of contexts by different perpetrators, but available data only allow for an estimate of killings perpetrated by family members and intimate partners.<sup>17</sup>

### Unpacking intimate partner and family-related homicide

Distinguishing between female homicides committed by intimate partners and those committed by other family members (including siblings, parents, etc.) reveals both important commonalities and differences across regions and countries (figure 9). In general, countries that record higher rates of female intimate partner homicide also tend to record higher rates of female family-related homicide.<sup>18</sup> However, rates of female intimate partner homicide exhibit much greater variability across countries in various regions than rates of female family-related homicide (figure 9). In Latin America and the Caribbean in particular (11 countries), women and girls are significantly more likely to be killed by intimate partners than by other family members, whereas the shares of female intimate partner and family-related homicides tend to be more equal in countries in other regions. Notable exceptions are several countries in Asia and Eastern Europe with available data, where the rate of female family-related homicide exceeds that of female intimate partner homicide. These findings suggest that,

**FIG. 9** Relationship between the rates of female intimate partner and family-related homicide in 35 countries, latest available year 2015–2021



Source: UNODC homicide statistics.

Note: The rates of female intimate partner and family-related homicide are based on data from 35 countries, using the latest available year in the period 2015–2021. The size of circle represents the total number of victims of intimate partner/family-related homicide in each country. The closer to the dotted diagonal line, the more similar the two rates.

depending on the region or country, interventions aimed at reducing killings of women and girls in the family need to target different types of perpetrators.

### Trends in female intimate partner/family-related homicide

Since the availability of data on intimate partner/family-related homicide of women and girls is greater than for men and boys, trends in female intimate partner/family-related homicide can be analysed in greater depth than those in male intimate partner/family-related homicide. The greater availability of data on female homicide perpetrated in the family sphere may be attributed to the greater attention paid by Governments, researchers and civil society organizations to the problem of gender-related killings of women and girls (also referred to as “femicide” or “feminicide”),<sup>19</sup> with female intimate partner/family-related homicides making up the largest proportion of such gender-related killings.<sup>20</sup> Moreover, the recently developed international statistical framework by UNODC and UN Women (discussed above) for improving the standardization and comparability of

## Killings due to accusations of sorcery or witchcraft and ritual attacks<sup>a</sup>

Belief in witchcraft or sorcery, understood here as the ability of people to intentionally cause harm through supernatural means, remains widespread across the globe.<sup>b</sup> Witchcraft or sorcery is often used to explain misfortune such as sickness, death, natural disaster and financial ruin, and in some contexts can lead people to accuse and attack those perceived as being witches. This can lead to their torture, banishment, forced public nudity, cutting of body parts and amputation of limbs, burning and killing. Intentional killings of people accused of witchcraft or sorcery have been reported by the Office of the United Nations High Commissioner for Human Rights (OHCHR) across 60 countries during the past decade, with most victims recorded in Africa, Asia and the Pacific Islands, but there have also been some cases in the United Kingdom of Great Britain and Northern Ireland, France and the United States of America.<sup>c</sup> The Statistical framework for measuring the gender-related killing of women and girls counts killings of this type as “femicide”.<sup>d</sup>

According to OHCHR, 5,250 killings were reported in online sources during the period 2009–2019, the exact number is unknown and is likely to be significantly higher owing to under-reporting.<sup>e</sup> In addition, there have been reported rapes, mutilations and killings of individuals for the purposes of using their body parts in witchcraft practices or rituals.<sup>f</sup> Killings of individuals accused of being witches and ritual attacks are highly secretive crimes and the community is often complicit in their perpetration, making official reporting to authorities irregular at best. In Malawi, for example, perceived impunity has been reported in court sentences for crimes against people with albinism that do not reflect the gravity of the crimes committed, decreasing the deterrent effect of the law. This perceived impunity can indirectly contribute to such attacks.<sup>g</sup>

The United Nations independent Expert on the enjoyment of human rights by persons with albinism, reported that in some countries, people with albinism are killed for their body parts due to the belief that they can be used to produce talismans or potions that will bring about financial success, cure illness or provide some other form of good luck.<sup>h</sup>

The inadequacy of data means that trends in this type of homicide are not clear, although the numbers of victims are clearly not diminishing in many parts of the world. Some data suggest that this type of homicide is even contagious and is spreading to environments<sup>i</sup> such as refugee communities<sup>j</sup> and diaspora communities,<sup>k</sup> and affecting new classes of victims, including children.<sup>l</sup> Extensive historical, anthropological and sociological literature has demonstrated that anxiety, precarity and uncertainty provoked by sudden social and environmental change lend themselves to the scapegoating of individuals through accusations of witchcraft.<sup>m</sup>

Because of the difficulties involved in reporting cases, often the most comprehensive data available comes from local print-based newspapers. An analysis based on the two main local newspapers in Papua New Guinea from 1996–2021 found a total of 655 reported deaths following accusations of sorcery (see figure below). The incomplete nature of the data means that drawing conclusions from such trends is not easy, as reporting is heavily contingent on where reporters are stationed and their interest in the issue. However, the main message from the data is that the issue is continuous and significant rather than merely sporadic. Moreover, an additional study of sorcery accusation-related violence in four provinces of Papua New Guinea found that most incidents are committed by large groups, with 34 per cent of incidents committed by groups of more than 20 people and 40 per cent committed by groups of 5 to 20 people.<sup>n</sup>

In many countries, including India and countries in Africa, women and girls are the main targets of such accusations and killings,<sup>o</sup> but men and boys also fall victim to them in some locations, such as Kenya and parts of Papua New Guinea.<sup>p</sup> The age of victims also varies and tends to depend on where such killings take place: in some societies, widowed older women

a A contribution by Miranda Forsyth (Australian National University) and Muluka-Anne Miti-Drummond (United Nations Independent Expert on the enjoyment of human rights by persons with albinism).

b Gershman, B., “Witchcraft beliefs, social relations, and development”, *Handbook of Labor, Human Resources and Population Economics* (March 2022).

c Office of the United Nations High Commissioner for Human Rights (OHCHR), “Concept note on the elimination of harmful practices related to witchcraft accusations and ritual killings”, 19 March 2020.

d *Statistical framework for measuring the gender-related killing of women and girls (also referred to as “femicide/feminicide”)* (United Nations publication, 2022).

e OHCHR, “Concept note on the elimination of harmful practices related to witchcraft accusations and ritual killings”, 19 March 2020.

f International Bar Association, *Waiting to Disappear: International and Regional Standards for the Protection and Promotion of the Human Rights of Persons with Albinism* (June 2017).

g United Nations General Assembly, Human Rights Council, “Report of the Independent Expert on the enjoyment of human rights by persons with albinism on her mission to Malawi”, 14 December 2016, A/HRC/34/59/Add.1.

h See the work of the United Nations Independent Expert on the enjoyment of human rights by persons with albinism: OHCHR, “Witchcraft killings of people with albinism rose during pandemic – UN expert”, 29 July 2021.

i Forsyth, M. and Gibbs, P., “Contagion of violence: the role of narratives, worldviews, mechanisms of transmission and contagion entrepreneurs”, *International Journal for Crime, Justice and Social Democracy*, vol. 9, No. 2 (November 2022).

j Edwards, S., “The genocide and terror of witchcraft accusation, persecution and related violence: an emergency situation for international human rights and domestic law”, *International Family Law* (December 2013).

k See, for example, The National Working Group on Child Abuse Linked to Faith or Belief, “National action plan to tackle child abuse linked to faith or belief”, 2013.

l Priest, R. J., Ngolo, A. and Stabell, T., “Christian pastors and alleged child witches in Kinshasa, DRC”, *On Knowing Humanity Journal*, vol. 4, No. 1 (January 2020); Ekundayo, O., “Proliferation of child witchcraft accusation in Nigeria: a violation of the human rights of the child”, *International Journal of Law Management and Humanities*, vol. 5, No. 3 (June 2022) pp. 1621–1659.

m Hutton, R., *The Witch* (Yale University Press, 2022); Ashforth, A., *Witchcraft, Violence, and Democracy in South Africa* (Chicago, University of Chicago Press, 2004); Behringer, W., *Witches and Witch-hunts* (Polity Press, 2004); Geschiere, P., *Witchcraft, Intimacy, and Trust: Africa in Comparison* (Chicago, University of Chicago Press, 2013); Erikson, K., *Wayward Puritans: a Study in the Sociology of Deviance*, Classic Edition (1966).

n Forsyth, M., Gibbs, P. and Losoncz, I., “Sorcery accusation related violence in PNG: Characteristics of perpetrators and their accomplices”, *The National Research Institute Spotlight*, vol. 14, No. 11 (September 2021).

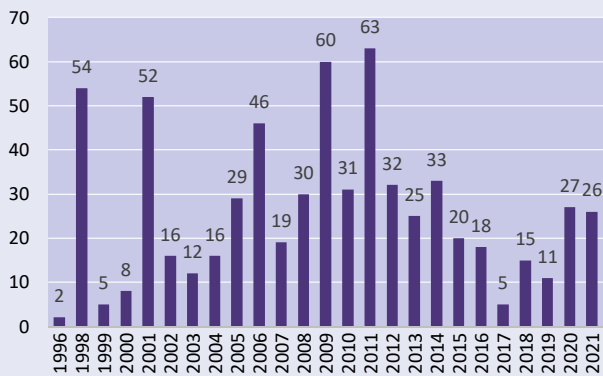
o Kelkar, G. and Nathan, D., *Witch Hunts: Culture, Patriarchy, and Structural Transformation* (Cambridge, Cambridge University Press, 2020).

p Forsyth, M., “The regulation of witchcraft and sorcery practices and beliefs”, *Annual Review of Law and Social Science*, vol. 12 (October 2016), pp. 331–351. Forsyth, M. et al., “Sorcery accusation related violence in Papua New Guinea: The Impact of SARV on Children”, *Development Policy Centre Discussion Paper*, No. 97 (2021).





### Cases of sorcery accusation-related murders reported in newspapers in Papua New Guinea



Source: Newspaper reporting of Sorcery Accusation-Related Violence (SARV), Australian National University SARV project.

are common targets<sup>q</sup> while children are targets in others, especially those living in step-families.<sup>r</sup> In Africa in particular, revised understandings of witchcraft that increasingly focus suspicion on children have recently emerged.<sup>s</sup> A study carried out in Kinshasa, the capital of the Democratic Republic of the Congo, for example, revealed the related dynamics,<sup>t</sup> including the role played by the church.<sup>u</sup>

Despite the extreme forms of harm involved, the human rights abuses carried out as a result of a belief in witchcraft and sorcery have only recently started to receive international attention.<sup>v</sup> In 2021, for example, the United Nations Human Rights Council adopted a resolution on the elimination of harmful practices related to accusations of witchcraft and ritual attacks.<sup>w</sup> Furthermore, in 2022, the Pan African Parliament adopted guidelines on eliminating harmful practices related to accusations of witchcraft and ritual attacks.<sup>x</sup>

q Eboiyehi, F., "Convicted without evidence: Elderly women and witchcraft accusations in contemporary Nigeria", *Journal of International Women Studies*, vol. 8, No. 4 (August 2017).

r Cimpric, A., *Children Accused of Witchcraft: an Anthropological Study of Contemporary Practice in Africa* (United Nations Children's Fund (UNICEF), 2021).

s Secker, E., "Witchcraft stigmatization in Nigeria: challenges and successes in the implementation of child rights", *International Social Work*, vol. 56, No. 1 (December 2012).

t Priest, R., Ngolo, A. and Stabell, T. "Christian pastors and (alleged) child witches in Kinshasa", *On Knowing Humanity DRC*, vol. 4, No. 1 (January 2020).

u Ibid.

v In 2022, the International Network Against Accusations of Witchcraft and Associated Harmful Practices was established to connect organizations across the globe working on the issue. See [www.theinternationalnetwork.org](http://www.theinternationalnetwork.org).

w United Nations General Assembly, Resolution adopted by the Human Rights Council on 12 July 2021, A/HRC/RES/47/8.

x The Pan African Parliament, *Accusations of Witchcraft and Ritual Attacks: Towards Eliminating Harmful Practices and Other Human Rights Violations* (2021).

disaggregated homicide data focuses on female homicide in the family as one of the key "data blocks" that can be used by Member States to measure gender-related killings of women and girls.<sup>21</sup>

Despite improvements in the availability and comparability of disaggregated data on female intimate partner/family-related homicide over the past decade,<sup>22</sup> significant data gaps remain, especially in countries in Africa, Asia and Oceania. In some cases, these data gaps can be attributed to a lack of reporting mechanisms among subnational, national and international data producers. In other cases, such homicides are simply not recorded by or reported to the police or other competent authorities.<sup>23</sup> In light of these data limitations, Europe and the Americas are currently the only two regions where data availability allows for the estimation over time of trends in female intimate partner/family-related homicide. Even in those two regions, however, it is possible that the actual number of female intimate partner/family-related homicides is higher, as data on the victim-perpetrator relationship is not available in all cases.

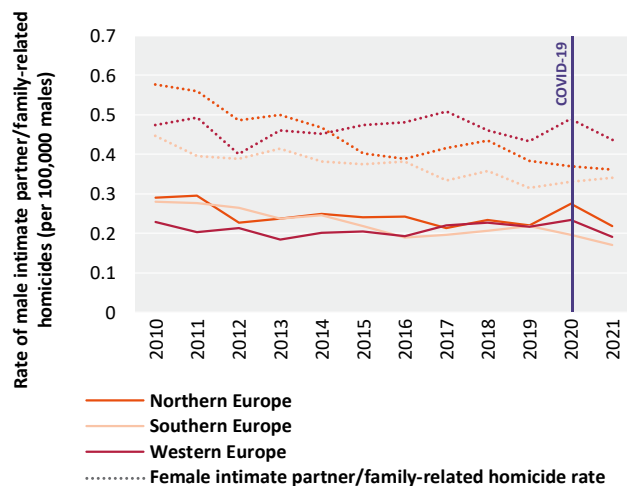
The overall picture that emerges is one of relative stability in the absolute number of annual killings at the regional level. Between 2010 and 2021, Europe experienced a decrease of 21 per cent in the number of female intimate partner/family-related homicides, albeit with different patterns between subregions and with signs of reversals in the downward trend since 2020 in some, including Western and Southern Europe. By contrast, the Americas saw an increase of 6 per cent over the same period, although in South America the trend moved in the opposite direction. Population growth in Europe and the Americas, led to a decline in the rate of female intimate partner/family-related homicide in both regions between 2010 and 2021, although more markedly in Europe, at more than more than 20 per cent, than in the Americas, at less than 4 per cent. A detailed analysis of patterns and trends in female intimate partner/family-related homicide including 2022 data is provided in a separate research brief, published in tandem with the *Global Study on Homicide 2023*.<sup>24</sup>

## Trends in male intimate partner/family-related homicide

Europe and Northern America are currently the only regions where data availability allows for the estimation of trends over time in male homicides perpetrated by intimate partners or other family members. In Northern, Southern and Western Europe, the annual number of men and boys killed by partners or other family members remained relatively stable between 2010 and 2021 and at relatively low levels, typically fewer than 200 killings, in each region (figure 10). By contrast, there was a steady increase in the number of male intimate partner/family-related homicides in Northern America from 2012, with a noticeable uptick

since the onset of the COVID-19 pandemic in 2020 (figure 11). Meanwhile, the annual number of male intimate partner/family-related homicides fluctuated in Eastern Europe between 2010 and 2021, with a substantial spike in killings around 2015, followed by a decline up until the onset of the COVID-19 pandemic in 2020 (figure 11).

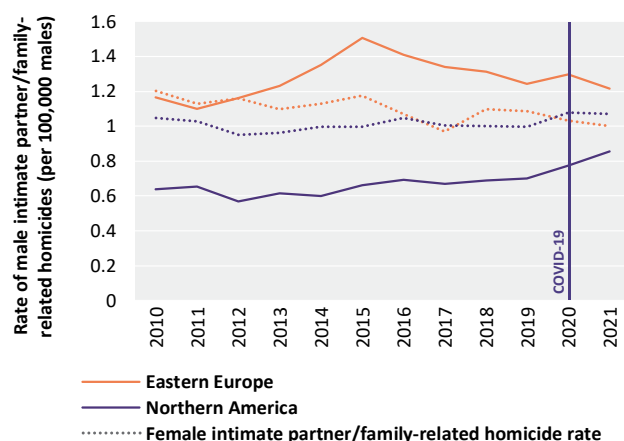
**FIG. 10** Trends in the rate of male and female intimate partner/family-related homicide in Northern, Southern and Western Europe (2010–2021)



Source: UNODC homicide statistics.

*Note: The rate of homicide victims killed by intimate partners/family members could be higher as data on the victim-perpetrator relationship are not available for all homicide cases.*

**FIG. 11** Trends in the rate of male and female intimate partner/family-related homicide in Northern America and Eastern Europe (2010–2021)



Source: UNODC homicide statistics.

*Note: The rate of intimate partner/family-related homicide could be higher as data on the victim-perpetrator relationship is not available for all homicide victims.*

The comparison of male and female intimate partner/family-related homicide data in Northern America and Europe suggests that the male and female trends tend to move in tandem over time, with some notable exceptions such as the aforementioned spike in male victims in Eastern Europe around 2015. Nevertheless, the female intimate partner/family-related homicide rate tends to be higher than the male rate, other than in Eastern Europe, where there are usually more male victims than female victims. The difference in Eastern Europe can be explained primarily by a pattern observed in the Russian Federation, where the number of male homicides committed by other family members (not intimate partners) tends to exceed the number of female homicides committed by other family members by a factor of roughly two.

### Interpersonal homicide outside the family

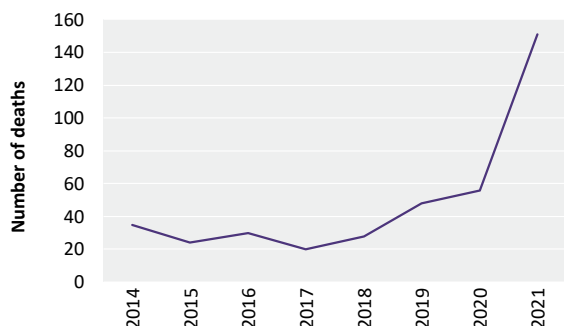
In comparison to homicide perpetrated within the family, interpersonal homicide outside the family is more difficult to record and quantify systematically. This is because in many cases the necessary information on both the victim-perpetrator relationship and the situational context of the crime is not readily available.<sup>25</sup> Certain forms of interpersonal homicide outside the family occur in situations in which the livelihoods of communities are threatened and relations between the inhabitants of those communities are consequently under strain. For example, interpersonal homicide may occur because of disputes over access to land and competition over other resources that are essential for human survival such as water.<sup>26</sup> Insecure land tenure in particular can provoke disputes and result in violence.

Data on interpersonal homicides that can be attributed to land disputes are not widely available, but in selected countries with available data, some insights can be gained. In Kenya, for example, deaths resulting from cattle rustling and stock theft incidents have been on the rise since 2017, with the number of killings increasing sharply (by 170 per cent) from 2020 to 2021 (figure 12). Such incidents take place primarily among pastoralist communities in the North Rift counties. In recent years, the increasing occurrence of drought has led to greater competition for water and grazing land for animals, which has led to an increase in raids and violence.<sup>27</sup>

In India, violent deaths caused by disputes over property or land accounted for some 16 per cent of all interpersonal murders between 2019 and 2021 (figure 13). In general, land conflicts in India are spread among activities such as infrastructure, forestry and land use, and can involve conflicts over both common and private land.<sup>28</sup> Indeed, land laws and land accusation were also found to make up a substantial proportion of the Supreme Court's caseload between 1993 and 2011.<sup>29</sup>

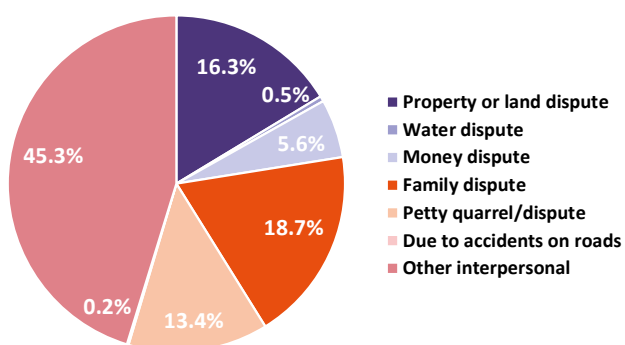


**FIG. 12** Deaths resulting from cattle rustling and stock theft incidents in Kenya, 2014–2021



Source: National Police Service, Kenya.

**FIG. 13** Interpersonal murders by type in India, 2019–2021



Source: National Crime Record Bureau, Ministry of Home Affairs, India.

Note: The other interpersonal category includes murders related to honour killing, love affairs, illicit relationships, personal vendetta or enmity, dowry, witchcraft, psychopath or serial killers, lunacy, road rage and rape.

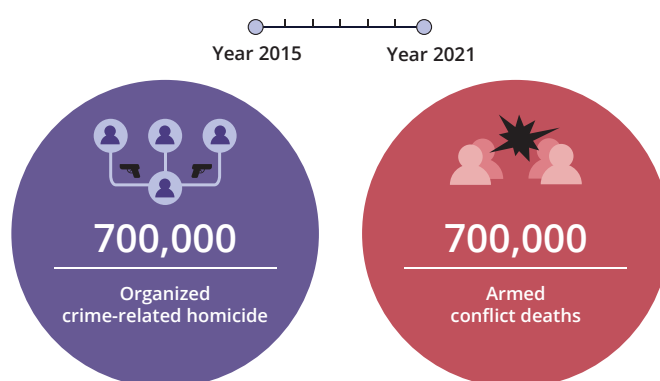
Disputes over access to water are a prominent driver of interpersonal homicide outside the family. In recent years, population growth, economic expansion and climate change have impacted water security in many regions of the world, which in combination with other societal and political factors has led to increased violence associated with water disputes.<sup>30</sup> Data from the Pacific Institute show that the number of incidents of violence associated with water resources has risen substantially since 2015, with most incidents reported in Southern Asia, Sub-Saharan Africa and Central America.<sup>31</sup> Although systematic and cross-national data on the number of homicides related to this type of dispute are unavailable, country-specific data can highlight the potential gravity of the issue. Between January and September 2018, for example, over 1,700 violent deaths resulting from violence between farmers and pastoralists over the scarcity of water and land resources

were reported in western and central Nigeria.<sup>32</sup> Moreover, 0.5 per cent of all interpersonal murders recorded in India in the period 2019–2021 can be attributed to conflict over water (figure 13).

## Crime-related homicide

Crime-related homicide, both linked to organized crime and other crimes such as robbery, accounts for almost 4 out of 10 homicides with a known typology worldwide (figure 3). From 2015 to 2021, organized crime was responsible for close to 700,000 deaths, as many as those resulting from armed conflicts during the same period (figure 14).<sup>33</sup> Although about four out of every five of those deaths occurred in the Americas, organized-crime related homicide is prevalent in all regions.

**FIG. 14** Organized crime-related homicides and armed conflict deaths, 2015–2021



Source: Organized crime-related homicide estimates based on UNODC homicide statistics. Conflict death estimates are from the Uppsala Conflict Data Program/Peace Research Institute Oslo (UCDP/PRI) Armed Conflict Dataset (available at <https://ucdp.uu.se/exploratory>) and include deaths from state-based violence, non-state violence, and one-sided violence.

The following section examines the specific ways that organized crime contributes to homicidal violence, with a focus on Europe and Latin America and the Caribbean. The majority of organized crime-related homicides worldwide take place in the Americas, where roughly half of all homicide victims in 2021 were linked to organized crime (figure 3). In Europe, available evidence suggests that organized crime-related homicide is on the increase as a result of drug trafficking.

Organized crime-related homicide also occurs in other regions. In the case of Africa, however, a lack of data makes a quantitative analysis similar to that of the Americas and Europe a challenge. Nevertheless, this section includes two short analyses that focus on South Africa and the Sahel region, which illustrate the type of organized crime-related

violence that may affect other parts of Africa. The level of homicidal violence is generally much lower in Asia than the global average and the limited available data indicate that organized crime is responsible for a small share of homicides in that region. Asia is discussed in greater detail in the sections on interpersonal and sociopolitical homicide in this chapter.

### Organized crime as a driver of homicide trends: a focus on Latin America and the Caribbean

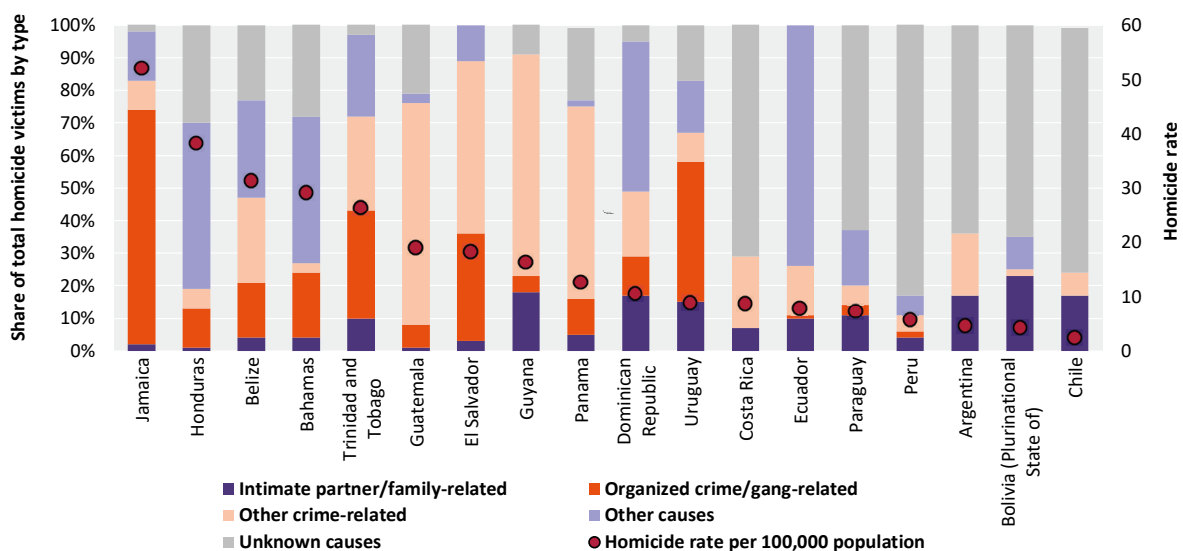
Nowhere is homicidal violence caused by organized crime more prevalent than in Latin America and the Caribbean, the subregion with the highest homicide rate worldwide. Although absolute numbers and rates vary across subregions, countries and cities, comparatively high levels of lethal violence are persistent in Latin America and the Caribbean. One reason for this is the dynamic and dense ecosystem of organized criminal groups, including hundreds of drug trafficking organizations, mafia syndicates, gangs and militia, that alternately cooperate, collude and compete for the control of illegal markets. The incidence of lethal violence has also been attributed to other factors such as illicit drug markets, the proliferation of firearms<sup>34</sup> and militarized crime control interventions.<sup>35</sup> Across Latin America and the Caribbean, homicidal violence also correlates with structural risks such as weak rule of law, high levels of impunity, social and income inequality and youth unemployment.<sup>36</sup>

The intensity and scale of homicidal violence is unevenly distributed in Latin America and the Caribbean.<sup>37</sup> Coun-

tries, states and cities that register comparatively high and volatile rates of homicidal violence also experience disputes between rival criminal factions, public security forces and local communities. Notwithstanding high levels of intimate partner and interpersonal violence across the subregion,<sup>38</sup> rapid surges in lethal violence are often a result of competition involving armed groups, as well as military and police action.<sup>39</sup> Moreover, countries, states, cities and border areas with a high concentration of rival criminal factions typically experience high rates of lethal violence. Likewise, prisons and detention facilities housing members of multiple criminal organizations tend to have a high risk of outbreaks of lethal violence.<sup>40</sup>

Homicidal violence is a result of multiple risk factors,<sup>41</sup> at least three of which contribute to above-average homicide rates across Latin America and the Caribbean. First, record-breaking drug production and trafficking lead to changes in the geography of lethal violence, as criminal organizations may use violence to protect plantations, transshipment routes and retail outlets.<sup>42</sup> Second, the proliferation and fragmentation of heavily-armed criminal groups and subsequent responses to crime influence the scale and scope of homicidal violence. Depending on whether criminal organizations dominate, form pacts or splinter, they may be inclined to resort to lethal violence.<sup>43,44</sup> Third, the use of firearms increases the risk of lethal outcomes in violent disputes between rival criminal groups. Weak gun control and/or poor enforcement in supply and destination markets can result in high-calibre weapons falling into the hands of criminal organizations.<sup>45</sup> When these three factors converge, homicide is more likely to increase.

**FIG. 15** Homicide rates (per 100,000 population) and share of homicide by type (percentage) in Latin America and the Caribbean, 2021 or latest year



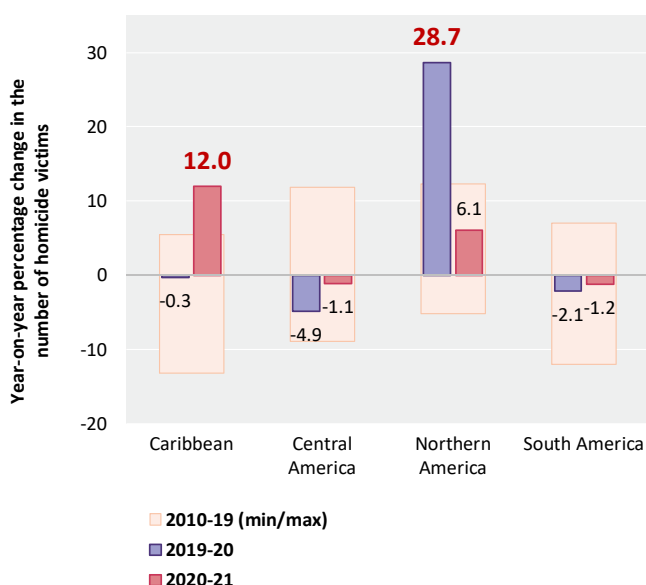
Source: UNODC homicide statistics.

### Subregional homicide trends

Homicide rates have been high in Latin America and the Caribbean for decades and remained so, even increasing in some areas, during the COVID19 pandemic,<sup>46, 47</sup> despite declines in other forms of violent and non-violent crime.<sup>48</sup> Latin America and the Caribbean not only consistently has the highest homicide rate of any subregion, but also had the highest proportion of homicides involving organized crime worldwide in 2021 (figure 3). Moreover, countries in Latin America and the Caribbean reported the highest proportion of homicides involving both male victims and firearms.<sup>49</sup> In 2021, 8 of the 10 countries with the highest homicide rates<sup>50</sup> worldwide were located in Latin America and the Caribbean.

Notwithstanding the high subregional homicide rate, there is considerable spatial and temporal variation across Latin America and the Caribbean. Homicide trends have fluctuated between and within the different parts of the subregion since 2010, including during the height of the COVID19 pandemic in 2020 and 2021 (figure 16). In the Caribbean, annual changes in the number of homicide victims fluctuated between +12 per cent and -13 per cent between 2010 and 2021. By comparison, the fluctuation in Central America was between +11 per cent and -8 per cent during the same period and in South America, between +7 per cent and -12 per cent. More recently, at the national level, 13 countries registered increases in homicidal violence between 2021 and 2022 (most notably Ecuador and Haiti) and 11 countries reported decreases (most notably El Salvador and Mexico).

**FIG. 16** Year-on-year percentage change in the number of homicide victims in the Americas 2010–2021



Source: UNODC homicide statistics.

The Caribbean has experienced the most dramatic increase in homicidal violence in recent years, largely because of intense competition between gangs over drug markets. In 2022, the number of homicides in the Turks and Caicos Islands, a transit point between the Bahamas, Colombia and Venezuela (Bolivarian Republic of), climbed to 28 in October 2022, compared with 13 during the whole of 2021.<sup>51</sup> In Jamaica, the homicide rate reached 53.3 per 100,000 in 2022, with about 70 per cent of homicides being connected to organized criminal groups or gangs in 2021. Saint Lucia recorded a homicide rate of 36.7 per 100,000 in 2022, a slight decrease from the previous year, while Saint Vincent and Grenadines reported a homicide rate of 40.4 per 100,000. Meanwhile, the homicide rate in Trinidad and Tobago rose to 39.5 per 100,000 in 2022, an increase of more than 30 per cent from the previous year, largely due to the splintering of large gangs into smaller violent factions. The homicide rate reached 31.2 per 100,000 in the Bahamas in 2022, and in Haiti, it surged to 18 per 100,000 in 2022, an increase of more than 35 per cent from 2021, due in large part to deepening tensions associated with gang-violence.<sup>52</sup>

By contrast, the homicide rate stabilized and decreased in several countries in Central America. Despite continuing to experience the highest level of lethal violence in the subregion, Honduras saw its homicide rate decline to 35.1 per 100,000 in 2022 after crackdowns led to the dismantlement of over 38 gangs, according to national police media statements.<sup>53</sup> This represents a decrease of 8.1 per cent from 2021 and the lowest homicide rate in the country since the beginning of the century. Belize and Panama also experienced a decrease in the homicide rate from 2021 to 2022, from 31.3 to 27.9 per 100,000 in the case of Belize, and from 12.6 to 11.3 per 100,000 in the case of Panama. By far the most significant decline occurred in El Salvador, however, where there were 7.8 homicides per 100,000 in 2022 compared with 106.8 in 2015. Anti-gang crackdowns<sup>54</sup> and the imprisonment of more than 72,000 alleged gang members since the implementation of the state of emergency in March 2022<sup>55</sup> are credited by the Government for the sharp decline in the homicide rate in El Salvador.<sup>56</sup> Elsewhere, Mexico’s high homicide rate of 26.1 per 100,000 decreased slightly from 2021 to 2022.<sup>57</sup> An exception to the decreasing trend in Central America is Costa Rica, which has experienced an uptick in the homicide rate in recent years, reaching 12.8 per 100,000 in 2022 as organized crime groups have been fighting for control of the port of Limón, a key distribution node to Europe.

Homicide trends have been more heterogeneous in South America, with countries long associated with a high homicide rate registering decreases and those with low levels of lethal violence registering increases. The homicide rate of Venezuela (Bolivarian Republic of), for example, declined from 41 per 100,000 in 2019 to 19.3 in 2021. Colombia also experienced a slight decline in the national homicide

**TABLE 1** Homicide level in the Caribbean, 2019–2022 (total and rate per 100,000 population)

Country	2019		2020		2021		2022	
	Homicide	Homicide rate	Homicide	Homicide rate	Homicide	Homicide rate	Homicide	Homicide rate
Antigua and Barbuda	3	3.3	9	9.7	16	17.2	10	10.7
Bahamas	95	23.5	73	18.0	119	29.2	128	31.2
Barbados	48	17.1	41	14.6	32	11.4	43	15.3
Cayman Islands	2	3.0	3	4.5	#N/A	#N/A	#N/A	#N/A
Cuba	500	4.4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Dominica	13	18.2	15	20.8	10	13.8	#N/A	#N/A
Dominican Republic	1,026	9.4	961	8.7	1,172	10.5	1,389	12.4
Grenada	16	13.0	14	11.3	5	4.0	#N/A	#N/A
Haiti <sup>a</sup>	#N/A	#N/A	1,280	11.3	1,489	13.0	2,088	18.0
Jamaica	1,340	47.6	1,333	47.3	1,474	52.1	1,508	53.3
Puerto Rico	633	19.2	556	17.0	632	19.4	572	17.6
Saint Kitts and Nevis	12	25.2	10	21.0	14	29.4	#N/A	#N/A
Saint Lucia	46	25.8	52	29.0	70	39.0	66	36.7
Saint Vincent and the Grenadines	19	18.1	33	31.5	32	30.7	42	40.4
Trinidad and Tobago <sup>b</sup>	539	35.5	399	26.3	448	29.4	605	39.5

a See *Haiti's Criminal Markets: Mapping Trends in Firearms and Drug Trafficking* (United Nations publication 2023).

b Provisional data for 2021 and 2022 from the Central Statistical Office, Ministry of Planning and Development, Trinidad and Tobago.

