



# MEXICO

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*According to police data, Mexico recorded 14 673 road fatalities in 2019 – a 5.8% decrease on 2018. The mortality rate is 11.6 deaths per 100 000 inhabitants. On 15 October 2020, the chamber of deputies approved the constitutional reform that empowers congress to legislate on mobility and road safety. The Mexican political constitution now includes the right to mobility: "Every person has the right to mobility in conditions of road safety, accessibility, efficiency, sustainability, quality, inclusion and equality". A general law on mobility and road safety is expected to be passed in 2021. Note that data in this country profile come from the Mexican Institute of Transportation (Instituto Mexicano del Transporte [IMT]) and the Ministry of Health; IRTAD has yet to validate them.*

## Impact of Covid-19

In response to the Covid-19 Pandemic, Mexico introduced lockdown measures on 23 March 2020, which affected the movement of people and goods on the road and in turn the exposure to road crashes.

The only road crash data available for the first semester of 2020 is that compiled by the National Guard (previously known as the Federal Police) and refer to crashes that occurred on the Federal Road Network (RCF).

Currently, there are no official statistics on the evolution of traffic volume in 2020. However, information from navigation applications provides some indications. The application Waze for Cities has been operating in Mexico for several years. Since March 2019 there has been a co-operation agreement between Waze and the IMT, which makes it possible to assess the number of Waze users who have been affected by a traffic event on the whole road network.

For the first half of 2020, the biggest reductions, compared to 2019, were reported in May, with a 37.0% reduction in the number of road deaths and a 65.5% reduction in the number of impacted Waze users.

**Table 1. Road fatalities by month**  
(dead at the scene of the crash, on the RCF)

	Average 2017-19	2020	% change
January	224	240	7.3
February	215	202	-5.9
March	268	223	-16.9
April	282	195	-30.8
May	253	159	-37.1
June	236	204	-13.6

**Table 2. Road motor vehicle traffic by month**  
Number of users of the Waze application

	Average 2017-19	2020	% change
March	6 753 050	5 908 257	-12.5
April	16 972 797	6 893 271	-59.4
May	23 963 085	8 265 564	-65.5
June	39 937 729	24 686 258	-38.2

## Trends

Mexico registered an overall **decrease in the number of road deaths in 2019**. According to the latest available data, 14 673 persons lost their lives in traffic crashes in Mexico in 2019. This represents a 5.8% decline on 2018. In 2018, 15 574 road deaths were reported, a 1.8% decrease on 2017.

Over the **longer-term**, there has been a lack of significant sustained improvements in road safety in Mexico when measured by the number of annual road fatalities. Between 2000 and 2019, the number of annual road fatalities increased by 5%. Annual road fatalities in Mexico reached their highest point on record in 2009 at 17 820 – 27% more than at the start of the century. Fatality totals have receded slightly since then, but a clear downward trend is not visible.

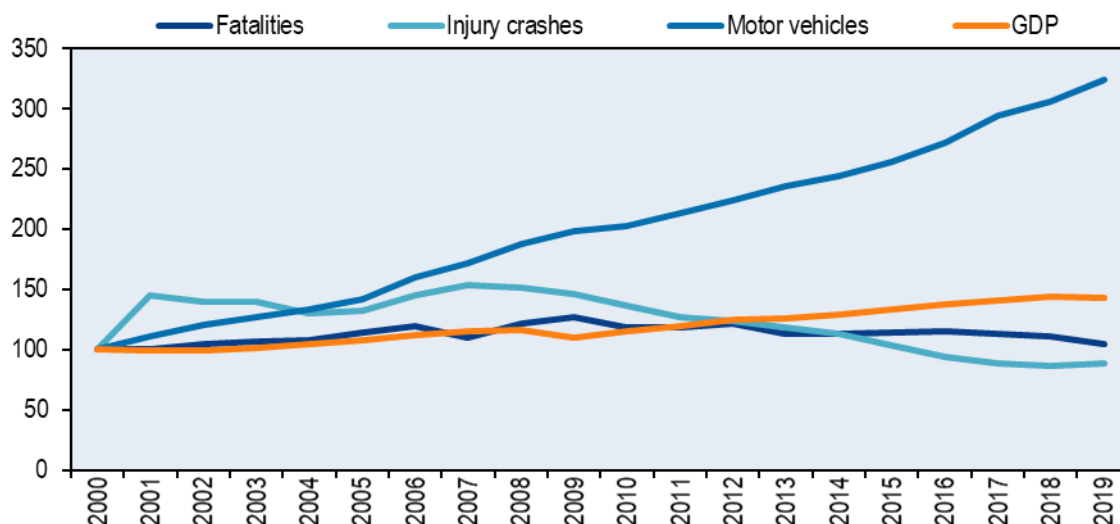
The number of **traffic deaths per 100 000 inhabitants** in Mexico fell 17% between 2000 and 2019. A total of 11.6 traffic deaths per 100 000 inhabitants were recorded in 2019, compared to 13.9 in 2000. By way of comparison, the average in the European Union was 5.1 deaths per 100 000 inhabitants in 2019.

