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Status report on road safety

in the WHO African Region

2023

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Foreword

Dr Matshidiso Moeti | WHO Regional Director for Africa

I am pleased to present the Status report on road safety 2023 for the African Region, which is both timely and demonstrates the urgent need for action.

This report highlights the increasing public health burden of road traffic injuries and fatalities in the Region. Road traffic deaths are becoming a significant problem in Africa, rising at a faster rate than in any other region. Fatalities increased by nearly one fifth in the decade from 2010 to 2021, with almost one quarter of a million people killed on Africa's roads within that decade.

Despite this alarming trend, there are positive signs of progress. Member States have implemented a number of measures to tackle the issue. More than one third of countries in the African Region have succeeded in reducing the number of road traffic deaths in the past 10 years. These successes provide valuable lessons for the Region, demonstrating that robust, multisectoral and evidence-based road safety interventions, along with effective implementation, can make a significant difference.

Africa's most vulnerable road users, such as motorcyclists, cyclists, and pedestrians, remain at high risk. The African Region has the highest proportion of pedestrian deaths, accounting for one third of global fatalities. This highlights the need for additional urgent action from all Member States to address these challenges comprehensively and protect the most vulnerable.

Sub-Saharan Africa is also the world's fastest urbanizing region. With a rapidly growing urban population, relying primarily on individual automobiles as the main mode of transport is simply not sustainable. However, this presents an opportunity to innovate and provide safe, affordable, and sustainable modes of transport, including public transport, for all.

As we confront these complex challenges, it is imperative to strengthen national road safety strategies, improve coordination mechanisms, and allocate adequate resources to support implementation. In addition, we must ensure equitable access to post-crash responses and rehabilitation services for everyone, regardless of their ability to pay.

The Status report on road safety 2023 for the African Region is a call to action and a reminder of the urgent need to prioritize road safety as a fundamental human right. Together, we can work tirelessly to turn these statistics into stories of lives saved, futures preserved, and thriving communities.

Acknowledgements

The WHO Regional Office for Africa gratefully acknowledges the contributions and collaboration of WHO staff and partners to the development of this Status report on road safety 2023 for the African Region.

Data collection for this report was made possible thanks to the invaluable support of WHO representatives and staff, who facilitated the work, Member-State government officials, who provided support and clearance for the information included in this report and national data focal persons and national data contributors, who participated in data collection and consensus meetings (see Annex 1).

Binta Sako coordinated and supervised the preparation of this report and also participated in the analysis and write-up, in collaboration with the regional data focal points, Eunice Chomi and Idrissa Talla. We also acknowledge the invaluable contributions of Maria Segui-Gomez, Kacem Iaych, Evelyn Murphy, Fangfang Luo, Chiara Retis and Mathew Taylor in the revision of the report.

Executive summary

Road traffic injuries are an increasingly serious public health concern in the WHO African Region, causing an estimated 225 482 deaths in 2021. Africa accounts for 19% of the global burden of deaths, despite having only 15% of the global population and owning merely 3% of the global vehicle fleet.

Since 2010, there has been a concerning 17% increase in fatalities in the African Region, the only WHO region to experience such a surge. However, 17 countries in the Region have managed to reduce fatalities by up to 49%. Still, the African Region holds the highest fatality rate in the world, at 19.4 deaths per 100 000 population, with substantial variations among countries.

The burden of road traffic deaths disproportionately affects males and the productive age group of 15–64 years. Vulnerable road users such as motorcyclists, cyclists and pedestrians account for half of all fatalities. Fatalities among motorcyclists have doubled in the past 10 years, increasing faster than in any other WHO region.

Despite these challenges, only a few countries prioritize the promotion of multimodal transport systems. This is evident in weak national policies and regulations. Moreover, none of the countries in the Region have national laws that meet best practices in all key road safety behavioural risk factors.

Africa is one of the fastest-growing markets for used vehicles. Total vehicle registration is on the rise, having almost tripled since the publication of WHO's *Global status report on road safety 2013*. While some progress has been made in legislating for safety equipment in vehicles, pedestrian protection features remain largely unaddressed. Additionally, road infrastructure safety ratings are generally low, with only a small percentage of roads meeting acceptable standards for various road users.

Despite efforts to address road safety data management, there are discrepancies between reported and estimated fatality data, indicating a need for improved data collection systems. Furthermore, there are varying capacities among health care facilities to provide post-crash care across different countries, highlighting the importance of equitable access to prehospital and hospital-based health care services.

To address these challenges comprehensively, concerted efforts are needed to strengthen national road safety strategies embedded in regional transportation policies. This entails enhancing coordination mechanisms, allocating adequate resources and improving data collection systems. Additionally, prioritizing the safety of vulnerable road users and enhancing legislative frameworks are crucial steps towards significantly reducing road traffic fatalities and injuries in the African Region.

With one third of the countries showing a reduction in road traffic fatalities, there is a need for comprehensive understanding of the effectiveness of recommended road safety interventions in the African Region. Advocating for region-specific research and strengthening research capacities is crucial to identifying and documenting successful interventions that work in the African context. Investing in research tailored to the unique challenges and contexts of the African Region can generate real-world examples of effective strategies that have proven successful in the Region.

Road safety in the African Region:

Key facts and figures

In the WHO African Region, an estimated **225 482** people died from road traffic injuries in 2021, representing **19%** of the global burden of deaths, even though the African Region accounts for only **15%** of the global population and only **3%** of the global vehicle fleet.

The African Region holds the highest fatality rate, of **19.4 per 100 000** population, compared with a global rate of **15 per 100 000**.

The estimated number of fatalities in the Region has increased by **17%** since 2010. This is the only WHO region that has seen an increase in the number of fatalities during this period. However, **17** countries have reduced the number of fatalities, by **2% to 49%**, since 2010.

Vulnerable road users (two- or three-wheelers, cyclists and pedestrians) account for half of all fatalities - **50%**. Four-wheelers represent **32%**.

24 countries report having national strategies to promote access to and use of public transport. Only **13** have national strategies to promote walking and/or cycling.

No country in the Region has national laws that meet best practices in all five key road safety behavioural risk factors (speeding, drink driving and non-use of motorcycle helmets, seatbelts and child restraints).

In 2021, there were **65.62 million** registered vehicles, representing a more than twofold increase since the publication of the Global Status Report on Road Safety 2013. There was a threefold increase in the number of two and three-wheelers in the same period.

29 countries have legislation specifying requirements and standards for core safety equipment in vehicles. None of the laws include pedestrian protection safety features or mandate all five core areas of safety equipment.

16 countries have no legislation on vehicle safety at all.

The Region has **666 371 km** of paved roads.

Only **1.45 km** of roads have a three-star or higher rating for pedestrians, **2.11 km** for powered two- and three-wheelers, **2.68 km** for cyclists and **3.74 km** for passenger vehicles.

Most countries - **35** - in the Region have a national strategy for road safety, but only **21** of them have specific targets for reducing road traffic fatalities.

10 countries have laws requiring health care facilities to take care of everyone regardless of capacity to pay following a crash. In **4** countries, the law guarantees rehabilitation care for all regardless of ability to pay

3 countries provide free psychosocial support for victims and their families.

12 countries have a national single emergency number.

Data systems in many Member States surveyed are incomplete and sparse, failing to capture critical data on morbidity and road user characteristics such as sex, age and user type.

Introduction

Road traffic crashes are a leading cause of death globally, ranking as the twelfth leading cause of death for all ages in 2019. According to the same estimations, road traffic crashes are the ninth leading cause of death in the African Region. Road traffic crashes disproportionately affect children and youth, with 90% of all deaths and injuries occurring in low- and middle-income countries *(1)*. Hence road safety is a health, social and developmental issue that requires the collaborative efforts of multiple sectors including government, nongovernmental organizations (NGOs), civil society, academic/research institutions, the United Nations, international organizations and the private sector.

Recognizing the global burden of deaths and injuries from road traffic crashes, the United Nations General Assembly adopted resolution A/RES/64/255 in 2010, proclaiming 2011–2020 as the Decade of Action for Road Safety, with the goal to stabilize and then reduce road traffic fatalities *(2)*. This was followed in 2015 by the inclusion of road safety in the 2030 Agenda for Sustainable Development, with Sustainable Development Goal (SDG) target 3.6, which aims to halve deaths and injuries from road traffic crashes *(3)*.

In 2020, the United Nations General Assembly adopted resolution A/RES/74/299, declaring 2021–2030 as the Second Decade of Action for Road Safety, with the same target extended to 2030 *(4)*. In this regard, the Global Plan was developed by WHO and the United Nations Regional Commissions and partners, as a guiding document to support Member States in their implementation of the Decade of Action for Road Safety 2021–2030 and its objectives and targets *(5)*. Based on the Safe System approach, the Global Plan calls for integrated multisectoral evidence-based actions, focusing on five key areas contributing to safety on the roads: multimodal transport and land-use planning; road infrastructure; vehicles; road users; and post-crash response, while ensuring that adequate legal frameworks and financing are in place, leaving no one behind.

Since 2010, WHO has monitored progress on the goals of the Decade of Action through the *Global status report on road safety*. The second (2013), third (2015) and fourth (2018) such reports were released during the Decade of Action and reported on achievements in road safety between 2011 and 2020 *(6–8)*. The recently published *Global status report on road safety* (2023) is the fifth in the series and the first in the new decade *(9)*. It is, therefore, uniquely placed to evaluate the impact of actions in the Decade of Action for Road Safety 2011–2020 and serve as a baseline for the second Decade of Action for Road Safety 2021–2030.

This report presents the status of road safety in the WHO African Region, with the aim of:

- describing the burden of road traffic crashes on injuries and deaths;
- assessing progress made in implementing measures identified in the Global Plan;
- identifying achievements and gaps for targeted improvement and strengthening; and
- catalysing multisectoral action for enhanced road safety in the African Region.

WHO groups countries into regions. Forty-seven of the African countries[1] are grouped in the WHO African Region, which is the focus of this report.

This report has three main sections. Section 1 covers the regional burden of road traffic deaths and injuries. Section 2 covers strategies that mitigate the risk of road traffic deaths and injuries. Section 3 presents the status of the overarching themes of road safety governance and data management. The report concludes with recommendations on the way forward to improve road safety in the Region. Country profiles are available in the 2023 Global status report *(9)* or on demand in the *Global status report on road safety 2023* and the mobile app WHO Road Safety Data (Android or iOS).

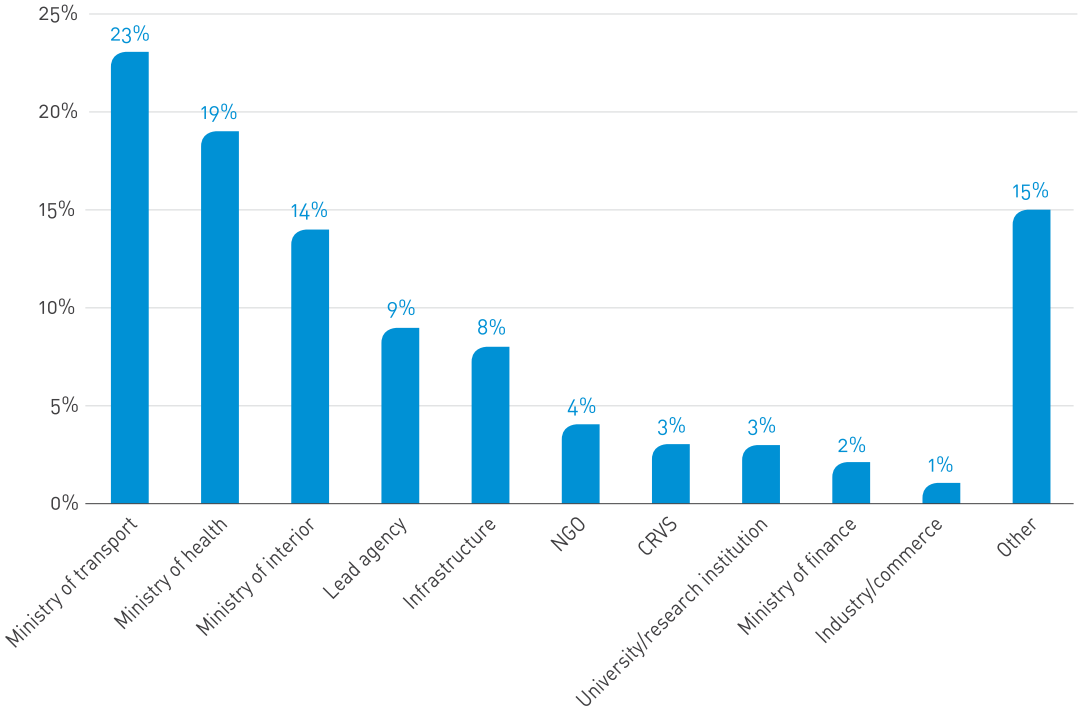
[1] Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Togo, Uganda, United Republic of Tanzania, Zambia and Zimbabwe.

Methodology

This report was developed using data collected for the fifth Global status report on road safety. Forty-five of the Region's 47 Member States participated, representing 97% of the Region's population. Data came from a variety of sources. The unique data collection effort involved collaboration between WHO at the global, regional and country levels, and participating Member States of the Region. Each Member State nominated a national data focal point (NDFP) to coordinate the process of data collection. The NDFPs were nominated from the ministries of health, interior and transport and lead road safety agencies and other government institutions. The NDFPs, in turn, selected up to 10 contributors from the most relevant sectors who play a role in road safety in their respective countries to form a multisectoral team responsible for data collection.

This data collection began in July 2022 and was completed in April 2023, by a multisectoral team comprising 297 key road safety stakeholders, predominantly from the transport (23%) and health (19%) sectors but also from the interior ministry/police (14%), the infrastructure ministry (9%), the lead road safety agency (9%), NGOs (4%), academia/research (3%), the civil registration and vital statistics (CRVS) agency (3%), the finance sector (2%) and industry/commerce (1%). The data collected in each country were validated and endorsed in a national road safety stakeholders consensus meeting before being uploaded onto a global data repository platform.