Source: Data submitted by countries through the United Nations Survey on Crime Trends and Operations of Criminal Justice Systems (UN-CTS), from governmental sources, or other sources reviewed by countries.

**TABLE 2** Homicide level in countries in Central America, 2019–2022 (total and rate per 100,000 population)

Country	2019		2020		2021		2022	
	Homicide	Homicide rate	Homicide	Homicide rate	Homicide	Homicide rate	Homicide	Homicide rate
Belize	134	34.4	102	25.8	125	31.3	113	27.9
Costa Rica <sup>a</sup>	563	11.1	570	11.1	588	11.4	664	12.8
El Salvador	2,398	38.2	1,341	21.3	1,085	17.2	496	7.8
Guatemala	4,387	25.6	3,292	19.0	3,520	20.0	#N/A	#N/A
Honduras <sup>b</sup>	4,078	40.9	3,613	35.7	3,931	38.2	3,661	35.1
Mexico	36,661	29.3	36,773	29.2	35,700	28.2	33,287	26.1
Nicaragua	515	7.7	#N/A	#N/A	754	11.0	#N/A	#N/A
Panama	480	11.3	500	11.6	550	12.6	499	11.3

a Data from Costa Rica Observatorio de la Violencia, "Homicidio doloso".

b Data for 2022 from Honduras Secretaría de Seguridad Policia Nacional, "Comportamiento de los homicidios en Honduras año 2022".

Source: Data submitted by countries through the United Nations Survey on Crime Trends and Operations of Criminal Justice Systems (UN-CTS), from governmental sources, or other sources reviewed by countries.

**TABLE 3** Homicide level in countries in South America, 2019–2022 (total and rate per 100,000 population)

Country	2019		2020		2021		2022	
	Homicide	Homicide rate	Homicide	Homicide rate	Homicide	Homicide rate	Homicide	Homicide rate
Argentina	2,308	5.2	2,418	5.4	2,094	4.6	1,961	4.3
Bolivia (Plurinational State of)	497	4.2	428	3.6	418	3.5	485	4.0
Brazil <sup>a</sup>	44,073	20.8	47,722	22.4	45,562	21.3	#N/A	#N/A
Chile	924	4.9	1,115	5.8	906	4.6	1,322	6.7
Colombia	11,750	23.4	11,452	22.5	13,223	25.7	13,166	25.4
Ecuador	1,187	6.8	1,372	7.8	2,496	14.0	4,859	27.0
Guyana	136	17.0	157	19.7	131	16.3	#N/A	#N/A
Paraguay <sup>b</sup>	554	8.5	481	7.3	525	7.8	472	7.0
Peru	2,385	7.3	1,903	5.7	#N/A	#N/A	#N/A	#N/A
Suriname	30	5.0	55	9.1	35	5.7	45	7.3
Uruguay	394	11.5	341	9.9	306	8.9	383	11.2
Venezuela (Bolivarian Republic of)	11,874	41.0	8,384	29.4	5,444	19.3	#N/A	#N/A

a Data from Ministry of Health of Brazil, Information Technology Department of the United Health System (DATASUS).

b Data from Paraguay General Directorate of Prevention and Safety, "Estadísticas de homicidios años 2018 al 2022".

Source: Data submitted by countries with the United Nations Survey on Crime Trends and Operations of Criminal Justice Systems (UN-CTS), from governmental sources, or other sources reviewed by countries.

rate, from 25.7 per 100,000 in 2021 to 25.4 in 2022, with the rate being generally higher in areas where armed groups such as ex-combatants of the Fuerzas Armadas Revolucionarias de Colombia (FARC) and the Ejército de Liberación Nacional (ELN) were more active.<sup>58, 59</sup> A slight decrease in the homicide rate, from 4.6 per 100,000 in 2021 to 4.3 in 2022, was also recorded in Argentina. That said, the province of Santa Fe and the city of Rosario in particular have experienced a surge in homicides, reportedly owing to rivalries between two local drug factions, the Monos and Clan Alvarado.<sup>60</sup> In Brazil, the homicide rate remained steady, at roughly 21.3 per 100,000 in 2021,<sup>61</sup> after 2019, the second lowest homicide rate in the country since 2000. However, the north and north-east of Brazil remain violence hotspots owing to tensions between the competing drug factions, Primeiro Comando da Capital and Comando Vermelho.<sup>62, 63</sup>

Conversely, several countries in South America have experienced rising homicide rates of late, linked in large part to tensions between criminal groups. In 2022, Ecuador experienced by far the sharpest rise in the homicide rate in the subregion, to 27 per 100,000, almost double the homicide rate recorded in 2021.<sup>64</sup> This surge in homicidal violence is attributed to intense clashes between rival transnational and local drug factions, in Esmeralda and Guayaquil in particular.<sup>65</sup> Although less dramatic, Uruguay

reported a 25.8 per cent increase in homicide to 11.2 per 100,000 in 2022. Chile also experienced an increase in homicide, of 45.1 per cent, from 4.6 per 100,000 in 2021 to 6.7 in 2022, with the increase attributed to criminal gangs involved in trafficking in persons, drug trafficking and the timber mafia. Paraguay, however, reported a slight decrease in homicide, from 7.8 per 100,000 in 2021 to 7.0 in 2022.

### Role of firearms

A key factor contributing to the disproportionately high rates of lethal violence in Latin America and the Caribbean is access to and misuse of firearms. In contrast to bladed weapons and blunt objects, firearms amplify the speed and scale of intentional and unintentional homicide. It is not necessarily the availability of firearms (for example, ownership) that is the key determinant, but rather weak oversight and control and the impunity associated with their use.<sup>66, 67</sup> Handguns such as revolvers and pistols, and to a lesser extent semi- and automatic rifles of various calibres and makes, are frequently procured and misused by criminal factions to settle disputes.<sup>68</sup> A study of a sample of prison inmates in Belize, Suriname and Trinidad and Tobago, for example, described mixed motives for acquiring an illicit firearm, including personal protection, peer pressure, the pursuit of criminal activity and financial considerations.<sup>69</sup>



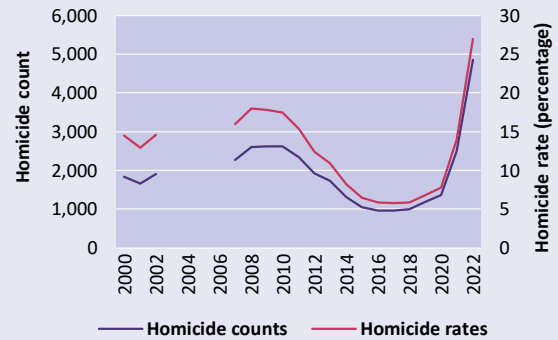
## Drug gangs and surging violence in Ecuador

After years of a comparatively low rate of violent crime, Ecuador is experiencing an unprecedented escalation of lethal violence. Homicidal violence increased by roughly 407 per cent between 2016 and 2022 in the country, and the latest surge in homicides representing an increase of 94.7 per cent from 2021 to 2022 has been linked to increasingly violent competition between rival drug trafficking gangs. For example, a number of criminal organizations are disputing lucrative cocaine routes, including in Guayaquil, home to one of the busiest ports in South America.<sup>a</sup>

The homicide rate has also increased dramatically in other areas where criminal factions are competing, including the cities of Duran and Mahala and the coastal province of Esmeraldas, which experienced an almost fourfold increase in homicide from 23.5 per 100,000 in 2021 to 81.1 in 2022.<sup>b</sup> Indeed, the increase in the homicide rate from 2014 to 2022 was higher in the coastal or neighbouring provinces than elsewhere in the country.

Record-breaking coca cultivation in neighbouring Bolivia (Plurinational State of), Colombia and Peru and increased cocaine trafficking through Ecuador en route to the major destinations markets in Northern America and Europe are driving violence in Ecuador. Drug-related violence began to

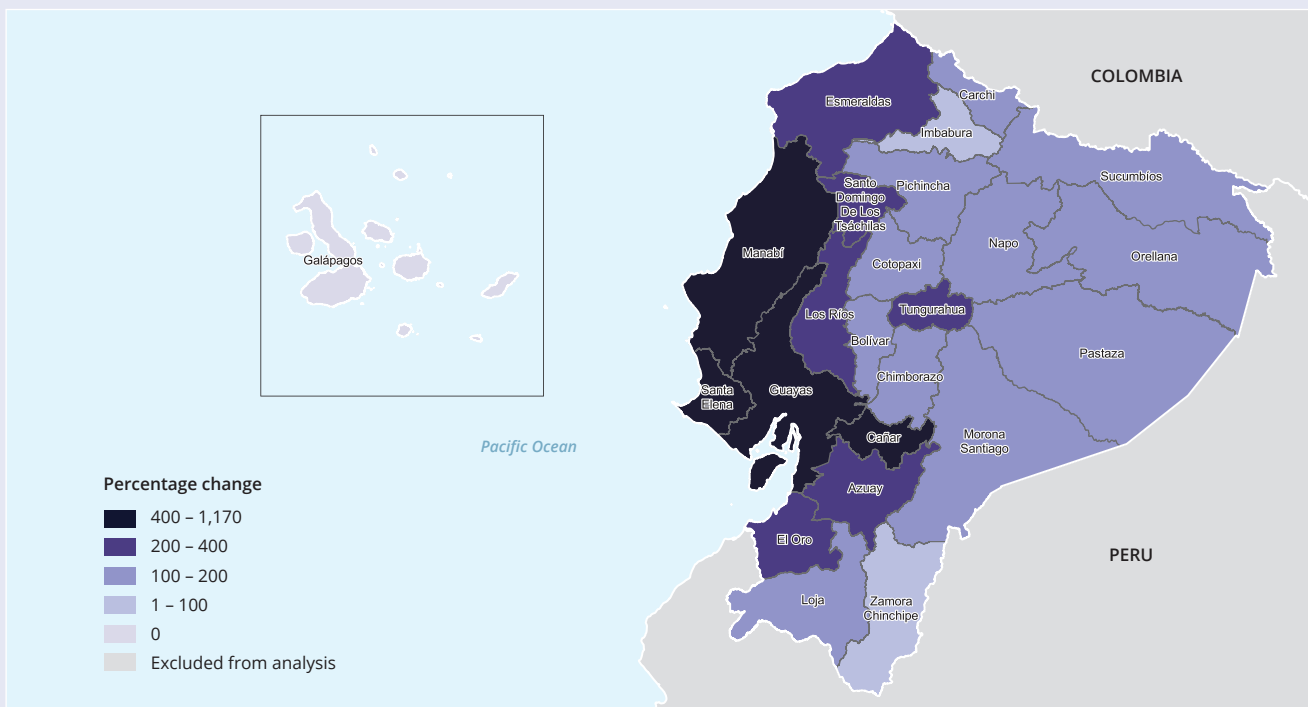
Number of homicides and homicide rate per 100,000 population, Ecuador, 2000–2022



Source: UNODC homicide statistics.

increase in 2018, most of it related to disputes between local gangs or confined to prisons, but violence has spiralled over the past two years, reportedly owing to deepening tensions between transnational crime groups from Mexico, such as the Jalisco New Generation Cartel,<sup>c</sup> and Clan Farruku from Albania.<sup>d</sup>

### Percentage change in the homicide rate in Ecuador, by province, 2014–2022



Source: Ministry of Interior for homicide number; National Institute of Statistics and Census for population figures.

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

a Global Report on Cocaine 2023 – Local Dynamics, Global Challenges (United Nations publication, 2023).

b Lizcano Villalba, J., “Murder record broken in northern Ecuador as gang feuds fuel violence”, *Insight Crime*, 28 Oct 2022.

c See Ferri, P., “Mexican cartels linked to Ecuador violence: ‘criminals have an incentive to say they belong to a renowned group’”, *El País*, 11 August 2023.

d See Sisternans, V., “‘Clan Farruku’ arrest highlight Albanian’s Latin America cocaine connections”, *Insight Crime*, 20 April 2023.



## Factors shaping criminal homicides in Latin America and the Caribbean

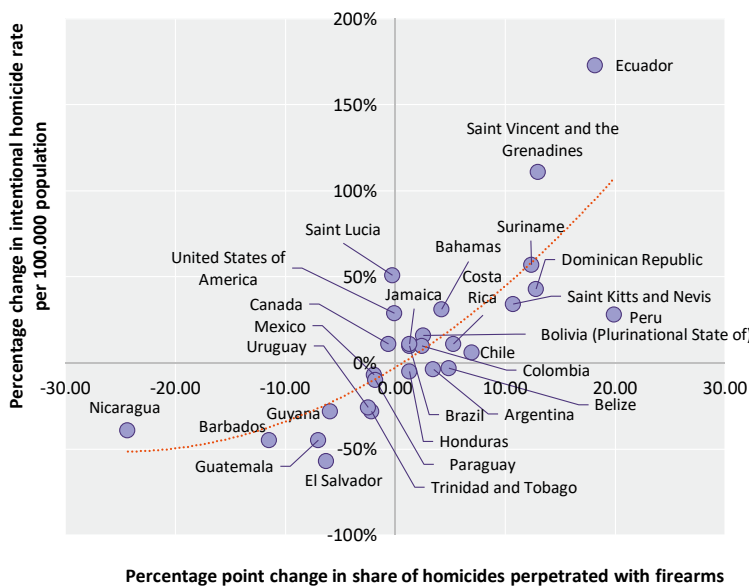
The present study notes several recurrent patterns with respect to homicide, including in Latin America and the Caribbean.

- › Homicides related to organized crime and gangs are significantly more volatile than homicides perpetrated by intimate partners or other family members (figure 5).
- › Subregions, countries and cities with a high homicide rate tend to be associated with a larger proportion of firearm-related homicide.
- › Settings with a high homicide rate also typically report a large proportion of homicides involving male victims.
- › High homicide rates are also usually associated with a proportionately higher number of homicides related to organized crime. Where there is a higher density of criminal organizations, there is a higher risk of homicidal violence.
- › Drug markets alone do not predict homicide but they are frequently associated with lethal violence, especially in the context of multiple competing criminal factions.

Firearms can be acquired by organized criminal groups in multiple ways. With the exception of the Caribbean, where almost all firearms and ammunition are imported, whether legally or illegally,<sup>70</sup> firearms and ammunition can often be sourced domestically, either through private dealers, on the black market, or diverted from law enforcement arsenals and military stocks. More often than not, firearms are procured from foreign sources, most notably in Northern America and Western Europe, via both legal and illegal means.<sup>71, 72</sup> Weapons are frequently shipped by air and sea, on commercial passenger planes, and by post.<sup>73, 74</sup> In this regard, there is growing concern about the “iron pipeline” involving networks of dealers and brokers who smuggle firearms, ammunition, parts and accessories from the United States in particular, to countries in the Caribbean, Central America and South America.<sup>75</sup>

Countries in Latin America and the Caribbean report the largest proportion of gun-related homicides worldwide. In 2021, there were at least 89,100 gun-related homicides in Latin America and the Caribbean, including 55,100 in South America, 29,900 in Central America and 4,100 in the Caribbean,<sup>76</sup> which translates into respective homicide rates of 9.3, 16.9 and 12.7 per 100,000. The share of homicides perpetrated with firearms ranged from 65 per cent in Central America to 67 per cent in the Caribbean and 70 per cent in South America in 2021, compared with 62 per cent in Northern America and 17 per cent in Europe. In general, an increase in the homicide rate is associated with a higher share of homicides perpetrated with firearms, and vice versa in the case of a decrease in the homicide rate (figure 17).

**FIG. 17** Change in the homicide rate and change in the share of homicides perpetrated with firearms, the Americas, 2019–2021 or 2019–2020



Source: UNODC homicide statistics.

### Role of men

All over the world, the perpetrators and victims of homicide are disproportionately male. This is particularly the case in Latin America and the Caribbean, where roughly 91 per cent of homicide victims in 2021 were male while the global average was 81 per cent. The countries with the largest share of male homicide victims in Latin America and the Caribbean in 2021 were the Bahamas (95 per cent), Guyana (93 per cent), Haiti (93 per cent), Colombia (92 per cent) and Brazil (92 per cent).

The men involved in homicidal violence across Latin America and the Caribbean are also disproportionately young. This is partly to be expected since the subregion has a relatively large youth population, although the share of young people has been decreasing over time.<sup>77</sup> In the Americas, including Northern America, more than 45 per cent of homicide victims were aged between 15 and 29 years in 2021. Countries that registered the highest share of homicide victims in this age group included the Bahamas (52 per cent), El Salvador (49 per cent), Guatemala (48 per cent) and Colombia (46 per cent). Most victims in this age group were males. In El Salvador, for example,

approximately 43 per cent of all homicide victims were males aged 15–29 even though this age group constitutes just 15 per cent of the country's population.

The large share of young male homicide victims in Latin America and the Caribbean is also linked to the demography of criminal organizations across the subregion. This is because, while the leadership of organized criminal organizations may be older, on the whole the rank and file of drug trafficking factions, militia groups, street gangs and other criminal entities is typically made-up of young men.<sup>78</sup> There are multiple motivations for joining criminal organizations, ranging from a desire to belong, to the pursuit of economic opportunity, with young Latin Americans, over 80 per cent of whom live in urban settings, being deeply concerned about their lack of education and employment opportunities.<sup>79</sup> These motivations were apparently exacerbated during the COVID-19 pandemic, when the risk of recruitment of young people into criminal organizations increased.<sup>80</sup>

### Criminal pacts – “pax mafiosa”

The presence of organized crime groups does not always translate into a high rate of homicidal violence. In comparison with much of Latin America and the Caribbean and some countries in Africa, Asia and Europe appear to have much smaller shares of organized crime-related homicide, but that does not necessarily mean there is less organized crime in Asia and Europe than in other regions.

Types of organized crime such as large-scale drug trafficking can be managed in ways that may or may not promote violence,<sup>a</sup> as shown by the example of the countries in South-Eastern Europe that lie on the Balkan Route, along which tons of heroin are trafficked every year,<sup>b</sup> yet do not report high homicide rates. Similarly, in some countries in Asia, well known organized crime groups that are apparently important players both at home and abroad,<sup>c</sup> such as the Yakuza in Japan, continue to operate in a country with one of the very lowest homicide rates worldwide (0.23 per 100,000 in 2021).

Indeed, the dominance of a hegemonic organized crime group can have an impact on violent crime, particularly when it successfully exerts control over territory and criminal markets. Moreover, criminal organizations may also enter into “gentleman's agreements”, including with state authorities, precisely for the purpose of avoiding violent confrontations, even if this effectively leads to the authorities ceding control of some

a *Global Study on Homicide 2019* (United Nations publication, 2019).

b *World Drug Report 2023*, Booklet 3, chapter 8 (United Nations publication, 2023).

c Finckenaer, J.O. and Chin, K., “Asian transnational organized crime and its impact on the United States: developing a transnational crime research agenda: a final report,” *Trends in Organized Crime*, vol. 10, No. 2 (December 2006) pp. 18–107.

d *Global Study on Homicide 2019* (United Nations publication, 2019); Zabyelina, Y., “Transnational organized crime in international relations”, *Central European Journal of International and Security Studies*, vol.3, No. 1 (2009).

### Role of criminal groups

Trends in lethal violence are heavily influenced both by collaboration and competition between organized crime groups, drug factions and gangs. When criminal organizations seek to enforce their influence and compete to control drug routes and retail outlets, they often resort to coercive violence. Rival factions may seek to assert control over territory and, if co-optation is not possible, intimidate or eliminate their opponents. Likewise, drug trafficking organizations, militia and street gangs frequently use lethal violence in prisons, many of which face significant overcrowding and other challenges, in order to degrade and dissuade rivals.<sup>81</sup> An example of this emerged following the breakdown of the “non-aggression pact” between two rival drug trafficking groups, the Primeiro Comando da Capital and Comando Vermelho, in Brazil.<sup>82</sup> When the pact came to an end in 2016, waves of brutal prison violence followed in both public and private prisons across the country, including in Boa Vista, Manaus and Altamira in 2017/18, resulting in hundreds of deaths of inmates and sparking violent reprisals.<sup>83</sup>

local jurisdictions. Such informal pacts of non-interference can result in a “pax mafiosa”, a relatively low level of violence in territories dominated by criminal groups.<sup>d</sup>

The term “pax mafiosa” has been frequently used in Italy to describe how the leadership of organized crime groups have deliberately reduced the use of overt violence, leading to a drop in the number of mafia-related killings in the country.<sup>e</sup> The same concept has been applied in Mexico, Brazil and other parts of Latin America during the past two decades. In Mexico the concept of “pax narcotica” has also been applied referring to situations of tolerance in the twentieth century towards drug-trafficking activities which maintained low levels of drug-related violence in the country.<sup>f</sup> The leadership of the Sinaloa Cartel reportedly urged its sub-commanders involved in drug trafficking operations in Baja California to reduce homicidal violence because it was attracting too much government attention.<sup>g</sup> Meanwhile, in Sao Paulo, Brazil's largest city, areas dominated by Primeiro Comando da Capital have reportedly experienced fewer violent crimes, which some studies indicate is because of the group's monopoly over crime.<sup>h</sup>

e See for example Ralazione Della, “Commissione parlamentare di inchiesta sul fenomeno delle mafie e sulle altre associazioni criminali”, *Camera Del Deputati Senato Della*, Doc. XXIII, NO.38 (February 2018). and “Relazione sull'attivita' delle forze di polizia sullo stato dell'ordine e della sicurezza pubblica e sulla criminalita' organizzata”, *Senato Della Repubblica*, Doc. XXXVIII, No.4 (January 2017).

f Chabat, J., “Combatting drugs in Mexico under Calderon: The inevitable war”, CIDE, No. 205 (2010).

g See Pachico, E., “Baja California: a test for Mexico's pax-mafioso?”, *InSight Crime*, 14 April 2013.

h See Biderman, C. et al., “Pax monopolista and crime: the case of the emergence of the Primeiro Comando da Capital in Sao Paulo”, *Journal of Quantitative Criminology* (November 2018), pp. 573–605. See also Amorim, S. and Voitch, P., “SP: queda de homicídios se deve à hegemonia de facção criminosa”, *O Globo*, 18 July 2012. It is important to note that there are some disputes about the role of the Primeiro Comando da Capital's (PCC) influence in reducing violent crime, including Justus. M. et al., “The Sao Paulo mystery: the role of the criminal organization PCC in reducing homicide in 2000s”, *Economia*, vol. 19, No. 2 (May 2018).

## More organized crime, less homicide? A look at municipality-level data in Mexico

There is no linear association between violence and the presence of organized crime in a community and Mexico, a country with high levels of organized crime, offers an example of how a greater presence of organized crime does not always translate into a higher level of violence.<sup>a, b</sup>

Although measuring organized crime remains a challenge,<sup>c</sup> <sup>d, e</sup> survey data<sup>f</sup> on citizens' perceptions of safety, trust in public institutions and crime victimization in Mexico, from the National Survey of Urban Public Safety (ENSU), can help improve understanding of the connections between organized crime and violence. Data from the 2021 survey provide a range of indicators that can indirectly assess the presence of organized crime across 75 cities in Mexico and 16 areas in Mexico City and the level of certain crimes:<sup>g</sup>

1. "Seen gangs" – the proportion of respondents who have heard about or seen violent groups or gangsterism<sup>h</sup> around their homes.
2. "Seen illegal fuel" – the proportion of respondents who have heard about or seen theft of illegal sale of fuel around their homes.

3. "Victims of extortion" – the proportion of respondents who were victims of extortion.
4. "Victims of vehicle theft" – the proportion of respondents who were victims of vehicle theft.
5. "Victims of theft of vehicle parts" – the proportion of respondents who were victims of theft of vehicle parts.

Linking these indicators with homicide, the table below shows that the presence of organized crime, homicide and other violent crimes tends to co-occur within municipalities. Some combinations of crime are more likely to occur than others but, overall, the data suggest that organized crime, in relation to visible gangs in particular, correlates with violent crimes.<sup>j</sup>

Focusing on the relationship between homicide and the two indicators that measure the presence of organized crime and have the strongest associations with homicides – the proportion of respondents exposed to gangs near their home, and the proportion of respondents who were victims of extortion – suggests that a greater presence of organized crime

Correlation matrix of variables of interest, Mexico, 2021

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Organized crime indicators</b>								
(1) Seen gangs	1.00	0.35	0.52	0.59	0.39	0.28	0.27	0.58
(2) Seen illegal fuel	0.35	1.00	0.17	0.18	0.15	0.03	0.23	0.29
(3) Victims of vehicle theft	0.52	0.17	1.00	0.74	0.50	0.24	0.24	0.74
(4) Victims of theft of vehicle parts	0.59	0.18	0.74	1.00	0.54	0.13	0.33	0.71
(5) Victims of extortion	0.39	0.15	0.50	0.54	1.00	0.31	0.20	0.41
<b>Homicide, law and order</b>								
(6) (Ln) Homicide rate	0.28	0.03	0.24	0.13	0.31	1.00	0.15	0.03
(7) Victims of burglary <sup>i</sup>	0.27	0.23	0.24	0.33	0.20	0.15	1.00	0.10
(8) Victims of robbery	0.58	0.29	0.74	0.71	0.41	0.03	0.10	1.00

Source: Instituto Nacional de Estadística, Geografía e Informática (INEGI), ENSU 2021.

Note: The Pearson Correlation Coefficient measures the linear association between the two variables and ranges between a minimum of -1 (a total negative linear relationship) to a maximum of 1 (a total positive linear relationship; in violet). The value of 0 indicates no linear relationship. The table displays a correlation matrix between each of these organized crime indicators and measures of homicide, law and order at the municipality level in Mexico.

a Aguirre, J. and Herrera, H. A., "Institutional weakness and organized crime in Mexico: the case of Michoacán", *Trends in Organized Crime*, vol. 16 (April 2013), pp. 221–238.

b Atuesta, L. H. and Pérez-Dávila, Y. S., "Fragmentation and cooperation: the evolution of organized crime in Mexico", *Trends in Organized Crime*, vol. 21, No. 3, (February 2017), pp. 235–261.

c Vander Beken, T., "Risky business: a risk-based methodology to measure organized crime", *Crime, Law and Social Change*, vol. 41, (June 2004) pp. 471–516.

d Dugato, M., Calderoni, F. and Campedelli, G. M., "Measuring organised crime presence at the municipal level", *Social Indicators Research*, vol. 147 (August 2019), pp. 237–261.

e Van Dijk, J., "Mafia markers: assessing organized crime and its impact upon societies", *Trends in Organized Crime*, vol. 10, (October 2007), pp. 39–56.

f Mexico, Instituto Nacional de Estadística, Geografía e Informática (INEGI), Encuesta Nacional de Seguridad Pública Urbana (ENSU).

g These municipalities correspond to those that had at least 100 respondents to ENSU, as well as available homicide data.

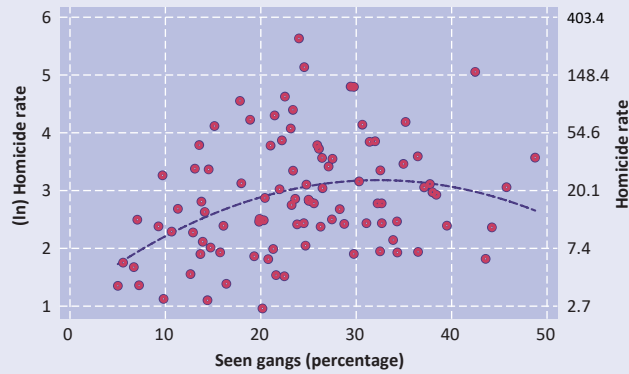
h The term refers to the behaviour of gang members and their modi operandi.

i Burglary in this context refers to situations when victims were either present or absent from the property.

j A notable exception is the sale of illegal fuel, which has only modest correlations with most other indicators.



**Homicide rate (ln) by the proportion of respondents who had heard about or seen violent groups or gangsterism near their home, Mexico, 2021**



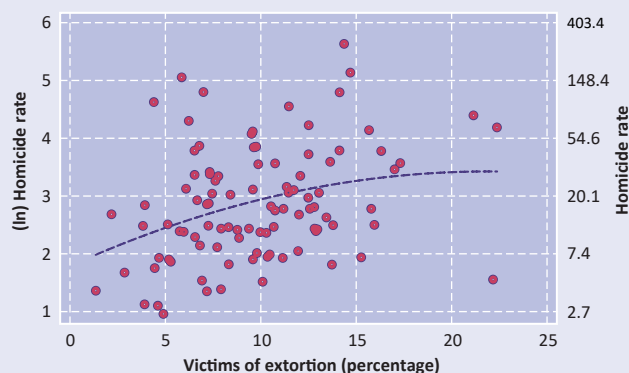
Source: INEGI, ENSU 2021.

Note: The above figure is a scatterplot comparing the homicide rate with the proportion of respondents who had heard about or seen gangs near their home. Each dot in the figure corresponds to one of the 75 cities in Mexico and 16 areas in Mexico City included in the sample. The homicide rates were also log-transformed, which is a common research technique to reduce the influence of extreme homicide rates on order to make results more representative of all municipalities. The untransformed homicide rate corresponding to each logged value is listed in the secondary y-axis. In addition, a dashed fit-line was included in the figure, which reflects the average association between the two variables, as estimated using a simple ordinary least squares (OLS) regression model (see annex 1 of the present chapter for the numeric estimates).

goes hand-in-hand with a higher level of homicide,<sup>k</sup> although only up to a certain point. When the presence of organized crime reaches a certain level (more than 32 per cent of people reporting having seen gangs in the community) homicide starts to decline.

Once organized crime surpasses a certain level, its positive relationship with homicidal violence not only disappears but also turns negative, and the municipalities with the highest proportion of residents exposed to gangs do not actually experience the most homicides. For example, while 48.75 per cent of the population of San Luis Posi were exposed to

**Homicide rate (ln) by the proportion of respondents who had been victims of extortion, Mexico, 2021**



Source: INEGI, ENSU 2021.

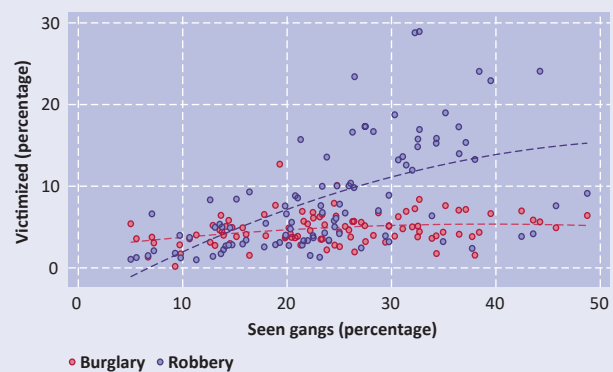
<sup>k</sup> An increase from 5 to 6 percentage points in the proportion of the population exposed to gangs is related to a significant increase of 11.2 per cent in a municipality's homicide rate, and an increased proportion of extortion victims from 1 to 2 percentage points is associated with an increase in the homicide rate of 15.3 per cent.

gangs near their home, the community's homicide rate (35.50 per 100,000), although high, was well below the homicide rate of Fresnillo (279.66 per 100,000), where 24.00 per cent of residents were exposed to gangs. The municipalities with the highest levels of homicide were within a middle range of gang exposure, of between 20 and 40 percentage points.

The same pattern can be seen using other indicators that measure the presence of organized crime. The proportion of respondents who were victims of extortion ranged from 1.35 per cent (in Boca del Rio, Veracruz) to a high of 22.38 per cent (in Irapuato, Guanajuato). Higher levels of extortion tend to be associated with an expected increase in the homicide rate, but that association plateaus once more than 15 per cent of residents have been victims of extortion.

The association between the presence of organized crime and property crime is similar but not the same as for homicide. As in the case of homicide, greater exposure to gangs has a positive association with robbery victimization rates, and a higher prevalence of extortion is strongly and positively related with a higher risk of public robbery. Increasing the proportion of respondents who were victims of extortion from 1 to 2 percentage points is associated with an increase of 1.568 in the percentage of respondents who were victims of robbery across municipalities.

**Burglary and robbery victimization by the proportion of respondents who had heard about or seen violent groups or gangsterism around their homes, Mexico, 2021**



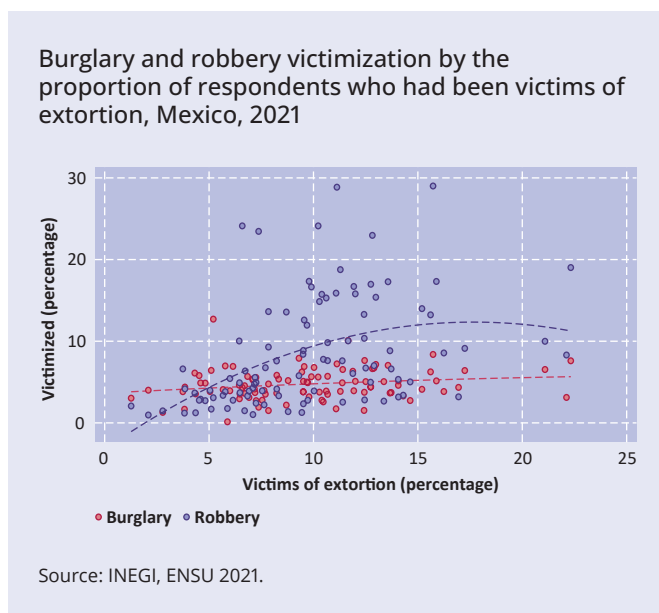
Source: INEGI, ENSU 2021.

Like homicide, when organized crime reaches a certain point (more than 18 per cent of residents are victims of extortion), robberies are more contained. Unlike homicide, however, even when the positive relationship weakens as extortions become more prevalent, the association between organized crime and robbery never clearly turns negative.

The decrease in homicide (but not robbery) as the presence of organized crime becomes more visible in a given municipality, suggests the particular role that violence may play in the operations of organized crime groups. Such groups may be more violent when establishing or asserting their presence, but once their operations have been consolidated and become visible, they may need to employ lethal violence to a lesser extent.







Criminal organizations, most notably gangs, are contributing to increasing homicide in several Caribbean countries. On the one hand, this is because gangs are increasingly competing to control drug trafficking routes between drug-producing countries in South America and the markets in Northern America and Western Europe, in particular.<sup>84</sup> On the other hand, and even more importantly, as inter-factional violence intensifies and state security forces seek to disrupt gang leadership, the composition of the gangs changes.