### Country Profile

**Population** in 2019: 126.5 million  
**GDP per capita** in 2019: USD 9 941  
**Cost of road crashes:** 2.2% of GDP (2019)  
**Road network** in 2019: 794 524 kilometres (urban roads 9.5%; rural roads 89.2%, motorways 1.3%)  
**Registered motor vehicles** in 2019: 50.5 million (cars 68%; goods vehicles 21%; motorcycles 10%)  
**Speed limits:** 20-80 km/h on urban roads; 60-110 km/h on rural roads; 110 km/h on motorways  
**Limits on Blood Alcohol Content (BAC):** 0.8 g/l for general drivers; 0.3 g/l for professional drivers

Mexico recorded **2.9 road fatalities per 10 000 registered vehicles** in 2019. This represents a decrease of 68%, compared to the year 2000, when the rate of deaths to registered vehicles stood at 9.0. This change is partly a result of vehicle registrations tripling over this period (a development powered by an increase in motorcycle registrations by a factor of 16).

**Figure 1. Road safety, vehicle stock and GDP trends**  
Index 2000 = 100

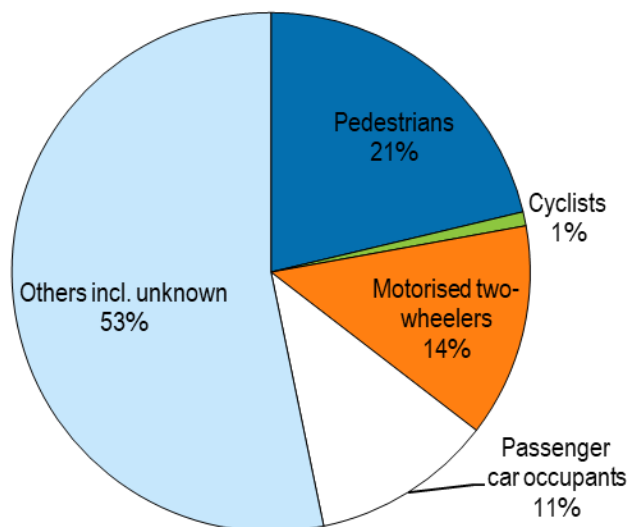


Data for **fatalities by road user group** is characterised by an explosion in the number of motorcyclists killed. Although motorcyclists only represented 13% of road deaths in 2019, the number of reported motorcyclists killed in traffic increased by a factor of 12 between 2000 and 2019, proportional to the growth in motorcycle registrations. This is clearly a growing concern for Mexico, especially since the motorcycle fleet is still relatively small and in constant expansion. Likewise, cyclist safety is a cause of concern with the number of cyclists killed having risen by 20% since 2000. According to police data, the number of cyclists killed rose from 107 in 2000 to 128 in 2019. These numbers are likely to be underreported.