Fig. 1. Distribution of institutions/sectors participating in data collection



All data from countries went through a rigorous process of validation to ensure accuracy, consistency and completeness prior to analysis. Central to the methodology was the engagement of key stakeholders from diverse sectors, aligned with the multisectoral and intersectoral approach embedded in the Global Plan. The process brought together a vast array of stakeholders contributing to road safety in the country, promoting partnerships and networks for collaborative efforts within the context of each country.

Detailed information on the remaining data sources and methodology can be found in Annex 1 of the *Global status report 2023 (9)*.

"My best part of the methodology was the multistakeholder approach to data collection, which not only reminded us of the invaluable role collective action plays in road safety management but also provided a platform for strengthened accountability, collaboration and coordination among key stakeholders."

Maria Nkalubo, NDFP Uganda.

1

Section 1.

The regional burden of road traffic injuries

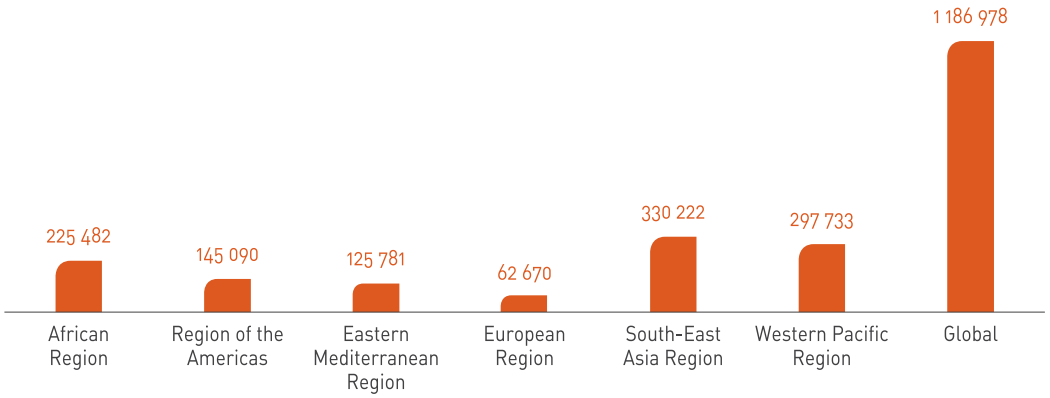
WHO periodically produces estimations of road traffic fatalities for all Member States. The findings described below analyse these estimations for the 47 Member States in the African Region.

In 2021, an estimated **1.19 million people** globally died from road traffic injuries, which remain the leading cause of death of young people aged 5–29(1).

In 2021, an estimated **225 482 people** died from road traffic injuries in the WHO African Region, accounting for **19%** of the global burden of road traffic deaths.

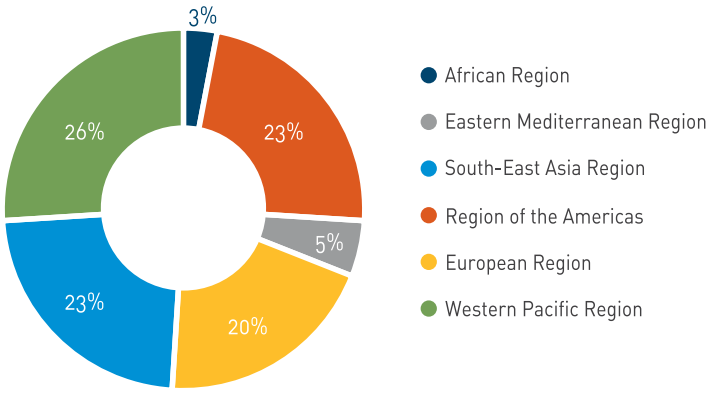
It is alarming that the Region, home to only **15%** of the global population, ranks third in the world for the highest number of road traffic deaths, after the South-East Asia Region (330 222 deaths, 28% of global road traffic deaths) and the Western Pacific Region (297 733 deaths, 25% of global road traffic deaths).

Fig. 2. Distribution of road traffic deaths by WHO region, 2021



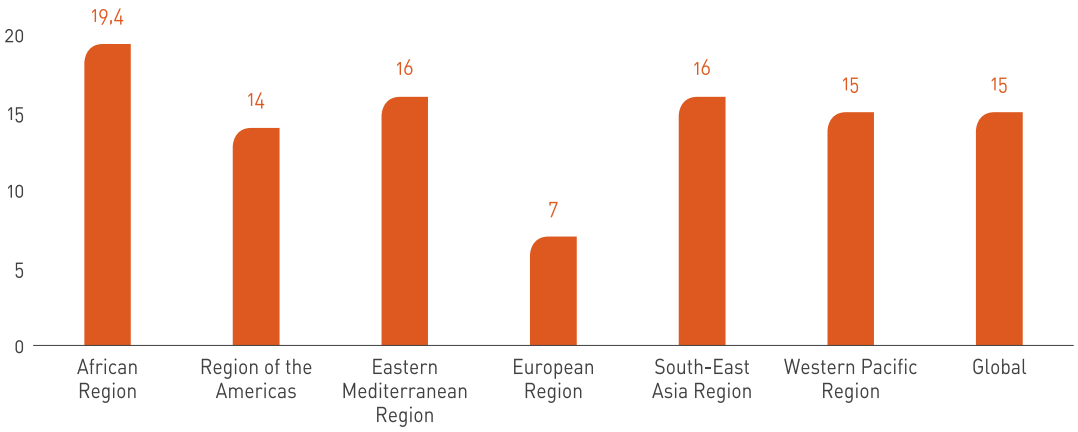
Relative to the size of its vehicle fleet, which is the lowest globally, accounting for only 3%, the African Region bears a disproportionate burden of global road traffic deaths. In contrast, the European Region, which has the lowest proportion of road traffic deaths (5%), accounts for 20% of the world's vehicles.

Fig. 3. Registered motor vehicles by WHO region, 2021



As in previous reports, the road traffic fatality rate in the African Region remains the highest globally, at 19.4 per 100 000 population, followed by the Eastern Mediterranean Region and South-East Asia Region, both at 16 per 100 000.

Fig. 4. Estimated road traffic fatality rate by WHO region per 100 000 population, 2021



Key facts for the African Region

Estimated **225 482** road traffic deaths in 2021

Highest fatality rate from road traffic injuries, with **19.4** deaths per 100 000 population

19% of global fatalities from road traffic injuries

15% of the global population

3% of the global motorized vehicle fleet

60% of deaths occurring among the young and adults (15–64 years)

70% of deaths occurring among males.

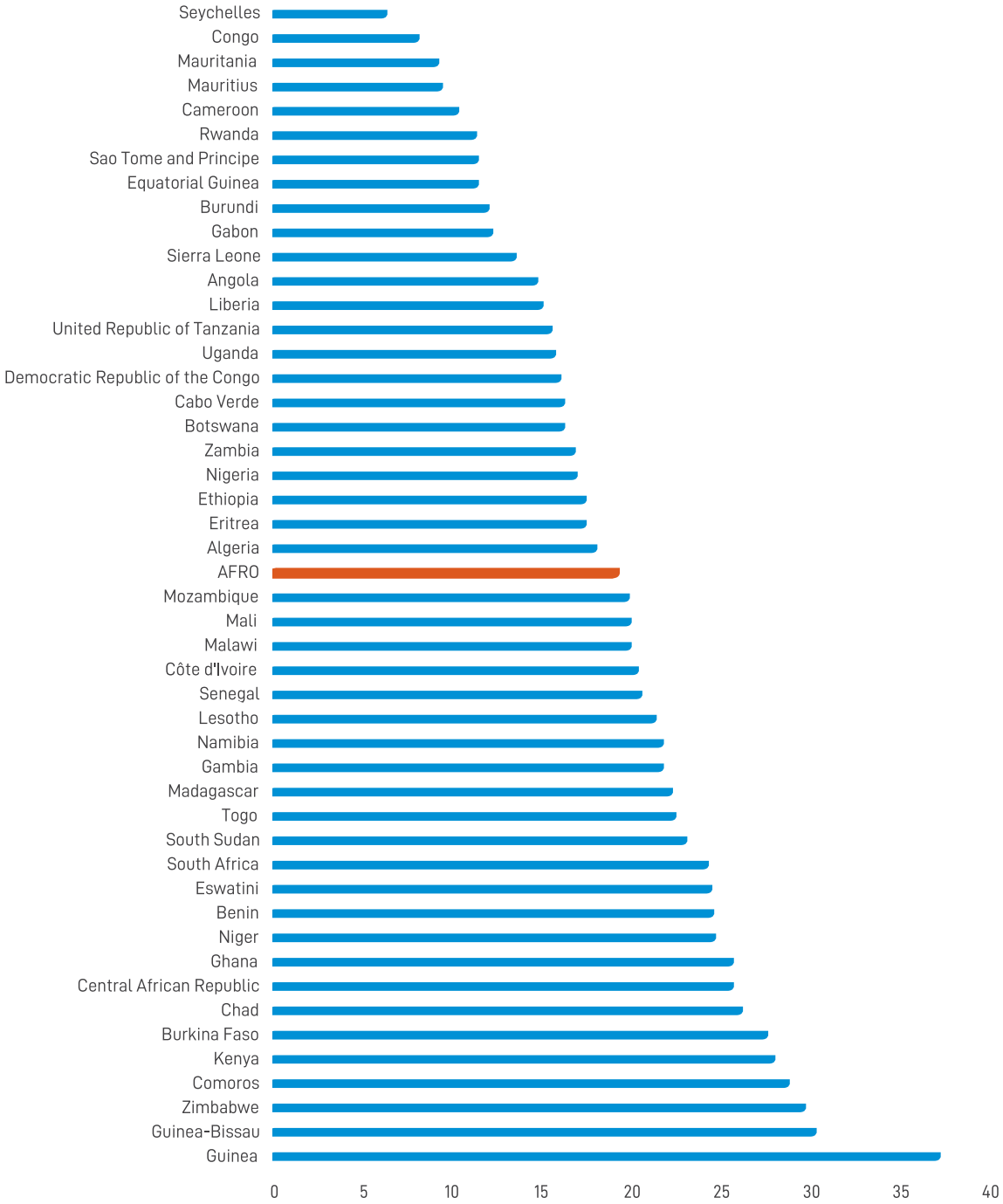
Distribution of deaths within the African Region

The distribution of road traffic deaths in the population in the African Region follows global patterns, and like in other regions, affects predominantly men during their most productive years of life. Most road traffic deaths (70%) occur among males, and over half occur among 15–64 year olds *(1)*.[2]

Estimated road traffic fatality rates vary widely within the Region, from a low of 6.6 per 100 000 population to a high of 37.4 per 100 000 population, with at least 24 countries having rates higher than the regional average.

[2]Data were taken from the 2021 Global Health Estimates because in the current survey, age and sex distribution of road traffic deaths was reported by only 12 and 26 countries, respectively. However, in these countries, trends similar to those reported in the 2021 Global Health Estimates were observed.

Fig. 5. Estimated road traffic fatality rates per 100 000 population by country, 2021

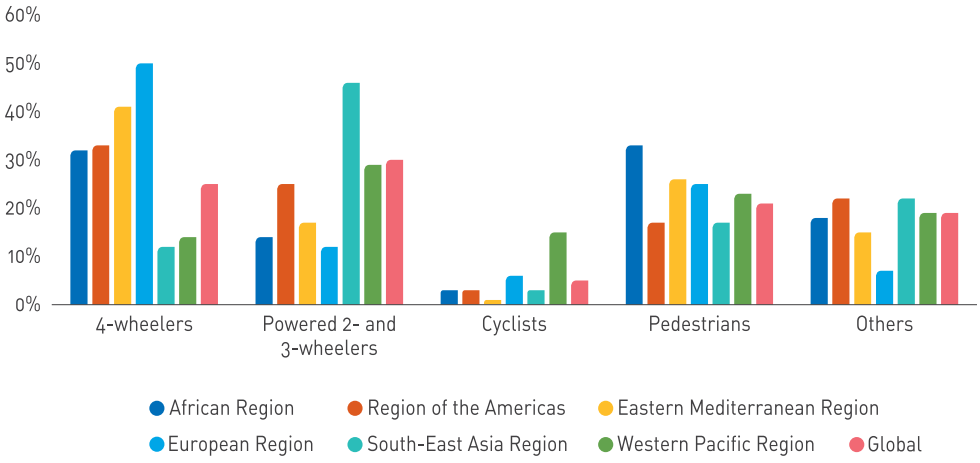


Most countries in the Region are classified as low-income *(22)* or lower-middle-income countries *(18)*. Seychelles is the only country belonging to the high-income category. When analysed by income level, the highest road traffic fatality rates are observed in low- and lower-middle-income countries, which account for 91% of all estimated road traffic deaths in the Region. This is followed by 7% in upper-middle-income countries. Low-income countries in the Region have an average fatality rate of 21 per 100 000 population, which is higher than the regional average.