In Trinidad and Tobago, the Strategic Services Agency of the Ministry of National Security noted the effect of the elimination of gang leaders by gang rivals or their incarceration for prolonged periods on the leadership of criminal gangs.<sup>85</sup> The emergence of younger and more violent leaders and the fragmentation of existing gangs have been accompanied by animosity between them.<sup>86</sup> Trinidadian gangs have also diversified into new types of illegal business, from fraud and money laundering to robbery, human smuggling and illegal gambling;<sup>87</sup> they are also accessing higher calibre weapons than in the past.<sup>88</sup> In Jamaica, law enforcement operations targeting major gangs and organized crime groups in the early 2010s led to a decrease in the number of homicides, from 1,682 in 2009 to 1,005 in 2014.<sup>89</sup> However, the crackdown strategy, which was not sustained over time, exacerbated the splintering of gangs, which expanded their activities to rural areas.<sup>90</sup> The number of gangs is reported to have doubled in the country from 191 in 2010 to at least 389 in 2019,<sup>91</sup> and the increase in the number of gangs was followed by an increase in homicide.<sup>92</sup> Similarly, in Latin America, the fragmentation of organized crime groups that followed law enforcement activities in Mexico has also been put forward as a reason for the increase in homicidal violence in the country since 2014.<sup>93</sup>

Meanwhile, an estimated 200 gangs are operating in Haiti at present, some of them operating in federations (for example, G9, 400 Mawozo and G-Pep) with significant territorial control. Several gangs in the country have access to high-calibre firearms from the United States and are heavily involved in a range of criminal activities, from kidnapping and assassination to extortion and sexual violence.<sup>94</sup>

Criminal organizations are particularly active in border and coastal areas, partly because of the importance of moving drugs and other contraband across frontiers. Examples of this are the tri-border areas of countries in South America, including Argentina, Brazil, Bolivia (Plurinational State of), Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname and Venezuela (Bolivarian Republic of). A 2023 study detected one or more groups in almost 70 per cent (242 of 348) municipalities in border areas of the eight Amazon Basin countries.<sup>95</sup>

### Role of drugs

Latin America and the Caribbean is home to countries that are the world's primary producers of cocaine. The expansion of the transnational drug trade has contributed to the emergence of sophisticated and powerful organized crime organizations, and the surge in cocaine production in the Andean countries in particular, most notably since 2020, has increased competition, and consequently lethal violence, between global organized crime organizations both in the Amazon Basin<sup>96, 97</sup> and in neighbouring countries such as Argentina and Chile.<sup>98, 99</sup>

The surge in drug trafficking in the Caribbean<sup>100</sup> is associated with increasing homicide rates across the region, which has corrosive implications for sustainable development.<sup>101</sup> The transshipment of drugs through Caribbean countries is hardly new, of course, with more than three quarters of all cocaine seized between South America and the United States during the 1980s being intercepted in Caribbean countries.<sup>102</sup> The creation of the North American Free Trade Association and the temporary void created by the dismantling of some Colombian drug cartels in the first half of the 1990s diminished the importance of the Caribbean cocaine route in relation to the route through Mexico.<sup>103</sup> However, increasing demand in Europe led to the resurgence of large-scale cocaine trafficking in the Caribbean, including via the Dominican Republic.<sup>104</sup>

Among the many victims of organized crime-related homicide are human rights defenders. OHCHR documented the killing of at least 1,921 human rights defenders between 2015 and 2022 in Latin America and the Caribbean alone, over 60 per cent of the global total.<sup>105</sup>

### States of emergency

Amid mounting public concern about violent crime and a low level of trust in the police,<sup>106</sup> some Governments in Latin America and the Caribbean have introduced a “state of exception”. In Central America, several countries have issued emergencies to address public security crises, while deploying the military alongside law enforcement and increasing the involvement of citizens in crime control efforts. In 2022, for example, the Honduran authorities declared a state of emergency in over half the country,<sup>107</sup> which was extended in 2023.<sup>108</sup> Following the extension of the state of emergency, OHCHR urged authorities in Honduras to reinforce the internal and external oversight of military operations in the country.<sup>109</sup>

El Salvador also introduced a state of emergency in 2022 to fight the gangs MS-13 and Barrio 18. According to information provided by the Government of El Salvador, through Legislative Decree 333 of 27 March 2022, emergency measures were introduced, and as a consequence, the constitutional rights and guarantees regulated in articles 7, 12 second paragraph, 13 second paragraph and 24 were suspended for an initial period of 30 days. These measures have been maintained with successive extensions issued by the Legislative Assembly, in accordance with article 30 of the Constitution. The Government reported that arrests carried out using these legal tools are made on the basis of evidence that those individuals are members of an organized crime group, which constitutes the crime of illicit association, as regulated by article 345 of the Salvadoran Penal Code, which is punished with a prison sentence, provided that group membership has the characteristics of unlawfulness. According to the Government, more than 72,000 gang members and leaders have been arrested since the introduction of the state of emergency, leading to a reduction in criminal activities.<sup>110</sup> OHCHR has expressed deep concern about the prolonged state of emergency in El Salvador, and reported excessive use of force, detention and ill treatment, as well as amendments to criminal law and procedure.<sup>111</sup> Prior to Honduras and El Salvador, in 2017, Guatemala introduced a state of emergency in municipalities neighbouring Mexico, ostensibly to fight drug trafficking.<sup>112</sup>

In South America, faced with rising lethal violence, including in the country’s prisons, Ecuador recently declared a state of emergency.<sup>113</sup> The country has introduced 10 separate states of emergency since 2021 and deployed the military to tackle the problem.<sup>114</sup> Elsewhere in the subregion, Chile recently enacted a privileged legitimate defence bill (or “Naín-Retamal” law) in order to counter drug trafficking groups, which provides legal certainties and guarantees to the law enforcement authorities when they carry out their duties. Some senators in the country pointed out that the law could be considered a trigger-happy one.<sup>115</sup>

### Organized crime-related homicide in Europe

There is growing public concern about expanding and increasingly violent transnational organized crime across Eastern, South-Eastern and Western Europe. Although these subregions register a comparatively low prevalence of homicide, organizations such as the European Union, the European Union Agency for Law Enforcement Cooperation (Europol) and the International Criminal Police Organization (Interpol) have noted an increasing incidence of violent crime in recent years.<sup>116</sup> In the wake of high-profile killings of prosecutors and journalists, officials from across the European Union have detailed how organized crime is undermining public order and degrading democracy.<sup>117</sup> City leaders have been reported in the media as decrying a “culture of crime and violence” that is contributing to perceptions of insecurity<sup>118</sup> and a growing chorus of analysts has described violent organized crime as a strategic threat for the European Union.<sup>119</sup>

Notwithstanding headlines on organized crime-related violence, European countries report comparatively low levels of homicide when compared with countries in the Americas and Africa. Indeed, the regional homicide rate in Europe was 2.2 per 100,000 population in 2021, as opposed to 15 in the Americas and 12.7 in Africa. Furthermore, some 73 per cent of homicide victims in Europe are male, compared with 81 per cent globally and a relatively modest share of homicides in the region are firearm-related. In 2021, at least 12 per cent of homicides in Europe were attributed to firearms (figure 24),<sup>120</sup> although the actual share is likely higher, since 30 per cent of homicides did not have a recorded mechanism. Nonetheless, unlike in the Americas, firearms are not the most prevalent homicide mechanism in Europe. Furthermore, about 10 per cent of homicides are estimated to be related to organized crime or other crime (figure 3), a figure much lower than in the Americas and below the global average.

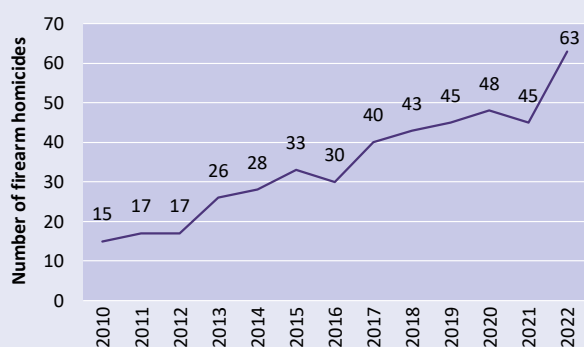
The perceived increase in lethal violence connected to organized criminal groups in the European Union is widely attributed to a boom in drug production in South America and the drug markets in Europe.<sup>121</sup> According to Interpol, drug trafficking and consumption in Europe has increased by an “order of magnitude” over the past five years, together with a corresponding rise in violent crime.<sup>122</sup> There is growing concern in Europe about the use or threat of violence by criminal networks. A spike in serious violent incidents associated with organized crime, in drug markets in particular, has been seen in some countries in the European Union and neighbouring countries in the past few years.<sup>123</sup> As expanding cocaine and cannabis markets in Europe have recently attracted new drug trafficking organizations, drug-related conflicts have resulted in public shootings, bombings, kidnapping and torture.<sup>124, 125</sup>



## Organized-crime related violence in Sweden<sup>a</sup>

Sweden has experienced unprecedented levels of gang violence and firearm-related deaths in recent years. The Swedish National Council for Crime Prevention reported that Sweden had one of the highest levels of firearm-related deaths in a study of over 20 European countries. In 2022, a total of 116 cases of lethal violence were registered in Sweden, with firearms being used in 63 of the observed cases.<sup>b</sup>

Number of firearm-related homicides in Sweden, 2010–2022



Source: UNODC homicide statistics.

This increase in the number of firearm homicides is related to criminal milieus in socially disadvantaged areas in the country. About 8 out of 10 homicides in Sweden occur in criminal milieus. Moreover, a significant share of all reported homicides is committed by young males aged 20–29. Another possible contributing factor is something called the “social contagion effect”, when one shooting leads to another.

Although research has linked the rising level of gun-related violence to conflicts related to illegal drug markets, criminal gangs and a lack of confidence in the criminal justice system, some uncertainties persist about the extent of involvement of organized crime groups in homicide in Sweden. Indeed, Sweden does not submit official estimates to UNODC on the share of reported homicides associated with organized crime or gangs.

a Source: Swedish National Council for Crime Prevention, *Gun homicide in Sweden and other European countries* (2021).

b The study uses data from Eurostat and the World Health Organization. Swedish National Council for Crime Prevention, *Gun Homicide in Sweden and other European Countries* (Stockholm, 2021).

Europol, for example, has detected a rising incidence of violent incidents in the European Union, as well as the increasing impact and visibility of acts of egregious violence, including torture. High-profile cases in Belgium, Denmark, Italy, Sweden and Spain suggest a growing willingness to use lethal violence,<sup>126</sup> not only in violent disputes between gangs but also in contract killings and assassinations.<sup>127</sup>

An increasing proportion of such violent incidents are reportedly perpetrated by younger and less experienced perpetrators who are more inclined to use violence, including in public spaces.<sup>128</sup> This increasing violence may be related to competition over drug trafficking and distribution networks, shifting power balances between rival groups, and the instrumental use of violence in order to enhance a group’s reputation and retain its market position.

Certain areas are considered by regional law enforcement to be more at risk of violent organized crime than others: specifically, areas in which drug markets are more abundant are associated with a higher risk of lethal violence. Just three countries, Belgium, the Kingdom of the Netherlands and Spain, were responsible for approximately 70 per cent of the cocaine seized in Europe in 2021.<sup>129</sup> Areas of particular concern to law enforcement for organized crime-related homicides include coastal cities with ports serving as transit hubs, including Antwerp (Belgium), Amsterdam, Rotterdam and Utrecht (the Kingdom of the Netherlands), Hamburg (Germany), smaller ports in Spain and coastal cities in Sweden.<sup>130</sup> Neighbouring cities are also considered potentially at risk owing to their location along drug-trafficking corridors and those for other types of smuggling.

The perception of increasing organized crime-related violence in parts of Europe is associated with a string of high-profile homicides in several countries. Highly visible assassinations targeting members of the political and judicial establishment as well as investigative journalists have been reported in the media in Belgium,<sup>131</sup> the Kingdom of the Netherlands<sup>132</sup> and Spain.<sup>133</sup> It is important to underline, however, that the homicide rates in Belgium (1.08 per 100,000 in 2021), the Kingdom of the Netherlands (0.65) and Spain (0.61) are very low. Furthermore, although few European countries disaggregate or publicize organized crime-related homicides, in those where data are made available, the number tends to be extremely small.<sup>134</sup> Assassinations and contract killings tend to be more common where there is a pre-existing presence of organized crime.<sup>135</sup>

The perceived increase in organized criminal violence is spurring responses from regional and national entities across Europe. In 2022, for example, Belgium, France, Germany, Italy, Spain and the Kingdom of the Netherlands launched a new coalition to disrupt drug smuggling in ports, airports and transport corridors.<sup>136</sup> Moreover, the European Union launched a multi-year initiative to fight serious organized crime (2022–2025), which is designed to dismantle organized crime structures.<sup>137</sup>

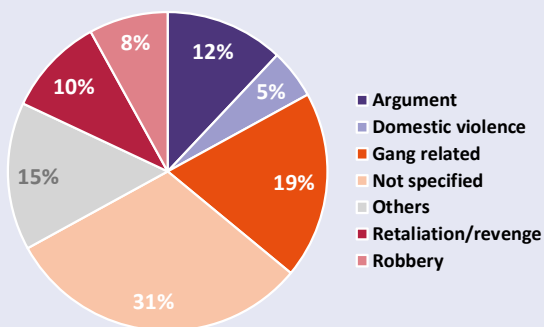
## Unpacking organized crime group-related homicides: evidence from incident-level data in South Africa

Many countries are currently unable to provide a comprehensive breakdown of homicides by the situational context of the killing (such as killings related to organized crime, other crimes, interpersonal disputes, or sociopolitical violence). Yet this contextual information is key to improving the targeting of homicide prevention policies and criminal justice responses. For example, organized crime-related homicide may require a coordinated international response, given the cross-border nature of many organized crime groups, while family-related homicide may require a more local operational response.

For these reasons, and in the absence at the country level of a classification of homicides by situational context in line with the International Classification of Crime for Statistical Purposes (ICCS), it is useful to identify a core set of correlates, such as age of victims, mechanism of killing and location of killing, which can help researchers and policymakers predict whether a killing was related or unrelated to organized crime.

The South African Police Service (SAPS) of Western Cape province has provided UNODC with an incident-level dataset on intentional homicides.<sup>a</sup> In addition to containing information about the profile of victims such as their gender, age and race, the dataset also classifies each homicide by “motive of killing”. This variable enables a grouping of all homicides recorded in the dataset into two groups: organized crime-related and non-organized crime-homicides. The date, time, day of the week, place of occurrence and vicinity of the killings are also captured in the dataset, which includes all intentional homicides recorded in the Western Cape from April 2020 to March 2021, amounting to 3,855 victims in total.

Share of murders, by motive of killing, Western Cape province, April 2020–March 2021



Source: South African Police Service.

While the data from the Western Cape can offer some important insights into the profile of organized crime homicides in South Africa, it is important to highlight that the findings may not necessarily apply to other South African provinces, or beyond. This is because the Western Cape tends to have the largest number (and share) of gang-related murders of all the provinces of South African. During the first quarter of 2023,

a Intentional homicides are referred to as “murders” in South African Police Service statistics.

b Some 6,068 murders out of a total of 6,289 murders nationally in the first quarter of 2023 were classified according to motive of killing (“causative factors”). Differences between provinces in terms of the number and share of classified murders may also reflect differences between provinces in their capacity to classify murders. See South Africa, South African Police Service, “Police recorded crime statistics, Republic of South Africa”, 2023.

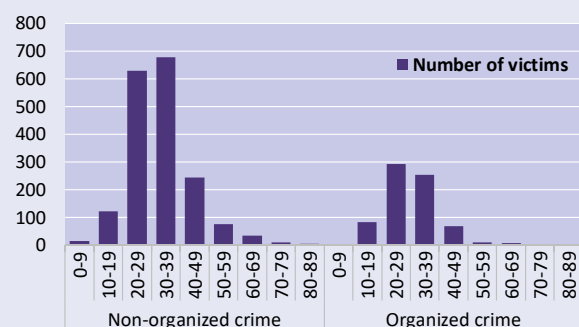
for example, around 72 per cent of all the classified gang-related murders in South Africa occurred in the Western Cape.<sup>b</sup>

### Results

The above figure shows the distribution of motives of killing in the dataset. While the “gang-related” category can be used as a proxy for organized crime-related homicides, all the others are considered non-organized crime-related homicides. Non-organized crime-related homicides include, for example, homicides committed in the context of domestic violence or interpersonal disputes. In the case of some 1,204 homicides, or around 31 per cent of all the homicides in the dataset, the motive could not be specified by the police (these observations are omitted from the analysis).

As in many other parts of the world, the victims of homicide in the Western Cape are more likely to be male than female. It is noteworthy, however, that male victimization is significantly more likely when a killing is organized crime-related (96.58 per cent) than when it is non-organized crime-related (89.52 per cent).<sup>c</sup> In terms of age profile, victims are mostly concentrated in the age range 20–39 years, both among organized crime-related homicides and non-organized crime-related homicides (figure below). However, the age distribution among non-organized crime-related homicides is much broader and includes many more victims in the older age ranges. There is also a significant difference in the average (mean) age between the two groups: the mean age of organized crime-related homicide victims is lower (24.7 years) than of those of non-organized crime-related homicide (27.2 years).<sup>d</sup>

Distribution of age of victims of organized crime-related homicide and non-organized crime-related homicide, Western Cape province, South Africa, April 2020–March 2021



Source: South African Police Service.

c Because the outcome variable and correlates are categorical, chi-squared tests are used to determine whether differences between organized crime-related homicides and non-organized crime-related homicides are statistically significant.  $p < 0.01$

d  $p < 0.01$ .

e During Apartheid, the racial category “Coloured” was socially constructed by the regime to differentiate between those who were considered black people and people who had mixed-race ancestry, Asians (especially Indians) and some lighter-skinned Southern African ethnic groups. In the 1950s, due to the apartheid-era Group Areas Act, many mixed-race households were forcibly relocated to areas like the Cape Flats, which became marginalized and economically disadvantaged. See, for example, MacMaster, L., “Social and economic emasculation as contributing factors to gangsterism on the Cape Flats”, *Scriptura: Journal for Contextual Hermeneutics in Southern Africa*, vol. 95. No. 1, (2007), pp. 278–289. →

In terms of the ethnic group of victims, 91.85 per cent of the victims of organized crime-related homicide are “Coloured”<sup>e</sup> as are 24.33 per cent of the victims of non-organized crime-related homicide, with the “Coloured” population making up roughly 5 per cent of the overall population of the Western Cape.<sup>f</sup> Just 6.39 per cent of organized crime-related homicide victims are “Black African”, but “Black Africans” make up significantly larger share of victims of non-organized crime-related homicide (70.81 per cent), with the group accounting for approximately 30 per cent of the total population. “Asian” is the least likely racial group in the dataset to fall victim to both these types of homicide, followed by “White”, with “Whites” accounting for less than 20 per cent of the population of the Western Cape and “Asians” accounting for less than 2 per cent.

In terms of the homicide mechanism, non-organized crime-related homicides are roughly equally distributed between killings perpetrated with firearms (44.65 per cent) and without firearms (55.35 per cent). By contrast, just 6.93 per cent of organized crime-related homicides were conducted without firearms, while the vast majority (93.07 per cent) were perpetrated with firearms.<sup>g</sup>

In terms of timing, weekends or specific weekdays are not significant predictors of organized crime-related homicide.<sup>h</sup> Location and vicinity are significant, however. In terms of location, organized crime-related homicide is less likely to take place inside a building (19.16 per cent) than non-organized crime-related homicide (34.46 per cent).<sup>i</sup> In terms of vicinity, the vast majority of organized crime-related homicides are committed in urban suburbs (81.52 per cent) followed by formal/informal residential areas (13.72 per cent). By contrast, almost half (47.05 per cent) of non-organized crime-related homicides are committed in formal/informal residential areas and one in five (19.79 per cent) in urban suburbs, followed by informal settlements/squatter camps (15.56 per cent) and rural suburbs (10.91 per cent).<sup>j</sup> Finally, multivariate regression analysis suggests that the sex and ethnicity of victims and the use of firearms are the strongest predictors of organized crime-related homicide in the dataset.<sup>k</sup>

This exploratory analysis suggests that correlates such as the sex, age and ethnic group of victims, homicide mechanism and location/vicinity of homicide could be used to predict whether a homicide has been committed in the context of organized crime or not. In many countries, such correlates are more readily available than a classification of homicides by “situational context”, and these correlates could in turn be used to draw inferences about the likely share of homicides that are organized crime-related. Going forward, it will be important to replicate this type of analysis using incident-level data from other countries and contexts, so that a core set of predictors of organized crime-related homicide that are applicable across time and space can be established.

f Population group shares are based on the 2011 Census, Statistics South Africa, “Statistics by Place”.

g  $p < 0.01$ .

h  $p = 0.39$ .

i  $p < 0.01$ .

j  $p < 0.01$ .

k The logistic regression model includes victim sex, age, race, mechanism of killing, weekday, place, vicinity, and an inside/outside variable as predictors.

## Organized crime-related violence in South Africa and the Sahel: two case studies in Africa

The analyses focusing on South Africa and the Sahel region, in the text boxes on pages 120 and 122 of this chapter, illustrate the type of organized crime-related violence that may also affect other parts of Africa.

## Sociopolitical homicide

Sociopolitical homicide is a typology of intentional homicide related to social prejudice, political aims, civil unrest and other sociopolitical agendas, including vigilante killings, unlawful killings by the police and killings due to communalism,<sup>138</sup> casteism and class conflicts. Sociopolitical homicide covers killings by terrorist groups and the targeted killings of individuals, including human rights defenders, environmental defenders, community leaders and vulnerable professionals, such as journalists and humanitarian aid workers. Globally, available data on this homicide type are very limited, with less than a fifth of countries reporting on this homicide type to UNODC through the United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems (UN-CTS). As highlighted by the examples of Nigeria and Mali on pages 98 and 128 of this chapter, however, sociopolitical homicides may represent a significant share of all homicides in countries where sporadic or chronic political instability results in many intentional killings.

A key group targeted for sociopolitical motives are human rights defenders, who encompass a wide range of people acting to promote or protect human rights in a peaceful manner.<sup>139</sup> They include activists calling for an end to summary executions, torture, arbitrary arrest, discrimination and forced evictions in order to advocate the right to life, food, water and a healthy environment. Although many human rights defenders operate at the global and regional levels when seeking to influence international policy, most work at the local level, where they investigate and report on human rights violations and support victims.

In some parts of the world, human rights defenders face serious threats and vulnerabilities. Since the adoption of the Declaration on human rights defenders in 1998,<sup>140</sup> the United Nations Special Rapporteur on human rights defenders has repeatedly stressed the threats facing human rights defenders in settings where there is armed conflict and severe civil unrest and where legal and institutional protection and guarantees of human rights are not fully assured.<sup>141</sup> Particular risks singled out by the Special Rapporteur include executions, torture, arbitrary detention, death threats and restrictions of freedom of movement and expression,<sup>142</sup> risks that not only affect human rights defenders but also their families and associates. In general, trends in killings of human rights defenders closely parallel those in killings of environmental defenders and of journalists.

## The nexus between organized crime, conflict and violence in the Sahel

Violent incidents in the Sahel countries of Burkina Faso, Chad, Mali, Mauritania and the Niger resulted in more than 9,300 casualties in 2022.<sup>a</sup> A range of mutually reinforcing factors have contributed to the expansion of both insurgency and banditry in the region, including intercommunal tensions over scarce resources, which in turn have created an environment conducive to the proliferation of organized crime. Other elements that have enabled organized crime and illicit economies to flourish include limited opportunities for communities to sustain their livelihoods and weak law enforcement capacity.

There is no clear delineation between crime and conflict in the Sahel countries and firearms are an enabler of both phenomena. Armed groups of men engage in different types of violent and acquisitive crime in the region, which has known several periods of upheaval since the 1990s (figure below). The following mutually reinforcing factors have contributed to the proliferation of both insurgency and banditry in the Sahel, leading to intercommunal tensions, violence between farmers and herders, violent religious extremism and competition over scarce resources such as water and arable land. The longer the periods of insecurity, the more likely people are to take up arms in order to defend themselves. In such instances, the motivation behind criminal acts becomes blurred, making it difficult to distinguish between criminal or political motives.<sup>b</sup>

Intercommunal violence between agrarian and pastoralist communities in the North West and North Central zones of Nigeria, which is fueled by criminal groups, represents the single greatest source of armed conflict-related violent incidents in West Africa,<sup>c</sup> followed by clashes between armed groups and pro-governmental forces. According to analyses by the Armed Conflict Location & Event Data Project (ACLED), intercommunal violence has killed more people in the North East of Nigeria in recent years than Boko Haram and Islamic State West Africa Province (ISWAP).

Sahelian armed groups have also become involved in various forms of banditry, such as cattle rustling, robberies and kidnappings, which has been fueling violence in the Sahel by escalating existing intercommunal tensions.<sup>d</sup> Groups of bandits and traffickers have expanded in the region and are fighting for control over trade routes.<sup>e</sup> All these groups require firearms and ammunition to sustain their illicit activities, and as their numbers have increased, so too have business opportunities for arms traffickers in the Sahel countries.

a "Firearms trafficking in the Sahel", Transnational Organized Crime Assessment – Sahel (United Nations publication, 2022).

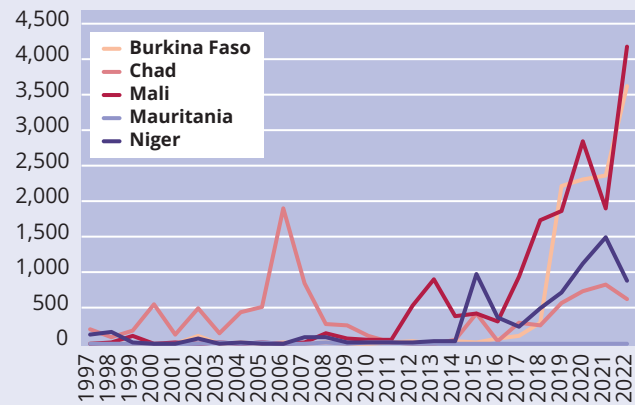
b For more information on the differences between intentional homicides and killings related to conflicts/wars, see chapter 2 of the present study.

c Conflict Armament Research, referring to ACLED data, argues: "Including reprisal attacks, Nigeria's herder-farmer conflict killed more people in 2018 than Boko Haram and the Islamic State in West Africa. Indeed, the clashes claimed 40 per cent more lives than Islamist attacks in Burkina Faso, Mali, and the Niger combined." See Conflict Armament Research, "Nigeria's herder-farmer conflict", Explore the data, January 2020.

d "With armed conflict in central and northern Mali, rural banditry appeared to be more closely linked to the proliferation of different non-state armed groups than to terrorist groups specifically." *Pastoralism and Security in West Africa and the Sahel: Towards Peaceful Coexistence* (United Nations Publication, 2018).

e International Crisis Group, "Getting a grip on central Sahel's gold rush", Report no. 282/Africa, 13 November 2019.

Number of fatalities in the Sahel countries per year, 1997–2022



Source: Armed Conflict Location & Event Data Project (ACLED) for Burkina Faso, Chad, Mali, Mauritania and the Niger between 1 January 1997 and 17 November 2022.

In this context, the vicious cycle in the Sahel,<sup>f</sup> consisting of firearms trafficking and conflict, becomes apparent, as conflict enables firearms trafficking and firearms trafficking in turn enables conflict. Another enabler of firearms trafficking is limited law enforcement capacity in the Sahel countries, meaning that only a small number of offenders are apprehended, convicted and imprisoned, relative to the size of the countries' populations.

Evidence suggests that the vast majority of firearms trafficked in the Sahel are procured within Africa, although some weapons are procured along long-range trafficking routes, including by air from France and from Türkiye via Nigeria.<sup>g</sup>

Organized crime and illicit markets generate conflicts and insecurity in the Sahel, which can be an enabling factor in generating other types of conflict and can undermine efforts to resolve conflicts. Yet organized crime structures and any type of illicit economy can also play important roles as livelihood providers in contexts where alternatives are scarce and can therefore act as stabilization and local development drivers.<sup>h</sup> This is true of a range of illicit activities associated with organized crime within the Sahel, including artisanal gold mining and the smuggling of migrants. Violence in the region is also driven by high levels of migration, which have been compounded by ongoing conflicts in some of the Sahel countries.

Refugees and migrants in the Sahel countries are subjected to exploitation and abuse during their migration through the Central Sahel, irrespective of whether smugglers have been involved. As a matter of fact, migrants and refugees are more

f For the purpose of this analysis, "Sahel countries" refers to Burkina Faso, Chad, Mali, Mauritania and the Niger.

g See Conflict Armament Research, "Nigeria's herder-farmer conflict", Explore the data, January 2020, and Conflict Armament Research, "Weapons supplies fuelling terrorism in the Lake Chad crisis", 23 May 2022.

h The role of illegal activities associated with organized crime as livelihood providers is widely recognized, including in the case of drug production, which is addressed through alternative development described as "conventional rural development applied to a drug-production area". See, for example, *World Drug Report 2015*, Booklet 2 (United Nations publication, 2015).



likely to suffer abuse or violence at the hands of armed groups and criminal gangs, as well as border officials and security forces, than the smugglers themselves.

There are various connections between armed groups and migrant smuggling in the Sahel countries, in particular in Chad and Mali. Even though some smugglers are affiliated to armed groups, those groups do not directly engage in migrant smuggling. They extract money from smuggling activities through their control of territories, either by imposing taxes on passage or by providing paid escorts.

By the same token, some smugglers in the Sahel do not restrict their illicit activities to migrant smuggling. They may also engage in trafficking in persons, sexual exploitation and forced labour, among other, the latter often being linked to gold mining, most notably in Mali and Burkina Faso. The diversification of the illicit activities of smugglers into drugs and firearms trafficking has also been reported in the Niger.

Although all refugees and migrants in the Sahel may fall victim to abuse and other human rights violations throughout their journey, women and children face the greatest risk. Indeed, gender-based violence and exploitation has been reported by refugees and migrants in the Sahel countries. Reported experiences of sexual violence in the Sahel, both by women who used smugglers and those who did not, suggests that this type of abuse affects women on the move irrespective of the involvement of a smuggler.<sup>i</sup> Rape was the most frequently reported form of gender-based violence, with approximately 60 per cent of key informants and smugglers interviewed alluding to this form of abuse.<sup>j</sup>

i Respectively, 26 and 22 per cent. However, the sensitivity of the subject may lead to under-reporting on the part of respondents in the quantitative data.

j For more information, see “Smuggling of migrants in the Sahel”, Transnational Organized Crime Assessment – Sahel (United Nations publication, 2022); and “Firearms trafficking in the Sahel”, Transnational Organized Crime Assessment – Sahel (United Nations publication, 2022).

Estimating the precise global share of sociopolitical homicides out of all homicides is challenging, as political instability often coincides with a lack of political will or technical capacity to accurately record homicides linked to political motives.<sup>143</sup> Nevertheless, it is estimated that sociopolitical homicide accounts for at least 9.1 per cent of all homicides globally (see figure 2). In the following section, evidence on selected subtypes of sociopolitical homicide is provided in order to illustrate some of the characteristics of this homicide typology.

## Killings of environmental defenders

### Trends and patterns in killings of environmental defenders

Policy and research on the nature and scope of homicides of environmental defenders predominantly rely on data collected by the non-governmental organization (NGO) Global Witness,<sup>144</sup> which has been estimating the number of homicides of environmental defenders globally since

2012.<sup>145</sup> Global Witness employs a multipronged approach to the creation of its dataset: homicides of environmental defenders are searched for on national and international databases, media alerts are set up and in-country local organizations are contacted for information.<sup>146</sup> There are limitations to this methodology, which means that the overall number of homicides reported is likely to be lower than the actual number and there is likely to be a geographic bias to the data. For example, since the data collection of Global Witness partly relies on the reporting of homicides of environmental defenders by the media and civil society, in places without a free press and/or an independent civil society, homicides of environmental defenders may go unreported. Conversely, there may be some bias in the data due to the political leanings of the media or civil society sources. Furthermore, environmental defenders are often active in remote places, which may not have digital communications or be connected to civil society networks, further compounding the possibility that any such homicides go unreported or unrecorded and thus fail to be collected through the Global Witness methodology.

Despite these limitations, according to Global Witness there have been 1,733 killings of environmental defenders globally since 2012 (table 4), with 39 per cent of the victims being indigenous and 11 per cent being women. The Americas appears to account for the majority of those homicides, with 68 per cent of the total, followed by Asia, with 25 per cent, Africa, with 6 per cent, and Europe and Oceania, each with less than 1 per cent.

### Factors in cross-country variations in homicides of environmental defenders

Evidence that can explain variations in the number of environmental defender homicides remains limited across countries and more research is needed to support the creation of prevention measures; however, available information provides some insights into the possible factors that drive this type of homicide.

The United Nations Special Rapporteur on Human Rights and the Environment linked three contributory factors to the vulnerability of environmental defenders based on regional consultations and existing research: 1) a growing global demand for extraction and exploitation of natural resources; 2) a lack of political power and legal recognition of the groups that are often most affected by this increasing demand; and 3) weak or corrupt legal institutions that create a culture of impunity.<sup>147</sup>

Some scholars have explored these three factors further, linking judicial corruption and related impunity to homicides of environmental defenders.<sup>148</sup> Foreign direct investment, the net amount of deforestation, a large share of indigenous populations and empowered local governments are also factors that have been associated with killings of environ-

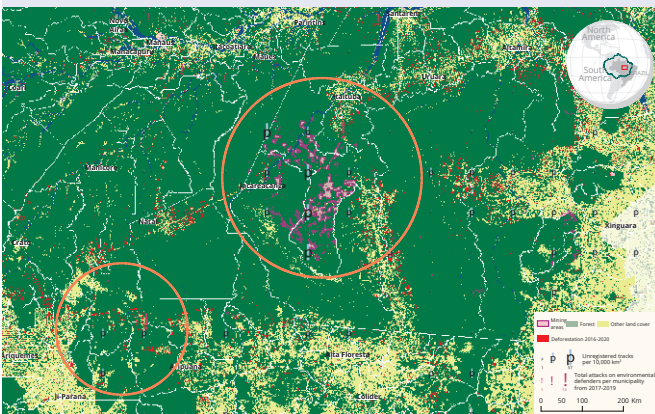
## Convergence of crime in the Amazon Basin: illegal mining, deforestation and attacks against environmental defenders<sup>a</sup>

In some parts of Latin America, organized criminal groups are involved in an array of illicit activities beyond drug trafficking that have a significant negative impact on the environment and create violence hotspots. The Amazon Basin is a region where drug trafficking organizations perpetrate crimes that affect the environment beyond deforestation.<sup>b</sup>

The convergence of crime in the Amazon Basin continues to happen in a context where there is limited law enforcement, a diversity of criminal actors and a scarcity of meaningful economic alternatives for the local population. Indigenous people and other minorities are disproportionately affected by the criminal nexus in the Amazon Basin, as they suffer forced displacement and increased exposure to violence and victimization.

In recent years, border areas have been cleared to make way for coca production, illegal logging and gold extraction, which creates a breeding ground for corruption, financial crimes and both lethal and nonlethal violence. The proliferation of criminal activities in border areas gives rise to a host of security and health risks, leaving local populations entangled in criminal enterprises. Young males from impoverished backgrounds who lack stable employment are particularly vulnerable to recruitment by criminal groups.

### Illegal mining, unregistered airstrips, attacks against environmental defenders and deforestation in Brazil



Sources: Base Cartography of Brazil and Administrative boundaries: Brazilian Institute of Geography and Statistics (IBGE) and Geoportail Provita, 2023. Boundary of the Amazon Basin: the Amazon Network of Georeferenced Socioenvironmental Information (RAISG, 2020). Forest/land cover: Copernicus Global Land Service, 2019. Attacks against environmental defenders: Tierra de Residentes, 2023. Mining and deforestation data: RAISG, 2020/2021. Unregistered tracks: plataforma.brasil.mapbiomas.org, 2023.