The increase in fatalities in these road user groups has occurred parallel to road safety improvements for passenger car occupants and pedestrians. Between 2000 and 2019, pedestrians experienced a 43% decrease in road deaths, while passenger car occupants saw a 23% drop in road fatalities, according to police data.

According to police data, pedestrians represent 21% of all road deaths, yet the Ministry of Health suggests that closer to half of all road fatalities in Mexico are pedestrians.

**Figure 2. Road fatalities by road user group, 2019**  
(based on police data)



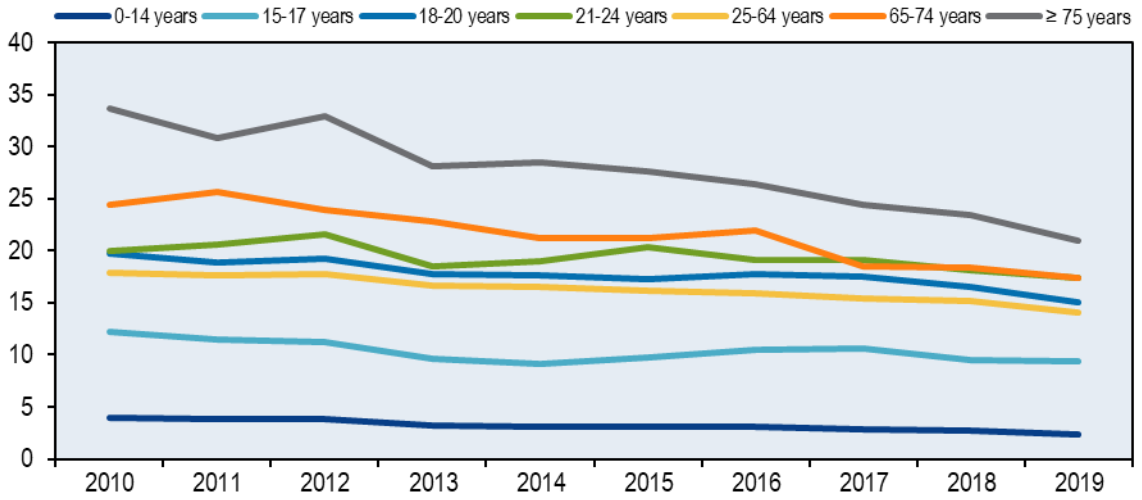
**Road deaths by age group** in 2019 largely showed continuity when compared to 2018. The most significant change concerned the 0-14 age group, who experienced a 12% decrease in the number of road deaths year-on-year.

Looking at the longer-term trend, since 2000 road fatalities have increased across all age groups, with the exception of the very young and the very old. Age categories between 18 and 64 years old recorded road fatality increases of 9.0% on average over this period. On the other hand, those under 14 had a 49.0% decrease in road fatalities, while the 15-17 age group registered a 5.0% decrease. Seniors over 75, for their part, have registered a 1.5% decrease in road fatalities since 2000.

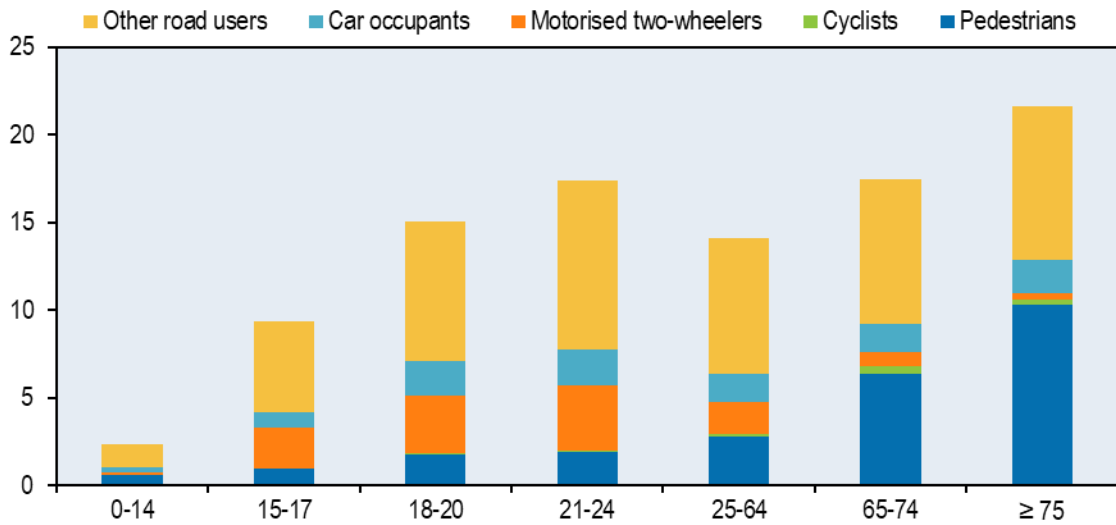
When measured by mortality rates, the elderly were at highest risk in traffic in 2019. Seniors over 75 suffered road fatalities at a rate of 21 per 100 000 inhabitants. They were followed by those aged 65-74 and 21-24, who were both killed at a rate of 17.4 persons per 100 000 inhabitants.