Road traffic deaths by road user type

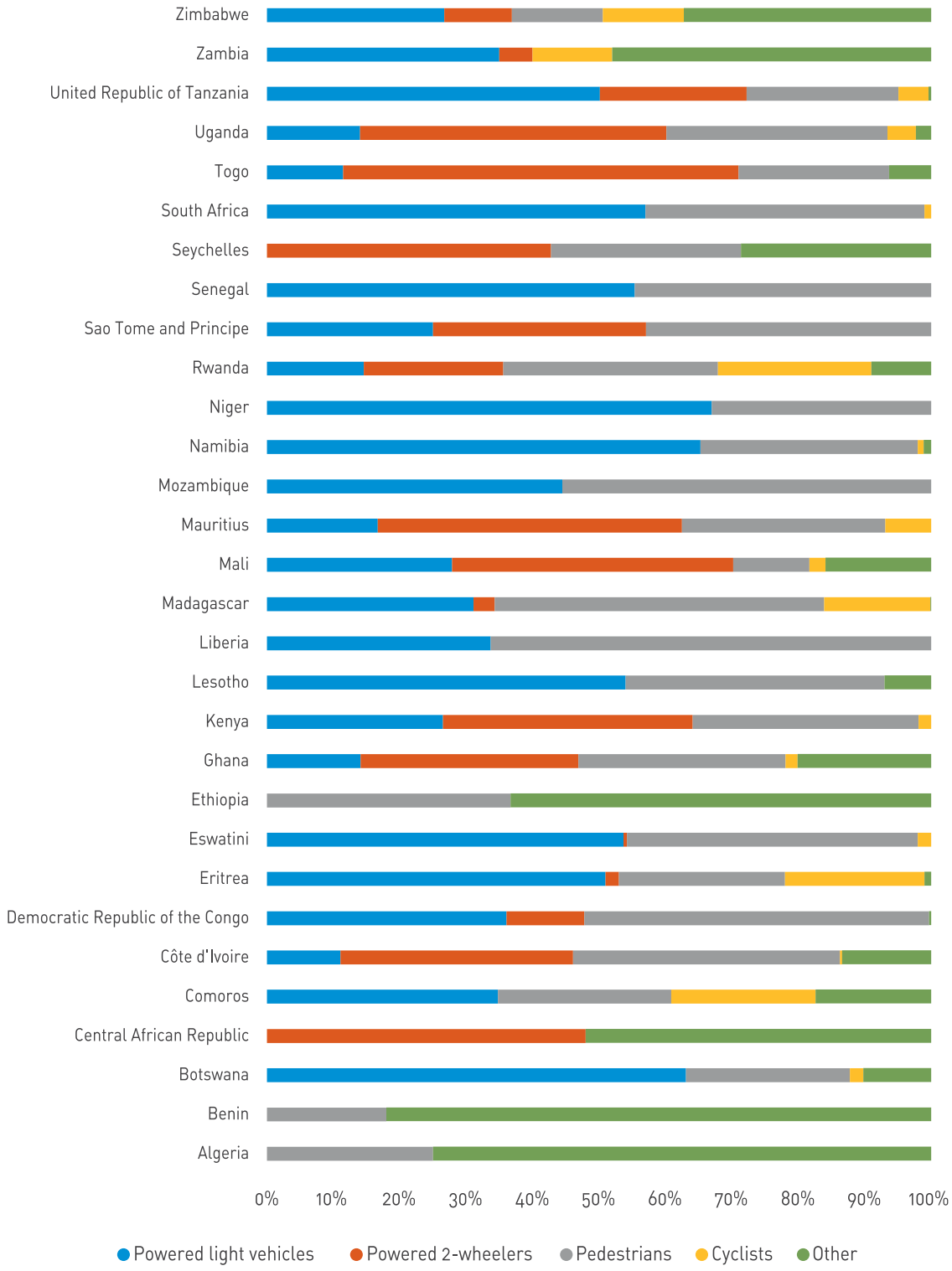
The most vulnerable road users (pedestrians, cyclists and users of two- and three-wheeler vehicles) bear the highest burden of road traffic fatalities (50%). The African Region has the highest proportion of pedestrian road traffic fatalities (33%). Four-wheeler fatalities remain higher than the global average.

Fig. 6. Distribution of reported deaths by road user type and WHO region, 2021



Mortality by road user type varies among countries. Figure 7 presents the distribution of fatalities among road user types reported by 30 out of the 45 countries surveyed.

Fig. 7. Road traffic fatalities by road user type in selected WHO African Region countries (%)



Improving the safety of school children in Mozambique

Over the past 10 years, the highest burden of road traffic deaths in Mozambique has been among pedestrians. Children are particularly at risk because the vast majority walk to school, often unaccompanied by an adult.

To protect children in schools and the surrounding communities located along the main roads from fatal road crashes, the Government of Mozambique initiated a series of projects to promote safe road crossing near schools. The projects were gradually rolled out nationwide and implemented with the support of different private sector stakeholders.

"Let's Learn to Walk Safely" targeted primary schools and communities and vehicle and motorcycle drivers in the district of Maotize and the city of Tete. It was implemented between April 2012 and January 2013 by the National Institute for Road Transport (INATRO) with funding from the Government and support from Rio Tinto.

Teachers were trained in basic traffic rules and safe road crossing. They then incorporated the same training into regular class lessons for the students, using training manuals designed specifically for primary school children. Illustrative pamphlets and flyers were produced for easy understanding of the educational messages. Refresher courses and seminars on road safety and traffic rules were conducted for vehicle and motorcycle drivers, community leaders and community members.

A total of eight schools comprising 9185 students and 190 teachers, 162 drivers, 312 motorcycle drivers, eight community leaders and 562 community members were reached. According to INATRO's 2012 report, there was a 100% reduction in the occurrence of road crashes in Tete and Moatize (from 12 crashes involving students, with five deaths and seven seriously injured, in 2011).

This project demonstrates how collective action between various government sectors, development partners, the private sector and local communities can significantly improve road safety for all road users, especially the most vulnerable.

Progress towards the target of a 50% reduction in deaths between 2010-2021

The African Region has fallen short in terms of progress towards the target of a 50% reduction in deaths by 2020. Between 2010 and 2021, the estimated number of road traffic fatalities in the African Region increased by 17%, from 192 682 to 225 482 deaths. With the Eastern Mediterranean Region having a slight increase (<1%) in road traffic fatalities, the African Region is the only one among the WHO regions to report a significant increase in the past 10 years (Table 1). Since the Global status report 2013, road traffic fatalities among two- and three-wheelers in the Region have doubled, representing the highest increase among the WHO regions (Table 2).

Table 1. Change in estimated road fatalities by WHO region, 2010 and 2021

	Change 2010–2021
African Region	17%
Region of the Americas	-0.1%
Eastern Mediterranean Region	<1%
European Region	-36%
South-East Asia Region	-2%
Western Pacific Region	-16%
Global	-5%

Table 2. Change in road user type deaths by WHO region, 2010–2021

	African Region	Region of the Americas	Eastern Mediterranean Region	European Region	South-East Asia Region	Western Pacific Region	Global
Four-wheeler	-26%	-21%	11%	0%	-20%	-39%	-19%
Powered two- or three-wheeler	100%	67%	21%	0%	39%	-19%	30%
Cyclists	-40%	0%	-67%	50%	-25%	88%	0%
Pedestrians	-13%	-26%	-7%	-7%	42%	-8%	-5%
Other	157%	29%	-17%	0%	-39%	138%	0%

While the global target of halving road traffic deaths (in absolute numbers) has not been met in the Region, 17 countries have reduced the number of deaths. Of these, three countries have reduced the number of deaths by 40–49%, two countries by 30–39%, five countries by 20–29%, six countries by 10–19% and one country by less than 10%.

Table 3. Number of countries with reductions in road traffic fatalities, WHO African Region, 2010–2021

Number of countries that have reduced deaths since 2010	17
Number of countries that have reduced deaths by 40–49%	3
Number of countries that have reduced deaths by 30–39%	2
Number of countries that have reduced deaths by 20–29%	5
Number of countries that have reduced deaths by 10–19%	6
Number of countries that have reduced deaths by less than 10%	1


Ethiopian
C106
STOP

2

Section 2.

Strategies to mitigate the risk of road traffic deaths and injuries

Measures to mitigate the risk of death and injury focus on five key areas crucial for a comprehensive approach to road safety in the Region: multimodal transport, road users, safe roads, safe vehicles and post-crash response

24 countries report having national strategies to promote access to and use of public transport.

None of the countries has laws that meet best practices for all five risk factors.

Seatbelt use is the risk factor for which best practice laws are most adhered to; child restraints system use sees the least adherence.

8 countries report national legislation requiring a formal road safety assessment or inspection for existing roads.

Best practice laws to manage post-crash response, including prehospital care, are poorly implemented in the Region, and the capacity of the health care system is weak.

2

The Safe System approach

Originating from Sweden's Vision Zero, the Safe System approach recognizes that road transport is a complex issue and places safety at its core. The core principles of the approach are as follows:

- It recognizes that humans make mistakes, and a Safe System must anticipate and accommodate human errors.
- The transport system should produce zero deaths or serious injuries and safety should not be compromised at any cost.
- Vehicles and the road infrastructure and design must interact in a way that ensures a high level of safety.
- Road safety is a shared responsibility among those who design and maintain the roads, manufacture vehicles and administer safety programmes as well as those who use the roads.
- The approach commits to proactive and continuous improvement of roads and vehicles, thereby making the entire system safe.

Measures to mitigate the risk of death and injury focus on five key areas crucial for a comprehensive approach to road safety in the Region: multimodal transport, road users, safe roads, safe vehicles and post-crash response *(10)*. The recommended interventions in these key areas are mainly based on evidence from high-income countries (HICs), with contexts that differ significantly from those in low- and middle-income countries (LMICs), particularly in terms of governance structures, traffic mix, types of vehicles and crash patterns. In the absence of research from LMICs, interventions based on what works in HICs are implemented without a comprehensive understanding of their effectiveness in the LMIC context *(11)*.

Multimodal transport and land use planning

More than 50% of the global population lives in cities, and sub-Saharan Africa is regarded as the world's fastest-urbanizing region *(10)*. This fast-growing urban population means reliance on individual automobiles as the main mode of transportation is no longer tenable. Countries must face the challenge of providing safe, affordable and sustainable modes of transport for all. Urban planning and well-designed transportation systems can make living and working in urban centres easier and more conducive to health and well-being. Special attention needs to be given to pedestrians as, according to a United Nations Environmental Programme (UNEP) report on walking and cycling in Africa, 78% of people walk for transport *(12)*.

The current *Global status report on road safety* looks at strategies that promote multimodal transport, a key area for sustainable road safety and central to the Global Plan. In the WHO African Region:

- twenty-four countries report having national strategies to promote access to and use of public transport.
- thirteen have national strategies to promote walking.
- twelve have national strategies to promote cycling.
- very few countries have set targets for walking and cycling: five of the strategies have targets to increase walking by 20–80%, and three have targets to increase cycling by 10–60%.

The strategies and planning for transport systems in the Region must give more consideration to non-motorized transport users such as pedestrians and cyclists. The Region is characterized by transport systems developed to accommodate motorized transport users, and yet more people in African cities and villages walk as their main mode of transport every day. Walking and cycling need to be given commensurate priority in transportation system planning, to ensure sustainable mobility that is safe, accessible and equitable for all users.

Furthermore, understanding the demand for and use of different modes of transport is crucial when designing transportation systems that consider all users. In this survey, fewer than one third of the countries in the Region monitor the extent to which people use different transport options. The use of public transport is the most monitored, with 11 countries keeping track, whereas only two countries monitor walking. Eight countries monitor the use of four-wheelers, and five monitor the use of two- and three-wheelers.

Safe road users

Preventing road traffic deaths and injuries requires an integrated strategy that addresses the key behavioural risk factors that increase the vulnerability of people to serious injuries and death. These are speeding, drinking and driving and noncompliance with helmet use, seatbelt use or child restraint use. Enacting and enforcing legislation that is evidenced-based and contextualized on the key behavioural risk factors can significantly reduce the burden of road traffic deaths and injuries. WHO recommends a minimum set of best practice criteria for laws and regulations based on scientific evidence for preventing and mitigating the impact of crashes.[4]

Legislation on key behavioural risk factors has been reviewed against best practice criteria to identify gaps and opportunities for improvement. For each risk factor, countries may have laws that meet best practices, laws that include only some of the criteria or have laws that do not include any of the criteria.

[4] WHO best practice criteria do not exist for laws on drug driving, distracted driving and professional driver time limits.

Risk factors and best practice criteria

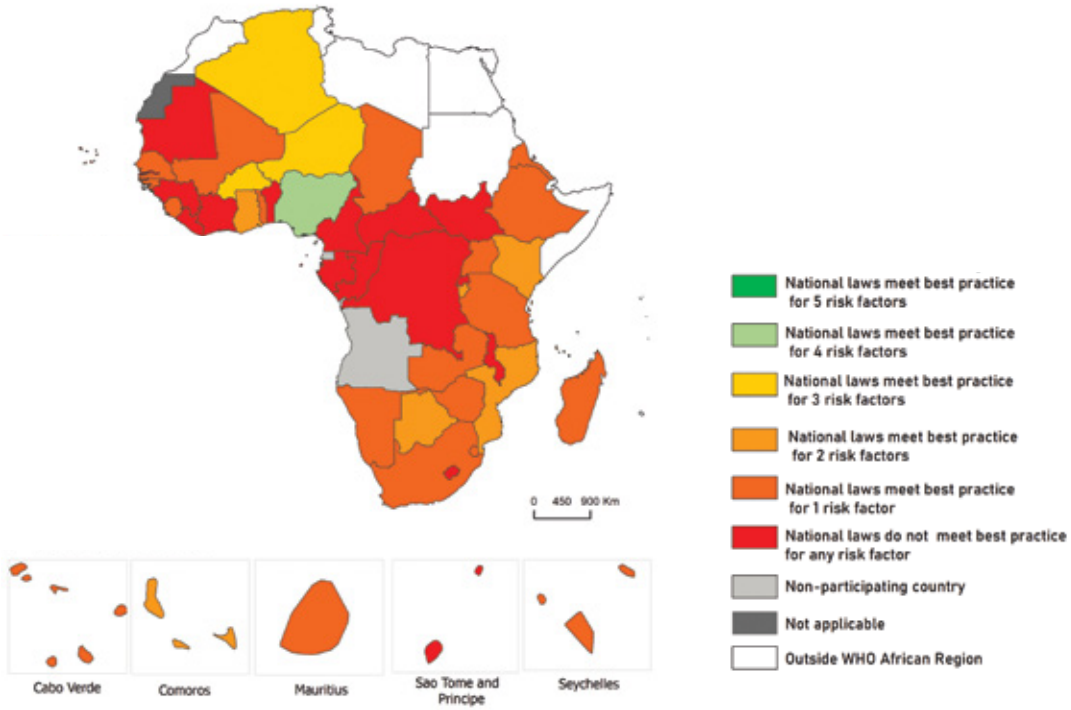
Risk factor	WHO best practice criteria
Speeding	National law exists; urban limits are set at 50 km/h or lower and local authorities can further modify this limit.
Drink driving	National law exists; alcohol levels are defined by BAC; alcohol limits per general driving population are ⩽0.05 g/dl and for novice drivers ⩽0.02 g/dl.
Motorcycle helmet use	National law exists and covers all riders, on all road types and all engine types; the helmet must be fastened and meet a standard.
Seatbelt use	National law exists and applies to all seating positions in vehicles.
Child restraint system use	National law exists; children up to the age of 10 years, or 135 cm in height, must use a child restraint system meeting a standard; in addition, children of a particular age/height are prohibited from sitting in the front seat.