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

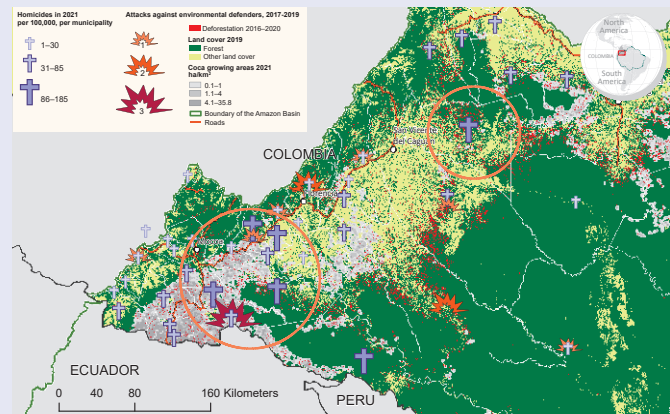
- a Sourced from chapter on the nexus between drugs and crimes that affect the environment and convergent crime in the Amazon Basin, *World Drug Report 2023* (United Nations publication, 2023), p. 68.
- b Although Ecuador, Guyana, Suriname, Venezuela (Bolivarian Republic of) and French Guiana also form part of the Amazon Basin and are affected by drug and related crime issues, this section focuses on the Amazon region covering Bolivia (Plurinational State of), Brazil, Colombia and Peru.

Many municipalities in the Amazon Basin record rates of criminal violence higher than the national average of the countries in which they are located. In 2021, municipalities in Brazil's Legal Amazon registered some of the highest homicide rates in the country, which resulted in a regional average of 29.6 homicides per 100,000 population,<sup>c</sup> compared with the national average of 21.3. This can be explained in part by competition between rival criminal factions competing for control over the production, distribution and retail of drugs.

There have been numerous instances in which law enforcement officials, journalists and environmental activists have uncovered how criminal groups have illegally purchased land to support illegal logging operations in countries in the Amazon Basin.<sup>d</sup> The media and non-governmental organizations have also reported on escalating disputes between drug trafficking groups and traditional communities in the Amazon, leading to assassinations, assassination attempts, death threats and violent and non-violent protests.<sup>e</sup> Moreover, killings of and attacks against environmental defenders have been reported in Brazil and Colombia (see maps).

In Brazil, the world's largest indigenous territory is home to the Yanomami people. Mining on indigenous lands in Brazil

### Coca cultivation, violence and deforestation in the eastern part of the Colombian Amazon



Sources: UNODC survey on coca cultivation 2021; Base cartography of Colombia and administrative boundaries: Agustín Codazzi Geographic Institute – IGAC and the National Geostatistical Framework of the National Administrative Department of Statistics (DANE, 2021). Limit of the Amazon Basin: the Amazon Network of Georeferenced Socioenvironmental Information and deforestation data (RAISG, 2020/2021). Attacks against environmental defenders: Tierra de residentes, 2023. Homicides: Policía Nacional de Colombia.

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

- c Fórum Brasileiro de Segurança Pública, “Cartografias das violências na região amazônica”.
- d See chapter on the nexus between drugs and crimes that affect the environment and convergent crime in the Amazon Basin in *World Drug Report 2023* (United Nations publication, 2023), p. 68.
- e Velasco, M., “Drug trafficking in Colombia undermines the foundations of indigenous autonomy”, *IWGIA*, 2 May 2022.



**TABLE 4** Killings of land and environmental defenders, by region and year 2012–2021

Region	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	TOTAL	%
Africa	8	0	2	13	16	19	14	7	18	10	107	6.17
Americas	108	73	88	121	119	116	83	148	166	157	1,179	68.03
Asia	22	10	25	49	61	64	65	55	43	33	427	24.64
Europe	1	4	1	0	1	2	3	2	0	0	14	0.81
Oceania	0	4	1	0	0	0	0	0	1	0	6	0.35
TOTAL	139	91	117	183	197	201	165	212	228	200	1,733	

Source: Global Witness 2012–2021.

mental defenders,<sup>149</sup> along with the availability of natural resources (for example, water and land) Indeed, it has been argued that homicides of environmental defenders tend to be concentrated where resources are abundant and relatively unexploited.<sup>150</sup> Other studies have argued that clashes between political groups, even in democracies with eco-populist movements, can lead to a higher level of homicides of environmental defenders.<sup>151</sup>

### International response to killings of environmental defenders

In light of the continued killings of environmental defenders documented by Global Witness, the United Nations Environment Programme (UNEP)<sup>152</sup> developed an internal policy to denounce violence against environmental defenders, advocate for their protection and rights, support the responsible management of natural resources, and request accountability from Governments and companies in countries where environmental defenders are murdered. The UNEP policy was followed, in 2019, by the United Nations Human Rights Commission Resolution A/HRC/

RES/40/11, which recognizes the contribution of environmental human rights defenders to the enjoyment of human rights, environmental protection and sustainable development. Another international agreement is the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, known as the Escazú Agreement, which is the first legally binding instrument to seek to protect environmental defenders. Article 9 of the Escazú Agreement states: “Each Party shall guarantee a safe and enabling environment for persons, groups and organizations that promote and defend human rights in environmental matters, so that they are able to act free from threat, restriction and insecurity.”<sup>153</sup>

### Killings of journalists

Public access to information is a fundamental right that forms part of the 2030 Agenda for Sustainable Development. Yet, according to the United Nations Educational, Scientific and Cultural Organization (UNESCO), 85 per cent of the world’s population have experienced a decline in press freedom in their country over the past five years.<sup>154</sup> This decline was the result of several factors, such as laws that restrict online freedom of expression or an increase in false and misleading content, but is also a reflection of the challenges to the freedom and safety of journalists, which continue to be compromised.

Journalists contribute to the public good by facilitating the dissemination of trustworthy and crucial news and analysis to the public, which in turn empowers citizens to participate in a free and open society. Attacks on journalists are considered a violation of the fundamental human right to freedom of expression.<sup>155</sup> As part of Sustainable Goal 16: peace, justice and strong institutions, UNESCO measures indicator 16.10.1 on cases of killing, kidnapping, enforced disappearance, arbitrary detention, and torture of journalists, associated media personnel, trade unionists and human rights advocates.

expanded by 625 per cent between 2011 and 2021<sup>f</sup> and members of Primeiro Comando da Capital have become increasingly involved in mining operations across Yanomami territory, as well as in drug trafficking and sexual exploitation.<sup>g</sup> This has had devastating consequences for indigenous communities that rely on fish from local rivers contaminated with mercury as a result of the mining activities.

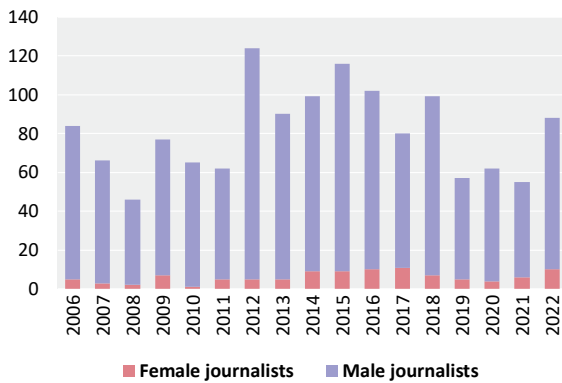
Indigenous communities in neighbouring countries in the Amazon Basin have also been affected by the involvement of criminal groups. Media reports and research studies in Colombia, for example, have documented how armed groups frequently target indigenous and community leaders in the Amazon Basin in relation to land disputes.<sup>h</sup>

f Mapbiomas Brasil, “Projeto MapBiomas – Mapeamento das pistas de pouso e garimpo na Amazônia”, Factsheet, February 2023.

g Madureira, V., “Report: illegal mining threatens Brazil’s Yanomami tribe,” OCCRP, 27 April 2022.

h “Colombia’s indigenous nomads displaced by violence”, *France 24*, 16 December 2021.

**FIG. 18** Number of journalists killed, 2006–2022



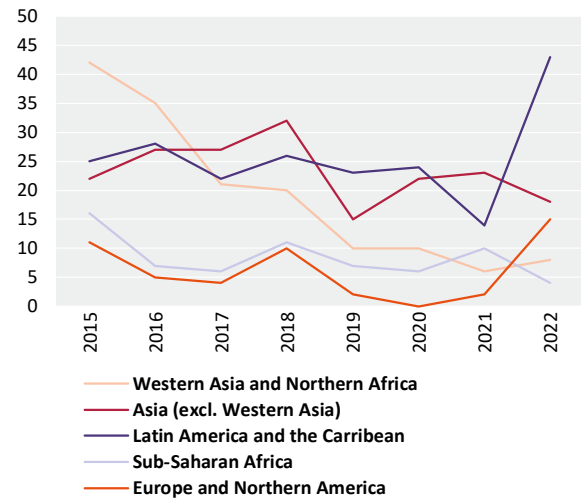
Source: UNESCO database.

Based on UNESCO data, it is estimated that the number of journalists killed during the period 2018–2022 was 25 per cent lower than in the preceding five-year period. In 2021, the death toll of journalists was the lowest since 2008, which along with the comparatively low number of deaths in 2020, is a partial reflection of the effect of the COVID-19 pandemic on the work of journalists, when many shifted to online reporting.<sup>156</sup> Spikes in the number of killings of journalists often reflect ongoing violent situations such as war or civil unrest, but in recent years the share of journalists killed in countries other than those experiencing conflict has increased to over 60 per cent.<sup>157</sup> According to the Committee to Protect Journalists, there was a noticeable increase in the number of journalists killed in 2022, with journalists covering the conflict in Ukraine and others covering crime, corruption, gang violence and the environment in Mexico and Haiti jointly accounting for roughly half of deaths of journalists globally.<sup>158</sup>

A breakdown by sex of journalists killed during the past decade shows that male journalists accounted for at least 90 per cent of victims. The relatively small share of female journalists killed suggests that they are less involved in reporting in dangerous situations; however, it has been discovered that certain recent cases of killings of female journalists were linked to gender-related violence.<sup>159</sup>

Since 2015, most killings of journalists have occurred in Latin America and the Caribbean and Asia (excluding Western Asia), with no clear trend visible in either region. The countries that have seen relatively high numbers of journalists killed in the past five years include Afghanistan, India, Mexico, Pakistan and the Syrian Arab Republic. In Northern Africa and Western Asia, the number of journalists killed has declined significantly since 2015, as the intensity of armed conflicts in the region has decreased.<sup>160</sup>

**FIG. 19** Number of journalists killed, by region, 2015–2022

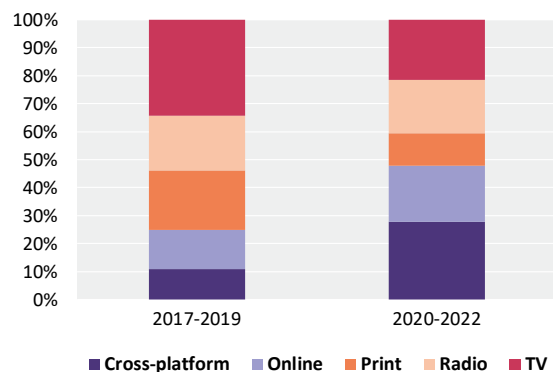


Source: UNESCO database.

Reflecting a broader trend in the profession towards diversifying the channels through which news are conveyed to citizens, the UNESCO database shows that the share of journalists killed in the period 2020–2022 who worked in cross-platform media was triple the number killed in the period 2017–2019.<sup>161</sup> This may be linked to evolving trends in the media landscape as journalists now often work across multiple platforms, including traditional print, broadcast and digital media, which can expose them to a wider range of audiences and potential risks.<sup>162</sup>

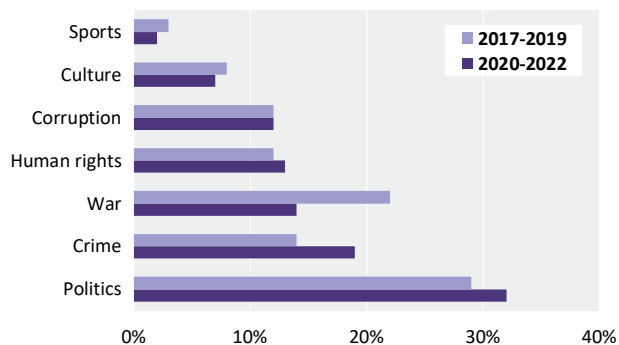
Data from the Committee for the Protection of Journalists (CPJ) provide further insights both into the topics being covered by journalists when they were killed and the possible motives of the suspected perpetrators.<sup>163</sup> At more than 30 per cent, politics accounted for the largest share among the topics being covered when journalists were

**FIG. 20** Type of media in which killed journalists were employed, 2017–2019 and 2020–2022



Source: UNESCO database.

**FIG. 21** Percentage of journalists killed, according to the topics being covered at the time of their killing, 2017–2019 and 2020–2022



Source: CPJ database. Available at: <https://cpj.org/data/>.

Note: In some cases, journalists are working on multiple topics at the time of their death.

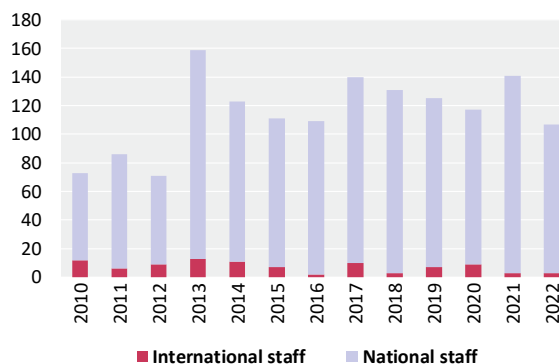
killed in the period 2020–2022. Crime has overtaken war as the second most covered topic, which accounted for 19 per cent of killings in the period 2017–2019. In line with the pattern in the topics being covered, reportedly the main suspects in killings of journalists over the past five years have been political groups (28 per cent), followed by criminal groups (25 per cent) and military officials (20 per cent). Despite such insights, impunity for killings of journalists is still very high, with UNESCO estimating that the share of killings of journalists that went unpunished decreased by just 3 percentage points from 2018 to 2022, when impunity remained at 86 per cent.<sup>164</sup>

### Killings of humanitarian aid workers

According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), humanitarian aid workers face dangerous conditions and threats in their work, which can lead to kidnappings, injuries and deaths.<sup>165</sup> Data from the Aid Worker Security Database show that, while the annual number of aid workers killed has been declining steadily since 2017, with the exception of 2021, the total number of fatalities in the period 2017–2022 was greater than in the period 2010–2016 (figure 22).<sup>166</sup> However, because of the nature of the areas in which humanitarian aid workers tend to be deployed, it is difficult to distinguish between killings corresponding to intentional homicides and other conflict-related deaths.<sup>167</sup>

Almost two thirds (63 per cent) of the killings of aid workers perpetrated worldwide in 2021/22 occurred in South Sudan (48 killings), Afghanistan (30), Myanmar (29), Somalia (26) and Ethiopia (22), all of which represented significant increases compared with the figures recorded in the previous three years. In 2022, the fourth-highest number of lethal attacks on aid workers was recorded in Ukraine.

**FIG. 22** Number of aid workers killed worldwide, 2010–2022



Source: Aid Worker Security Database (AWSDB).

The context in which lethal attacks occur differs from one country to another, but most attacks (including non-lethal kidnapping and injuries) were reported to be politically motivated, with most victims being in their own countries when attacked. In 2021, the most common means used in such lethal attacks were shooting (69 per cent), followed by airstrikes and shelling (9 per cent).<sup>168</sup> Although data for 2023 are not yet available, between the start of hostilities in the Gaza Strip and Israel on 7 October 2023 and 12 November 2023, over 100 employees of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) have been killed. This represents the largest number of United Nations aid workers killed in any conflict in the history of the organization<sup>169</sup> and almost as many victims as the total number of aid workers killed in 2022.

### Killings by terrorist groups

National data on homicides perpetrated by terrorist groups tend to be limited and not comparable, in part due to the lack of a globally agreed definition of terrorism.<sup>170</sup> It is therefore not possible to paint a global picture of terrorism-related homicides that meet the ICCS criteria of what constitutes intentional homicide. That said, data from the Global Terrorism Database (GTD) can provide a global overview of the extent of killings related to terrorism,<sup>171</sup> although GTD data should be interpreted with caution, given the difficulties of disentangling terrorist killings from other types of killing (especially in conflict settings) and the reliance on publicly available, open-source materials that may be biased (in terms of coverage) towards specific terrorist groups, countries or regions.<sup>172, 173</sup> The global distribution of fatalities from terrorist incidents recorded in the period 2010–2020 are shown in map 1.

## Violent deaths and intentional homicide in Mali

With an estimated population of 21.5 million in 2021, Mali is the twentieth most populous country in Africa. The country has faced numerous political issues in recent years, culminating in conflicts involving domestic and international groups such as Islamic State in the Greater Sahara (ISGS), Jama'at Nusrat al-Islam wal-Muslimin (JNIM), the Arab Movement of Azawad (AMA), the Malian Armed Forces (FAMA) and Operation Barkhane, an international military operation led by France that lasted for more than eight years until it ended in November 2022. Partially as a consequence of these conflicts, Mali continues to face a wide range of social and political challenges that hinder the country's human and economic development. Investigating the prevalence and characteristics of intentional homicide in such a challenging context is thus difficult.

The following analysis shows the complexity of counting intentional homicide in the context of an internal conflict and suggests that most homicides in Mali relate to sociopolitical tensions rather than interpersonal violence. Data compiled from integrated daily reports sourced from the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) are used to differentiate killings as pure conflict-related killings (lawful killings during combat), intentional homicide committed during conflict operations (unlawful killings) and intentional homicide outside conflict settings. MINUSMA reports are typically short reports describing basic facts about noteworthy incidents happening across Mali, such as protests, battles and homicides. The information in the reports is sourced primarily from MINUSMA personnel, from media published by other groups and from MINUSMA security, community and humanitarian sources across Mali.

All reports mentioning the keywords “homicide” and “killing” from January 2020 to October 2021 were investigated. The data collection included the identification of interpersonal killings and the coding of relevant information about each victim such as the location of the killing (for example, administrative units and coordinates), date, time, mechanism of killing, situational context, number of victims, their age, sex, etc.

As the reports were never meant to support any rigorous statistical analysis, the data are limited and the analysis simply attempts to extract the maximum amount of information on killings from the available data about the complexity of the situation in Mali in 2020 and 2021. Results should not be interpreted as representative of all the killings in the country, but as indicative of the presence of specific issues related to interpersonal killings, nor should statistics be interpreted as a minimum number of killings.

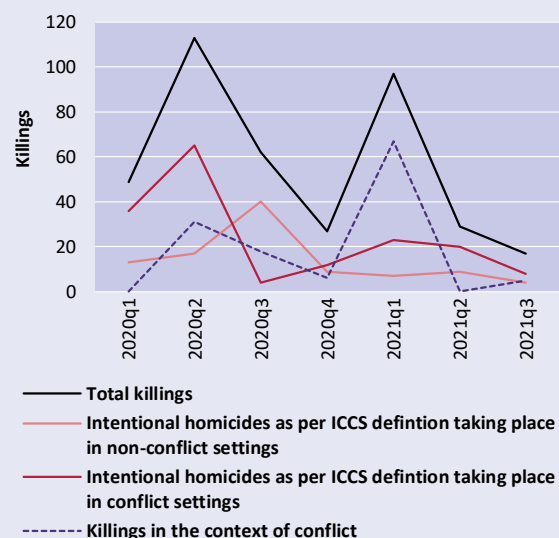
Altogether, the integrated daily reports reported on a total of 115 incidents (a few describing multiple incidents), which mentioned a total of 439 killings that resembled homicide or were conflict-related. Of those, 335 (76.3 per cent) were directly linked to armed conflicts in Mali, while the remaining 104 (23.7 per cent) were 7 terrorism-related killings and 97 intentional homicides of other types, for example, interpersonal killings, crime-related, etc).

A key challenge in contexts of non-international armed conflict (that is, internal armed conflict) is determining whether killings should be considered strictly unlawful. ICCS explores this issue, listing specific standards for classifying unlawful

killings in the context of an armed conflict, such as the targeted killing of civilians, those resulting from breaches of international humanitarian law, and those linked to other criminal offences committed by combatants.<sup>a</sup>

Following these standards, of the 335 killings linked to the armed conflict in Mali, 170 (55.7 per cent) were identified as intentional homicides by combatants in conflict settings. In most cases, these killings were determined as unlawful because they involved the targeted killing of civilians seemingly uninvolved in the conflict. This includes, for example, the detonation of an improvised explosive device that killed four civilians in a minibus in the Bandiagara area, or the killing in Ménaka region of 11 civilians who refused to surrender their village and livestock to members of ISGS. By contrast, killings in the context of the armed conflict were those involving parties to the conflict, regardless of the affiliation of the victim. The figure below shows the quarterly trend in the total number of killings, split between intentional homicides (per the ICCS definition) and other casualties from the armed conflicts.

Killings per quarter and by type, Mali, January 2020 to September 2021



Source: MINUSMA.

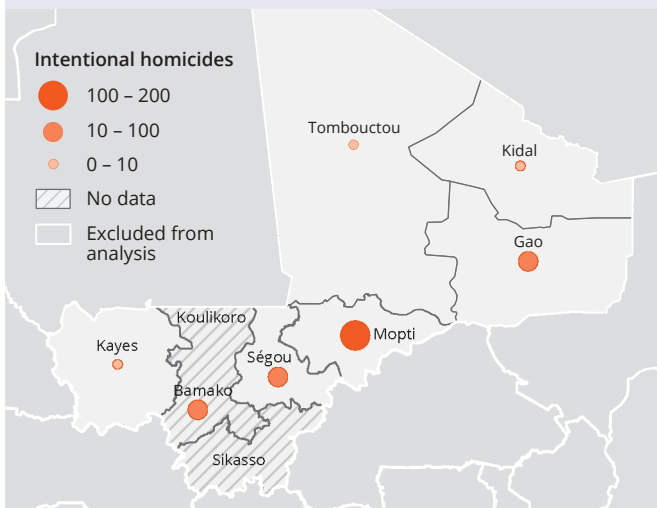
The figure displays a volatile trend in total killings, mostly due to sudden variations in killings in the context of conflict, as they are determined by larger combat operations and attacks that are relatively more sporadic and unpredictable. Conversely, intentional homicides, which include interpersonal killings and some terrorist attacks, as well as intentional homicides in conflict settings, follow a more predictable trend, which declined gradually over the period under study.

As a country, Mali is divided primarily into three levels of administrative units: 8 regions, 49 cercles and 703 communes.

a See “Considerations for classifying conflict-related deaths and intentional homicides, and their overlap in conflict situations”, in chapter 2 of the present study.

The figure below is a choropleth map of the intentional homicides (including those related to conflict settings but aligned with the ICCS definition) recorded in Mali from January 2020 to October 2021 by region. As shown, reported homicides are largely concentrated in the regions bordering Burkina Faso and the Niger, along Mali's east and south-east borders.

Intentional homicides by region, Mali, January 2020 to October 2021



Source: MINUSMA.

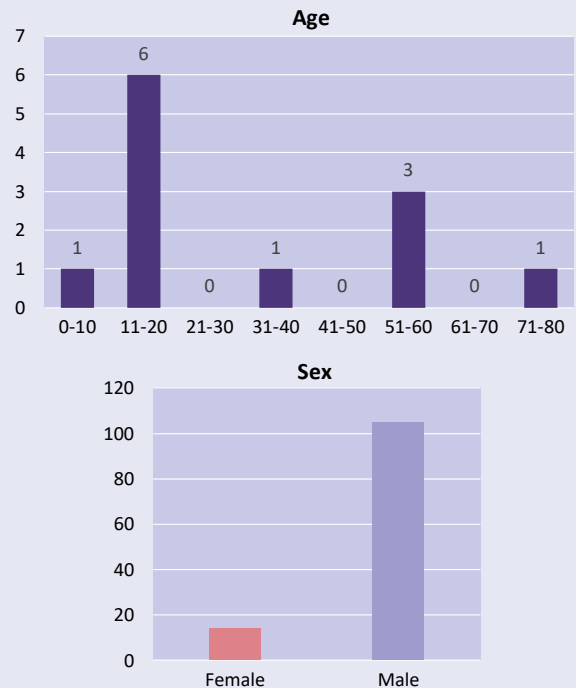
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Roughly three quarters of intentional homicides (75.2 per cent) occurred in villages of up to a few thousand inhabitants. Such villages and their surroundings occupy much of the territory of Mali, spread across rural communes that, according to data from World Population Prospects (UN WPP), contained 56.1 per cent of the population of Mali in 2020. Interestingly, 53.6 per cent of homicides occurred in remote places, with fewer homicides occurring either in the country's cities, for example, Bamako, Gao, Timbuktu, or on main roads. Moreover, intentional homicides were concentrated in specific areas where the armed conflicts were most intense, showcasing the strong link between homicides and the armed conflicts in the country.

In terms of situational context, most intentional homicides in Mali are related to group tensions and conflicts, with the number of killings of an interpersonal nature being relatively much lower. Nearly 71.5 per cent of the homicides were socio-political, perpetrated by combatants in the context of an armed conflict, motivated by a grievance between ethnic groups, or related to civil unrest. Of the remainder, 6.9 per cent were interpersonal homicides, typically related to business or family disputes, and just 5.8 per cent were linked to another crime, most frequently robbery, but it was not possible to determine the situational context of 15.7 per cent of homicides. Some 15.0 per cent of victims were killed in incidents with a single victim, whereas 46.0 per cent were killed in incidents with 10 victims or more. In 65.9 per cent of homicides, the perpetrator was unknown to the victim, while in just 6.6 per cent the perpetrator was known to the victim. Only one single

homicide victim was confirmed to be a family member of the perpetrator (a wife to a murderous husband). The perpetrator-victim relationship further underscores the group nature of homicides in Mali, while indicating that addressing those resulting from group conflicts would greatly reduce the prevalence of homicide in the country.

Intentional homicides by age and sex, Mali, January 2020 to October 2021

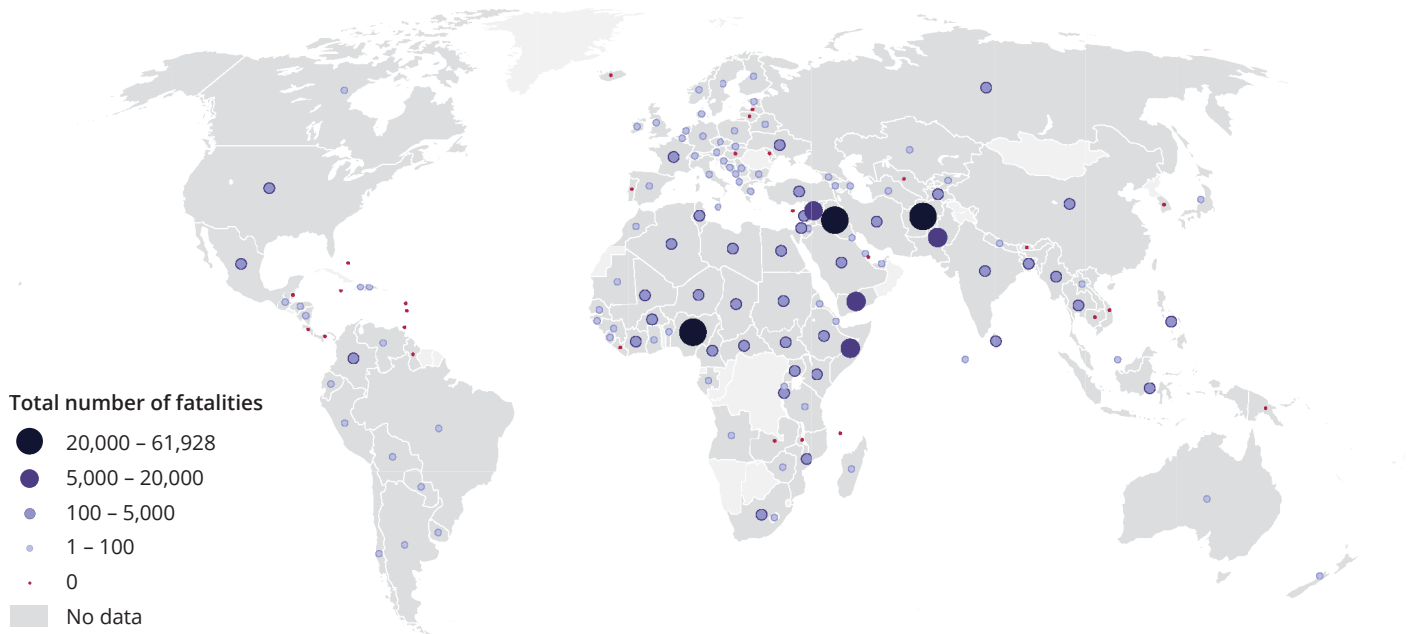


Source: MINUSMA.

Nevertheless, data on homicide perpetrators were limited, not least because the perpetrator was often unknown. No report had information on the age of the perpetrator, the perpetrator was identified as male in just nine of them, while none linked a homicide to a female perpetrator. Most notably, out of all intentional homicides mentioned in the reports, only 2 (0.7 per cent) led to the arrest of the perpetrator and 47 (17.15 per cent) to the opening of an investigation.



**MAP 2** Total number of fatalities from terrorist incidents as defined in the Global Terrorism Database, by country, 2010–2020



Source: Global Terrorism Database (GTD).

*Note: GTD defines a terrorist attack as the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation. Practically, this means that in order to consider an incident for inclusion in GTD, all three of the following criteria must be fulfilled: the incident must be intentional – the result of a conscious calculation on the part of a perpetrator; the incident must entail some level of violence or immediate threat of violence, including property violence, as well as violence against people; the perpetrators of the incidents must be subnational actors. The database does not include acts of State terrorism. The definition of a terrorist attack used by GTD does not coincide with the United Nations definition. The map represents an illustrative example of available data, giving an overview of all intentional killings resulting from terrorist incidents between 2010 and 2021.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. 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. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).*

## Mechanisms of homicide

A vital factor in understanding homicide is the variety of methods used to perpetrate the crime. The WHO International Classification of Diseases (ICD-10) identifies over 200 causes of death by assault, which UNODC groups into the following classifications:

- › Victims killed with firearms or explosives (ICD codes X93-X96)
- › Victims killed with another weapon (ICD codes X99, Y00, Y03)
- › Victims killed without a weapon or another mechanism (ICD codes X85-X90, X97-X98, Y04-Y08)
- › Victims killed with unspecified (“unknown”) means (ICD code Y09)<sup>174</sup>

For analytical purposes, the data are adjusted into four main groups: homicides perpetrated with firearms (excluding explosives), sharp objects, other mechanism<sup>175</sup> and unknown mechanism.

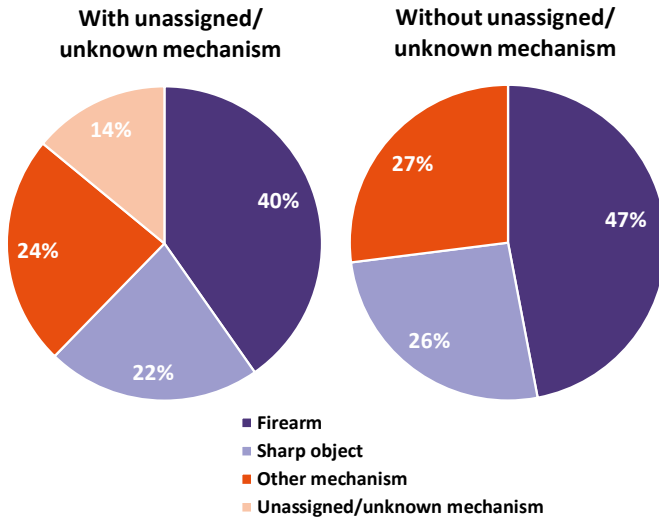
## Global and regional overview

The distribution of homicides by mechanism has remained relatively stable over time at the global level. Firearms continue to be the most common homicide mechanism identified globally, accounting for approximately 47 per cent of victims (range: 40–54) worldwide in 2021 (figure 24). The remainder was roughly equally split between homicides perpetrated with a sharp object or those perpetrated with another mechanism.

Compared with the global distribution, the predominant mechanism used to perpetrate homicide differs significantly across regions, but the overall distribution within each region does not appear to have changed much over time (figure 25). In the Americas, which accounted for an estimated 34 per cent of all homicides globally in 2021, at least 67 per cent of homicides were perpetrated with firearms. In other words, 23 per cent of all homicides globally in that year can be attributed to firearm homicides in the Americas.<sup>176</sup> Europe was at the other end of the spectrum, with just 12 per cent of homicides perpetrated with a firearm in 2021, while roughly a quarter of homicides were



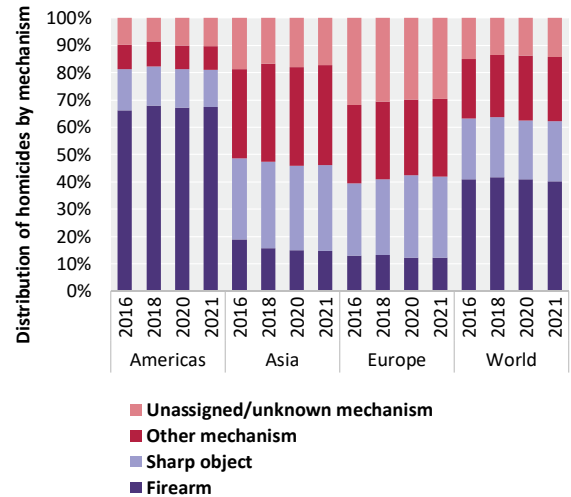
**FIG. 23** Global shares of homicides by type of mechanism, including unassigned/unknown mechanism, and by type of known mechanism, 2021



Source: Estimates based on UNODC homicide statistics.

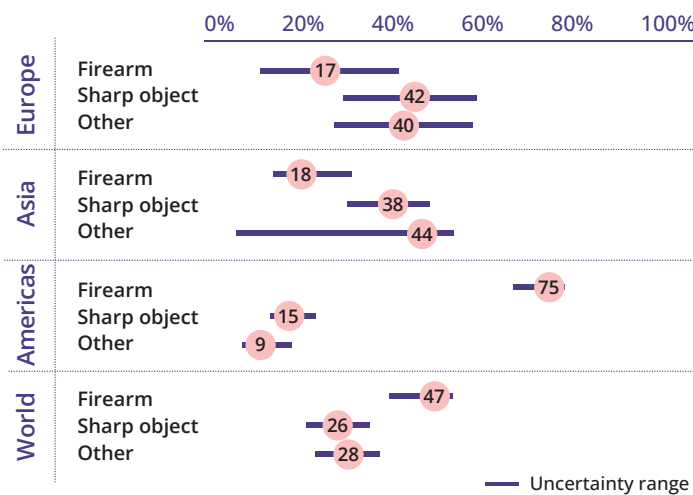
Note: The shares without an unassigned/unknown mechanism are based on the assumption that the distribution of homicides with an assigned mechanism is representative of the ones with unassigned/unknown mechanism.

**FIG. 25** Distribution of homicides by type of mechanism, worldwide and in selected regions and selected years



Source: Estimates based on UNODC homicide statistics. The percentages here are equivalent to the lower bounds presented in figure 24.

**FIG. 24** Regional shares of homicides by type of known mechanism, 2021



Source: Estimates based on UNODC homicide statistics.

Note: The lower bound share refers to the proportion of homicide victims killed with a specific mechanism over the total number of homicide victims. The best estimate share refers to the proportion of victims killed with a specific mechanism over the sum of all victims for which a mechanism was reported (excluding the unassigned/unknown homicides). The upper bound share refers to the proportion of the sum of victims by a specific mechanism plus the victims of unassigned/unknown mechanism over the total number of homicide victims.