Analysis of road fatalities by age and road user group shows that motorcycle fatalities are most prevalent among young people aged 15 to 24. In contrast, a significant share of the elderly killed in traffic crashes are pedestrians.

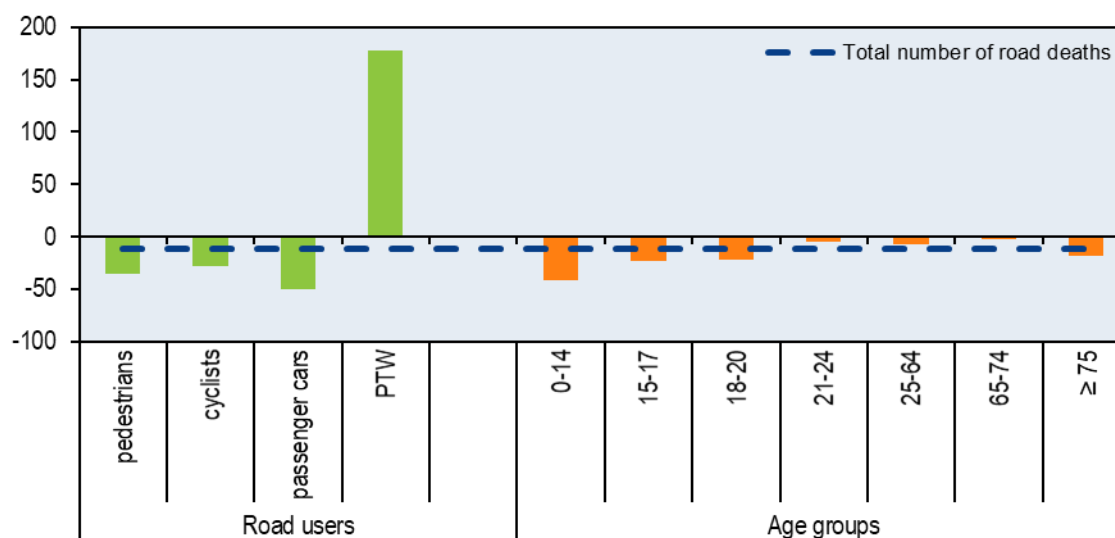
**Figure 3. Road fatality rates by age group, 2010-19**  
Deaths per 100 000 inhabitants in a given age group



**Figure 4. Road fatality rate by age and road user group, 2019**  
Fatalities per 100 000 inhabitants



Police data is not sufficient to assess the development of road safety by **road type**, as it is unknown for about 51% of fatalities.

**Figure 5. Evolution of road deaths by user category and age group, 2010-19**

## Economic costs of road crashes

Traffic crashes represent huge costs to Mexican society. In 2019, they were estimated at USD 27.6 billion, or 2.2% of GDP. These costs are estimated based on a human capital approach, as there are not yet any studies available on the statistical valuation of life using a willingness-to-pay approach (IMT, 2020; INEGI, 2020; McMahon, 2008).