Source: Global status report on road safety 2023

As Figure 8 shows:

- Fewer than half the countries in the Region adhere to best practices for any of the five risk factors.
- Seatbelt use is the risk factor for which best practice laws are most adhered to; child restraints system use sees the least adherence, demonstrating the vulnerability of the youngest segment of the population.
- None of the countries has laws that meet best practices for all five risk factors.
- One country has laws that meet best practices for four risk factors.
- Three countries have laws that meet best practices for three risk factors.
- Six countries have laws that meet best practices for two risk factors.
- Nineteen countries have laws that meet best practices for one risk factor.

Fig. 8. Countries meeting all or a few behavioural risk factor best practices, WHO African Region, 2021



Since the last report, not much progress has been made with strengthening the legal framework relating to risk factors, although some improvements have been noted regarding speed, drink driving, seatbelt and child restraint use (Table 4).

Table 4. Countries with legislation meeting best practice criteria, WHO African Region

Risk factor	Countries with laws meeting best practices		Change since last report
	2018 report	2023 report	
Speed	9	11	+2 countries
Drink driving	3	5	+2 countries
Seatbelt	17	20	+3 countries
Motorcycle helmet	8	8	No change
Child restraints	0	1	+1 country

Rigorous enforcement of legislation is essential to make it effective. While the majority of countries in the African Region do have national laws on risk factors and enforcement measures, less than 50% of them have laws regarding child restraint.

Although data collection for this report did not capture the level of enforcement of the laws pertaining to risk factors, according to an E-Survey of Road Users' Attitudes (ESRA) conducted among the general population in 12 African countries,[5] the perceived probability of being checked by the police is 46% for respecting the speed limit, 28% for alcohol, 46% for wearing a seatbelt and 32% for use of a hand-held mobile phone *(13)*.

Furthermore, understanding road safety attitudes can provide insight into the reasons for unsafe road behaviour and guide the development of appropriate and effective counter measures. Based on the same survey, 47% of respondents declared practising unsafe behaviours. Exceeding the speed limit was self-declared by 42% inside built-up areas and 49% outside built-up areas. About 15% of car drivers reported having exceeded the legal limit allowed for drinking and driving at least once over the previous 30 days and 13% of respondents reported that their friends would drive after drinking alcohol. Reported non-use of a seatbelt was higher while sitting in the back seat (71%) compared to while driving (45%). About half (53%) of respondents reported having talked on a hand-held device while driving. A third of motorcyclists reported using their mobile phone while riding. While a proposal regarding obligatory helmet use for motorcyclists is widely supported, almost half of the African motorcyclist respondents did not use a helmet (58%). Less than half (47%) of respondents indicated not using child restraints (below 150 cm) or seatbelts (over 150 cm) for their children *(13)*.

Speed management

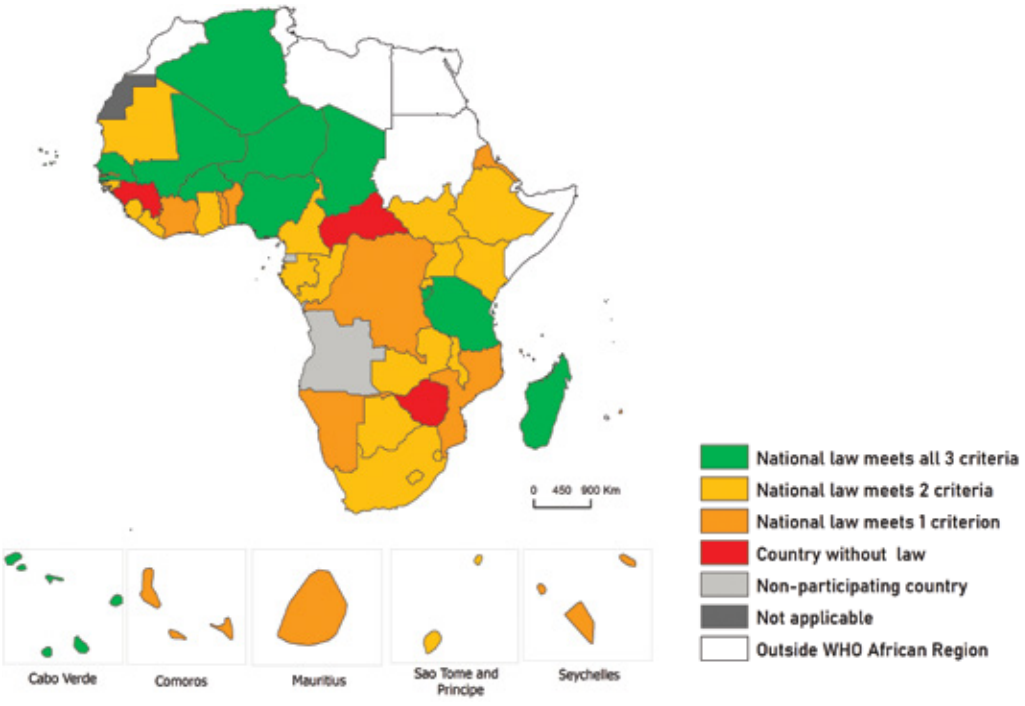
Speed is a major risk factor for road safety as it is directly correlated with the likelihood of a crash and the severity of injuries leading to death. For every 1% increase in mean speed, there is a 4% increase in the fatal crash risk and a 3% increase in the serious crash risk *(14)*. Lowering speed limits has been shown to reduce the risks of crashes and fatalities, the severity of injuries and the number of fatalities *(15)*. It is estimated that a 5% reduction in average speed can reduce the number of fatalities by 20% *(14)*. While laws should set speed limits, it is necessary also to include provisions for local authorities to make adjustments based on local conditions. Although the majority of countries in the region (41) have national laws that limit speed, only 11 have laws that meet best practices. Twenty of the countries have laws that meet two of the criteria for best practices, with 10 countries each meeting one of the two criteria (Figure 9).

The speed laws of 11 countries prescribe the use of speed cameras to monitor speed limits and 41 countries use penalties as a means of enforcement for violation of the law.

Since the *Global status report 2018*, four additional countries have a national law that limits speed, of which two meet best practice. Furthermore, seven countries have modified their speed laws to include at least one of the criteria (five countries) and penalties for violation of the law (two countries).

[5] The survey was conducted in Benin, Cameroon, Côte d'Ivoire, Ghana, Kenya, Nigeria, South Africa, Uganda, Zambia, Egypt, Morocco and Tunisia. The last three countries are not in the WHO African Region.

Fig. 9. Status of speed laws, WHO African Region, 2021



Impaired and distracted driving (drink driving, drug driving, distracted driving and professional driving times)

Legislation on drink driving

Alcohol impairs reflexes and driving under the influence of alcohol increases the risk of involvement in road traffic crashes and the likelihood of resulting death or serious injury (15). Ten countries reported the proportion of road traffic deaths attributable to alcohol impairment per year, which ranges from 0% to 3%. The amount of alcohol in the body is measured as blood alcohol concentration (BAC), by testing a sample of blood or urine; or as breath alcohol concentration (BrAC), tested by a breathalyzer. WHO recommends that drink driving laws be based on BAC or BrAC for the general population and high-risk groups such as young or novice drivers and commercial drivers (see Table 5 for recommended BAC and BrAC levels) *(16)*.

Table 5. WHO-recommended BAC and BrAC levels

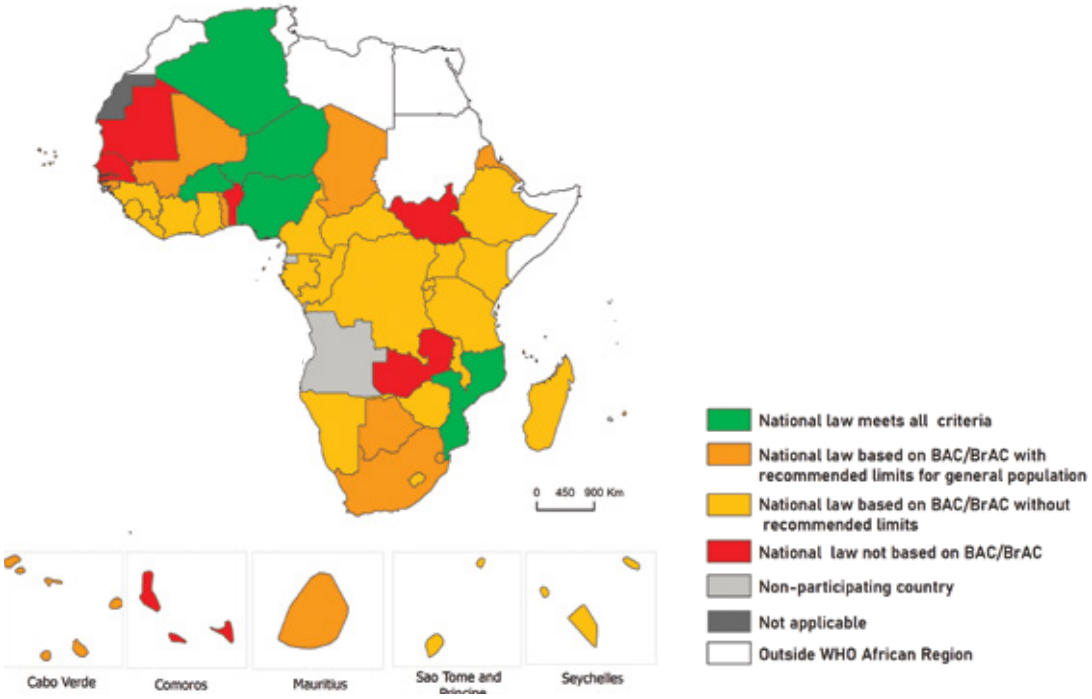
Driving group	BAC		BrAC	
	mg/100 ml	g/dl	mg/L	mcg/L
General population	50	0.05	0.24	240
Novice drivers	20	0.02	0.10	100
Commercial drivers	20	0.02	0.10	100

Source: WHO (2022) Drink driving: a road safety manual for decision-makers and practitioners

All countries surveyed in the Region have laws prohibiting driving under the influence of alcohol but only 38 have laws based on BAC or BrAC. Fewer countries (five) have laws that meet WHO best practices (Figure 10). Of the countries that do not meet best practices, the criteria not met by most is BAC less than or equal to 0.02 g/dl for young or novice drivers.

Only eight countries have laws that set BAC levels for commercial drivers at ≤0.02 g/dl. Five countries have modified their drink driving laws since 2010.

Fig. 10. Status of drink driving laws, WHO African Region, 2021



In terms of enforcement of the drink driving law, random breath testing has been successfully used to deter drivers from driving under the influence of alcohol. This method is effective because drivers can be stopped and tested anywhere at any time, without the need to establish that a driver shows signs of impairment or has committed an offence *(16)*. None of the countries routinely tests fatally injured drivers for the presence of alcohol, while eight countries carry out random breath testing of drivers. In the 38 countries where the laws are based on BAC or BrAC, penalties are prescribed to drivers with levels above legal limits.

There has been no change in the number of countries with drink driving laws or laws meeting best practices since the last report.

Legislation on drug driving

Drug driving is a growing concern and there is a growing body of evidence on the extent of the problem and effective interventions to reduce the burden. However, gaps in knowledge needed to inform policy and legislation still exist, particularly on the relationship between drug concentrations and crash risk and appropriate threshold limits in blood *(17)*. As such, there are no recommended best practice criteria for drug driving laws against which these laws can be assessed.

The majority of countries (82%) in the African Region have legislation that prohibits driving under the influence of drugs and other psychoactive substances. Fewer countries specify the prohibited drugs: three countries prohibit all drugs; five prohibit opioids and four prohibit cannabis, cocaine, amphetamines and methamphetamines.

Random testing is prescribed in the drug driving laws of three countries, while drug testing in case of fatal crashes is practised in one country. Penalties for drug driving are required by law in 33 countries.

Since the last report, six additional countries have established drug-driving laws.

Legislation on distracted driving

Distracted driving is defined as any activity that diverts attention from driving, including talking or texting on your phone, eating or drinking, talking to people in your vehicle and fiddling with the stereo, entertainment or navigation system *(18)*. Distraction caused by mobile phone use is a growing concern given the increased ownership of phones – 78% of the global population owns a mobile phone and in Africa ownership is at 63% of the population *(19)* – and the increased risk of use while driving *(18)*. Thirty-three countries have legislation that prohibits distracted driving in general, while 38 countries prohibit the use of mobile phones and 15 prohibit the use of hand-free mobile phones while driving. The laws in 36 countries prescribe the use of penalties for violation. Given limited evidence on the magnitude of the problem, the impact of driving performance and the effectiveness of interventions, there are no best practice criteria against which these laws can be assessed.

Since the last report, the number of countries that prohibit the use of mobile phones while driving has increased by three. There has been no change in the number of countries that prohibit the use of hands-free mobile phones.

Legislation on professional driving times

Currently, 19 countries have legislation on rest periods for professional drivers, of which 15 countries report a maximum number of driving hours and minimum rest periods.[6]

[6] Rest periods for professional drivers are most frequently reported as either a 30-minute rest after a maximum driving time or a minimum number of daily hours.

Improving road safety law enforcement to reduce road traffic crashes in Namibia

To decrease the number of road traffic deaths and injuries in Namibia, law enforcement presence was increased on the B1 and B2 highways covering seven regions. This was carried out under the Pilot Law Enforcement Surveillance Project, led by the National Road Safety Council and Namibia Police Force, with support from local authorities (municipalities) and funding from the council's fuel levies.

Between August 2018 and February 2019, 120 officers from the Namibia Police Force and 15 from the Roads Authority Transport Inspectorate were deployed on the highways to increase visibility. The goal was to deter illegal road use behaviours and improve public perceptions of law enforcement and enhance effectiveness. The law enforcement officers monitored road behaviour to promote early detection of traffic offences, including assessing driver fitness and prevent potential crashes. They also worked on improving adherence to road traffic laws and regulations, reducing the risks associated with dangerous driving, and ensuring the roadworthiness of vehicles. Additionally, the policing boundaries of local authorities were widened, and the handling of traffic offence cases was expedited by establishing a dedicated traffic court. They also conducted a sustained publicity campaign via the print and audiovisual media to increase public awareness of the project.