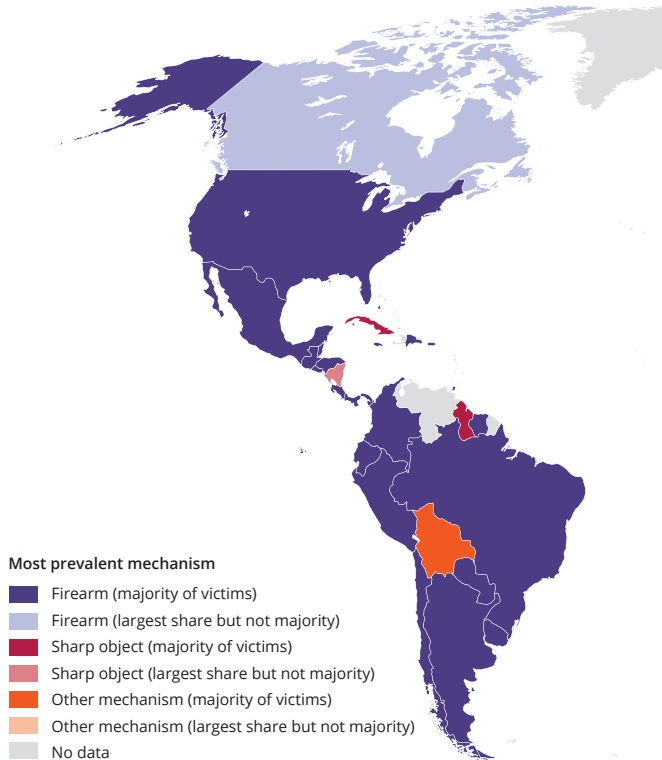
committed with sharp objects and another quarter with other mechanisms. However, since homicides in Europe are estimated to have represented just 4 per cent of all homicides worldwide in 2021, the distribution does not have a major impact on the global figures.

In Asia, the share of homicides perpetrated with sharp objects and other mechanisms were equal and a very small share of homicides were perpetrated with firearms. In India, for example, available data for the period 2005–2016 show a share of homicides perpetrated with firearms of less than 15 per cent.<sup>177</sup> In Japan, the Republic of Korea and Singapore, the shares of firearm homicides were even smaller, with more than 95 per cent of homicides perpetrated with sharp objects or other mechanisms. Those three countries are characterized by strict gun laws and some of the lowest civilian gun ownership rates worldwide.<sup>178</sup> This may explain the small share and low rate of homicides perpetrated with firearms, but other socioeconomic factors such as income inequality or the proportion of youth among the general population may also play a role.<sup>179</sup>

In Central Asia, homicide victims in Uzbekistan (64 per cent in 2019) and Kazakhstan (48 per cent in 2017) were mostly killed with sharp objects. However, data from Türkiye show that between 2015 and 2021 at least one third of homicides were perpetrated with firearms and the Philippines and Thailand had the highest shares and rates of firearm killings in Asia, accounting for up to 60 per cent of all homicide victims in the region in some years.<sup>180</sup>

The country-level pattern of mechanisms used to perpetrate homicide is more aligned with the regional picture in the Americas, where the majority of homicide victims in most countries were killed with firearms in 2021 (map 2). That was not the case in seven countries in the region, but in some of those countries, such as Bolivia (Plurinational

**MAP 3** Most prevalent mechanism used in the perpetration of homicide in the Americas, 2021 or latest available year



Source: UNODC homicide statistics.

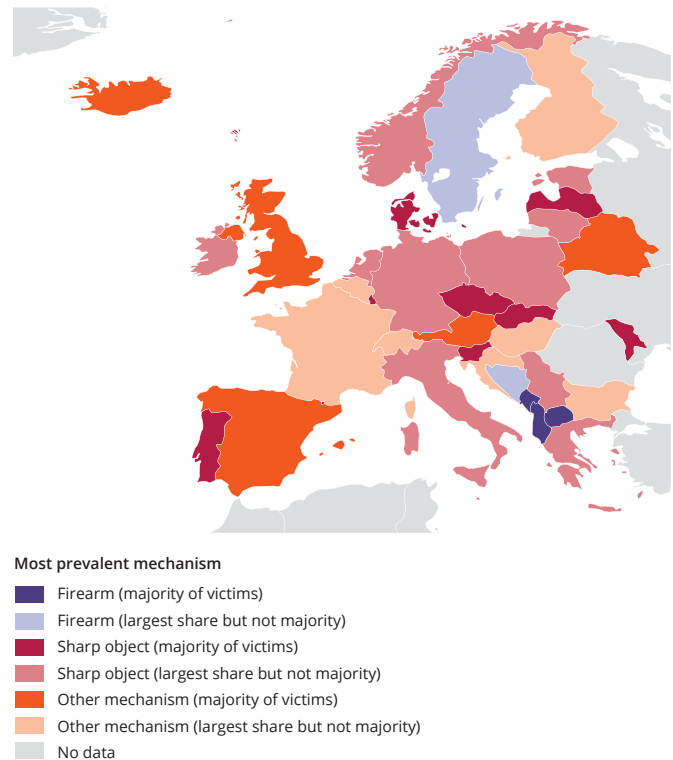
*Note: The following countries do not have information on the mechanism for more than 50 per cent of homicides: Plurinational State of Bolivia, Guatemala and Nicaragua.*

*The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).*

State of) and Guatemala, there is no information on the mechanism used in over half of the homicides recorded. In Cuba, Guyana and Nicaragua, sharp objects accounted for the largest share of all homicide mechanisms used. In this context, a question may arise about whether this could be attributed to strict gun legislation; however, studies argue that there is no clear relationship between homicide and such legislation and that other factors such as the efficiency of institutions, the presence of organized crime and access to illegal firearms play an important role.<sup>181</sup>

Unlike in the Americas, no clear homicide mechanism is predominant across Europe. Firearms constituted a large share of all homicides in just a few countries in the region in 2021 (map 3), most of which are located in the western Balkans. In Albania, for example, 75 per cent of all homicides in 2021 were committed with a firearm, in Bosnia and Herzegovina, the share was 43 per cent, in Montenegro, 46 per cent and in North Macedonia, it was

**MAP 4** Most prevalent mechanism used in the perpetration of homicide in Europe, 2021 or latest available year



Source: UNODC homicide statistics. In Iceland and Ireland, the data refers to the most prevalent mechanism in the past three years.

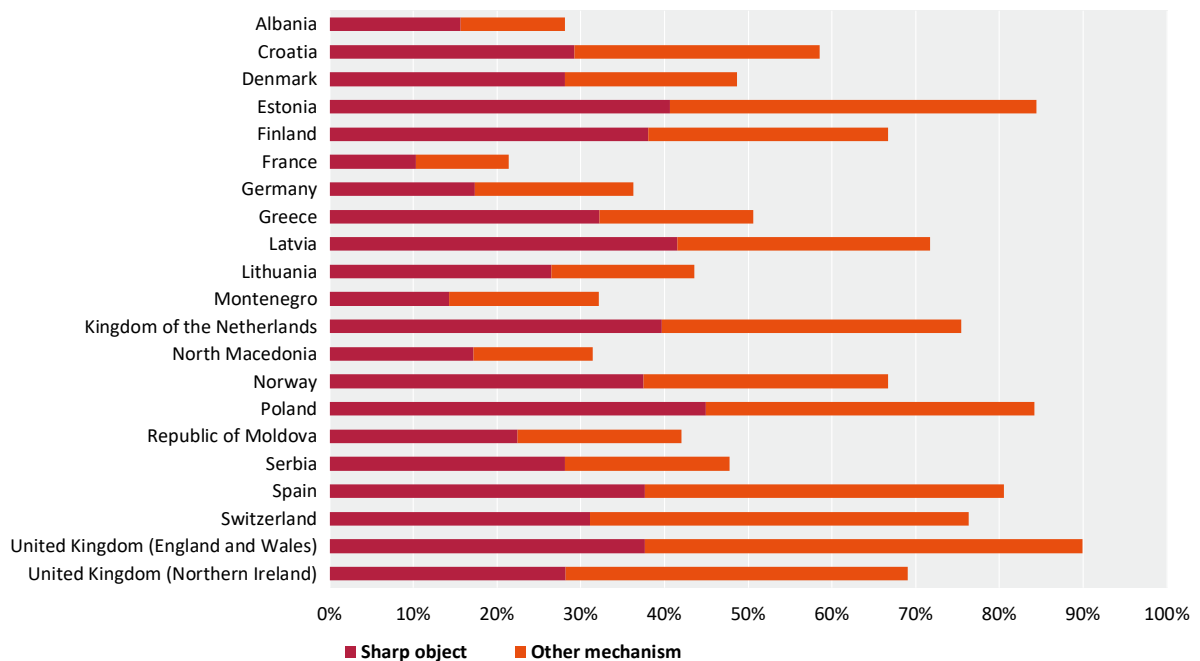
*Note: The following countries do not have information on the mechanism for more than 50 per cent of homicides: Belgium, Denmark, France, Germany, Lithuania, Republic of Moldova, Serbia and Slovakia.*

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

51 per cent in 2017. Sweden was a notable exception in Northern Europe, with 40 per cent of all homicides perpetrated with a firearm in 2021.

No other pattern was observed within the different subregions of Europe and in many cases the shares of homicides perpetrated with sharp objects and other mechanisms were more or less equal (figure 26). Another notable observation is that 20 per cent of countries in Europe with data on homicide do not report the homicide mechanism for over 50 per cent of victims. In all types of fatality, identifying cause of death is a lengthy process requiring a medical examination to be performed outside the judicial system, which may lead to challenges relating, for example, to the coordination of civil registries and police records. In France and Germany, data on homicide mechanism are not reported by the police and health registries contain information on cause of death in only 50–60 per cent of all homicides in each country.<sup>182</sup>

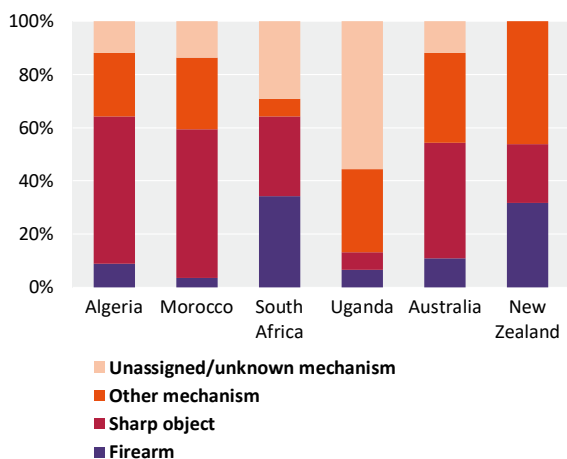
**FIG. 26** Share of homicides perpetrated with a sharp object or other mechanism in selected countries in Europe, 2017–2021



Source: UNODC homicide statistics.

Note: The calculation adjusts for homicides where the mechanism of killing is “unknown”. The shares are calculated using weighted averages of data from the latest three years available between 2016 and 2021.

**FIG. 27** Distribution of homicides by type of mechanism in selected countries in Africa and Oceania, 2018–2021



Note: The shares are based on aggregates of the latest two years available between 2018 and 2021.

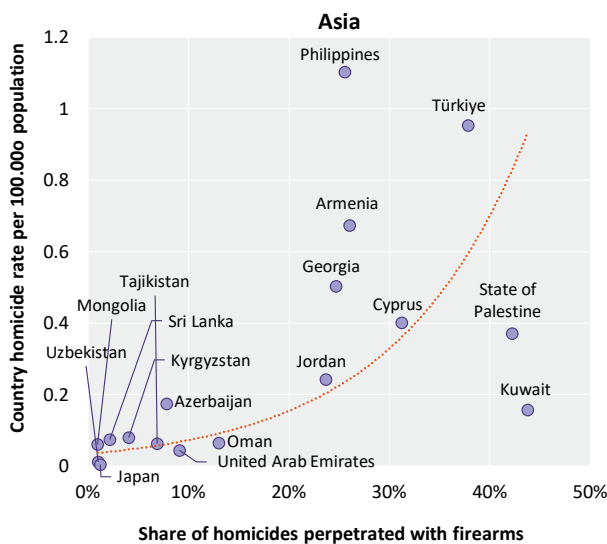
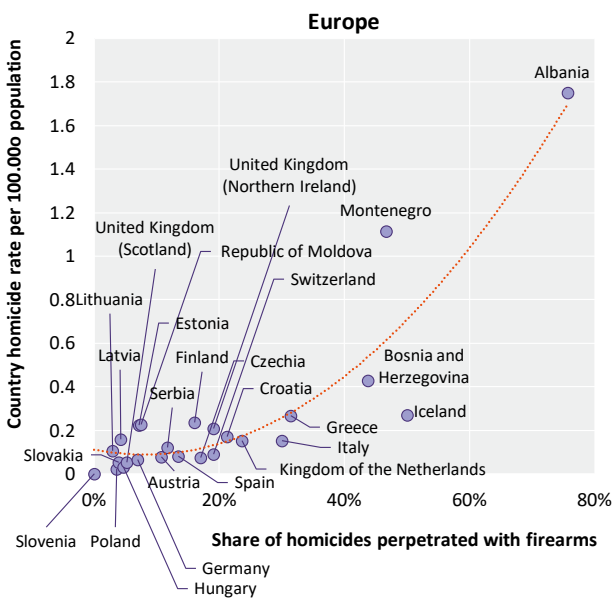
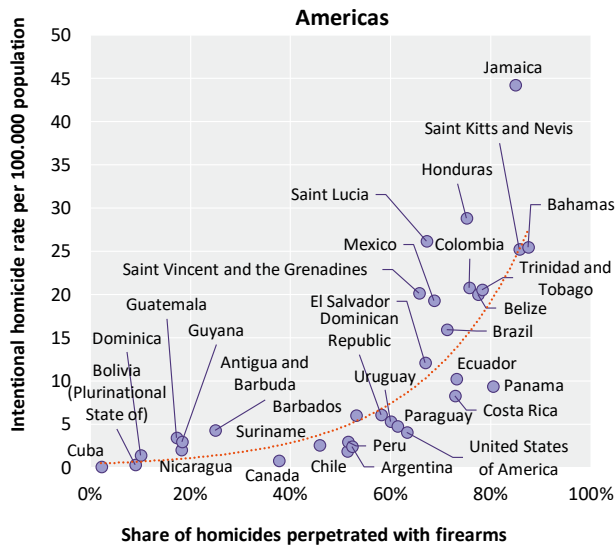
In Africa and Oceania, there are not enough countries with data to show regional patterns of and trends in the mechanisms used to perpetrate homicide; however, available data from a number of countries suggest that the share of homicides perpetrated with firearms is likely lower in those two regions than in the Americas (figure 27).

In Australia, homicide mechanisms other than sharp objects and firearms are the most prominent, while in New Zealand, the usually small share (15–30 per cent) of homicides perpetrated with firearms increased as a result of the Christchurch mosque shootings in 2019, a clear outlier event that caused the large difference in the share of firearm homicides between the countries during the period 2018–2021.

In Algeria and Morocco, the distribution of homicides by type of homicide mechanism are similar, with the most common mechanism being sharp objects (roughly 55 per cent), followed by other mechanisms (25 per cent). In South Africa, firearms have constituted a large share of homicide mechanism during the past three decades but the trend has fluctuated. The highest number of firearms killings in the country occurred before the passing of the Firearms Control Act in 2000, after which they declined gradually until 2010, when homicides perpetrated with firearms began to increase again to account for an average of around one third of total homicides in 2018/19.<sup>183</sup>

As shown in the section on organized crime above, an observation that can be drawn across all regions is that high homicide rates are usually associated with a high percentage of homicides committed with firearms (figure 28), which may suggest that firearm homicides could be a driver of overall homicides on an aggregate level.<sup>184</sup>

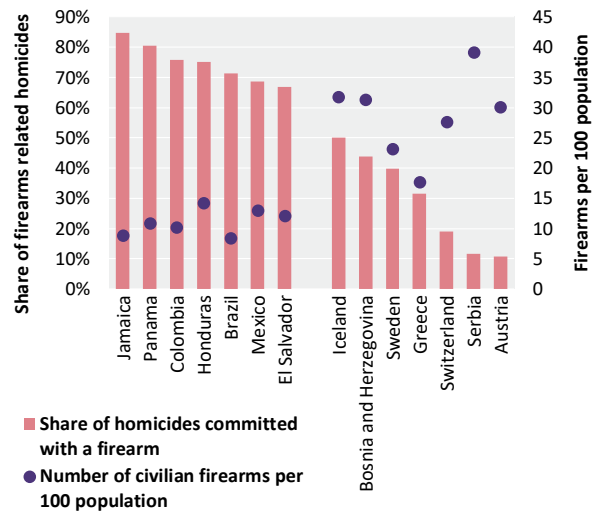
**FIG. 28** Homicide rate versus proportion of homicides involving firearms, selected regions, 2019–2021



Source: UNODC homicide statistics.

Countries that suffer from a high level of violence associated with organized crime are also likely to record a large share of homicides perpetrated with a firearm. This is the result of more than just a proliferation of firearms, as many countries in Europe have a higher rate of firearm ownership than countries in Latin America, yet still have a smaller share of homicides committed with a firearm, in addition to a lower overall homicide rate. Even in the United States, the country with the highest recorded number of firearms per capita worldwide, only 63 per cent of homicides were committed with a firearm in 2020, according to UN-CTS data. By contrast, in a number of countries in Latin America and the Caribbean, more than two thirds of homicides are committed with a firearm (figure 29).

**FIG. 29** Average share of homicides committed with a firearm in 2021, or latest year available, and estimated firearms per 100 citizens in 2017

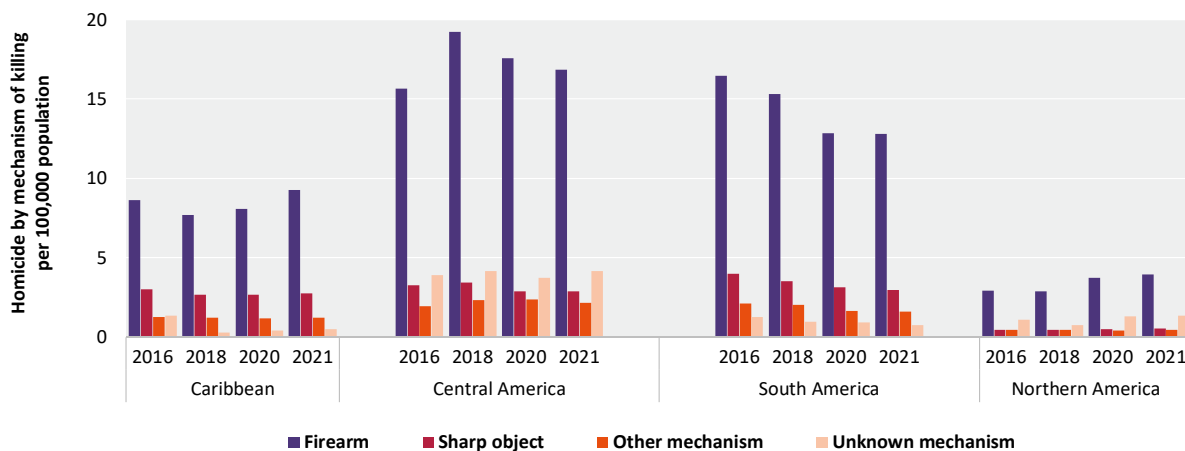


Source: UNODC statistics and Small Arms Survey.

**Non-firearm homicides**

Despite the fact that homicides perpetrated using a mechanism other than firearms constitute at least 41 per cent of homicides globally, cross-national research on homicide mechanisms other than firearms is limited and when available often encompasses non-lethal injuries as well. That said, a number of country-specific case studies provide insights related to homicide perpetrated with sharp objects. A review of studies on knife crime in five high- and upper-middle-income countries suggested that knife crime may be associated with illicit drug use, mental health difficulties and early child victimhood.<sup>185</sup> Males were more likely to use knives against strangers and in public, while females were more likely to use knives against family members and intimate partners in domestic settings.

**FIG. 30** Homicide rate by mechanism of killing in the Caribbean, Central America and South America, selected years



Source: UNODC homicide statistics.

However, the small geographical scope and number of the studies does not allow wider conclusions to be drawn on the entire population of the countries in question.<sup>186</sup>

In terms of country examples of trends in non-firearm homicides, in England and Wales, United Kingdom, the number of homicide victims killed with a sharp object in 2021/22 was the highest recorded in the past decade. The increase coincided with lockdown periods implemented during the COVID-19 pandemic and was mostly observed among young male victims.<sup>187</sup> Data from South Africa have also shown that although sharp objects are not the main mechanism, sharp objects, especially knives, still account for a large number of homicides in the country in absolute terms.<sup>188</sup>

Although not on the same scale as mass shootings, mass stabbings involving sharp objects have also received media coverage in recent years. A study in 22 countries, including China, Germany, Israel the United States and the United Kingdom, examined 138 reported incidents between 2004 and 2017 that resulted in 402 deaths and 1,519 injuries.<sup>189</sup> In almost half of the incidents (46 per cent), the perpetrator had a reported history of mental health issues, suggesting a possible link between such incidents and mental health issues. The study also noted that in such cases, the attack was disproportionately more likely to occur at a school.

### Subregional trends in homicide mechanisms in the Americas and Europe

The distributions of the different mechanisms used to perpetrate homicides has remained roughly the same both in the Americas and Europe in recent years, yet there are some notable subregional trends in the homicide rate by mechanism that can be examined due to the availability of data in those two regions.

In the different subregions of the Americas, changes in the homicide rate usually follow the same trend as changes in the rate of firearm homicide (figure 30). Given that around two thirds of all homicides in the region in recent years have been attributable to the use of firearms, this is not surprising. In the Caribbean, the rate of homicide has undergone a gradual increase since 2018, driven primarily by developments in the Dominican Republic, Jamaica and several other smaller island nations in the subregion.

Even though there has been a decline in recent years, Central America continued to have the highest rate of homicide perpetrated with a firearm of all the subregions in the Americas in 2021, as shown most notably in the cases of Honduras (28.8 per 100,000) and Mexico (19.3). Central America also had the highest rate of homicide perpetrated without a known mechanism in the Americas – higher than the rate of homicide perpetrated with sharp objects or other mechanisms.

In South America, the homicide rate by each of the different known mechanisms of killing, most notably firearms, decreased from 2016 in line with a drop in the overall homicide rate in the subregion. South America also had a relatively high rate of homicide perpetrated with a sharp object compared with other subregions in the Americas, a mechanism that is relatively prevalent in Colombia, for example.

### Firearm homicides as drivers of trends in the Americas

Although firearm homicides can drive the total homicide trend in some countries, they may be much less significant in others. As indicated in the previous section, available data in the Americas suggest that most countries in the region fall into the former group.

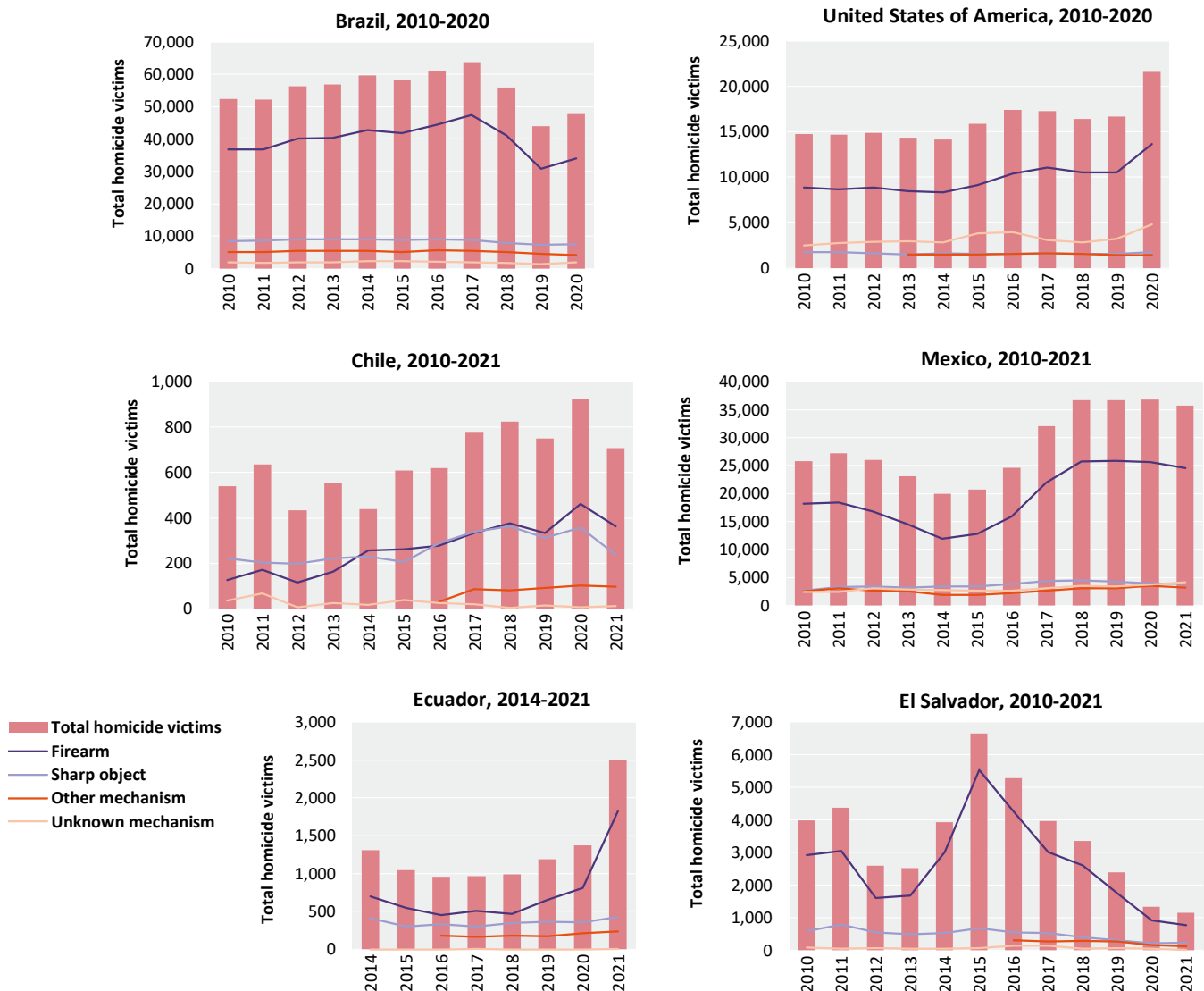
The country examples in figure 31 provide further proof that spikes or drops in the total number of homicide victims are mainly driven by changes in the number of firearm homicides, while other types of mechanism play a more limited role in explaining national homicide trends. A notable exception is Chile, where up until 2019 the number of homicides perpetrated with sharp objects and firearms were at the same level, whereas the increase in homicides in 2020 was driven more by firearms and the subsequent decrease in 2021 by sharp objects.

In the United States, gun sales increased greatly in 2020.<sup>190</sup> According to open sources, this was in connection with anxiety related to the COVID-19 lockdowns and also with upheavals related to social and political protests.<sup>191</sup> An analysis by the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) also showed that there was an increase in

guns recovered by the police with a short “time-to-crime”,<sup>192</sup> an indicator of newly purchased guns being used in crimes. In the same year, the United States recorded the highest number of homicides perpetrated with firearms since 2005 at least, an increase of around 30 per cent compared with 2019.<sup>193</sup> Data from the Center for Disease Control and Prevention also showed that, in 2020, firearm-related injuries were the leading cause of death among children and young people between the ages of 1 and 19, which was likely related to the increase in mass shootings.<sup>194</sup>

Record gun sales has been put forward as an explanation for the surge in homicides perpetrated using firearms in the United States.<sup>195</sup> However, the extent to which the increase in sales of firearms contributed to the spike in firearm killings is contested. A study focusing on state-level firearm purchasing and violence<sup>196</sup> during the COVID-19 pan-

**FIG. 31** Number of homicide victims and homicides by mechanism of killing in selected countries in the Americas, 2010 to latest available year



Source: UNODC homicide statistics.



demographic showed that excess purchasing was only associated with increases in violence in the domestic context in the months with the strongest physical distancing restrictions, with no such relationship being observed in months with fewer restrictions.<sup>197</sup> This also indicates that other factors relating to the pandemic, such as drug and alcohol use or restricted access to domestic violence prevention services, could have been contributing factors to the increase in violence in the months with fewer restrictions. Moreover, no association was found between firearms purchases and non-domestic violence.

In Brazil, there is a similar debate regarding the impact of the availability of firearms on crime, including homicide. Some studies<sup>198</sup> have shown that Brazil's last major change in gun legislation in 2003, which restricted the carrying of guns, led to a reduction in gun-related homicides outside the home. In 2019, new legislation loosening certain restrictions on gun ownership led to an increase in gun sales,<sup>199</sup> but also included more supervision and tracing of firearms. After a steady decline in homicides since 2017, there was a slight uptick in 2020 in tandem with an increase in homicides perpetrated with firearms. The increase in firearm homicides may be associated with the increase in gun sales, but the available evidence does not allow for a clear causal attribution at present.

In several countries in Latin America, trends in organized crime-related and other crime-related homicides are strongly linked to trends in firearm homicides. In El Salvador, for example, the use of firearms is strongly associated with killings in the context of gang violence, robbery and organized crime activities, as opposed to intimate partner/family-related violence.<sup>200</sup> Along with a decrease in organized crime-related homicides in El Salvador in recent years (as described in chapter 2 of the present study), homicides perpetrated with firearms (and homicides overall) also declined, suggesting a link between trends in crime-related killings and firearm killings. A similar situation was observed in Mexico, where an increase in firearm homicides between 2015 and 2018 occurred during periods of increased organized crime activities.<sup>201</sup>

In Europe, the overall homicide rate in most subregions has either remained at the same relatively low level or decreased slightly in recent years. Observations can be made on the different homicide mechanism in some subregions with available data. In Northern Europe, for example, the homicide rate in relation to all the different homicide mechanisms has gone down since 2016, with the exception of the rate of homicide perpetrated with a firearm, which has remained at the same level. This does not apply to Sweden, however, where the number of homicides perpetrated with a firearm has increased threefold since 2010. A study conducted by the Swedish National Council for Crime Prevention has shown that the

illegal gun market has become easier to access and that the availability of guns has been associated with violence within the criminal milieu.<sup>202</sup>

In Southern Europe, firearm homicide rates have been decreasing steadily since 2017, more so than the overall decrease in homicide, as seen in Serbia (0.42 per 100,000 population in 2017 to 0.12 in 2021), Bosnia and Herzegovina (0.67 to 0.43) and Spain (0.14 to 0.08).

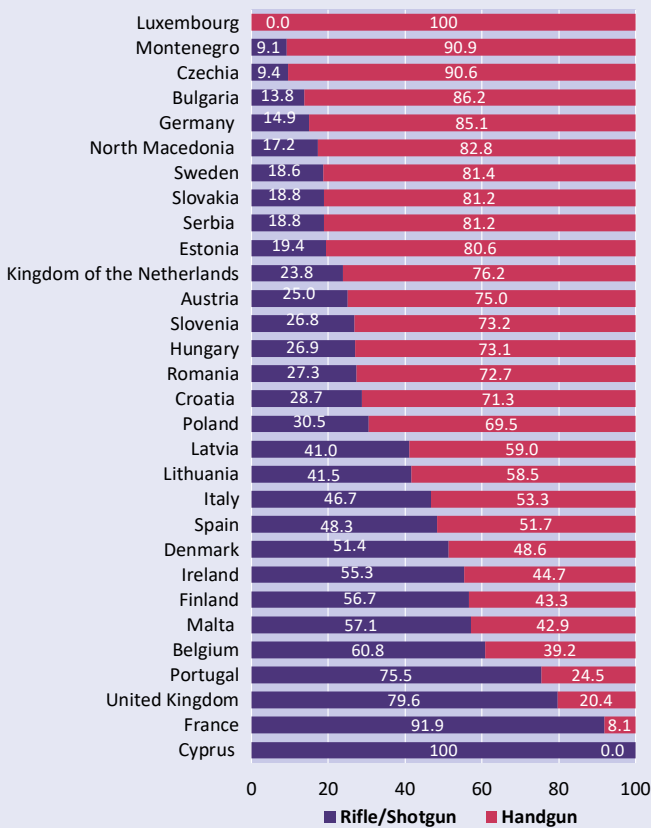
A notable case in Western Europe is the Kingdom of the Netherlands, where the level of firearm killings has been relatively high in comparison with the neighbouring countries in recent years. Although this type of violence has been observed in liquidations carried out by the drug mafia,<sup>203</sup> firearm killings still constitute a smaller share of homicides than those perpetrated with sharp objects.

## The context of firearms homicide in Europe: results from Project TARGET<sup>a</sup>

Project TARGET,<sup>b</sup> coordinated by the Flemish Peace Institute and funded by the European Union, collected data on gun violence in 34 European countries and analysed the linkages between gun violence and firearms trafficking in seven European countries (Belgium, Estonia, Kingdom of Netherlands, Poland, Serbia, Spain and Sweden).<sup>c</sup>

A general downward trend in firearm homicides could be observed in Europe between 2000 and 2014, which then seems to have come to a halt in some European countries. In countries such as Belgium, Germany and Latvia, for example, the number of firearm homicides stopped decreasing in the mid-2010s, while in Austria it returned to a level similar to that in the early 2000s. In Sweden, however, the number of firearm homicides doubled between 2000 and 2019.

Share of firearm type used in homicides (omitting other/unspecified) in Europe, 2000–2016



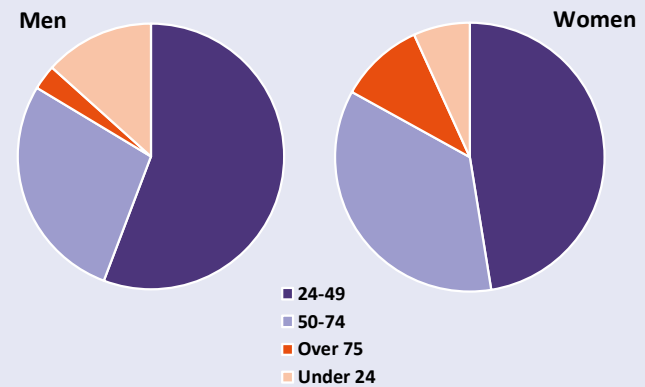
Source: Analysis by Duquet, N. and Vanden Auweele, D. (2021), based on the detailed mortality database of the World Health Organization. Available at <https://www.who.int/news-room/q-a-detail/who-mortality-database>. The information was collected in October 2020; the database has since been taken offline.

a Source: Project TARGET. Available at <https://vlaamsvredesinstituut.eu/en/target/>.  
 b For more information, visit Flemish Peace Institute, “Project target”, 19 December 2021.  
 c See Flemish Peace Institute, *Pulling the Trigger: Gun Violence in Europe* (2022).

Handguns are the firearms most used in homicides in most countries in Europe. In just 7 of the 34 countries included in the analysis the use of long guns/shotguns is more prevalent (figure below). The use of long guns appears to be particularly prevalent in France (92 per cent of all homicides with long or short guns), Portugal (76 per cent) and the United Kingdom (80 per cent). Nevertheless, this information should be interpreted with caution since in most of the countries analysed the majority of types of firearm were classified as “unspecified”.

Men under the age of 35 are the main perpetrators and victims of lethal firearm violence in Europe. This is overwhelmingly the case in the criminal context, yet in the context of domestic gun violence, a large number of female victims can also be observed. Specifically, in the context of intimate partner firearm violence, most of the victims are female. The age groups of perpetrators and victims in the domestic context are more evenly distributed than in the criminal context.

Victims of deadly firearms violence in Belgium, by sex, 2009–2017



Source: Statistics Belgium.