**Table 3. Costs of road crashes, 2019**

	Unit cost [USD]	Total cost [USD]
Fatalities	695 857	10.2 billion
Injuries	173 964	17.4 billion
<b>Total</b>		<b>27.6 billion</b>
<b>Total as % of GDP</b>		<b>2.20%</b>

## Behaviour

The behaviour of road users is an important determinant of a country's road safety performance. **Inappropriate speed**, in particular, is one of the main causes of road crashes. In 2019, 15% of road crashes on the federal highway network were attributed to excessive speed, according to National Guard.

The table below summarises the main speed limits in Mexico.

**Table 4. Passenger car speed limits by road type, 2020**

	General speed limit	Comments
Urban roads	20-80 km/h	20 km/h in school zones
Rural roads	60-110 km/h	60 km/h on collector roads
Motorways	110 km/h	

**Driving under the influence of alcohol** is another major cause of road crashes in Mexico. According to the statistics office (INEGI) 7.1% of road fatalities on urban and suburban roads in 2017 were reported to be due to drunk drivers. In 2018, this share decreased to 6.4%, and in 2019 it increased again to 7.8%. However, it is important to note that the BAC level is not systematically reported in the case of fatal crashes. This figure is therefore likely to be underreported. In 2016, 11.0% of the 1 831 autopsies performed following road accidents showed alcohol had been consumed. Moreover, 18.0% of emergency patients involved in a traffic crash were reported as having consumed alcohol during the previous six hours.

The maximum authorised BAC on federal roads and highways is 0.8 g/l for automobile drivers and 0.3 g/l for truck and coach drivers. On urban roads, the maximum BAC differs by state, however, in most states the level is the same as for federal roads and highways. A crash is defined as alcohol-related when one of the participants (including cyclists and pedestrians) has a BAC above the legal limit. Limits on BAC are mainly enforced through alcohol breath tests conducted by the police on the roadside. More than 29 000 checkpoints were set up in 2018, with 1.4 million breath tests conducted, of which 9% were above the legal limit.

The Mexican authorities conduct regular checks on the federal highway network to test the physical and physiological condition of professional drivers. However, there is no data available to estimate **deaths due to drugs**.

An increasing problem for traffic safety in Mexico is **distraction**, for instance, through the use of mobile phones while driving (there is no official definition of distracted driving). In Mexico, only hands-free devices are allowed while driving. There is no data on the contribution of distracted driving to road crashes.

The share of **sleepiness and fatigue** as a causal factor in crashes is especially challenging to detect. There are no data available on the contribution of sleepiness and fatigue to fatal crashes. According to 2019 National Guard data, sleepiness was a contributing factor in 4% of fatal road crashes on the federal highway network.

**Seat belt wearing** has been compulsory in Mexico since 2003 in front seats and since 2015 in rear seats. The wearing rate in 2017 was 79% for drivers, 65% for front seat passengers and 46% for rear seat passengers. It is estimated that only 11% of children under the age of 12 are properly seated with a dedicated child restraint system. These figures suggest that much progress can still be made in increasing seat belt use.



According to the INEGI, 24% of drivers killed in a crash on urban and suburban roads in 2019 did not wear a seat belt when the crash occurred. However, it is important to note that this information was only available for 30% of road deaths.

**Table 5. Seat belt wearing rates**  
Percentages

	2017
<b>Front seats</b>	
General (driver and passengers)	74
Driver	79
Passenger	65
<b>Rear seats</b>	
General	46
Children (use of child restraint)	11

For motorcyclists, **helmet wearing** is the most effective passive safety habit. In Mexico, helmets have been compulsory for users of all of motorised two-wheelers on the whole network (federal highway network and urban and suburban roads) since 2012. In 2016, based on observational surveys, 83% of motorcycle drivers and 55% of motorcycle passengers wore a helmet.

Bicycle helmets are not compulsory.

## Road safety management and strategies

A total of 15 000 deaths were recorded on average every year over the last 25 years. The number of registered fatalities peaked in 2009 at 17 820.