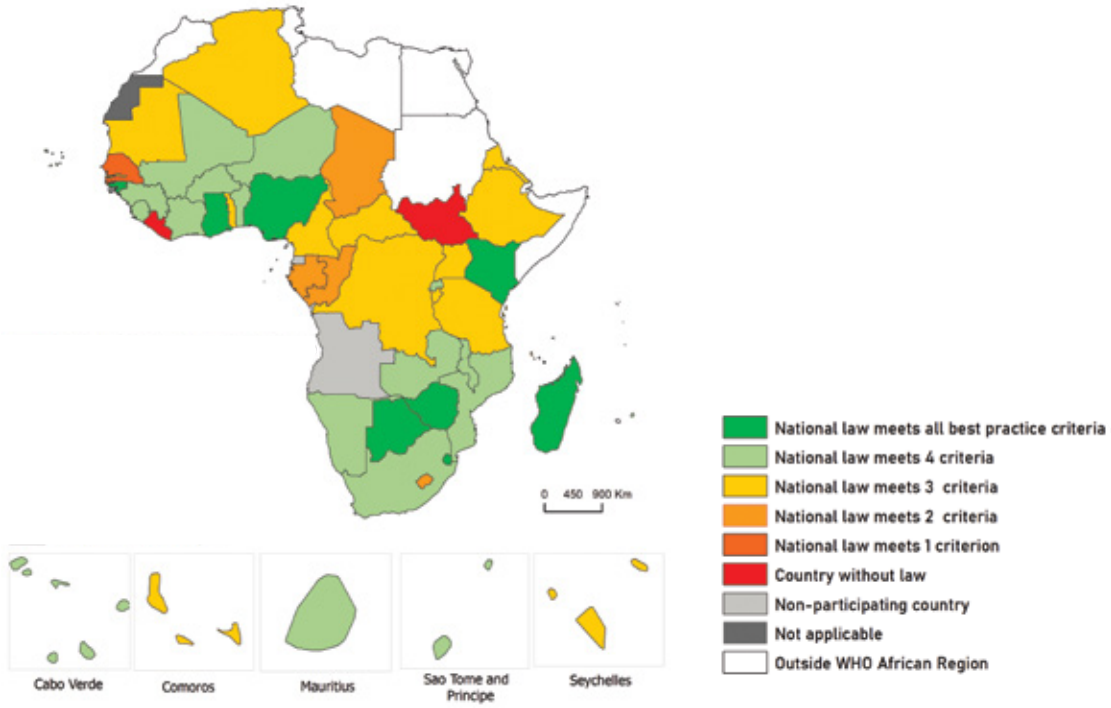
As a result of the increased law enforcement presence and implemented measures, Namibia has seen significant reductions in road traffic crashes, injuries and deaths. According to monitoring reports, compared to 2017 there were fewer incidents in 2018:

- Injury crashes per 100 000 decreased by 10.4%, from 171 to 154.
- Serious injuries per 100 000 decreased by 22.3%, from 57.1 to 45.6.
- Deaths per 100 000 decreased by 31.9%, from 32.7 to 23.7.

Motorcycle helmet use

Motorcycle helmet use can reduce the risk of death by 42% and the risk of head injury by almost 70%. However, the protective effect is significantly reduced if a non-standard helmet is used and/or if the helmet is not properly fastened *(15)*. Similar to other risk factors assessed, most countries *(43)* in the African Region have legislation on helmet use but only eight have laws that meet all best practice criteria (Figure 11).

Fig. 11. Status of motorcycle helmet laws, WHO African Region, 2021

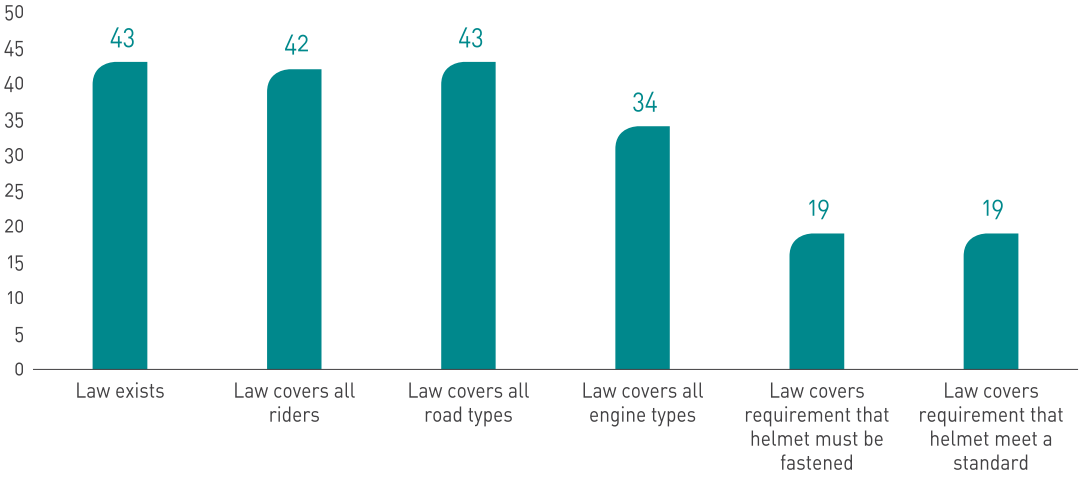


The best practice criteria most met by countries are laws that apply to riders (41 countries) and to all road types (43 countries). Fewer countries (34) have laws that apply to all engine types, 19 have laws that specify a particular helmet standard and 19 have laws that require that the helmet be appropriately fastened (Figure 12).

The latest update on helmet laws in the Region shows that three more countries have implemented these laws since the last Global status report 2018. However, there has been no change in the number of countries with laws that align with best practices. Since 2018, two countries have modified their helmet laws to include penalties for violation.

The laws in 38 countries prescribe penalties to enforce motorcycle helmet use.

Fig. 12. Countries with best practice criteria for motorcycle helmet use, WHO African Region, 2021



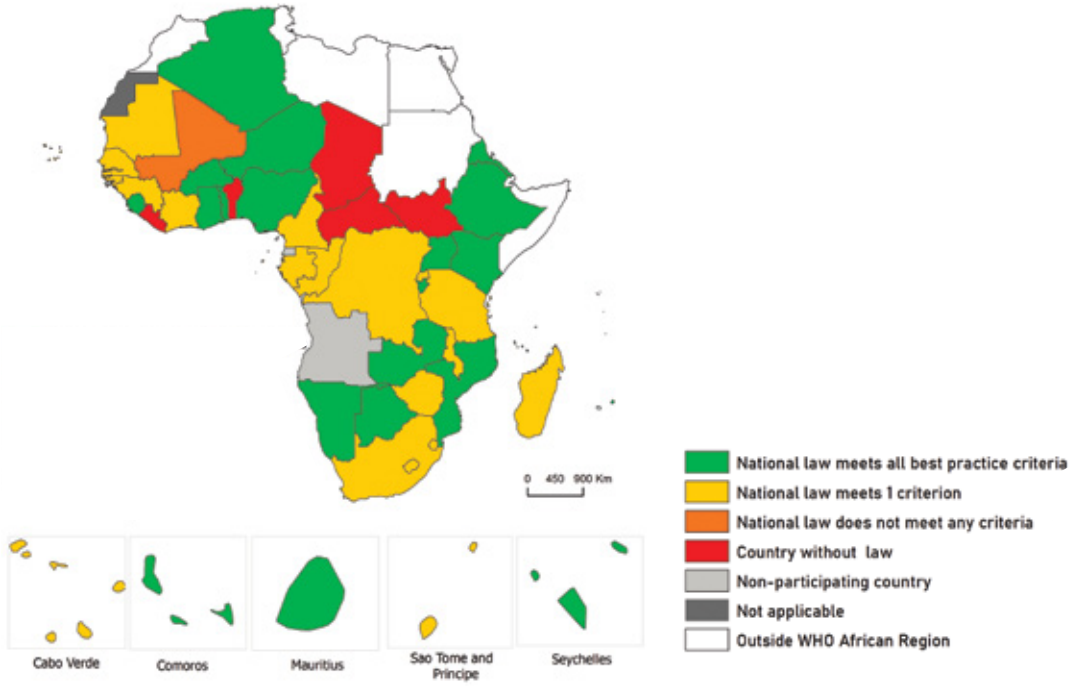
Seatbelt use

When seatbelts are used correctly, they can reduce the severity of injuries and the number of fatalities among all car occupants, with evidence suggesting a 40–50% reduction in the number of fatalities among front-seat passengers *(15)*. Out of the countries surveyed, 40 have mandatory seatbelt use laws but only 20 of the laws meet best practice, requiring all front and rear seat occupants to use seatbelts. In 19 countries, the laws require only the driver and front seat passengers to use seatbelts. Since the Global status report 2018, the number of countries

with seatbelt laws has increased by three. The countries with laws that meet best practices also increased by three (Figure 13).

The laws in 43 countries prescribe penalties for non-use of seatbelts.

Fig. 13. Status of seat-belt laws in the African Region, 2021



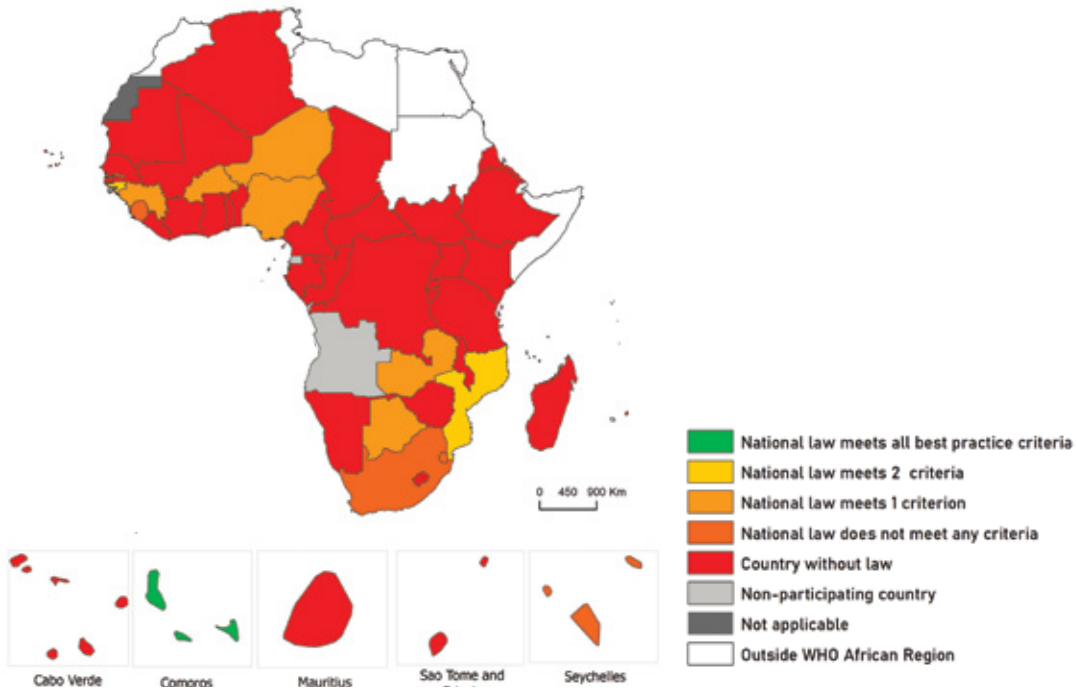
Child restraint system use

Properly restraining children in vehicles significantly reduces road traffic injuries and fatalities. To maximize the effectiveness of child restraint systems (CRS), technical requirements for their use, based on the child's seating position, age, height and weight, have been recommended and should be included in corresponding laws *(15)*. Although for this report, CRS laws were assessed based on the minimal best practice criteria (10 years, 135 cm), for countries in the process of developing new laws WHO promotes setting the CRS limit at 12 years and 150 cm, in line with the enhanced CRS UN Regulation 129 *(20)*. Currently, 14 countries have laws on the use of CRS but only one meets the best practice. Eleven of the 14 countries have laws that specify mandatory child restraint use based on age. Only four countries have laws that require the CRS to meet a specific standard. However, most countries *(22)* have laws or regulations restricting children from sitting in the front seat.

Among the five risk factors, child restraint use has shown the least improvement since the Global Status Report 2018, with no change in the number of countries with a law, and only Comoros amending its law to meet best practices (Figure 14).

In six countries, the law prescribes the use of penalties for violation.

Fig. 14. Status of child restraint system laws, WHO African Region, 2021



Driver licensing

The safe system approach to road safety mitigates the risk of exposure to road traffic crashes, and recommends an appropriate level of knowledge, skill and experience for drivers to safely use motorized vehicles. Institutional and legislative arrangements are necessary to regulate the admittance of drivers into the road system through licensing requirements and enforcement *(5)*.

The majority of countries (43) surveyed have laws requiring individuals to obtain a licence before driving. This applies to both four-wheelers and two- and three-wheelers. However, as Table 6 shows, fewer countries, have laws specifying the minimum age for obtaining a licence, a requirement for a learner permit prior to obtaining a full licence or additional licensing requirements for professional drivers. Penalty or demerit systems for repeated driving offences are specified in the laws of two countries, where the penalties include suspension or revocation of the driver's licence and fines.

Table 6. Driver licensing laws, WHO African Region, 2021

Law specifies the minimum age for obtaining a licence	Cabo Verde, Guinea-Bissau, Mozambique (n=3)
Law requires drivers to have a learner permit prior to obtaining a full licence	0
Law specifies additional licensing requirements for professional drivers	Cabo Verde, (n=2)
Law requires drivers to pass medical tests prior to obtaining a licence	Cabo Verde, Mozambique, (n=2)

Post-crash response

While prevention is the primary goal of road safety, crashes still occur, causing deaths and injuries. Survival after a crash critically depends on how quickly the injured receive care. Timely and effective emergency care is an essential component of road safety and can mitigate medium- and long-term consequences of injuries, reducing both deaths and disability and the socioeconomic consequences of crashes for individuals and their families (21). National road safety strategies aim to reduce the interval between a crash and the first professional emergency care in 26 of the surveyed countries in this report. Additionally, eight countries have set targets to ensure that professional care is provided within one hour of an accident.