The findings of project TARGET demonstrate that the characteristics of gun violence differ according to the context in which it occurs. In the criminal context, firearms are used for facilitating various types of criminal activities, such as robbery, the drug trade, violent crime, criminal extortion and trafficking in persons. Firearms used in such criminal activities are almost always illegally obtained. In some countries, the illegal firearms market is so large that even lower-level criminals have access to guns.<sup>d</sup> Handguns tend to be the tool of choice for criminal violence perpetrated with firearms as they are easy to carry, use and conceal. In most such cases, firearms violence is non-lethal as the weapon is mainly used to threaten others, as seen in cases of armed robbery in the Kingdom of the Netherlands, Belgium and western Balkans. However, the drug milieu is responsible for more lethal casualties and higher levels of use of automatic rifles than other contexts of criminal gun violence.

d See European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) and Flemish Peace Institute, “The Nexus between drug markets and gun violence in the European Union”, 2023.



Mass shootings connected with (organized) crime are rare in Europe and even gang violence rarely results in a large number of lethal casualties, which may be explained by the desire of criminals to remain under the public radar.

The use of firearms in acts of domestic gun violence in Europe is predominantly aimed at killing or injuring the victim rather than achieving some other goal. Although handguns are also the most used type of firearm in this context, a significant portion of the violence is also committed with long guns. The type of firearms used is based on their accessibility, meaning that perpetrators often use a firearm that is already in their (legal or illegal) possession. The link between firearm trafficking and domestic gun violence is therefore generally weaker than in the case of criminal gun violence.

Firearms are used in the terrorist context to destabilize a political state or a social order. Terrorist attacks can be particularly lethal when firearms are used. In general, terrorists prefer to use military-grade and automatic firearms, but often have to rely on whatever is locally available. Jihadi terrorists often operate as lone actors and are usually not structurally associated with an existing network. They tend to rely on members with criminal pasts to acquire firearms. Right-wing terrorism is an umbrella term that covers a wide variety of ideological backdrops and grievances, such as islamophobia, ethnic nationalism, white supremacy and incel (involuntary celibate). This is a fairly heterogenous group that tends to rely on various methods to acquire firearms, including the legal acquisition of firearms, internet purchases of firearm components for self-assembly, and even self-manufactured firearms using 3D-printing technology. Left-wing terrorists seem to use explosive devices rather than firearms.

The analyses from project TARGET indicate that criminal gun violence in Europe is linked to the availability of firearms on illicit gun markets. In addition to the presence of legacy conflict weapons (from the western Balkans in particular),<sup>e</sup> criminals have also exploited legal loopholes that have led to an increase in the availability of reactivated firearms,<sup>f</sup> converted blank-firing weapons or converted Flobert-calibre weapons (guns with a low muzzle velocity designed for indoor use).

e These are weapons that were used during conflicts (for example, the armed conflicts in former Yugoslavia) and have been diverted into the hands of private citizens.

f Firearms that were not properly deactivated (i.e. modifying the firearm, making it unable to fire live ammunition) can be reactivated and used as a live-firing firearm.

## APPENDIX

**Appendix I.** Linear OLS regression estimates underlying the figures in “More organized crime, less homicide?  
A look at municipality-level data in Mexico”

Variables	Homicide rate (Ln)		3 <sup>rd</sup> figure		4 <sup>th</sup> figure	
	1 <sup>st</sup> figure	2 <sup>nd</sup> figure	Burglary	Robbery	Burglary	Robbery
Seen gangs (%)	0.126*** (0.0416)		0.148* (0.0820)	0.704*** (0.244)		
Squared term	-0.00195** (0.000807)		-0.00189 (0.00159)	-0.00613 (0.00473)		
Victims of extortion (%)		0.149* (0.0871)			0.133 (0.174)	1.767*** (0.554)
Squared term		-0.00341 (0.00378)			-0.00190 (0.00754)	-0.0498** (0.0241)
Constant	1.145** (0.500)	1.788*** (0.465)	2.445** (0.985)	-4.464 (2.933)	3.661*** (0.926)	-3.324 (2.955)
Observations	98	98	98	98	98	98
R-squared	0.130	0.105	0.089	0.344	0.040	0.207

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Appendix II.** Intentional homicides by region and cercle – Mali,  
January 2020 to October 2021 (related to “Violent deaths  
and intentional homicide in Mali”)

Region	Cercle	Homicides
Bamako (Capital District)	Bamako	15
Gao	Gao	25
	Ansongo	11
	Bourem	1
Kayes	Kayes	3
Kidal	Kidal	1
Ménaka	Ménaka	16
Mopti	Koro	50
	Douentza	44
	Bankass	38
	Bandiagara	20
	Djenné	7
	Mopti	4
Segou	Niono	14
	San	13
	Baraouéli	3
	Macina	1
Tombouctou	Gourma Rharous	4
	Timbuktu	4

Source: MINUSMA.

## REFERENCES

- 1 *Global Study on Homicide 2019*, Booklet 3, *Understanding Homicide* (United Nations publication, 2019).
- 2 *International Classification of Crime for Statistical Purposes (ICCS)* (United Nations publication, 2016).
- 3 Question 1.4 and its subsections. UNODC, *United Nations Survey on Crime Trends and the Operation of Criminal Justice Systems (UN-CTS)*, June 2018.
- 4 See Regoeczi, W. C. and Rledel, M., "The application of missing data estimation models to the problem of unknown victim/offender relationships in homicide cases", *Journal of Quantitative Criminology*, 19, 155–183 (June 2003).
- 5 National Crime Record Bureau, *Crime in India*, Volume I (India, 2021).
- 6 Intimate partner/family-related homicides are a subtype of interpersonal homicide.
- 7 For further information, see "Introduction to the concept of homicide" in chapter 2 of the present study.
- 8 See "Nigeria: homicide estimates by homicide type using population surveys" on page 98 of this chapter and "Mapping violent deaths in Mali" on page 128.
- 9 This approach was, for example, used by Stöckl et al. to produce conservative (lower bound) estimates of intimate partner homicides globally. See Stöckl H. et al., "The global prevalence of intimate partner homicide: a systematic review", *The Lancet*, vol. 382, No. 9895 (September 2013).
- 10 Due to the limited data, no separate regional estimates on homicide shares by type are published for Africa, Asia or Oceania. However, the global shares include imputed estimates for those regions.
- 11 *International Classification of Crime for Statistical Purposes* (United Nations publication, 2016).
- 12 Ibid.
- 13 *Gender-related Killings of Women and Girls (Femicide/Feminicide): Global Estimates of Gender-related Killings of Women and Girls in the Private Sphere in 2021* (United Nations publication, 2022).
- 14 See *Global Study on Homicide 2019, Gender-related Killing of Women and Girls* (United Nations publication, 2019).
- 15 Average weighted by the number of intimate partner killings (male and female victims) in each of the 75 countries.
- 16 Data on female homicides perpetrated exclusively by intimate partners are available from 75 countries across all regions for at least one year in the period 2015–2021.
- 17 For further information, see "Statistical framework for measuring the gender-related killing of women and girls (also referred to as "femicide/feminicide")" (United Nations publication, 2021).
- 18 There is a positive and statistically significant correlation ( $r = 0.33$ ,  $p < 0.01$ ) between the rate of female intimate partner homicide and the rate of female family-related homicide in a sample of 35 countries with sufficient disaggregated data for the period 2015–2021.
- 19 See United Nations General Assembly resolutions, A/RES/68/191 adopted in 2013 and A/RES/70/176 adopted in 2016.
- 20 *Global Study on Homicide 2019*, Booklet 5, *Gender-related Killing of Women and Girls* (United Nations publication, 2019).
- 21 *Statistical framework for measuring the gender-related killing of women and girls (also referred to as "femicide/feminicide")* (United Nations publication, 2021).
- 22 *Gender-related Killings of Women and Girls (Femicide/Feminicide): Global Estimates of Gender-related Killings of Women and Girls in the Private Sphere in 2021* (United Nations publication, 2022).
- 23 See the methodological annex to the *Global Study on Homicide 2019* (United Nations publication, 2019).
- 24 *Gender-related Killings of Women and Girls (Femicide/Feminicide): Global Estimates of Female Intimate Partner/Family-related Homicides in 2022* (United Nations publication, 2023).
- 25 *Global Study on Homicide 2019*, Booklet 3, *Understanding Homicide* (United Nations publication, 2019).
- 26 Ibid.
- 27 See Kenya, National Police Service, *Annual Report* (2021).
- 28 See Land Conflict Watch, *Locating the Breach: Mapping the Nature of Land Conflicts in India* (Nut Graph LLP, Rights and Resources Initiative, and Oxfam India, 2020).
- 29 Robinson, N., "A Quantitative analysis of the Indian Supreme Court's workload", *Journal of Empirical Legal Studies*, vol. 10, No. 3 (December 2012).
- 30 See Gleick, P., Iceland, C. and Trivedi, A., *Ending Conflicts over Water: Solutions to Water and Security Challenges* (World Resource Institute, 2020).
- 31 See Pacific Institute, "Water conflict", Water conflict chronology.
- 32 Gleick, P., Iceland, C. and Trivedi, A., *Ending Conflicts over Water: Solutions to Water and Security Challenges* (World Resource Institute, 2020).
- 33 The period of reference does not cover 2022, which saw an increase in armed conflict deaths due to the war in Ukraine.
- 34 Sanjurho, D., "The relationship between firearm proliferation and violence in Latin America", 22 July 2022; Slmirano, C., "Behind a Rise in Latin America's Violent Crime, A Deadly Flow of Illegal Guns", *Americas Quarterly*, Mary 15 2023.
- 35 Flores-Macias, G. and Zarkin, J., "The Militarization of Law Enforcement: Evidence from Latin America", *Perspectives on Politics*, vol. 19, No. 2 (December 2019), pp. 519–538.
- 36 *Global Study on Homicide 2019* (United Nations publication, 2019)
- 37 See chapter 2 of the present study. Also, consult Ajzenman, N. and Jaitman, L., "Crime concentration and hot spot dynamics in Latin America", *IDB* (June 2016); Muggah, R. and Aguirre Tobon, K., "Reducing Latin America's violent hot spots," *Aggression and Violent Behavior*, vol.47 (July/August 2019); Muggah, R., Aguirre Tobon, K. and Chainey, S., "Targeting "hot spots" could statistically reduce Latin America's murder rate", *Americas Quarterly* (9 March 2017).
- 38 See the section on interpersonal homicide, on page 103 of this chapter.
- 39 *Global Study on Homicide 2019*, Booklet 2 (United Nations publication, 2019).
- 40 Bergman, M., "Insights from new studies on violence in Latin American prisons", *International Criminal Justice Review*, vol. 30, No. 1 (December 2019); Pierce, J. and Fondevila, G., "Concentrated violence: the influence of criminal activity and governance on prison violence in Latin America", *International Criminal Justice Review*, vol. 30, No. 1, (June 2019), pp. 99–130; Bergman, M. and Fondevila, G., *In Prisons and Crime in Latin America* (Cambridge, Cambridge University Press, 2021); Macaulay, F., "The policy challenges of informal prisoner government", *Prison Service Journal: Special Edition: Informal Dynamics of Survival in Latin American Prison*, No. 229 (January 2017).
- 41 See Croci, G. and Chainey, S., "An institutional perspective to understand Latin America's high level of homicide", *British Journal of Criminology*, vol.63, No. 5 (September 2023); Sanhueza, A. et al., "Homicide among young people in the countries of the Americas and Caribbean", *Revista Panamericana Salud Publica*, 47 31 (July 2023).
- 42 UNODC; *Global Report on Cocaine 2023 – Local Dynamics*, Global Challenges (United Nations publication, 2023).
- 43 Mohor, D., "Surging gang violence across Latin America challenges aid sector to respond", 17 May 2023.
- 44 Brantingham, J., Valasik, M. and Tita, G. E., "Competitive dominance, gang size and the directionality of gang violence", *Crime Science*, vol. 8, No. 7 (August 2019).
- 45 See Solmirano, C., "Behind a rise in Latin America's violent crime, a



- deadly flow of illegal guns”, *Americas Quarterly* (15 May 2023) and Aguirre, K. and Muggah, R., “Arming the Americas”, *Oxford Handbook of the Sociology of Latin America* (October 2020).
- 46 See Muggah, R. and Dudley, S., “COVID19 is reconfiguring organized crime in Latin America and the Caribbean”, *Small Wars Journal* (February 2021).
- 47 UNODC, “Research brief: Effect of the COVID -19 pandemic and related restrictions on homicide and property crime”, Vienna, 2020.
- 48 Muggah, R. and Aguirre, K., “In the Americas, homicide is the other killer epidemic”, *Foreign Policy*, 20 May 2022).
- 49 As noted later in this chapter and in chapter 2 of the present study.
- 50 These countries were Jamaica (52.1 per 100,000 population), South Africa (42.4), Saint Lucia (39.0), Honduras (38.2), Belize (31.2), Saint Vincent (30.7), Saint Kitts and Nevis (29.4), Trinidad and Tobago (29.4), Bahamas (29.2) and Myanmar (28.4). Note that not all countries reported data for 2021.
- 51 United Kingdom, House of Commons Library, “Crime in the Turks and Caicos Islands”, Research briefing, 9 December 2022.
- 52 At least 2,183 people were reportedly murdered in 2022 according to the Haitian National Police and United Nations Integrated Office in Haiti, up from 1,630 in 2021. See *Haiti’s Criminal Markets: Mapping Trends in Firearms and Drug Trafficking* (United Nations publication, 2023).
- 53 See *El Heraldo*, “Cuáles han sido los logros del estado de excepción en Honduras”, 3 January 2023.
- 54 Rosen, J. D., Cutrona, S. and Lindquist, K., “Violence, and Fear: Punitive Darwinism in El Salvador”, *Crime Law Soc Change* 79 (July 2022) pp. 175–194.
- 55 Written information provided by the Government of El Salvador to UNODC.
- 56 Government of El Salvador, Presidential Press Secretary, “*El Salvador registra el promedio de homicidios más bajo de Centroamérica*”, 5 January 2023.
- 57 Mexico reported 30,968 homicides in 2022, compared with 31,915 in 2021. Over 50 per cent were concentrated in just six states: Baja California, Chihuahua, Jalisco, Michoacan and the state of Mexico. See Instituto Nacional de Estadística, Geografía e Informática (INEGI), “Defunciones por homicidios enero a diciembre de 2022”, 25 July 2023.
- 58 Most notably in the departments of Arauca, Putumayo, Cauca, Chocó, Guaviare and Valle del Cauca, according to González Díaz, A., “12,221 homicidios en Colombia durante el 2022”, *Universidad Externado de Colombia*, 20 December 2022.
- 59 *Global Report on Cocaine 2023 – Local Dynamics, Global Challenges* (United Nations publication, 2023).
- 60 See Mistler-Ferguson, S., “Rivals for the throne – can Argentina’s Alvarado clan threaten the Monos?”, *Insight Crime*, 16 June 2022.
- 61 Data from Ministry of Health of Brazil, Information Technology Department of the United Health System (DATASUS).
- 62 Bessa Franciozo Diniz, V. and McBrien, J. L., “Children and drug trafficking in Brazil: can international humanitarian law provide protections for children involved in drug trafficking?” *Societies*, vol. 12, No. 6 (December 2022).
- 63 *World Drug Report 2023* (United Nations publication, 2023).
- 64 See “Drug gangs and surging violence in Ecuador” in the present chapter.
- 65 The rival factions are called Choneros and Lobos, although Colombian, Mexican and Albanian drug cartels and crime syndicates are also increasingly involved. See Andrade, C., Margolis, M. and Muggah, R. “Ecuador’s crime wave and its Albanian connection”, *Americas Quarterly* (12 April 2023).
- 66 Sanjurjo, D., *The Relationship between Firearm Proliferation and Violence in Latin America*, 22 June 2020.
- 67 Perez Ricart, C. A., “¿Más armas, más violencia? Evidencia de una compleja relación desde América Latina”, *Perfiles Latinoamericanos*, vol. 30, No. 59 (January 2022).
- 68 *Global Study on Firearms Trafficking 2020* (United Nations publication, 2020).
- 69 See Fabre, A.S. et al., “Weapons compass: Caribbean firearms study”, *Small Arms Survey* (April 2023).
- 70 Ibid.
- 71 See Aguirre, K. and Muggah, R., *Arming the Americas* (Oxford University Press, 2020).
- 72 *Global Study on Firearms Trafficking 2020* (United Nations publication, 2020).
- 73 See Aguirre, K. and Muggah, R., *Arming the Americas* (Oxford University Press, 2020). For more in relation to Latin American arms transfer trends. See also *Small Arms Survey* (2023) for a treatment of transfer modalities in the Caribbean.
- 74 *Global Study on Firearms Trafficking 2020* (United Nations publication, 2020).
- 75 See CARICOM Council, “CARICOM states join Mexico’s anti-gun lawsuit in the US”, 31 March 2023; United States Government Accountability Office, “Firearms trafficking: more information is needed to inform US efforts in Central America”, 11 January 2022; Henry Shuldiner and Anastasia Austin, “Across the Americas, governments aim to rein in flow of guns”, *InSight Crime*, 24 April 2023; Grillo, I., “US-made guns are ripping Central America apart and driving migration north”, *The Guardian*, 16 April 2021; Caribbean Community (CARICOM), “Declaration by CARICOM heads of government – war on guns”, 18 April 2023.
- 76 UNODC data based on regional estimates rounded up to the multiple of 100.
- 77 See *Population Trends in Latin America and the Caribbean, Demographic Effects of the COVID-19 pandemic* (United Nations publication, 2022).
- 78 See Chávez, C., “What we know and what we don’t know about youth gangs in Latin America”, United Nations Children’s Fund, 27 September 2018; Jutersonke, O., Muggah, R. and Rodgers, D., “Gangs, urban violence, and security interventions in Central America”, *Security Dialogue*, vol.40, No.4/5 (September 2009), pp. 373–397.
- 79 See Kalantaryan, S., Ueffing, P. and Nedee, A, *Youth Perspectives in Latin America and the Caribbean: Evidence from Latinbarómetro Survey* (Publications Office of the European Union, 2023).
- 80 See *The Impact of COVID-19 on Organized Crime* (United Nations publication, 2020).
- 81 See Dudley, S., and Bargent, J., “The prison dilemma: Latin America’s incubators of organized crime”, *Insight Crime*, 19 January 2017.
- 82 See Lessing, B. and Willis, G., “Legitimacy in criminal governance: managing a drug empire from behind bars”, *American Political Science Review*, vol. 113, No. 2 (22 February 2019), pp. 584–606.
- 83 See Muggah, R. and Szabo, I., Brazil’s deadly prison system, *New York Times*, 4 January 2017; Muggah, R., Taboada, C., and Tinoco, D., “Why is prison violence so bad in Brazil”, *Americas Quarterly*, 2 August 2019; and Muggah, R., “Brazil’s prison massacres send a dire message”, *NPR* (May 2019).
- 84 Hernandez-Roy, C. and Bendsoe, R., “Building barriers and bridges, the Need for international cooperation to counter the Caribbean-Europe drug trade”, Center for Strategic and International Studies (CSIS) (Washington, D.C., 2023).
- 85 Republic of Trinidad and Tobago, Ministry of National Security, *Strategic Services Agency, Annual Report 2021* (2021).
- 86 Ibid.
- 87 Ibid.
- 88 See Douglas, S., “SSA: Police-sized guns returning to criminals’ hands”, *News Day*, 19 May 2022.
- 89 Caribbean Policy Research Institute, *Guns Out: The Splintering of Jamaica’s Gangs* (Kingston, 2020).
- 90 Ibid.
- 91 See Linton, L., “JCF establishing special anti-gang task force”, *Jamaican Information Service*, 21 May 2020.
- 92 Ibid.
- 93 International Crisis Group. *Crime in Pieces: The Effects of Mexico’s “War on Drugs”, Explained* (2023).



- 94 See *Haiti's Criminal Markets: Mapping Trends in Firearms and Drug Trafficking* (United Nations Publication, 2023).
- 95 See *Infoamazonia*, "Welcome to the Amazon underworld", 3 August 2023.
- 96 See Muggah, R., "How cocaine is destroying the Amazon", *Foreign Policy* (6 August 2023); and *The Nexus Between Drugs and Crimes that Affect the Environment and Convergent Crime in the Amazon Basin* (United Nations publication, 2023).
- 97 *Global report on Cocaine 2023 – Local Dynamics, Global Challenges* (United Nations publication, 2023).
- 98 See Muggah, R., "Latin America's crime surge is fueled by surging cocaine production", *Small Wars Journal*, 22 May 2023.
- 99 *Global report on Cocaine 2023 – Local Dynamics, Global Challenges* (United Nations publication, 2023).
- 100 Hernandez-Roy, C. and Bendsoe, R., "Building barriers and bridges, the need for international cooperation to counter the Caribbean-Europe drug trade", Center for Strategic and International Studies (CSIS) (Washington, D.C., 2023).
- 101 See Horace Chang, Deputy Prime Minister and Minister of National Security, "Transnational organized crime from a Caribbean perspective", in a statement to High Level Security Conference of the Guiana Shield, Paramaribo, Suriname, 21/22 April 2022.
- 102 *Transnational Organized Crime in Central America and the Caribbean – A Threat Assessment* (United Nations publication, 2012).
- 103 *World Drug Report 2000* (United Nations publication, 2001).
- 104 *Global report on Cocaine 2023 – Local Dynamics, Global Challenges* (United Nations publication, 2023).
- 105 See Sustainable Development Goal indicator 16.10.01 at Sustainable Development Goal global database.
- 106 See Ray, J., "Global progress on safety, confidence in police stalls", *Gallup*, 26 October 2022.
- 107 Honduras, Diario Oficial de la Republica de Honduras, *Decreto Ejecutivo Número PCM 29-2022* (Honduras, 2022).
- 108 Honduras, Diario Oficial de la Republica de Honduras, *Decreto Ejecutivo Número PCM 15-2023* (Honduras, 2022).
- 109 OHCHR, "Honduras: Militarization of public security", Press Briefing Notes, 7 July 2023
- 110 Written information provided by the Government of El Salvador to UNODC.
- 111 OHCHR, "El Salvador: Concern at measures in response to rising gang violence", Press briefing notes, 5 April 2022.
- 112 These municipalities included Ixchiguan and Tajumulco in the department of San Marcos. Guatemala, Ministerio de Gobernación, *Segundo año de Gobierno: Memoria de Labores 2017* (Guatemala, 2017).
- 113 Ecuador, Government of Ecuador, Decreto Ejecutivo No. 824 (Ecuador, 2023).
- 114 See Agence France Presse, "Ecuador declares emergency rule in major port to combat crime", *Barron's*, 1 April 2023.
- 115 See Senate of Chile, "Ley Naín-Retamal ya una realidad", 6 April 2023.
- 116 See Interpol, "Interpol global crime trend summary report", October 2022; Europol, "Europol spotlight - the use of violent organized crime groups", 6 December 2021; and European Council, "The EU's fight against organized crime", 5 July 2023.
- 117 See EPP, "EPP group position paper on how to combat organized crime in the European Union", 13 September 2022; Vinocur, N., "They are infiltrating our societies: drug crime boom threatens EU democracies", *Politico*, 3 July 2023; and Carter, B., "Europe has reached a 'breaking point' over organized crime, says Europol", *Euronews*, 12 April 2021.
- 118 See Botzas, S., "Mob-style killings shock Netherlands into fighting descent into 'narco state'", *The Guardian*, 3 July 2022.
- 119 See Gandilhon, M., "Organized crime in the European Union: a strategic threat?", *Politique Étrangère*, No. 2, (April 2023); RAND, "Strengthening the fight against serious and organised crime in the EU", 29 March 2023.
- 120 A UNODC internal review of a sample of European countries with a comparatively high number of firearm-related homicides committed identified two clusters of countries: one with a proportionately greater use of hunting and military rifles and another with a proportionately greater use of handguns. The latter category is typically reflective of a greater likelihood of organized crime.
- 121 See European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), "Greater diversity in drug supply and use creates new challenges for Europe", press release, *European Drug Report 2023: Highlights*, 16 June 2023.
- 122 See Interpol, "Europe: Drug Trafficking, Organized Crime Increasing by an 'Order of Magnitude'", 8 May 2023.
- 123 See Europol, "Europol spotlight - the use of violent organized crime groups", 6 December 2021.
- 124 UNODC and EUROPOL, "The illicit trade of cocaine from Latin America to Europe – from oligopolies to free-for-all?", *Cocaine Insights* 1, (Vienna, September 2021), p. 26.
- 125 More information on violence linked to the cocaine supply chain in Europe is available in the *Global Report on Cocaine 2023* (United Nations publication, 2023).
- 126 See Europol, "Spotlight: the use of violence by organised crime groups", 29 January 2021.
- 127 See Global Initiative against Transnational Organized Crime, *Killing in Silence* (November 2021).
- 128 See, for example, Interpol, "Organised crime groups fuel a rise in violent crime in the EU", 29 January 2021.
- 129 UNODC data portal, "Drug trafficking and cultivation statistics".
- 130 See European Forum for Urban Security, "Organised crime in ports of European cities: how do public private partnerships work?", Web conference, 20 April 2022; Rae, S., "Drugs, violence and organized crime in Belgium", *Politico*, 13 February 2023.
- 131 See Saintourens, T. and Piel, S., "The mafia's grisly advances in the Netherlands and Belgium", *Le Monde*, 21 May 2022.
- 132 See Shankar, P., "Are drug gangs threatening the rule of law in the Netherlands", *DW*, 27 December 2022.
- 133 See Sanchez, N., "Hitmen, organized crime and the successful police team solving cases on Spain's Costa del Sol", *El País*, 26 July 2023.
- 134 Spain, for example, reported an average of just one organized crime-related homicide per year for every 10 million citizens in the period 2011–2021: UNODC data.
- 135 See Global Initiative against Transnational Organized Crime, "Global assassination monitor", video, 17 November 2021.
- 136 They are also targeting shipping companies and transport providers that may be intentionally or unintentionally involved in criminal activity. See Government of the Kingdom of the Netherlands, "Coalition of European countries fighting organised crime", 7 October 2022.
- 137 See European Council, "The EU's fight against organised crime", SNS, 24 April 2023.
- 138 *International Classification of Crime for Statistical Purposes*, Table III, (United Nations publication, 2016), p. 102.
- 139 The term "human rights defender" has been used since the adoption of the declaration on human rights defenders in 1998. The Human Rights Commission established the mandate on the situation of human rights defenders in 2000. The mandate was renewed by the Human Rights Council in 2020 in decision 43/115 and resolution 43/16. See Office of the United Nations High Commissioner for Human Rights (OHCHR) (ND) <https://www.ohchr.org/en/special-procedures/sr-human-rights-defenders/about-human-rights-defenders>.
- 140 See United Nations General Assembly, "Declaration on human rights defenders", 1998, A/RES/53/144.
- 141 See OHCHR, "Challenges faced by human rights defenders".
- 142 See United Nations General Assembly, "Final warning: death threats and killing of human rights defenders", 24 December 2020, A/HRC/46/35.
- 143 *Global Study on Homicide 2019*, Booklet 3, *Understanding Homicide* (United Nations publication, 2019).

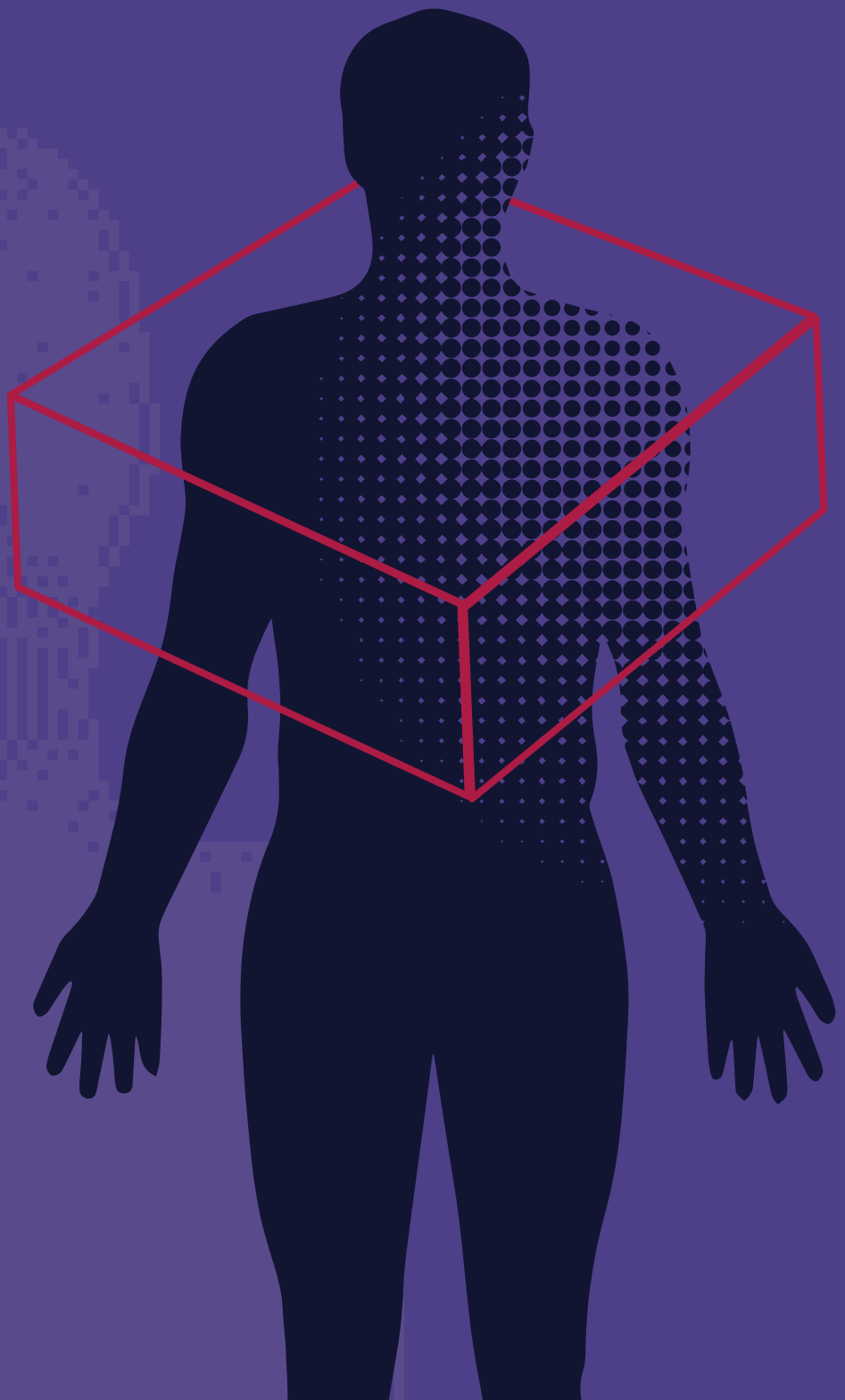
- 144 Middeldorp, N. and Le Billon, P., "Deadly environmental governance: authoritarianism, eco-populism, and the repression of environmental and land defenders", *Annals of the American Association of Geographers*, vol. 109, No.2 (February 2019), pp. 324–337; UN Environment, Promoting greater protection for environmental defenders, Policy; Zeng, Y., Twang, F. and Carrasco, L. R., "Threats to land and environmental defenders in nature's last strongholds", *Ambio*, vol. 51 (April 2021), pp. 269–279.
- 145 Hines, A. "Decade of defiance: ten years of reporting land and environmental activism worldwide", Global Witness, 29 September 2022.
- 146 According to Global Witness ("Last line of defence" (September 2021): "To meet our criteria, a case must be supported by the following available information: Credible, published and current online sources of information. Details about the type of act and method of violence, including the date and location. Name and biographical information about the victim. Clear, proximate and documented connections to an environmental or land issue".
- 147 Knox, J. H, "Environmental human rights defenders: a global crisis", policy brief, Universal Rights Group, 29 September 2022.
- 148 Braaten, D., "A triangle of vulnerability: global demand for resources, political marginalization, and a culture of impunity as causes of environmental defender killings," *Human Rights Quarterly*, vol. 44, No. 3 (August 2022).
- 149 Ibid.
- 150 Zeng, Y., Twang, F. and Carrasco, L. R., "Threats to land and environmental defenders in nature's last strongholds", *Ambio*, vol. 51 (April 2021), pp. 269–279.
- 151 Middeldorp, N. and Le Billon, P., "Deadly environmental governance: authoritarianism, eco-populism, and the repression of environmental and land defenders", *Annals of the American Association of Geographers*, vol. 109, No.2 (February 2019), pp. 324–337.
- 152 UN Environment, Promoting greater protection for environmental defenders, Policy.
- 153 United Nations, Economic Commission for Latin America and the Caribbean (ECLAC), "Regional agreement on access to information, public participation and justice in environmental matters in Latin America and the Caribbean", 28 September 2023.
- 154 UNESCO, *Journalism is a Public Good: World Trends in Freedom of Expression and Media Development, Global Report 2021/20* (Paris, 2022).
- 155 Ibid. p. 20.
- 156 CI-22/COUNCIL.33/6 Rev. – page 12.
- 157 Ibid. p. 17.
- 158 Dunham, J., "Deadly year for journalists as killings rose sharply in 2022", *Committee to Protect Journalists*, 24 January 2023.
- 159 Ibid, p. 19.
- 160 UNESCO, *Journalism is a Public Good: World Trends in Freedom of Expression and Media Development, Global Report 2021/20* (Paris, 2022).
- 161 Journalists who worked in cross-platform media includes journalists who worked regularly across different media, including: print/web; film; radio/print; radio/web; TV/radio; TV/print.
- 162 CI-22/COUNCIL.33/6 Rev. p.15.
- 163 CPJ data differ slightly from UNESCO data, but suggest the same overall trends in killings.
- 164 CI-22/COUNCIL.33/6 Rev. – page 36.
- 165 See United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), "More than 140 aid workers killed in 2021 as crises soar worldwide", press release, 12 August 2022.
- 166 The Aid Worker Security Database is a project of Humanitarian Outcomes.
- 167 For more information on the differences between intentional homicides and killings related to conflicts/wars, see chapter 2 of the present study.
- 168 Ibid p. 6.
- 169 See United Nations Relief and Works Agency for Palestine Refugees in the Near East, "UNRWA situation report #29 on the situation in the Gaza Strip and the West Bank, including East Jerusalem", 13 November 2023.
- 170 *Global Study on Homicide 2019*, Booklet 3, *Understanding Homicide* (United Nations publication, 2019).
- 171 Global Terrorism Database (GTD). Available at: <https://www.start.umd.edu/gtd/>.
- 172 For more information on the GTD methodology, see GTD, "Data collection methodology".
- 173 Global trends in terrorist killings in comparison with global trends in homicide and conflict-related deaths are discussed in chapter 2 of the present study.
- 174 The grouping follows the ICCS approach to building the additional disaggregation of intentional homicide by mechanism of killing (see ICCS, Table V, p. 104).
- 175 These include but are not limited to drugs, medicaments, biological substances, corrosive substances, pesticides, gases, vapours, carbon monoxide, hanging, strangulation, suffocation, drowning, submersion, explosive material, smoke, fire, flames, steam, hot vapours, hot objects, bodily force, sexual assault, other maltreatment and other unspecified means.
- 176 The 67 per cent figure represents the lower bound of estimates.
- 177 National Crime Records Bureau, Ministry of Home Affairs, Government of India, *Crime in India Reports 2005–2016*.
- 178 For South Korea, see South Korea, National Report on the Implementation of the United Nations Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All its Aspects (2008). For Japan, see Alleman, M., "The Japanese firearm and sword possession control law: translator's Introduction", *Pac. Rim L. & Poly*, vol. 9, No.1 (2000), p.165. For Singapore, see Small Arms Survey, and Non-Violence International Southeast Asia, "Legal controls on small arms and light weapons in Southeast Asia", 2001, p.8. Data on the estimated number of civilian-held firearms can be found at <https://www.smallarmssurvey.org/database/global-firearms-holdings>.
- 179 *Global Study on Homicide 2019*, Booklet 3 (United Nations publication, 2019).
- 180 UNODC homicide statistics., "Intentional homicide", dataUNODC.
- 181 See: Sanjurjo, D., *Gun Control Policies in Latin America* (New York, Palgrave Macmillan, 2020).
- 182 Data on the mechanism of killing in the two countries are available at the WHO Mortality Database.
- 183 See Gun Free South Africa (GFSA), "Gun massacres in SA: quick facts", 15 July 2022.
- 184 See Sanjurjo, D., *Gun Control Policies in Latin America* (New York, Palgrave Macmillan, 2020).
- 185 The studies were conducted in United States (9), United Kingdom (3), South Africa (1), South Korea (1) and Australia (1) and were mostly cross-sectional.
- 186 See Browne, K. D. et al., "Knife crime offender characteristics and interventions—A systematic review", *Aggression and Violent Behavior*, vol. 67 (November 2022).
- 187 See: Allen, G., Carthew, H. and Yayed, Y., "Knife crime in England and Wales: statistics", United Kingdom Parliament, House of Commons Library, 13 October.
- 188 Uchino, H., "The scourge of knife crime: trends in knife-related assault managed at a major centre in South Africa", *South African Journal of Surgery*, vol. 58, No. 3 (January 2002), pp.150–153.
- 189 See Amman, M., Burnette A. G. and Crowley, B. Z., "A review of mass stabbing attacks between 2004 and 2017", *Journal of Threat Assessment and Management*, vol. 9., No.2 (March 2022), p.111.
- 190 See National Firearms Commerce and Trafficking Assessment (NFCTA), *Crime Guns Recovered and Traced Within the United States and Its Territories* (2023).
- 191 Walsh, J., "U.S. bought almost 20 million guns last year — second-highest year on record", *Forbes*, 5 January 2022.