As a federation, **responsibility for the management of road safety** in Mexico lies with a wide range of actors. Road safety responsibility is partly co-ordinated by CONAPRA (the National Council for the Prevention of Accidents), the state councils for the prevention of accidents and the state agencies in charge of crash prevention for both urban and federal roads. In 2017, CONAPRA was strengthened and became a council with representatives from ten ministries working together to promote road safety. The actions carried out on federal roads are co-ordinated by the Ministry of Communications and Transport.

In 2011, Mexico launched its **National Road Safety Strategy 2011-20**, inspired by the Plan for the Decade of Action for Road Safety. The strategy was developed jointly by the Ministry of Communications and Transport (SCT) and the Ministry of Health. It proposed adopting a general road safety law, creating a national road safety agency and a national road safety council. Its action plan focused on the following areas:

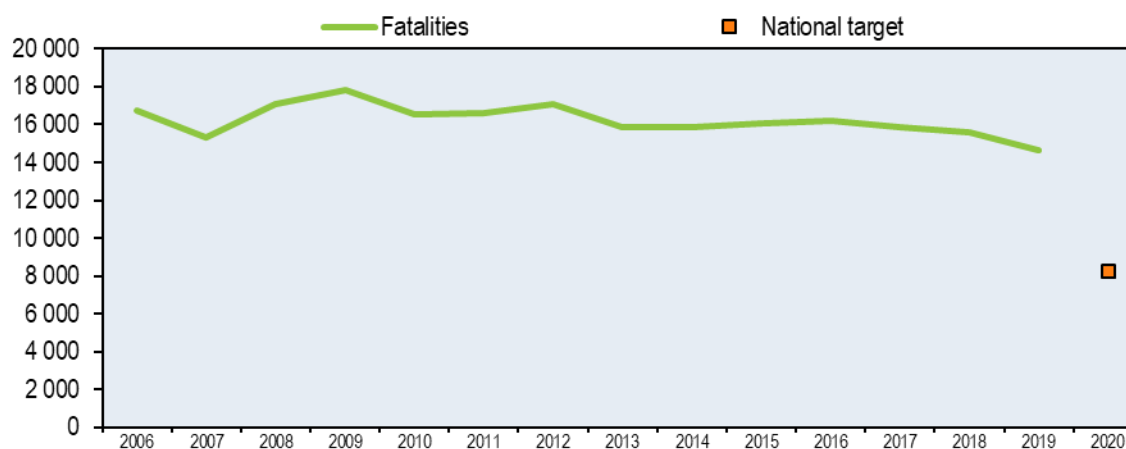
- road safety management: agreements among those involved in road safety both nationally and internationally; develop new laws in this area; update and create new regulations aimed at safeguarding the life of road users and road safety training

- safer infrastructure: update regulations on the design and operation of roads; restructure transport routes in the country; assess the safety level of roads and create a catalogue of measures to improve infrastructure.
- safer vehicles: establish standards to regulate the safety devices of new vehicles and evaluate the performance and compliance with current regulations; develop technological tools to support the renewal of the vehicle fleet and evaluate the devices designed to provide greater safety to road users
- road user behaviour: review and update the training programmes for professional drivers, the regulations for safety devices for vulnerable users, the drug and alcohol detection programmes for drivers and the implementation of training programmes for all types of road users
- post-crash care: update the applicable regulations for medical care providers, the locations of medical emergency regulatory centres, the training of health professionals and the involvement of citizens and government in the improvement of services.

The main target of the action plan was to halve the number of fatalities on Mexican roads by 2020 and reduce as much as possible injuries and disabilities from road crashes. Recent data suggest that the target was not met.

On 15 October 2020, the Chamber of Deputies approved by an absolute majority the constitutional reform that empowers congress to legislate on mobility and road safety. This amendment contributes to the actions promoted by the United Nations in the context of the beginning of the Second Decade of Action for Road Safety 2021-30.