The effective care of the injured begins with activating the emergency care system, which entails providing care at the scene and transporting the injured to facilities equipped to provide emergency and rehabilitation care. The appropriate legal, financial and social systems must be in place, and be well integrated, coordinated and supported by a sound legislative framework (5,21,22). Key elements of post-crash response include (5,21):

- a system to activate post-crash response;
- bystanders and lay responders (non-medical professionals) with the capacity to provide basic lifesaving interventions;
- professional medical care, with trauma registries and integrated prehospital, hospital and rehabilitation services that are accessible 24 hours, regardless of ability to pay;
- multidisciplinary, post-crash investigation, including appropriate financing mechanisms, such as mandatory third-party liability motor vehicle insurance and social, judicial and, where appropriate, financial support to bereaved families and survivors.

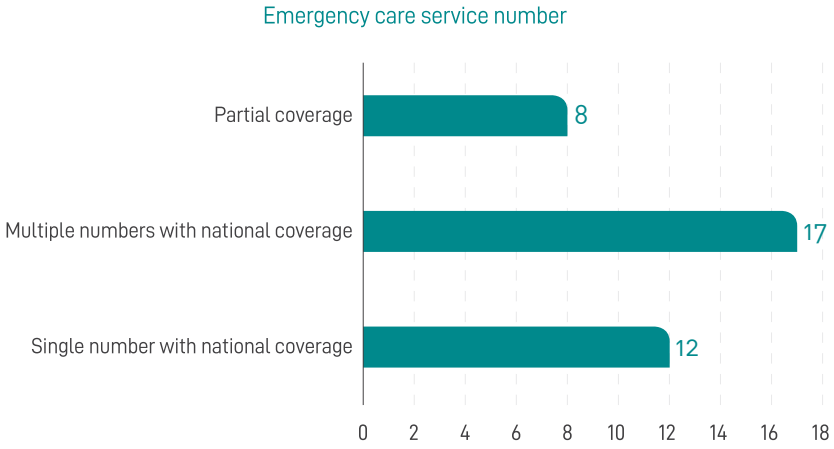
This survey assessed the status of post-crash response based on the above elements:

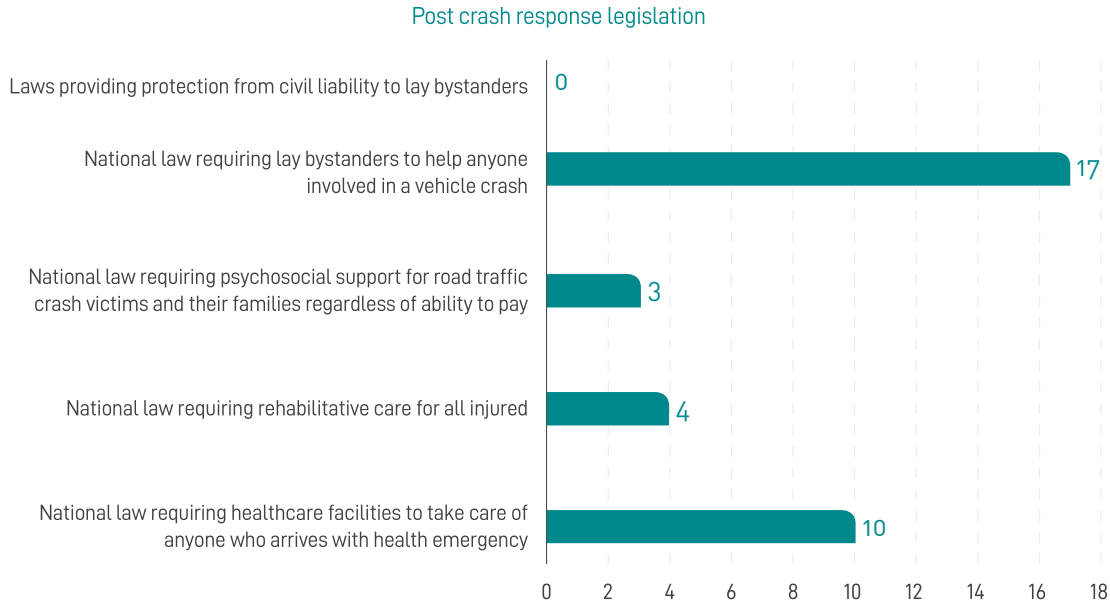
- Only seven countries conduct assessments of prehospital and facility-based emergency care which are necessary to design adequate services that respond to need.
- Five countries have national laws requiring training, licensing or other certification processes for first health responders.
- Certified specialist or subspecialist programmes for emergency medicine physicians are reported in 21 countries, for trauma surgeons in 24 countries, and specialization in emergency care/trauma care for nurses is reported in 13 countries.
- Trauma registries are reported in 19 countries. Eleven countries aggregate facility-based trauma data nationally, while eight aggregate trauma data only in selected facilities. Since the Global Status Report 2018, the number of countries with trauma registries has dropped from 32 to 19.

In addition, countries highlighted the uneven distribution of emergency care services between urban and rural settings. Only three countries reported that the number and level of emergency care facilities were adequate and responded to the needs of the population. In 26 countries, it was noted that there were minimal to no emergency services in rural settings. In nine countries, urban emergency services were deemed adequate, and in 17 countries they were considered inadequate.

Table 7 presents the status of emergency care numbers and post-crash legislation.

Table 7. Status of emergency care numbers and post-crash legislation, WHO African Region, 2021





Safe roads

Road infrastructure design plays a critical role in ensuring road safety outcomes. By facilitating safe road user behaviour and providing an environment that reduces the severity of crashes that do occur, safe road infrastructure can substantially reduce the occurrence of crashes, deaths and serious injuries. Equally important is the fact that appropriate road design that prioritizes the protection of vulnerable road users should include features like protected bicycle lanes and pedestrian-only zones. This not only reduces the risk of serious injury and death but also encourages the use of sustainable forms of transport *(23)*.

Road safety inspections and the star rating of roads can provide mechanisms to ensure that safety is a top priority in the design and management of new and existing roads. This report assesses countries based on their implementation of road safety assessments and their adherence to road safety standards.

Implementation of road safety audits for new roads/assessment of existing roads

Formal road safety audits are reported by 12 countries. Five of these countries declare evaluating 50% of their national road network, three evaluate 20–50% of their national road network and two evaluate 20% of their national road network.

Eight countries report national legislation requiring a formal road safety assessment or inspection for existing roads. Five have laws requiring periodic checks (maintenance or inspection) while three have laws requiring the needs of all users to be considered.

Road standards

Road safety standards were assessed using the star rating system developed by the International Road Assessment Programmes (iRAP), as an objective measure of the level of safety that is "built-in" to the road through more than 50 road attributes that influence risk for all road users *(24)*. A three-star rating is widely accepted as the minimum acceptable rating for new and existing roads *(19)*. In the African Region, 34 countries report on technical standards for the development of new roads that account for the safety of all road users, and 30 of these countries report using United Nations or other conventions to inform these standards. The Region has a total of 666 371 km of paved roads, of which only 1.45 km meet a three-star or higher rating in relation to pedestrians, 2.11 km in relation to powered two- and three-wheelers, 2.68 km in relation to cyclists and 3.74 km in relation to passenger vehicles.

A Safe System approach to public transportation: Dar es Salaam Bus Rapid Transit

The Dar es Salaam transportation system mainly consists of privately owned commuter buses called daladalas. which are, for the most part, unreliable and unsafe. This is worsened by the city's poor road regulatory control, unsafe road infrastructures and lack of transport schedules, which often lead to overcrowding in buses and congested roadways, especially during peak traffic hours.

To ensure a fast, safe and reliable transportation system that is integrated into the existing transport network, the Government of the United Republic of Tanzania initiated the Bus Rapid Transit (BRT) project, commonly known as mwendokasi, in 2012. The Dar Rapid Transit Agency (DART), funded by the World Bank, the African Development Bank, the International Development Association and the Government, is implementing the project in six phases, each including the construction of a strategic "corridor" on exclusive lanes for rapid transit buses. On completion in 2030, the system will have a 130.3 km road network dedicated to public bus transportation, 18 bus terminals and 228 bus stations.

Key features of Dar es Salaam's BRT

1. Based on the Safe System approach, the road infrastructure is designed to create a safe road environment for all road users through:

- exclusive lanes separating buses from other motor vehicles and pedestrians, with clear, prominent signage and lighting to ensure the orderly flow of traffic and improved safety for all users;
- modal integration at stations and terminals: middle lanes, central medians, short crossways, pedestrian walkways and pedestrian bridges, bicycle parking at stations, and park-and-ride facilities for drivers to facilitate non-motorized and walking access and enhance integration for other car users.
- A safer mode of transportation: speed management using fleet trackers and effective licensing and regulatory regimes for bus drivers.

2. A fast, efficient, reliable and clean transport system through:

- rapid boarding and disembarking;
- efficient pre-board fare collection;
- transit prioritization at intersections;
- use of large, high-frequency buses.

Achievements

Phase I of the project was completed in 2015, covering 20.3 km, with 27 bus stations, five bus terminals and one bus depot. Operations started in 2016, with a fleet of 140 buses, operated by the Usafiri salama Dar es Salaam Rapid Transit (UDA-RT), ferrying an estimated 200 000 passengers per day.

Dedicated lanes, priority at traffic intersections and feeder roads have eased traffic congestion and reduced travel time from three or four hours to 90 minutes. The use of new and large 150-seater buses reduces vehicle emissions as a result of fewer trips and buses, promoting improved air quality.

Challenges

The bus fleet is insufficient, resulting in overcrowding in buses and long waiting times at connecting stations, particularly during rush hour. This has been mitigated by the introduction of express services during rush hour, adding eight buses per hour.

Inappropriate road use by boda boda drivers and pedestrians (jaywalking and non-use of walkways) jeopardizes their safety. Sustained road safety campaigns are being carried out to increase awareness and promote safe road use.

Safe vehicles

The global fleet of light-duty vehicles is set to at least double by 2050, and 90% of this growth will take place in LMICs, which, based on a report published by UNEP, import the largest number of used vehicles, with key concerns regarding the environmental pollution and climate emissions as well as their quality and safety *(25)*. According to the same report, Africa imported the largest share of used vehicles globally (40%).

The period 2011–2020 saw the global motor vehicle fleet burgeon, with countries reporting a 160% increase since 2010. Four-wheeled vehicles make up 85% of the world's motor vehicle fleet, with powered two- and three-wheelers accounting for the next largest share, at 12% *(9)*.

Based on data reported by the countries in the Region,[7] in 2021, there were 65 616 363 registered vehicles, of which 9 883 828 were cars and four-wheeled light vehicles, 2 079 633 were two- and three-wheelers, 1 124 731 were buses, 631 236 were heavy trucks and 1 546 305 were other vehicle types.[8] Given the inconsistencies in reporting on vehicle types, it was not possible to assess the increase in fleet size for all vehicle types. Only nine countries have consistently reported the number of registered two- and three-wheelers since the Global Status Report 2013, which shows a threefold increase (Table 8).

Table 8. Number of registered powered two- and three-wheelers, WHO African Region, 2010–2021

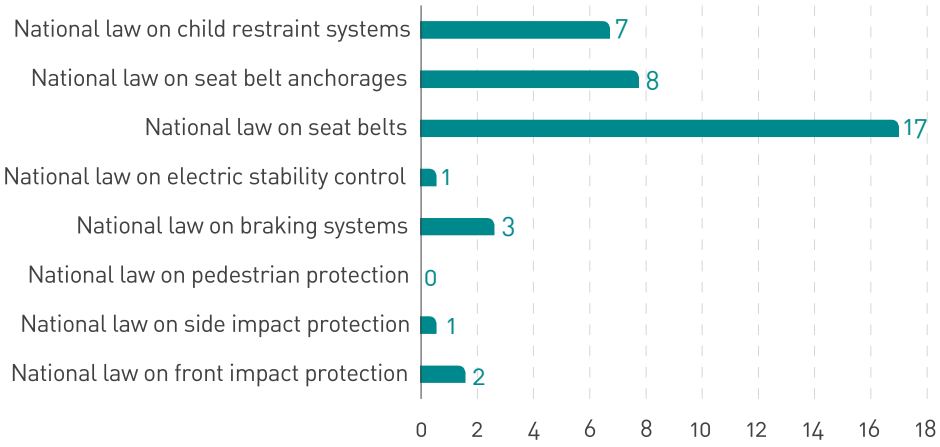
Country	2010	2021
Benin	13 722	979 512
Chad	178 727	420 594
Comoros	1 283	2 065
Ghana	57 518	148 126
Liberia	5 733	9 247
Mauritius	180 785	229 563
Rwanda	63 825	146 639
Togo	41 830	65 363
United Republic of Tanzania	145 880	211 211
Total	689 303	2 212 320
% change 2013–2021		221

Currently, 29 countries have national legislation addressing vehicle safety for four-wheeled motorized vehicles. The law applies to both private and professional vehicles in 26 countries. Legislation specifying requirements and standards for core safety equipment in vehicles recommended by the United Nations Economic Commission for Europe is absent in many countries, and none of the countries has legislation mandating all eight core areas of safety

[7] Only 17 countries reported the total number of registered vehicles by type. [8] Countries did not consistently report on the number of registered vehicles by type, therefore the totals by vehicle type do not add up to the total number of vehicles.

equipment. None of the countries in the Region has legislation that specifies the requirements and standards for pedestrian protection systems in vehicles, and only one country has legislation on electronic stability control systems. Table 9 presents countries with legislation on each of the eight core vehicle safety standards.

Table 9. Countries with legislation on core vehicle safety standards, WHO African Region, 2021



Thirty-one countries report having restrictions on used vehicle imports. Of these, 17 indicate a vehicle safety criterion with or without an additional vehicle age limit. Eight countries use the age limit alone.

Vehicle registration and insurance

The majority of countries in the Region have legislation requiring registration of all motorized vehicles, but the law applies to both private and professional vehicles in only three of the countries. Minimum requirements for registration of new and used motorized vehicles are reported in only one country.