- 192 "Time-to-crime" is the time from the last known retail sale of a firearm to when it is recovered in a crime.
- 193 Publicly available data on homicides perpetrated with firearms go back to 2005.
- 194 Goldstick, J. E., Cunningham, R. M. and Carter, P. M. "Current causes of death in children and adolescents in the United States", *New England Journal of Medicine*, vol. 386, No. 20 (May 2022).
- 195 Johns Hopkins Center for Gun Violence Solutions, *A Year in Review: 2020 Gun Deaths in the U.S.* (John Hopkins, 2022); Centers for Disease Control and Prevention (CDC), National Center for Health Statistics, "The record increase in homicide during 2020", podcast, 8 October 2021. The association between firearm availability and homicide is contested in the literature (see, for example, Hepburn, L. M. and Hemenway, D., "Firearm availability and homicide: a review of the literature", *Aggression and Violent Behavior*, vol. 9, No. 4 (July 2004); Schleimer, J. P. et al., "Firearm purchasing and firearm violence during the coronavirus pandemic in the United States: a cross-sectional study", *Injury Epidemiology*, vol.8, No. 43 (July 2021)). However, there is consensus that firearm accessibility in the home is a risk factor for domestic homicides (see Anglemeyer, A., Horvath, T. and Rutherford, G., "The accessibility of firearms and risk for suicide and homicide victimization among household members: a systematic review and meta-analysis," *Annals of Internal Medicine* 2014 (January 2014), pp. 101–110).
- 196 In the study, violence-related firearm injuries include both fatal and non-fatal ones.
- 197 Schleimer, J. P. et al., "Firearm purchasing and firearm violence during the coronavirus pandemic in the United States: a cross-sectional study", *Injury epidemiology*, vol .8, No. 43 (July 2021).
- 198 Schneider, R., "Fewer guns, less crime: evidence from Brazil", *Economic Policy*, vol. 36, No. 106 (2021), pp. 287–323.
- 199 Wilson Center, "Homicides are down in Brazil. But it's not time for a victory lap", *The Brazilian Report*, 14 March 2023.
- 200 *Global Study on Homicide 2019*, Booklet 3 (United Nations publication, 2019), p.86.
- 201 See chapter 2 of the present study.
- 202 See Swedish National Council for Crime Prevention (Brå), *Shootings in Criminal Milieux* (Sweden, 2019).
- 203 See Duquet, N. and Vanden Auweele, D., *Targeting Gun Violence and Trafficking in Europe* (Flemish Peace Institute, 2021).



# CHAPTER 5

# CRIMINAL JUSTICE SYSTEM RESPONSE



## Chapter 5

# CRIMINAL JUSTICE SYSTEM RESPONSE

---

### Introduction

To assess the effectiveness of the state response to violence, it is important to understand how many suspects are arrested, prosecuted, convicted and detained for intentional homicide. To shed light on this process, this chapter provides an overview of the latest trends in the number of people at different stages of the criminal justice process in relation to intentional homicide, from those brought into formal contact with the police for intentional homicide to those prosecuted, convicted and detained for the crime. In addition to the human resources allocated to the criminal justice system, the chapter also discusses the impact of the COVID-19 pandemic, which seems to have primarily impacted homicide convictions.

There is always a form of attrition when a crime passes through the criminal justice system as the number of people and cases decreases at each stage of the process. When moving from one stage to another, some cases and suspects are not pursued for different reasons, such as a lack of physical evidence or witnesses, which may make it impossible to identify a suspect for a given crime and proceed with a prosecution.

Measuring the number of people at each stage of the criminal justice system is challenging since it requires data from multiple agencies, including law enforcement, prosecution and courts. Ideally, case records should be linked throughout the criminal justice system, but this is not always possible or permitted. As a result, there may be discrepancies between the different institutions, leading to statistical gaps. For example, a crime classified as involuntary manslaughter by a law enforcement agency may be reclassified as murder by the public prosecutor's

office. Moreover, someone arrested in one year may be prosecuted in the following year and convicted a year later, or sometimes many years later, making the accurate measurement of the percentage of suspects found guilty a challenge. Finally, recording practices may differ between institutions, some recording and reporting an event when an investigation starts and others when it ends.

Despite these challenges, information about the number of individuals arrested, prosecuted and eventually convicted for homicide compared with the number of victims can provide valuable insights into the capacity of the criminal justice system to respond to the crime and the resources required to handle homicide cases. For example, if there is a high attrition rate at the prosecution stage, meaning that many cases do not make it to prosecution, it may indicate that prosecutors need greater resources or training if they are to build strong cases.

Homicides that do not lead to the arrest of a suspect, a prosecution or a conviction increase impunity, which may be a symptom of a weak rule of law. However, a high level of impunity may also be attributed to the predominant type of homicide in a country, with homicides linked to organized crime or other crimes being more difficult to solve than other types. Impunity may also be the result of high crime rates overstressing the capacities of law enforcement agencies and other institutions within the criminal justice system, making it challenging to investigate and process homicides effectively.

Although regional and global averages mask striking differences between countries, countries in the Americas generally have a lower percentage of homicides that lead to the identification and prosecution of a suspect



and the conviction of the perpetrator than countries in other regions. Many factors could explain this, one being the high homicide rate in the Americas, which stretches the capacity of the criminal justice system to investigate and prosecute homicides. Another is the large share of intentional homicides committed by gangs and organized crime groups, which is characteristic of the Americas. Such homicides are difficult to investigate, whereas most homicides in other regions tend to be interpersonal homicides, making it easier to identify a suspect and collect evidence than if they were crime related. In countries where organized crime is widespread, police corruption and political interference may hamper prosecution and sentencing, which may lead to a decrease in the number of successful investigations and prosecutions related to organized crime.<sup>1</sup>

Furthermore, discrepancies in the average number of victims per homicidal offence across regions may account for regional disparities in the number of prosecutions and convictions. For example, homicidal offences perpetrated with a firearm have been found to be more likely to involve multiple victims in domestic settings than those involving other mechanisms (with a single perpetrator),<sup>2</sup> but the available data do not allow the impact of this variability to be assessed. Such disparities may indicate varying approaches in the investigation, prosecution and conviction processes of homicide in different countries.

## Suspects brought into formal contact with the police for intentional homicide

### Type of homicide

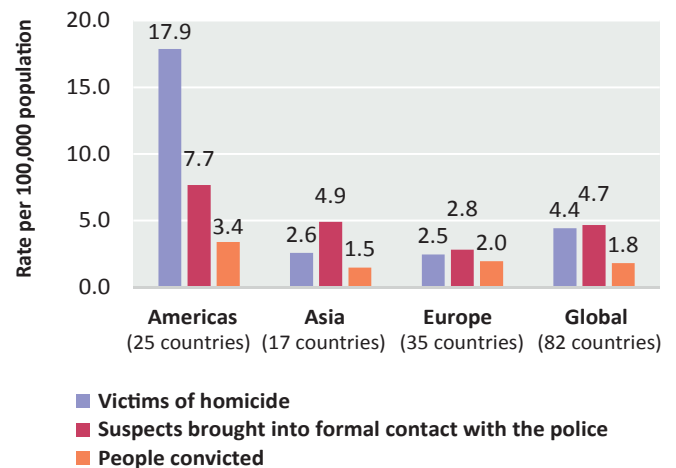
Unlike other crimes, which may often go undetected, the vast majority of homicides come to the attention of police forces. Nonetheless, the severity of homicide does not mean that suspects are identified in all cases. Studies have shown that different factors impact the homicide clearance rate, meaning the percentage of homicide offences for which law enforcement successfully identifies a suspect.<sup>3</sup> An analysis of the homicide clearance rate in Boston, United States of America, for example, suggested that gang- and drug-related homicides are less likely to be cleared than other homicides.<sup>4</sup> A study on homicide clearance rates in four European countries, Finland, the Kingdom of the Netherlands, Sweden and Switzerland, found that homicides perpetrated in a public setting were significantly more difficult to clear than those perpetrated in a private setting, except in Switzerland, where due to the very small proportion of unresolved cases, the difference remained insignificant.<sup>5</sup> The same study also showed that the clearance rate for homicides committed in a criminal milieu and in the context of robbery in the Kingdom of the Netherlands and Sweden was lower than for other types of homicide.

Another study of homicide clearance in Italy found that the sex of the victim was the only victim characteristic to affect homicide clearance, unlike other factors such as the nationality, socioeconomic status and previous criminal record of the victim. The study also found that the police were more effective at solving homicides with a female victim and that homicides that took place in a criminal environment had a lower clearance rate.<sup>6</sup>

## Region

When comparing the homicide rate with the rate of suspects brought into formal contact with the police for homicide, global data show different regional patterns (figure 1). In Asia and Europe, the number of suspects brought into formal contact with the police for intentional homicide exceeded the number of victims, suggesting that in many cases more people were suspected, arrested or cautioned than there were victims. In 2021, 19 suspects were brought into formal contact with the police for every 10 homicide victims in Asia, while the ratio was 11 to 10 in Europe.<sup>7</sup> In the Americas, the region with the highest homicide rate worldwide, only slightly more than 4 suspects were brought into formal contact with the police for every 10 homicide victims. However, since some homicide investigations are not successful and do not lead to the identification of a suspect, the number of suspects per successful homicide investigation could be even higher. Comparisons of these ratios should be made with caution, however, since criminal codes do not tend to distinguish between attempted and committed homicides, and it is possible that some of the convictions reported by countries include people convicted for attempted homicide.

**FIG. 1** Rates of homicide, suspects brought into formal contact with the police and people convicted of homicide per 100,000 population, selected regions, 2021 or latest year available



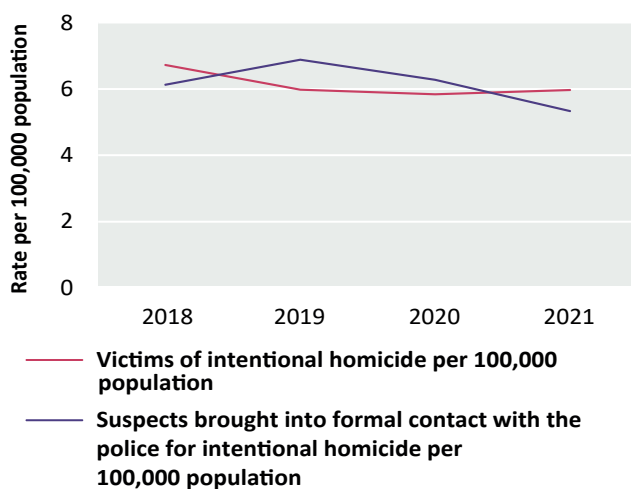
Source: UNODC homicide statistics.

Note: Average of countries with data weighted by population. Global figure is an aggregate of all countries with data, including three countries in Africa and two in Oceania.

Data from 82 countries for 2021 or the latest year available, show that for every 10 homicide victims globally, four suspects are convicted of homicide, although there are also notable differences between regions. For every 10 homicide victims, 8 suspects are convicted in Europe, around 6 are convicted in Asia, while fewer than 2 are convicted for every 10 homicide victims in the Americas. These regional patterns are not new and have not changed dramatically since 2016,<sup>8</sup> suggesting that impunity for homicide is higher in the Americas overall than in the other two regions. Although this comparison gives an overall picture of the attrition rate in the criminal justice system in different regions, it may hide differences across countries.<sup>9</sup>

Similar to the number of victims of intentional homicide, the number of homicide suspects brought into formal contact with the police is relatively stable over time. Data from 51 selected countries for the period 2018–2021 show no apparent impact of the COVID-19 pandemic in 2020 on the average number of suspects brought into formal contact with the police (figure 2). Although the average rate of suspects brought into formal contact with the police for homicide in the 51 countries was lower in 2020 than in 2019, it was still slightly higher than in 2018. This was in contrast to trafficking in persons offences, for which the number of suspects brought into formal contact decreased markedly in 2020.<sup>10</sup> Nevertheless, the average rate of suspects brought into formal contact with the police for intentional homicide in the 51 countries decreased from 6.3 per 100,000 population in 2020 to 5.3 in 2021 (figure 2), mostly driven by countries of the Americas.

**FIG. 2** Average rates of homicide and suspects brought into formal contact with the police per 100,000 population in selected 51 countries, 2018–2021



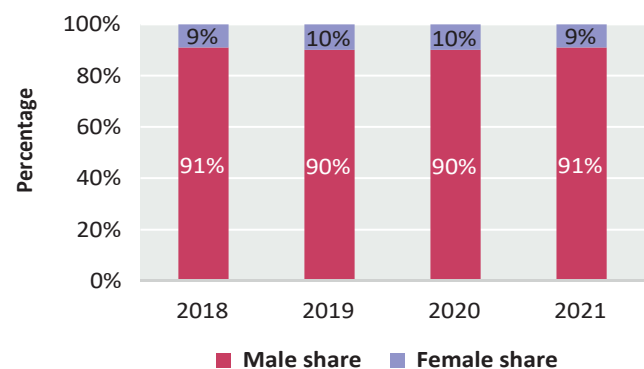
Source: UNODC homicide statistics.

Note: Based on complete time series data from 51 countries for the period 2018–2021, including 27 in Europe, 15 in the Americas, 7 in Asia, 1 in Africa and 1 in Oceania. Simple averages of countries with data. The rates are slightly different from the previous graph as the sample and weighting of countries is different.

## Sex of suspects

Men and boys account for the vast majority of both the victims and perpetrators of intentional homicide worldwide. As seen in chapter 2 of the present study, 81 per cent of the victims of intentional homicide worldwide in 2021 were men and boys. Similarly, roughly 9 out of 10 suspects brought into formal contact with the police for intentional homicides in 2021 were male. This share has remained stable over time, as shown by data from 50 countries on offenders disaggregated by sex for the period 2018–2021 (figure 3).

**FIG. 3** Share of male and female suspects brought into formal contact with the police for intentional homicide in 50 countries, 2018–2021



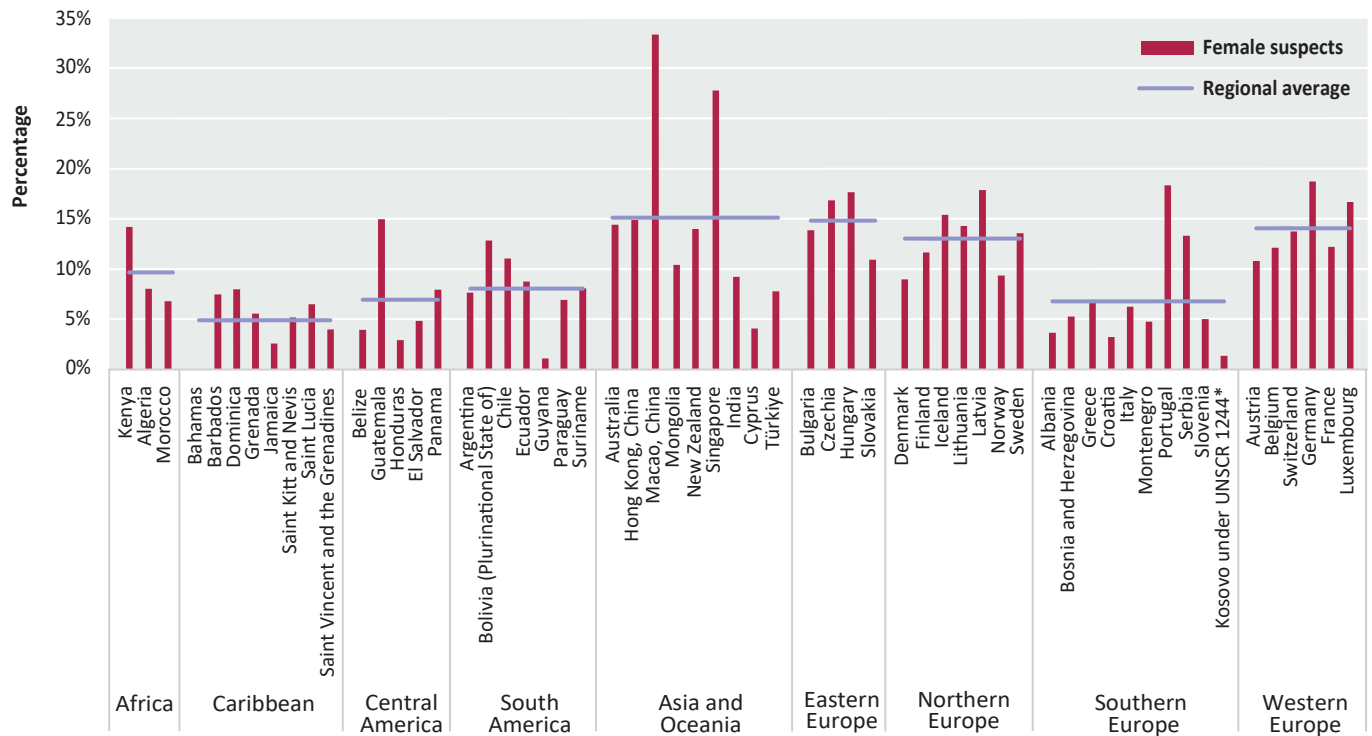
Source: UNODC homicide statistics.

Note: Based on complete time series data from 50 countries for the period 2018–2021, including 26 in Europe, 16 in the Americas, 6 in Asia, 1 in Africa and 1 in Oceania.

Although women account for a clear minority of homicide suspects across the world, there are some noteworthy differences between regions and subregions. Countries in Central America and the Caribbean, which have a high level of homicidal violence caused by organized criminal groups, gangs or other criminal activities, have small shares of female homicide suspects. For example, in eight countries in the Caribbean with data for 2020 and 2021, an average of 5 per cent of homicide suspects were women, with the smallest share being in the Bahamas, where all 148 suspects brought into formal contact with the police for intentional homicide were male. In Central America, the average female share was even smaller than in the Caribbean, at 7 per cent. By contrast, in countries with data in Asia, Oceania and Eastern Europe, an average of 15 per cent of homicide suspects were women in 2020 and 2021. In Singapore, more than 1 in 4 homicide suspects brought into formal contact with the police were women and in Hungary, women accounted for almost 1 in 5.

Interestingly, in countries in Southern Europe, although levels of homicidal violence are similar to those in other European countries, the share of female suspects in 2020 and 2021 was much smaller, at 7 per cent, in countries where data were available, as opposed to an average of between 13 and 15 per cent in the other subregions of Europe (see figure 4).

**FIG. 4** Share of female suspects brought into formal contact with the police for intentional homicide in selected regions, 2020–2021



Source: UNODC homicide statistics.

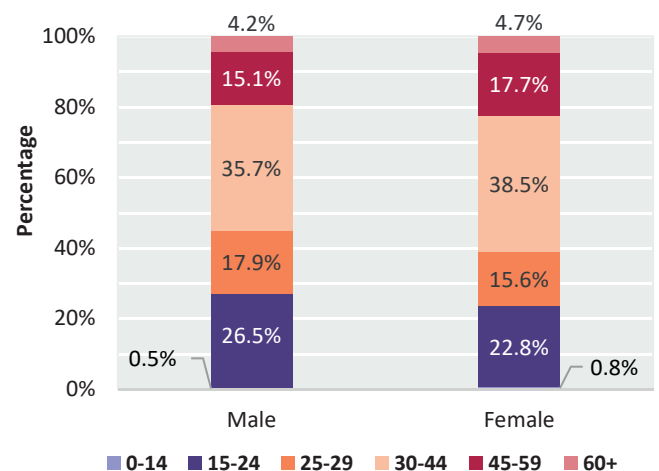
Note: Based on data from 59 countries for the years 2020–2021. Regional average refers to the average of countries with data weighted by the number of suspects. \* All references to Kosovo in the present study should be understood to be in compliance with Security Council resolution 1244.

### Age of suspects

In general, people brought into formal contact with the criminal justice system for intentional homicide are young. In 68 countries with data for 2021 or recent years, including 30 in Europe, roughly 44 per cent of suspects brought into formal contact for homicide were aged 15 to 29 – an age group making up 23 per cent of the global population – while only a very small minority were aged 60 or older. The average age of male and female homicide suspects brought into formal contact with the criminal justice system for intentional homicide was very similar, although female suspects tended to be slightly older than male suspects, with a larger percentage of them aged 30 or older.

A comparison of the Americas and Europe, the two regions with a sufficient number of countries with data, shows notable differences between the age of homicide suspects (figure 6). In 2021, although homicide offenders in Europe were older than in the Americas, in both regions there was a disproportionate share of offenders aged 15–29. This can be partially explained by the different age structure of the two regions, with countries having much younger populations in the Americas than in Europe. In 2021, 23 per cent of the population was aged 15–29 in the Americas compared with 16 per cent in Europe.<sup>11</sup>

**FIG. 5** Shares of male and female homicide suspects brought into formal contact with the criminal justice system for intentional homicide in 68 countries, by age, 2021 or latest year since 2017

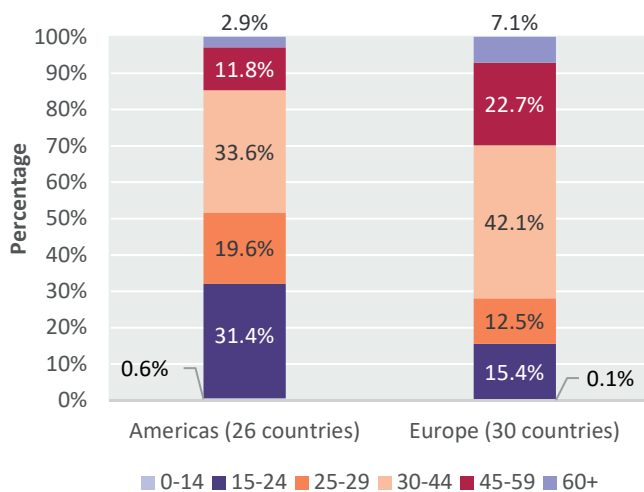


Source: UNODC homicide statistics.

Note: Average of countries with data weighted by the number of suspects by sex. Africa (2 countries), Americas (26 countries), Asia (9 countries), Europe (30 countries), Oceania (1 country).

Furthermore, the large share of organized crime- and gang-related homicides in the Americas may also contribute to lowering the region's average age of homicide suspects brought into formal contact with the criminal justice system for intentional homicide. This is because, although the leadership of organized criminal organizations may be older, the rank and file of drug trafficking factions, militia groups, street gangs and other criminal entities is typically made up of young men.<sup>12</sup> Indeed, in the 26 countries in the Americas with data, young males aged 15–29 accounted for some 47 per cent of suspects brought into formal contact with the criminal justice system for intentional homicide in 2021, yet for just 12 per cent of the total population of the Americas.<sup>13</sup>

**FIG. 6** Shares of suspects brought into formal contact with the criminal justice system for intentional homicide in the Americas and Europe, by age, 2021 or latest year since 2017



Source: UNODC homicide statistics.

Note: Average of countries with data weighted by the number of suspects.

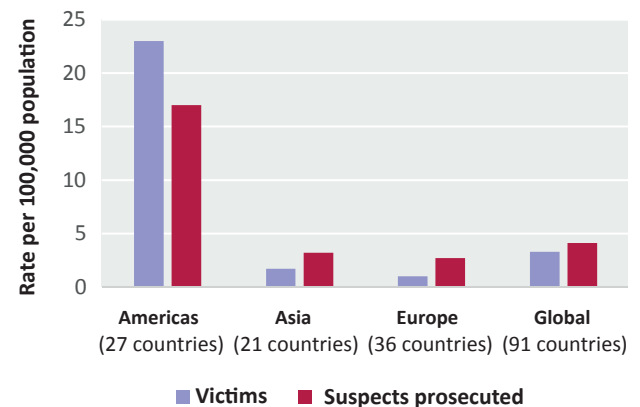
## Homicide prosecutions

Following the identification and arrest of a homicide suspect, a case is forwarded to the public prosecutor, who decides whether to press charges. Just as more than one person can be charged for the same offence, one person can be charged for more than one offence. Indeed, in the 91 countries with data on suspects prosecuted in 2021 or a recent year, 4.1 per 100,000 population were prosecuted for intentional homicide for every 3.3 victims. It is possible, however, that data on homicide prosecutions reported by some of those countries included prosecutions for attempted intentional homicide, since this offence may not be distinguishable from intentional homicide in their criminal code.

Notable differences can be observed at the regional level. In the 27 countries in the Americas with data, where there

is a high level of homicidal violence, for every 4 homicide victims, 3 suspects were prosecuted. At the opposite end of the spectrum, in the 36 countries in Europe with data, where there are far fewer homicide victims per capita, for every 4 victims, 11 suspects were prosecuted, and for every 4 victims in Asia, almost 8 suspects were prosecuted. The smaller number of suspects prosecuted per victim in the Americas could stem from the fact that the most prominent type of homicide in the region is largely related to organized crime and other criminal activities and thus difficult to investigate.<sup>14</sup> By contrast, homicides in other regions tend mostly to be interpersonal, for which it is easier to identify a suspect and collect evidence.<sup>15</sup>

**FIG. 7** Rates of homicide and suspects prosecuted for intentional homicide per 100,000 population in selected regions, 2021 or latest year available

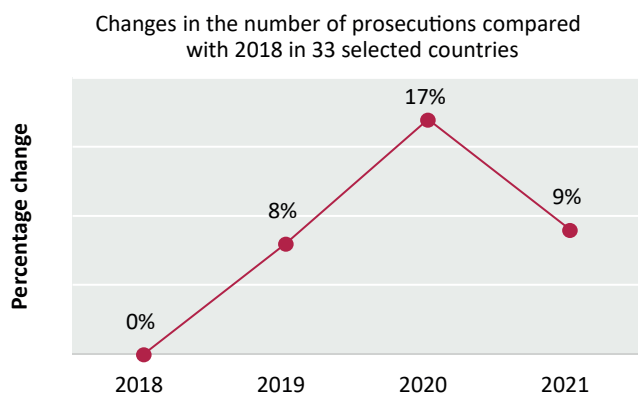


Source: UNODC homicide statistics.

Note: Average of countries with data weighted by population. The global figure includes five countries from Africa and two from Oceania. The difference from figure 1 in the rate of victims per 100,000 population is due to the sample of countries included in this figure.

The evolution of trends between 2018 and 2021 shows that the number of people prosecuted for intentional homicide remains relatively stable over time. Based on limited data from 33 countries, two thirds of them in Europe, the number of suspects prosecuted for intentional homicide did not seem to decrease during the COVID-19 pandemic. On average, the number of such prosecutions in this limited sample of countries actually increased by 17 per cent from 2018 to 2020, before decreasing slightly in 2021 (figure 8). Although large changes from one year to the next are mostly visible in countries with few intentional homicides, one notable exception is El Salvador, which recorded a decrease of 57 per cent in prosecutions for intentional homicide from 2018 to 2021, possibly stemming from the decrease in the number of homicide victims over the same period.<sup>16</sup> The state of emergency introduced by the Salvadoran Legislative Assembly in March 2022 to fight the gangs MS-13 and Barrio 18 may further impact prosecutions for homicide in the country.<sup>17</sup>

**FIG. 8** Average change in the number of prosecutions in 33 selected countries, 2018–2021



Source: UNODC homicide statistics.

Note: Based on data from 33 countries for the period 2018–2021. Africa (1 country), Americas (4 countries), Asia (5 countries), Europe (22 countries), Oceania (1 country). Simple average of countries with data.

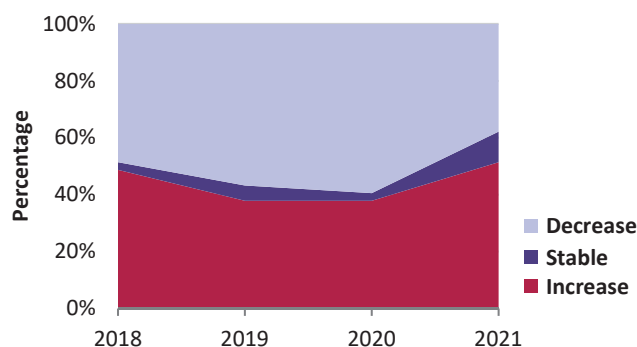
## Homicide convictions

If the public prosecutor decides to press charges, suspects are brought before a court where a judge or jury will decide whether they are guilty or not guilty. As shown above, when comparing the homicide rate, suspects brought into formal contact with the police for homicide and those convicted in different regions in 2021 or the latest year available (figure 1), the number of suspects convicted of intentional homicide is not necessarily proportional to the number of victims, highlighting the varying levels of impunity across regions. Indeed, in 17 Asian countries with data, 3 out of 10 suspects brought into formal contact with the police for intentional homicide were convicted in 2021, in 35 European countries with data, the figure was 7 out of 10, and in 25 American countries with data, it was slightly more than 4 out of 10.<sup>18</sup>

The number of convictions, like the number of prosecutions, varies from one year to the next, especially in countries with few homicides. Unlike in the case of prosecutions, however, the majority of countries with data (primarily in Europe) for the years 2017–2021 reported decreases in the number of convictions for intentional homicide in 2019 and 2020 and an increasing or stable number of convictions in 2021 (figure 9).

A decrease in the number of convictions can also be seen in the case of other crimes. A comparison of the number of convictions for intentional homicide with convictions for rape and drug trafficking in a small group of countries with available data shows that the number of convictions for all three offences was smaller in 2021 than in 2018 (figure 10). Specifically, despite a slight increase in 2021, there was an average of 20 per cent fewer convictions for intentional homicide in countries with data than in 2018.

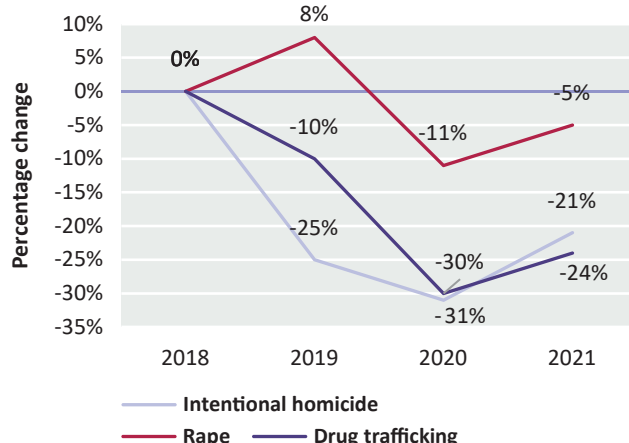
**FIG. 9** Share of countries that reported an increase, decrease or stable number of convictions for intentional homicide from the previous year, 2017–2021



Source: UNODC homicide statistics.

Note: Based on 37 countries with data for the period 2017–2021. Americas (6 countries), Asia (6 countries), Europe (24 countries), Oceania (1 country). Stable means the same number of convictions as in the previous years was reported.

**FIG. 10** Average change in convictions for different crimes in 32 selected countries, 2018–2021



Source: UNODC homicide statistics.

Note: Based on 32 countries with data for the period 2018–2021. Americas (6 countries), Asia (4 countries), Europe (21 countries), Oceania (1 country). Simple average of countries with data.

Although the annual number of convictions for intentional homicide seems to have decreased between 2018 and 2021, the number of intentional homicides and the number of people prosecuted for intentional homicide has remained stable or even increased. This could mean there was a backlog of pre-trial detainees for intentional homicide in the small group of countries with such data.<sup>19</sup> Indeed, the number of unsentenced prisoners held for all types of crime increased between 2019 and 2021, while the total number of prisoners decreased over the same time period.<sup>20</sup> As highlighted by Sustainable Development Goal target 16.3, which is focused on promoting the rule of law and ensuring equal access to justice for all, the number of pre-trial (“unsentenced”) detainees needs to be limited if unnecessary detentions are to be avoided.



## Prisoners held for intentional homicide

If convicted, intentional homicide offenders serve their sentence in prison. Roughly 11 per cent of the prison population of 91 countries with data were being held for intentional homicide in 2021. Given that there were more than 11 million people in prison worldwide in 2021,<sup>21</sup> this means that more than 1 million prisoners could have been serving time for intentional homicide in 2021, a number larger than the population of 37 different United Nations Member States. Even if slightly lower, this still represents a significant number of people requiring long-term prison facilities and, depending on their sentence, reintegration into society.

The number of prisoners held for homicide per 100,000 population is related to the number of homicide convictions per 100,000 population (figure 1), with countries in the Americas with a high conviction rate also having a large number of detainees in prison for homicide. In 91 countries with data, 40 of them in Europe, roughly 26 people per 100,000 population were in prison for intentional homicide in 2021, although this varied significantly across regions.