In 36 countries, there are national laws mandating third-party liability insurance for vehicles, but only three of these apply to all vehicles. Additionally, only two countries have laws that regulate insurance premiums and none of the countries has legislation that sets up a fund to cover victims of uninsured or unidentified (unregistered) vehicles. This has huge and far-reaching consequences for members of lower socioeconomic groups, who are more likely to be involved in road traffic crashes and have a higher risk of impoverishment as a result of catastrophic health care costs and lost income *(26,27)*.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Section 3.

Governance and data management

This section analyses overarching themes that support mitigating measures for road safety: road safety governance and data management.

35 countries have a national road safety strategy,
21 of these countries have set fatality reduction targets in their national strategies and
17 of the targets are aligned with SDG target 3.6 on halving road traffic deaths and injuries by **50%** by 2030.

Data systems in many Member States surveyed are incomplete and sparse, failing to capture critical data on morbidity and road user characteristics such as sex, age and user type.

Governance

Institutional management is crucial for achieving global and national road safety goals and targets. The capacity of countries to effectively implement road safety interventions depends on the establishment of agencies to lead road safety efforts through multisectoral coordination arrangements, the setting of road safety goals and targets, the provision of human and financial resources and the monitoring and evaluation of activities.

Most countries in the Region (42 out of the 45 surveyed) report having a lead road agency with appropriate coordination mechanisms. The lead road agencies are mostly responsible for coordination, public outreach and capacity-building, policy, planning and monitoring, data knowledge management systems and strategy planning. Only 16 countries reported having allocated funding in the government budget for the lead agency to conduct these functions.

Prevention of crashes and injuries, care and treatment of injuries, capacity-building, surveillance, monitoring and evaluation are the most funded activities for road safety in the Region, as reported by almost half of the countries surveyed. On the other hand, research relevant to road safety, rehabilitation and palliative care for survivors are reported to be the least funded activities by one third of the countries.

The main source of funds is general government revenues, reported by 15 countries, at 50% or higher of total funding in 12 of the countries. Other sources of funds include motor vehicle insurance, followed by international and national donors and health insurance. The share of funding from these sources ranges from 3% to 20%, except for that from national donors, which accounts for up to 60%.

Fiscal interventions reported by countries include taxation on fuel, alcoholic beverages, road use (e.g. tolls) and vehicle purchase; economic sanctions for infractions; and vehicle insurance. Sixteen countries reported that funds raised through fiscal interventions were earmarked for road safety.

Currently, 35 countries have a national road safety strategy and 31 of the strategies are funded; 21 of these countries have set fatality reduction targets in their national strategies and 17 of the targets are aligned with SDG target 3.6 on halving road traffic deaths and injuries by 50% by 2030.

Since the last report, the number of countries with a national strategy has increased by nine.

Data management

Reliable and accurate data are key to identifying priority risks for road safety, developing adequate strategies and evidence-based interventions and evaluating their impact through regular monitoring. Quality data are essential to securing political commitment in the context of competing priorities and scarcity of resources.

To provide an overview of road data management systems in the Region, we analysed definitions used, sources of data and discrepancies between estimated and reported data on mortality.

Definitions used

Data quality is impacted by the data collection and management process *(28)*. Factors that can compromise quality include definitions that determine which events are included or excluded from the system and how injuries, crashes and mortality from road traffic crashes are classified.

A single common definition of road traffic mortality shared by all stakeholders is necessary to ensure that the data gathered are comparable. When jurisdictions and sectors or agencies within a country do not use the same definitions, it is difficult to compile road safety data that are useful for planning.

As Table 10 illustrates, in the African Region, the definition of road traffic death varies widely, with only 27 countries using the recommended definition "Died within 30 days of crash."

Table 10. Definition of road traffic death used by countries to classify road traffic fatalities

Died within 30 days of crash	Died within unlimited time period following crash	Died at scene of crash	Died within 24 hours of crash	Died within 7 days of crash	Other	Total
27	5	6	4	1	3	46

Regarding serious injuries, 30 countries report having a data collection system in place. Among these, only two use a standard definition of severity of injuries based on internationally set criteria (MAIS, RTS or MGAP),[9] while 19 refer to the need for hospitalization and 7 to "other" definitions (Table 11).

Table 11. Definition used by countries to classify serious road traffic injuries

Serious injury data collection

Status	Yes	No	Data not available	Do not know	Total
No. of countries	30	8	5	2	45

Definition of serious injury

Standardized injury severity (MAIS, RTS, MGAP)	Requires hospital admission	Other	N/A	Total
3	19	7	1	30

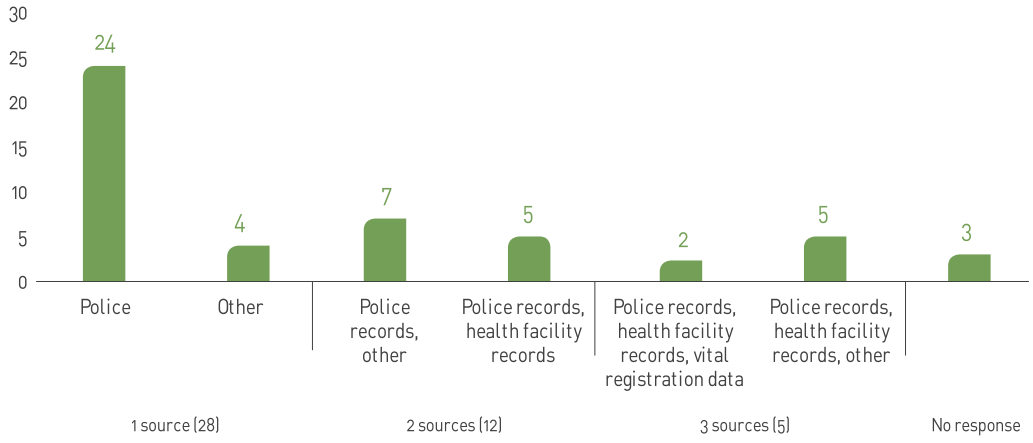
The lack of harmonization of definitions of death and injury severity has negative impacts on the quality of the data.

[9] MAIS = Maximum Abbreviated Injury Severity ; RTS = Revised Trauma Score; MGAP = Mechanism/Glasgow Coma Scale/Age/Pressure.

Data sources for road traffic fatalities

The use of several sources of data is recommended to increase the completeness of databases and the accuracy of road traffic fatality numbers. However, most countries *(28)* use a single source of data, often police records, as reported in 24 countries. Other sources of data include health facility records and CRVS. Only five countries (8%) use three sources of data (Figure 15).

Fig. 15. Distribution of countries by road traffic fatalities source of data



Our findings show that just over half of the countries surveyed *(23)* use CRVS data to report road deaths. CRVS involves the continuous recording of vital events in an individual's life, such as birth, marriage and death, including cause of death. Developing a CRVS system is a core governmental responsibility that necessitates collaboration among various stakeholders across multiple sectors *(29)*. Reliable data on deaths and their causes are crucial for both national and global health prioritization efforts.

Globally, approximately 62% of deaths are registered annually. In the African Region, only 10% of deaths are registered, compared to over 90% registered in Europe and the Americas *(29)*. An effective CRVS system not only records these events but also aids in tracking public health trends, planning interventions and evaluating policy effectiveness. These statistics adhere to international norms, ensuring comparability between countries, and encompass both natural and violent causes of death, such as road crashes.

However, obtaining good quality and timely mortality data remains a significant challenge in the WHO African Region. This is primarily because of factors such as low coverage and poor performance of CRVS systems, incomplete reporting through routine health information systems, weak policy and legal environments to support mortality reporting and inappropriate use of data standards such as the International Classification of Diseases and the International Medical Certificate Form of Cause of Death.

Improving road safety data in Senegal through a multisource approach

In Senegal, accurate data on road traffic fatalities has long been a challenge. A significant gap was identified between reported and estimated road traffic deaths, with the Global status report 2018 revealing only 604 deaths reported compared to an estimated 3609 by WHO. This discrepancy highlighted the urgent need for improved data management systems so as to better understand and address the road safety situation in the country.

In response to this challenge, a project was launched in 2021 in Senegal's Dakar region, a hub that covers 0.3% of the country's surface but hosts 23% of Senegal's population and an alarming 40% of the country's road traffic fatalities. Led by the Ministry of Health and Social Action, in collaboration with the Ministry of Transport and supported by WHO, the project aimed to enhance the data management systems for road traffic crashes using a multisource and collaborative approach.

Data are collected from five departments of the Dakar region – Dakar, Pikine, Guédiawaye, Rufisque and Keur Massar – focusing on road traffic fatalities recorded between 1 January and 31 December 2019. These data, sourced from hospitals, police, firefighters, military police (the gendarmerie) and health emergency services (SAMU) were consolidated into a single database. The results were eye-opening: in 2019 alone, 855 road traffic fatalities were recorded in the Dakar region. Extrapolating from these data, an estimated 2138 fatalities occurred on Senegal's roads, compared to the officially reported 745, demonstrating a threefold underestimation of fatalities.

One of the key findings was the superior quality of hospital data, including those of SAMU, which accounted for 58% of the fatalities and showed minimal duplication. This underscored the reliability and importance of hospital data in providing a more accurate picture of road traffic fatalities.

The success of this multisource approach can be attributed to several factors:

- **Improved data accuracy:** By combining data from multiple reliable sources, the project provided a more comprehensive and accurate picture of road traffic fatalities in Senegal.
- **Enhanced data quality:** The project provided an opportunity to build capacity among data managers from multiple sectors, ensuring alignment in data collection practices and resulting in improved data quality and reliability.
- **Facilitated multisectoral collaboration:** The multisource approach fostered collaboration between different sectors, which is essential for developing comprehensive and effective road safety strategies.

This project serves as a model for improving road safety data management systems, not only in Senegal but also in other countries facing similar challenges. By addressing the identified challenges and implementing the recommended strategies, the multisource approach has paved the way for more accurate and reliable estimates of road traffic fatalities, ultimately contributing to the development of effective road safety strategies and policies in Senegal.

For the *Global status report 2023*, WHO classified countries into four groups, based on the quality of death registration data.

WHO's country classification in terms of death registration data

Group 1: countries with eligible death registration data meeting the following completeness criteria – completeness for the year estimated at 80% or more, or average completeness for the decade including the country-year was 80% or more.

Group 2: countries where the completeness and accuracy of death registration data is relatively low but where additional sources of information on causes of death are available. This group is subdivided into two as follows:

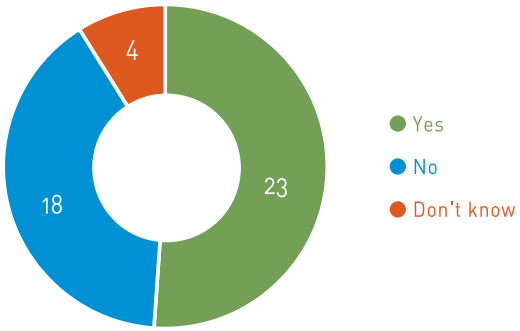
- **Subgroup 2A:** countries that have linked death registration data from various sources rather than relying on a single data source for the entire population.
- **Subgroup 2B:** countries that have linked death registration data from various sources rather than relying on a single data source. In these countries, the coverage is limited to specific geographical areas, such as the capital or a district.

Group 3: countries with populations less than 150 000 and without eligible death registration data.

Group 4: countries with populations greater than 150 000 and without eligible death registration data – with a high percentage of deaths assigned with unknown age and ill-defined cause of death.

All but six countries (Mauritius, Senegal, Seychelles, South Africa, United Republic of Tanzania and Zambia) in the WHO African Region belong to Group 4. Since the Global status report 2018, four countries (Côte d'Ivoire, Senegal, United Republic of Tanzania and Zambia) have made progress and moved from Group 4 to Group 2B following country efforts to improve the data systems.

Fig. 16. Use of CRVS data as a data source for road deaths, 2021



Reported and estimated road traffic fatalities data

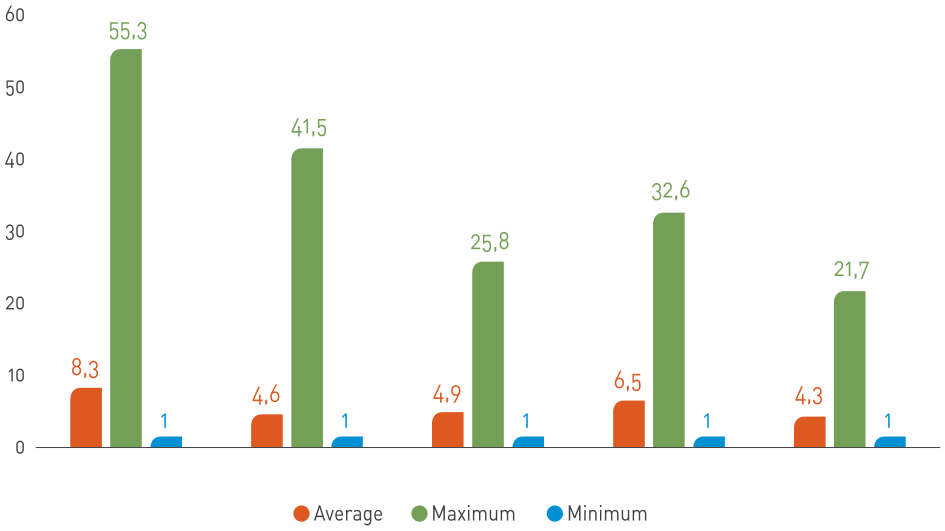
During the global status report data collection process, WHO also collects reported data on fatalities from countries. WHO produces mortality estimates from diseases and injuries, including road traffic injuries, regularly using statistical modelling methods recognized

internationally. These estimates are necessary to account for underreporting in the data, resulting from challenges in the completeness, accuracy and reliability of the reported road traffic fatality data *(30)*.

From 2007 to the current 2021 data, the gap between estimated and reported data reduced from an average of eightfold to fourfold. However, the discrepancies between estimated and reported data remain high, ranging from one to 22.

In 2021, reported data matched estimated data in five countries compared to only three in the 2010 report. Twenty-nine countries report having taken action to address the discrepancies between estimated and reported data. Measures taken include multisectoral engagement and sharing of data among stakeholders, multisource approach and capacity-building.