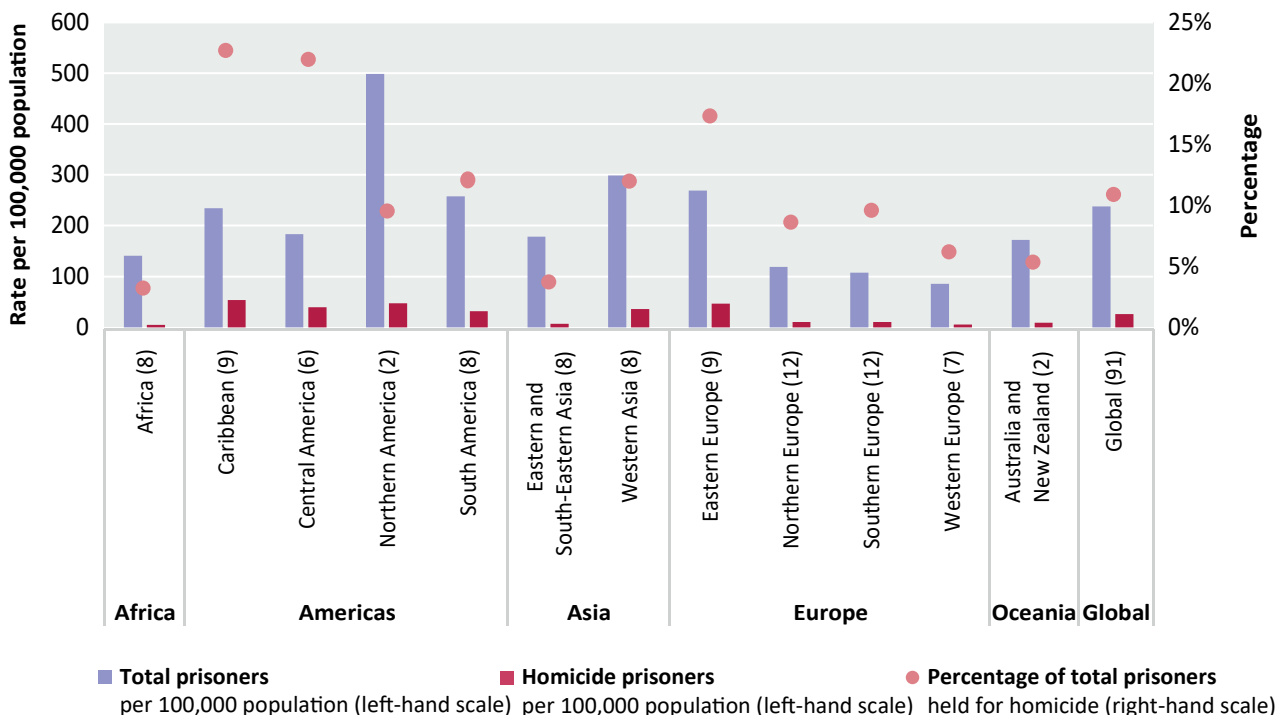
In the Americas in 2021, in the nine countries in the Caribbean with data, 53 people per 100,000 population were

in prison for intentional homicide, more than twice the global rate, while in Central America the rate was 39 per 100,000 population; in both regions, more than 20 per cent of detainees were in prison for intentional homicide. In Northern America, 47 people per 100,000 population were in prison for homicide, surpassing the global average, but since Northern America also had the highest total number of prisoners per 100,000 population, at almost 500, prisoners held for intentional homicide represented less than 10 per cent of the total prison population.

In Europe, there was a marked difference between countries in Eastern Europe and in other subregions, with both the total number of prisoners and of prisoners held for homicide per 100,000 population in 2021 being higher in countries in Eastern Europe, particularly in the case of those held for homicide. Consequently, the percentage of prisoners held for homicide in the total prison population in Eastern European countries was 17 per cent, as opposed to 10 per cent or under in countries in the other European subregions.

In Oceania, Australia and New Zealand had a similar rate of prisoners held for homicide as Northern, Southern and Western Europe, but a higher total rate of prisoners, meaning that, at 5 per cent, Australia and New Zealand had a smaller share of prisoners held for homicide than countries in Europe in 2021.

**FIG. 11** Rate of prisoners detained per 100,000 population, rate of prisoners detained for homicide per 100,000 population and percentage of prisoners convicted of homicide, as a percentage of total prisoners, in selected regions, 2021 or latest year available



Source: UNODC homicide statistics.

Note: Regional and global figures are averages of countries with data weighted by population. Number of countries in brackets.



Finally, based on data from eight countries in Western Asia, at 36 per 100,000 population, the rate of prisoners held for homicide in that subregion was higher than the global average. However, the total rate of prisoners held per 100,000 population was only slightly higher than the global rate, resulting in a share of 12 per cent of all prisoners being held for homicide. The lack of data in other subregions in Asia makes it difficult to draw further conclusions in the region; the same can be said for Africa.

### Criminal justice personnel

A well-funded criminal justice system is crucial for combating crime and violence, and its most valuable asset is its personnel. The exact roles of criminal justice personnel depend on the legal system and the cultural norms and practices of each country. The structure and functions of criminal justice systems can differ from country to country, as can the roles of police officers, prosecutors, judges and prison officers. Disparities between countries in the per capita count of such personnel may be explained by the different scope of their work within their national criminal justice system.

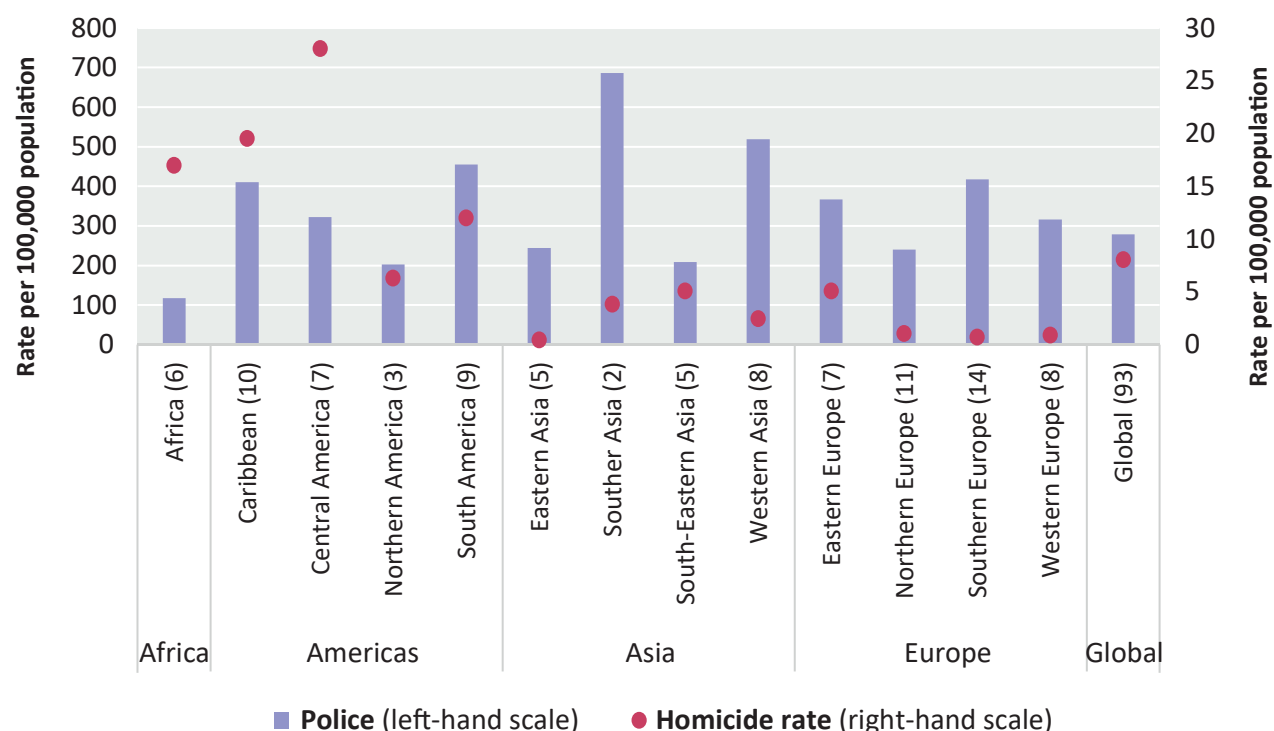
When looking at criminal justice systems in the different regions, identifying any clear relationship between the number of criminal justice personnel and the homicide

rate is difficult. For example, although the rate of police personnel per 100,000 population in countries in the Caribbean, Central America and South America is similar to that in countries in other regions, the homicide rate is significantly higher than in countries in other regions. By contrast, in countries in Northern Europe with fewer police personnel per 100,000 population than in countries in most of the other regions, the homicide rate is lower than in countries in most other regions (figure 12).

Intentional homicide is the most violent of crimes and is much more likely to be reported to the police than other crimes. As such, intentional homicide serves as a useful indicator of the overall level of violence in a country. Countries in the Caribbean, Central America and South America with a high level of homicidal violence primarily driven by the presence of organized crime and gangs do not have a much higher rate of police personnel than elsewhere.<sup>22</sup> Consequently, the number of homicide cases per police officer is larger in those regions than in the rest of the world. Since homicides can be used as a proxy for the overall level of violence in a region, this may indicate that law enforcement has a heavier workload in the Caribbean, Central America and South America than in other parts of the world.

In general, the police is the criminal justice system institution with the smallest share of female personnel. Women accounted for just 17 per cent of police personnel in the 84

**FIG. 12** Rates of police personnel and homicide per 100,000 population in selected regions, 2021 or latest available year

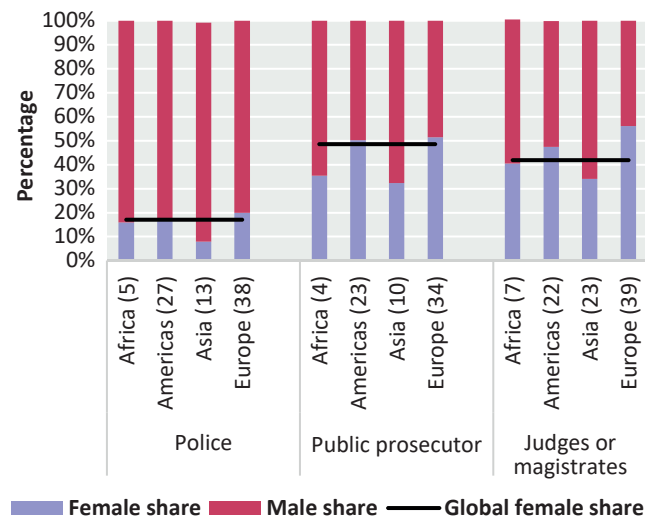


Source: UNODC homicide statistics.

Note: Regional and global figures are averages of countries with data weighted by population. Number of countries in brackets.

countries with data in 2021 (figure 13), the share being particularly small in the 13 countries in Asia that reported data, where women made up just 8 per cent of police personnel.

**FIG. 13** Average share of women in the criminal justice system in selected regions, 2021 or latest year since 2015



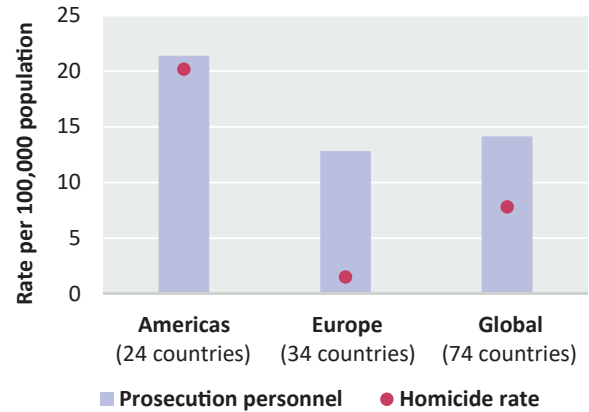
Source: UNODC homicide statistics.

Note: Regional and global shares are based on unweighted average shares in countries with data. The global female shares of police and judges or magistrates include one country from Oceania. Number of countries in brackets.

The rate of prosecution personnel per capita was higher in the 23 countries in the Americas with data in 2021 than in the other countries with data (figure 14). As noted earlier (figure 7), the number of people prosecuted for intentional homicide is significantly higher in countries with data in the Americas than in the countries with data in other regions, partially reflecting the higher level of homicidal violence in the Americas. This could also mean that prosecution personnel have a heavier workload in the Americas than in other regions, and thus less time to build a case and bring suspects to court, although the scope of the remit of prosecution personnel depends on countries<sup>23</sup> and this may explain some of the differences between regions. Women make up roughly half of prosecution personnel in both the Americas and Europe, but account for a smaller share in countries with data in other regions, where they make up around one third of prosecution personnel stands (see figure 13).

With 19 judges or magistrates per 100,000 population in 2021, the rate of judges per 100,000 was higher in Europe than in other regions, although it had dropped since 2008. By contrast, in the 23 countries in the Americas with data, the number of judges or magistrates per 100,000 population was just 3.5, despite the higher crime rates in those countries. Across the 87 countries with available data, including 40 in Europe, the number of judges per 100,000 population decreased from 12.4 in 2008 to 9.3 in 2021, which can be explained in part by population growth over the timeframe.

**FIG. 14** Rates of prosecution personnel and homicide per 100,000 population in selected regions, 2021 or latest year since 2015



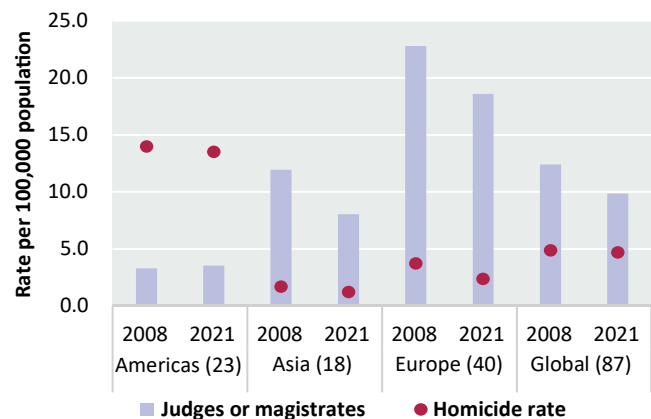
Source: UNODC homicide statistics.

Note: Regional and global figures are aggregates of countries with data. Global figure includes 5 countries in Africa and 11 in Asia. Homicide rates are different from other figures due to the different sample of countries.

This means that, the number of judges or magistrates in the 87 countries with data decreased from roughly 400,000 in 2008 to 320,000 in 2021, while the number of homicides decreased only slightly in the same countries.

A large part of the decline in the number of judges can be explained by a decline in China, which carried out a reform that clarified the role of judges and other administrators and officials during that period and saw its number of judges decline by 70,000. The share of women among professional judges and magistrates was about 40 per cent in the 92 countries with data at the global level. Similar to the case of police and prosecution personnel, the smallest share of women was in the countries with data in Asia, while the largest share was in those in Europe (see figure 13).

**FIG. 15** Judges or magistrates per 100,000 population in selected regions in 2008 and 2021



Source: UNODC homicide statistics.

Note: Regional and global figures are averages of countries with data weighted by population. Global figure includes five countries in Africa and two in Oceania. The column 2008 refers to 2008 or the earliest year between 2009 and 2014, and the column 2021 refers to 2021 or the latest year between 2015 and 2020. Number of countries included in brackets. Homicide rates are different from other figures due to the different sample of countries.

In summary, the data highlight that there is a smaller number of criminal justice personnel in the Americas than in other regions relative to the level of homicidal violence. Furthermore, it is impossible to discern a clear relationship between the quantity of criminal justice personnel and the homicide rate across regions. Homicide rates are influenced by a complex

interplay of factors including socioeconomic conditions, cultural dynamics, the presence of drug production and trafficking and other factors. Therefore, analysis of the effectiveness of the criminal justice system goes beyond simply considering the number of personnel and available resources.

## Homicide: a mental health perspective

For decades, research has indicated that mental health challenges, including childhood deprivation and neglect, abuse, intellectual disability, cognitive impairment and mental illness, can affect an individual's propensity to commit violent crime, including homicide.<sup>24, 25</sup> There is also evidence that adverse childhood experiences such as sexual, physical and psychological abuse significantly increase the likelihood of an individual developing mental illnesses in adulthood and the risk of committing violent crime.<sup>26</sup> Based on this line of thought, the "criminal careers perspective" seeks to explain the causes of criminal behaviour, in particular sequential offending committed over a long period of time.<sup>27</sup> Early antisocial behaviour, poor social skills for interacting in the community, a low level of education, early onset of offending and growing up in an environment with poor parental child-rearing practices are considered to be predictors of participation in offending.<sup>28</sup> This suggests there is an association between early-life trauma, an individual's propensity to develop mental health issues in adulthood and the risk of engaging in violent criminal behaviour. These pathways can play out with grim predictability; for instance, research has shown that individuals found guilty of sexual abuse are likely to have been victims of sexual abuse as children.<sup>29</sup>

Continued global disparities in income and between social groups hinder equitable access to mental health resources.<sup>30</sup> According to a study conducted in the United States focusing on individuals aged 60 and above, socially disadvantaged groups, including ethnic and racial minorities and low-income patients, tend to utilize mental health services less frequently than others.<sup>31</sup> The COVID-19 pandemic exacerbated these challenges, while coinciding with an escalation of mental health challenges, including loneliness and alienation, depression and self-harm. At the same time, there was a sharp increase in incidents of interpersonal violence, including intimate partner violence.<sup>32</sup>

Given this context, the criminal justice system needs to adapt if it is to provide more effective support for individuals facing mental health issues in order to reduce the risk of homicide and better equip those facing such adversity to navigate the legal system. Recent research conducted in India and elsewhere can provide valuable insights into this challenge.

### Mental health and violent crime: the cycle of marginalization

Among the most well-studied determinants of the commission of violent crime are mental illness,<sup>33</sup> poverty<sup>34</sup> and inequality.<sup>35</sup> Mental illness is not only a risk factor for committing violent crime, however, as patients suffering from mental illness may also be more likely to fall victim to homicide than the general population, as suggested by a study conducted in England

and Wales, United Kingdom of Great Britain and Northern Ireland, between 2003 and 2005.<sup>36</sup>

The link between violent crime and mental health has been well-documented in different regions. Childhood exposure to stress and trauma can directly affect healthy brain development, resulting in behavioural issues during adolescence and aggressive behaviour during adulthood, weakened social attachment and increased emotional reactivity.<sup>37</sup> Adverse childhood experiences are also associated with early initiation of substance abuse, lower levels of educational achievement and poor participation in the workforce, thereby escalating the risk of violence.<sup>38</sup>

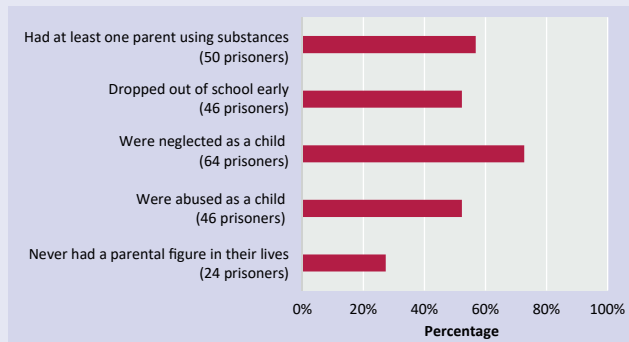
A recent study in India indicated that the intersections between poverty, social exclusion and mental illness are key to understanding the pathways to violent crime, including homicide. During the period 2016–2018, Project 39A, a criminal justice programme at the National Law University of Delhi, India, conducted a study based on interviews with prisoners on death row in the country for charges related to homicide, among other crimes.<sup>39</sup> The 88 interviewees represented one fifth of the prisoners on death row in India.<sup>40</sup> In addition, the interviewers conducted an assessment using psychometric tools and clinical interviews to estimate the extent of intellectual disability and mental health concerns among the prisoners. The three most striking findings of the study concerning people convicted of violent crime were: (a) the near-ubiquity of deprivation, abuse and other negative life experiences in the prisoners' backgrounds, (b) widespread intellectual disability and cognitive impairment among the prisoners, much of it originating in childhood and most of it unaddressed during their encounters with the legal system, and (c) the high rate of psychiatric disorders among the interviewees.

According to official statistics, mentally ill prisoners in India accounted for around 1.7 per cent of the total prison population, amounting to some 9,000 mentally ill inmates out of the roughly 550,000 inmates overall in the country in 2021.<sup>41</sup> This seems a small share, but there is lack of information regarding the process and timing of mental health diagnoses and it is not clear whether mental health-care services are available in all prisons in India.

Numerous studies have demonstrated that children from socioeconomically disadvantaged communities face a higher risk of violent behaviour later in life than others.<sup>42</sup> The findings from the interviews conducted in the Project 39A study appear to confirm this hypothesis: 24 of the 88 prisoners had never had a parental figure in their lives; 46 had been abused as children; 64 had been neglected; 46 had to drop out of school early; and 50 had at least one parent who had used substances (figure below).

## Homicide: a mental health perspective

### Proportion of prisoners with selected childhood issues interviewed as part of Project 39A, India



Source: Project 39A Study. Note: Percentages out of 88 prisoners.

Nine of the 83 prisoners (roughly 11 per cent) who consented to having their IQ assessed in the Project 39A study were diagnosed with intellectual disabilities, 63 prisoners had low intellectual functioning, 23 had borderline deficits in intellectual functioning, 32 had mild deficits and 13 had moderate deficits. Borderline/low intellectual functioning can mean that, without support, an individual may face barriers to reasoning, judgment formation, abstract thinking and decision-making, disabilities often seen as poor choices or bad or criminal behaviour, as observed in the Project 39A study.

Some 51 of the 82, prisoners for whom further clinical inquiry was undertaken for the purpose of diagnosis of mental health issues in the Project 39A study were diagnosed with at least one mental illness. This rate is far higher than that found in the overall Indian population, according to one of the lead experts involved in the study. The main psychiatric illnesses found were major depressive disorder (30 prisoners), generalized anxiety disorder (19 prisoners) and substance use disorder (18 prisoners).

Elsewhere, a study focusing on London, United Kingdom, has found that mental illness is more likely to be a key factor in homicide (29 of 50 cases) than the involvement of drugs (26) or gang-related factors (14).<sup>43</sup> The deterioration of mental health conditions plays a crucial role in the escalation of violence between the victim and suspect, according to this research. This includes “suspects missing scheduled check-up appointments with their mental health support team, reaching out for additional support but not getting access to it in time, or deciding to change their medication schedule without advice from a health professional”.<sup>44</sup> The study also found that specific mental health conditions such as acute polymorphic disorder, shared psychosis and paranoid schizophrenia posed a greater risk of homicide.

Moreover, a data analysis of 1,445 participants in the United States National Institute of Mental Health Clinical Antipsychotic Trials of Intervention Effectiveness Study in the mid-2000s, found that people with schizophrenia were twice as likely to commit violent acts if they had a history of childhood conduct problems (28 per cent) than if they did not (14 per cent).<sup>45</sup>

### Mental health: a growing crisis

These findings are particularly significant in the context of a growing mental health crisis globally. Between 1990 and 2019,

the global number of disability-adjusted life years (DALYs) attributable to mental disorders increased from 80.8 million to 125.3 million, and the proportion of DALYs attributed to mental disorders increased globally from 3.1 per cent to 4.9 per cent.<sup>46</sup> In recognition of the increase in mental disorders reported in the 2013 Global Burden of Disease Report, mental health was incorporated into the United Nations Sustainable Development Goals.

Recent events may have exacerbated the existing global mental health concerns. The COVID-19 pandemic had a multidimensional impact on people’s wellbeing, affecting their health, personal and social interactions, work life, finances and more, which has contributed a deterioration in mental health worldwide. In the initial year of the COVID-19 pandemic alone, the global prevalence of anxiety and depression surged by 25 per cent.<sup>47</sup> Stress, anxiety, depression, insomnia and anger are just some of the significant health issues that have been reported in studies.<sup>48</sup>

### Criminal justice responses and access to mental health

Examining the intersection between mental health and the criminal justice system and evaluating how the system addresses individuals facing mental health challenges can provide valuable insights into potential pathways to ensuring a fair and effective response to complex cases. The Project 39A study of death row prisoners in India highlighted the importance of democratizing access to mental health, while looking at the criminal and judicial systems through a mental health lens. Both intellectual disability and low intellectual functioning render individuals without adequate support vulnerable to harm within the criminal justice system. People with intellectual disability have a heightened risk of giving a false confession, especially when in court, where they are faced with challenging language and themes that may be inaccessible to them.

These considerations have broader implications as similar patterns have been observed worldwide. In line with the Sustainable Development Goals, universal access to mental health resources could have a far-reaching impact on the commission of violent crime, including homicide. However, addressing this issue requires careful consideration of the public stigma surrounding mental health, which may deter individuals from seeking help even when services are available.

Certain studies have indicated that addressing and treating mental health can reduce criminal activity. In the United States, an increase in the number of treatment facilities for drug use disorders has been associated with a reduction both in violent and financially motivated crimes. Similarly, the expansion of Medicaid healthcare coverage has been linked to a decrease in violent behaviour.<sup>49</sup> In Liberia, therapy has demonstrated its effectiveness in fostering greater patience and future-oriented behaviour among men involved in “low-skill” or illicit jobs, many of whom were former members of armed groups, which contributed to a decrease in crime rates among them.<sup>50</sup>

While poverty, deprivation, abuse and mental illness are considered mitigating factors in the justice system, the pathways for individuals navigating the system to communicate their experiences to criminal justice officials can often be poorly formed, leading to adverse consequences for these individuals. Adopting a universal mental health perspective could help to better safeguard their rights and due process.



## REFERENCES

- 1 Van Dijk, J., "Mafia markers: assessing organized crime and its impact upon societies", *Trends in Organized Crime* (2007), pp. 39–56.
- 2 Kivisto, A. J. and Porter, M., "Firearm use increases risk of multiple victims in domestic homicides", *J Am Acad Psychiatry Law*, vol. 48, No. 1 (March 2020).
- 3 Braga, A. A., Turchan, B. and Barao, L., "The influence of investigative resources on homicide clearances," *Journal of Quantitative Criminology*, vol. 35, No. 2 (2019), pp. 337–364.
- 4 Ibid.
- 5 Liem, M. et al, "Homicide clearance in Western Europe", *European Journal of Criminology*, vol. 16, No. 1 (March 2018).
- 6 Aziani, A. and Persurich, C., "Homicide clearance: discretionary and non-discretionary factors", *European Journal of Criminology*, vol. 20, No.3 (December 2022), pp. 947–972.
- 7 See the introduction to the present chapter for potential explanations.
- 8 For 2016 figures, see *Global Study on Homicide 2019* (United Nations publication, 2019), Booklet 2, figure 31.
- 9 It should also be noted that one perpetrator may kill more than one victim, and one victim may be killed by more than one perpetrator.
- 10 *Global Report on Trafficking in Persons 2022* (United Nations publication, 2022).
- 11 United Nations Department of Economic and Social Affairs (UNDESA), Population Division, "World population prospects 2022", 2022.
- 12 See Chávez, C., "What we know and what we don't know about youth gangs in Latin America", UNICEF, 27 September 2018; Jutersonke, O., Muggah, R. and Rodgers, D., "Gangs, urban violence and security interventions in Central America", *Security Dialogue*, vol. 40, No. 4/5 (August/October 2009), pp. 373–397.
- 13 UNDESA, Population Division, "World population prospects 2022", 2022.
- 14 For more details, see chapter 4 of the present study.
- 15 For more details, see introduction to this chapter.
- 16 For more information on recent trends in El Salvador, see chapter 4 of the present study.
- 17 El Salvador, Legislative Assembly of the Republic of El Salvador, Decree 333, El Salvador, 2022.
- 18 For factors influencing these differences, see the introduction to this chapter.
- 19 The postponement of court proceedings during the COVID-19 pandemic has been reported to have worsened the backlog of pre-trial detainees in some countries. See Thomson Reuters, "The impacts of the COVID-19 pandemic on state & local courts study 2021: a look at remote hearings, legal technology, case backlogs, and access to justice", Thomson Reuters Institute, 2021; Godfrey, B., Richardson, J. C. and Walklate, S., "The crisis in the courts: before and beyond COVID", *The British Journal of Criminology*, vol. 62, No. 4 (July 2022), pp. 1036–1053.
- 20 UNODC, "Data matters snapshot: global prison population and trends", 2023.
- 21 Ibid.
- 22 For more details, see chapter 4 of the present study.
- 23 Apart from their responsibility to dispose criminal cases for prosecution, prosecutors in every country play an important role in criminal investigations despite the differences in basic legal principles. In some countries, prosecutors have overall responsibility over an investigation, while in others they play a limited role in carrying out investigation. Asia and Far East Institute for the Prevention of Crime and the Treatment of Offenders, "Cooperation between the police and the prosecutors", in *Annual Report for 2001 and Resource Material Series No. 60*, part two ("Work product of the 120th International Senior Seminar: 'Effective administration of the police and the prosecution in criminal justice'"), p. 195.
- 24 Van Dorn, R., Volavka, J. and Johnson, N., "Mental disorder and violence: is there a relationship beyond substance abuse?", *Social Psychiatry and Psychiatric Epidemiology*, vol. 47, No. 3 (2012), pp. 487–503.
- 25 Von Cheong, E. et al., "Adverse childhood experiences (ACEs) and later-life depression: perceived social support as a potential protective factor", *BMJ Open*, vol.7, No.9 (2017); Varese, F. et al., "Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective- and cross-sectional cohort studies", *Schizophrenia Bulletin*, vol. 38, No. 4 (June 2012), pp. 661–671; Chapman, D. et al., "Adverse childhood experiences and the risk of depressive disorders in adulthood", *Journal Affective Disorders*, vol. 82, No. 2 (October 2004), pp. 217–25.
- 26 Varese, F. et al., "Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective- and cross-sectional cohort studies", *Schizophrenia Bulletin*, vol. 38, No. 4 (June 2012), pp. 661–671.
- 27 Gottfredson, M. R. and Hirschi, T., "The criminal careers perspective and an explanation of crime and a guide to crime control policy: the view from general theories of crime", *Journal of Research in Crime and Delinquency*, vol. 53, No. 3 (2016), pp. 406–419.
- 28 Farrington, D. P. and Hawkins J. D., "Predicting participation, early onset and later persistence in officially recorded offending", *Criminal Behaviour and Mental Health*, vol. 1 (1991), pp. 1–33.
- 29 Levenson, J. S., Willis, G. M. and Prescott, D. S., "Adverse childhood experiences in the lives of male sex offenders", *Sexual Abuse: A Journal of Research and Treatment*, vol. 28, No. 4 (June 2016).
- 30 Findings from a study of 17 low-middle- and high-income countries revealed low mental health care utilization despite documented high need: in each country, at least two thirds of individuals with common mental disorders went untreated. Furthermore, members of socially disadvantaged groups such as ethnic/racial minorities and low-income patients had lower mental health service utilization than members of advantaged groups (Alegria, M., Nakash, O. and NeMoyer, A, "Increasing equity in access to mental health: a critical first step in improving service quality", *World Psychiatry*, vol. 17, No.1 (February 2018), pp. 43–44). Less-developed countries in particular face a wide treatment gap, meaning most people with a mental disorder do not receive any treatment at all and often face isolation, discrimination and violations of their human rights (Kohn, R., "Treatment gap in mental health care", *Bulletin of the World Health Organization*, vol. 82, No. 11 (November 2004).
- 31 Jimenez, D. E., et al., "Disparities in mental health service use among racial/ethnic minority elderly", *Journal of the American Geriatrics Society (JAGS)*, vol. 6, No. 1 (December 2013), pp. 18–25.
- 32 Piquero, A. et al., "Domestic violence during Covid-19 pandemic: evidence from a systematic review and meta-analysis," *Journal of Criminal Justice*, vol. 74 (May–June 2021), pp. 1–10.
- 33 A study by Van Dorn, R. A. et al., for example, found that in a nationally representative community sample of 34,653 people from the National Epidemiologic Survey on Alcohol and Related Conditions, 2.9 per cent of people with serious mental illness had committed violent acts between two and four years following the study's baseline, compared with 0.8 per cent of people with no serious mental illness or substance use disorder. However, 10 per cent of people with both serious mental illness and substance use disorder committed such acts during that time.
- 34 Caruso, G. D., "Public health and safety: the social determinants of health and criminal behavior", *UK: Research Links Books* (October 2017).
- 35 Nivette, A. E., "Cross-national predictors of crime: a meta-analysis", *Homicide Studies*, vol. 15, No. 2 (April 2011), pp. 103–131. See also chapter 3 of the present study.
- 36 Rodway, C. et al., "Patients with mental illness as victims of homicide: a national consecutive case series", *The Lancet*, vol. 1, No. 2 (July 2014), pp. 129–134.
- 37 Sharma, E. et al, "Consortium on vulnerability to externalizing disorders and addictions (cVEDA): a developmental cohort study protocol," *BMC Psychiatry*, vol. 20, No. 2 (January 2020).
- 38 Fergusson, D., Swain-Campbell, N. and Horwood, J., "How does childhood economic disadvantage lead to crime?", *Journal of Child Psychology and Psychiatry*, vol. 45, No. 5 (July 2004).
- 39 Project39A, "Deathworthy: a mental health perspective of the death penalty", National Law University, Delhi, 2021.
- 40 Roughly 8,000 people are annually convicted of homicide in India, but the overturning of convictions during appeals is common. Statistics are not available, but see, for example; Deshpande, S., "Trial court orders

are overturned by high court in 90% of cases: lawyers", *The Times of India*, 10 November 2023.

- 41 National Crime Records Bureau Ministry of Home Affairs, Prison *Statistics in India 2021*, (Government of India, 2021).
- 42 Skinner, M. L., Elder, G. H. and Conger, R. D., "Linking economic hardship to adolescent aggression", *Journal of Youth and Adolescence*, vol. 21, No. 3 (June 1992).
- 43 Gadenne, V. et al., *Understanding Homicide: a Framework Analysis* (Mayor of London Violence Reduction Unit and the Behavioural Insights Team, November 2022).
- 44 Ibid.
- 45 Swanson, J. W. et al, "Alternative pathways to violence in persons with schizophrenia: the role of childhood antisocial problems", *Law and Human Behaviour*, vol. 32, No. 3 (June 2008).
- 46 GBD 2019 Mental Disorders Collaborators, "Global, regional and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study", *The Lancet*, vol. 9, No. 2 (February 2022).
- 47 World Health Organization, "Covid-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide," 2 March 2022.
- 48 Roy, A. et al., "Mental health implications of COVID-19 pandemic and its response in India", *International Journal of Social Psychiatry*, vol. 67, No. 5 (August 2021), pp. 587–600.
- 49 Bondurant, S., Lindo, J. M. and Swensen, I. D., "Substance abuse treatment centres and local crime", *Journal of Urban Economics*, vol. 104 (March 2018), pp. 124–133.
- 50 Latif Jameel Poverty Action Lab, "Reducing criminal behavior through cognitive behavioral therapy", April 2018.





**UNODC**

United Nations Office on Drugs and Crime



Vienna International Centre, PO Box 500, 1400 Vienna, Austria  
Tel: +(43) (1) 26060-0, Fax: +(43) (1) 26060-5866, [www.unodc.org](http://www.unodc.org)

With Goal 16 of the 2030 Agenda for Sustainable Development, Member States committed to significantly reducing all forms of violence and related death rates. As United Nations Secretary-General António Guterres underscored in the 2023 New Agenda for Peace policy brief, the scourge of violence has shaped the lives and livelihoods not just of those in armed conflicts.

To support Member States and the international community in efforts to prevent violence and strengthen responses, the fourth edition of the Global Homicide Study offers a comprehensive examination of intentional homicide trends and patterns around the world, and analysis of the complex dynamics behind the numbers. The study delves into different aspects of homicide, including the extent of intentional homicide in absolute numbers and rates. It highlights regional and subregional trends, demographics, age, and gender profiles of victims. It also explores the impact of the COVID-19 pandemic on homicide trends.

The analysis of homicide typologies is one of the main aspects of the Global Homicide Study, covering three categories: homicides related to criminal activities, interpersonal homicides, and socio-politically motivated homicides. A special section under chapter 4 examines how organized crime is driving homicide trends in Latin America and the Caribbean.

In addition, the study considers the impacts of megatrends such as climate change, ageing populations, inequality, urbanization and technological shifts, with the aim of providing insights into how these larger global developments may intersect with and influence homicide rates.

The Global Homicide Study also examines the criminal justice system's response to intentional homicide, seeking to identify areas for improvement and intervention.

The Global Study on Homicide 2023 is published on the UNODC website:

<https://www.unodc.org/unodc/data-and-analysis/global-study-on-homicide.html>

The data on homicide and criminal justice system response collected by UNODC are available on the Data Portal: <https://dataunodc.un.org/>



ISBN: 9789210030175



9 789210 030175