Fig. 17. Ratio between estimated and reported data, 2007–2021



The analysis of data provided through the survey in the African Region shows major deficiencies in information systems: poor-quality data that are incomplete, not standardized and unreliable, which weaken the system's capacity to make timely and appropriate decisions based on evidence.

Mortality data are not the only important information road safety managers need to develop effective interventions. The number of people seriously injured and facing long-term impairments from road traffic injuries, the types of road users, and age and sex distribution are all important indicators that countries do not capture consistently. Twenty-six countries reported data by sex, 12 by age group and 18 countries by road user type for the year 2021. Data on long-term impairment from road traffic injuries following a crash are available in only two countries, where prevalence rates of 12.9% and 35% were reported. Only 10 countries have national health information systems that monitor modes of transport and travel modalities of children. Moreover, there is substantial variability in the quality of reported data among countries in the Region and inconsistency in reporting over the years, which makes trend analysis challenging.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Conclusion

The road traffic burden remains high, and the African Region is disproportionately affected by road traffic crashes, with economic and social consequences beyond physical health and injury. This is a development issue for the youngest region in the world. There is a strong link between poverty and road traffic crashes, as the likelihood for poor people to be involved in road traffic crashes is higher. These crashes can push people deeper into poverty and limit their economic potential. This underlines the need for political will to address this growing societal and developmental crisis, calling for urgent collective action from governments, international organizations, the private sector, academia, civil society and youth.

There has been uneven progress towards the target of halving deaths by 2030, with substantial reductions in the number of deaths in 17 countries. In other countries, however, this number has either remained stagnant or increased. This shows that achieving the target is possible when the right decisions and appropriate actions are taken, underscoring the need for strong political will and concerted and rapid action by governments and stakeholders within the African Region. Furthermore, there is a need to invest in implementation research, tailored to the unique challenges and contexts of the African Region, to strengthen research capacities to identify, document and share successful interventions.

Multimodal transportation in the Region needs to be improved. Less than one third of countries have strategies to promote walking and cycling. Only a few of them have set targets to increase these alternative forms of transport. Given the rapid urbanization, there is a need for countries to hasten the pace of multimodal transport development to promote an optimal mix of motorized and non-motorized transport modes to consider the transportation and safety needs of populations and promote equitable access to mobility. Evidence suggests that cyclists and powered two-wheelers (motorcyclists/moped drivers) are perceived to be the least safe of all transport modes. Thus, promotion of walking/cycling must be carried out in a context where their safety is specially protected.

Insufficient legislation and safety standards in various countries pose a significant hurdle. Only a fraction of Member States in the African Region have laws and regulations that align with WHO best practices, underscoring the importance of having legislative frameworks to ensure road safety. More work is needed to enact or strengthen existing laws and regulations to meet best practices for behavioural risk factors. It is also important to specify minimum standards for vehicle safety and road infrastructure to safeguard all road users and promote a sustainable mix of transportation modes. The latter is of paramount importance for a region witnessing the most rapid urbanization in the world. There is evidence that investing in affordable and safe public transportation and creating enabling environments for walking and cycling can lead to sustainable solutions for the challenges posed in African cities.

Enforcement of road safety laws only reflects what is written in the law and not actual practice. There is a need for a research agenda to go beyond global status reports to capture practices, public perceptions of enforcement measures and levels of compliance with road safety rules, particularly those related to the five behavioural risk factors. Understanding the level of enforcement is important for identifying gaps and priorities for strengthening and sustaining enforcement measures as prescribed by law. Strengthening data collection systems on compliance indicators is crucial to supporting law enforcement efforts, particularly those related to road user behaviour.

Post-crash response services are insufficient or unavailable in most countries, with less than one third meeting the recommended standards. There is also a weak regulatory and legislative framework to promote access to prehospital care, emergency care and treatment, and rehabilitative services. Furthermore, the weak regulatory framework of motor vehicle insurance puts a high financial burden on crash victims and their families. Countries need to be supported to strengthen post-crash response, particularly in providing access to care and rehabilitative services, regardless of ability to pay.

Data management systems are weak, resulting in underreporting of road traffic fatality and injury data. There is a need to improve the reporting and quality of traffic data so that policy-makers can make evidence-based and informed decisions. Countries need support in enhancing data collection and reporting to ensure quality, accuracy and reliability, and further disaggregation by road user type, sex, age and vulnerable group, including persons with disabilities. Additionally, monitoring of mobility, in terms of patterns, vehicle fleet and infrastructure, needs to be strengthened to inform the development of Safe System policies.

Substantial progress towards 2030 will require increased effort from Member States rather than business as usual. Matching political will to the scale and urgency of the crisis, strengthening and enforcing laws, regulations and standards to comprehensively address risks inherent in motorized transport use, greater coordination of multisectoral efforts and collective action by everyone is crucial for the Region to make significant strides towards halving road traffic deaths by 2030.

Key recommendations

1 Countries should develop and implement policies that promote sustainable transportation systems, which consider the safety and accessibility needs of all road users, particularly the most vulnerable, and are appropriately aligned with the local context.

2 Legislative frameworks for road safety in the Region must be improved. Efforts must be made to ensure that laws and regulations are comprehensive, in that they meet best practice criteria for all risk factors, including enforcement mechanisms and resources and establish consequences for noncompliance. Such efforts should include relevant research and monitoring to identify gaps and understand the local context.

3 Improving the post-crash response will require the provision of systems to activate post-crash response; building and/or strengthening capacity along the continuum of prehospital, emergency care and treatment, and rehabilitative services; and creating comprehensive regulatory and legislative frameworks to provide an enabling environment for appropriate action. Countries must prioritize post-crash care as an essential element of health systems strengthening and access to universal health coverage.

4 Investing in data management systems to strengthen data collection, management and reporting is crucial to providing an enabling environment for all road safety efforts. This involves gathering data on injuries, long-term impairment and disability, mortality, law enforcement, road user perceptions and compliance, infrastructure, vehicle fleet and research data.

5 Implementation research tailored to the unique challenges and contexts of the African Region must be prioritized. Equally important is an appropriate investment to ensure that research capacities are strengthened and mechanisms for knowledge-sharing and collaboration are established within countries and across the Region.

6 Vehicle safety and roadworthiness require proper coordination and alignment among Member States and their respective regional entities to ensure adherence to regional and international standards, particularly regarding the regulation of imported vehicles.

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Annex 1.

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	Emmanuel Botchway	CRVS (Vital statistics)
	Foster Ansong-Bridjan	Ministry of Health
	Hannatu Abdulai	Lead agency
	Kwaku Duah	Ministry of Infrastructure
	Kwasi Agyeman-Boakye	Ministry of Infrastructure
	Patience Onny	Ministry of Infrastructure
Guinea	Alpha Bangoura	Ministry of Transport
	Antoine Kourouma	Other
	Abdoulaye Diallo	Ministry of Interior
	Djanka Keita	Other
	Djibril Camara	NGO
	Lamine Toure	Ministry of Transport
	Foromo Nestor Onikoyamou	Ministry of Health
	Yakhouba Sylla	NGO
Guinea-Bissau	Benedito Alfonso Lima	Ministry of Interior
	Maninho Fernando Gomes	Ministry of Transport
	Pedro Nino Tchigna Natelma	Other

Kenya	Bright Oywaya	NGO
	Charles Barasa	Ministry of Interior
	Charles Wanyama	Ministry of Interior
	Duncun Kibogong	Lead agency
	Justo Misiko	Ministry of Transport
	Japheth Ogendi	University/Research institution
	John Tabu	University/Research Institution
	Kenneth Kamumbu	Ministry of Infrastructure
	Peter Kingori	Ministry of Infrastructure
	Teresa Nyatuka	Other
Lesotho	Lehlohonolo Rasehlabo	Public Works and Transport
	Dr Kimini Mathews	Road Safety
	Mamonyane Taoana	Road Safety
	Masebeo Koto	Ministry of Health
	Rapelang Maekane	Public Works and Transport
	Rethabile Mahlala	Roads Directorate
	Joseph Sello	Roads Directorate
	Khahuso Pokane	Lesotho National Insurance Group
Liberia	Aaron Subah	Ministry of Finance
	Barbah Kaba	CRVS (Vital Statistics)
	Barbes Dawodu	Ministry of Infrastructure
	Fred M. Freeman	Ministry of Justice
	Samuel Wonasue	Ministry of Transport
	James Morlu	Ministry of Infrastructure
	Jasper White	CRVS (Vital statistics)
	William G. Zeanbo	Ministry of Health
	Leawon Gweh	Ministry of Interior
	Wesley Doe	Ministry of Interior
Madagascar	Cthérine Rakotoarison	Ministry of Health

Malawi	Alexandra Moyo	Ministry of Interior
	Amos Nyaka	CRVS (Vital Statistics)
	Aubrey Nyanga	Ministry of Transport & Public Infrastructure
	Bertha Kayuni	Ministry of Health
	Blessings Mushani	Lead agency
	Steve Derrick Manyozo	University/Research Institution
	Yona Mchanga	Ministry of Interior
Mali	Aliou Bagayoko	Ministry of Health
	Djadji Sacko	Lead agency
	Ousmane Maiga	Ministry of Transport
	Samba Dembele	Ministry of Transport
Mauritania	Cheikh Erebih	Ministry of Health
	Mohamed Mahmoud Ould Sidi Mohamed	Ministry of Interior
	Habib Toure	Ministry of Transport
	Ahmed Zemragui	Other
Mauritius	Vidyavratjee Ancharaz	Ministry of Health
	Sobhana Doorgakant	Other
	Pramanand Gopaldu	Ministry of Transport
	Dharamdev Nathoo	Ministry of Transport
	Salim Oozeer	Ministry of Transport
Mozambique	Agostinho Amor	Ministry of Interior
	Calide Naico	Ministry of Transport
	Celeste Moreira Amado Mamado	Ministry of Health
	Eulalio Nhamoneque	Lead agency
	Mateus Queha	Lead agency
	Nilza Antonio	Ministry of Finance
	Rene Dimas	Ministry of Transport
	Texel Tereza da Conceicao Conceicao	NGO

Namibia	Eugene Tendekule	Lead agency
	Isai Haikali	Other
	Justina Amupolo	Ministry of Health
	Melvin Van Wyk	Other
	Rozario Coetzee	Ministry of Interior
	Ruben Uupindi	Other
	Tulimeke Munyika	CRVS (Vital Statistics)
Niger	Abdoul Abdou-Aziz	Ministry of Transport
	Abou Mountari	Ministry of Interior
	Abdou Mahamane	Lead agency
	Mamadou Sanon	Ministry of Transport
	Souleymane Karadji	Ministry of Health
Nigeria	Aliyu Daksama	Lead agency
	Perpetua Akoji	Ministry of Transport
	Dominic Effion	Ministry of Interior
	Longi Dakum	Ministry of Health
	Moses Emmanuel	CRVS (Vital Statistics)
	Segun Atanda	Other
	Tunde Adebisi	Ministry of Finance
	Umaru Baba	Ministry of Finance
Rwanda	Elysee Nzimurinda	Other
	Emmanuel Kayigi	Ministry of Transport
	Fabrice Barisanga	Ministry of Infrastructure
	Ndamushima Gonzague	Ministry of Infrastructure
Sao Tome and Principe	Celma Tiny	Other
	Dossavi Freita	Ministry of Infrastructure
	Elizabete Barros	Ministry of Health
	Leslie Neto	Ministry of Health
	Taylor Silva	Ministry of Interior
	Yola Barbosa	Ministry of Transport

Senegal	Ousmane Faye	Ministry of Infrastructure
	Fodé Diémé	Ministry of Infrastructure
	Ange Michel Diatta	Ministry of Interior
	Ndeye Méry Mbaye	CRVS (Vital Statistics)
	Ousmane Diouf	Ministry of Health
	Suzanne Ndiaye	Ministry of Health
	Souleymane Ndiaye	Ministry of Infrastructure
	Mohamed Camara	Ministry of Interior
	Ndiaga Gaye	Ministry of Transport
	Banda Mangassa	NGO
Seychelles	Antoine Desnousse	Ministry of Interior
	Dan Simara	Ministry of Infrastructure
	Deano Louise	CRVS (Vital statistics)
	Flavia Contoret	Ministry of Industry/Commerce
	Gilbert Pierre	Ministry of Health
	Lanbert Woodcock	Other
	Patrick Andre	Lead agency
	Wilson Denis	Ministry of Transport
Sierra Leone	Christian Godwin	Lead agency
	Onieta Sinjo	Lead agency
	Veronica Sannoh	Lead agency
South Africa	Balene Mkhabela	Lead agency
	Deon Roux	Lead agency
	Earl Naidoo	Lead agency
	Heinrich Van Deventer	Lead agency
	Magadi Gainewe	Lead agency
	Mojalefa Lekoto	Lead agency
	Ntsobaki Tsokolibane	Lead agency
	Thabiso Ndebele	Lead agency
	Mpho Malebana	Lead agency
South Sudan	Emmanuel Longo	Ministry of Interior

Togo	Gregoire Abalo	Ministry of Health
	Dedry Sodji	Ministry of Interior
	Komla Gbevon	Ministry of Interior
	Andre Todzro	Ministry of Interior
Uganda	Bettinah Nalugo	Ministry of Interior
	Edward Kizito	Ministry of Transport
	Esther Bayiga	University/Research institution
	Ibrahim Kalule	Other
	James Katunguka	Ministry of Transport
	Judith Karara	Ministry of Transport
	Robinah Nampeera	Ministry of Transport
United Republic of Tanzania	Arnold Mato	Ministry of Industry/Commerce
	Juma Mfinanga	Ministry of Health
	Marwa Magoti	Ministry of Transport
	Phillip Dwese	Ministry of Infrastructure
	Zakaria Muyengi	Other
Zambia	Chinyama Chinyama	Ministry of Interior
	Chuncky Kanchele	Ministry of Transport
	Daniel Mwamba	NGO
	Gilbert Silwimba	Ministry of Transport
	John Sinfukwe	Ministry of Industry/Commerce
	Kondwelani Nkhosi	Ministry of Infrastructure
	Milos Mwale	NGO

The WHO Regional Office for Africa

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