The approved constitutional reform modifies Articles 4, 73, 115 and 122 of the Mexican constitution to include the right to mobility in the following terms: "Every person has the right to mobility in conditions of road safety, accessibility, efficiency, sustainability, quality, inclusion and equality". It also mandates the Congress of the Union to issue, within a period not exceeding one year after the entry into force of the decree, the General Law of Mobility and Road Safety.

**Figure 6. Trends in road fatalities towards the national target**

## Measures

Several measures to improve road safety management have recently been put into place.

**Road safety management:** The draft of the General Law of Mobility and Road Safety, approved last 15 October, establishes as a priority objective "the protection of the life and physical integrity of people when they travel on the country's public roads, by means of a prevention approach that reduces risk factors through the generation of safe road systems" (ANASEVI, 2020).

The United Nations General Assembly adopted a resolution on improving global road safety in September 2020, proclaiming the period 2021-30 as the Second Decade of Action for Road Safety. The goal of the initiative is to reduce road traffic deaths and injuries by at least 50% from 2021 to 2030. Mexico's Ministry of Communications and Transport is committed to continue working towards this goal, as well as taking action to meet the targets of the Sustainable Development Goals related to road safety. These include reducing the number of deaths and injuries from road traffic crashes, providing access to safe, affordable, accessible and sustainable transport systems for all, and improving road safety. Mexico aims to achieve this by expanding public transport, paying particular attention to the needs of vulnerable people, women, children, those with disabilities and senior citizens.

Within the context of the National Development Plan to improve the living conditions of the people of Mexico, it is the responsibility of the SCT to promote and conduct policies and programmes for the development of transport and telecommunications in the country. With this in mind, it has established the Sectoral Programme for Communications and Transport 2020-24, which includes actions for road safety in two of its four priority objectives (SCT, 2020):

- contribute to social welfare through the construction, modernisation and maintenance of accessible, safe, efficient and sustainable road infrastructure, with a vision of regional and intermodal development
- contribute to the development of the country by strengthening transport with a long-term vision, and a regional, multimodal and sustainable approach, so that the population, particularly in the regions of lower growth, will have safe, quality transport services with national coverage.

The IMT participated in the elaboration of the Agreement of Actions with the Motor Transport Chambers to increase road safety on the roads and bridges within federal jurisdiction.

Moreover, the IMT co-ordinates the work of the subgroup for a "review of statistics and methodology to obtain indicators of road crashes and their causes". This group aims to improve the quality of information available on road crashes in the country, identify the characteristics of these events and thus contribute to the formulation of public policies that improve the safety of all road users.

In 2018, the Ministry of Health published the Mexican Official Standard NOM-206-SCFI/SSA2-2018 for motorcycle helmets, health promotion actions, safety specifications, test methods and commercial information and labelling.

The Accident Prevention State Councils were established in order to facilitate and co-ordinate the engagement of all stakeholders: authorities from the three levels of government, as well as civil society and NGOs. By the end of 2018, 31 state councils had been formally established, with only the one in Mexico City yet to be formalised (STCONAPRA, 2019).

Regarding road safety data, state observatories have been set up to manage and analyse data at the state level. The information collected in each observatory is used to feed the National Injury Observatory, which is co-ordinated by the Technical Secretariat of the National Council for the Prevention of Accidents (STCONAPRA). The 32 state observatories have been in operation since the end of 2018 (STCONAPRA, 2019).

Together with local authorities, the STCONAPRA is promoting the modification and reform of legal provisions to better regulate road safety and crash prevention for the benefit of the general population.

**Road users:** STCONAPRA promotes the implementation of breathalyser control points in priority municipalities by providing technical and methodological tools planning, operating and evaluating them in the urban areas of the 32 states.

STCONAPRA has supported the states with training, equipment and didactic material, training more than 33 000 road safety promoters in the 32 states over the last 10 years. More than five million people have benefitted from more than 75 000 awareness events.

STCONAPRA and the Ministry of Health of Guanajuato designed the social media campaign #EvitaComportamientosRiesgos# (avoid risky behaviour) through the Accident Prevention Program.

In 2018, the official Mexican standard for Safety Helmets for the Prevention and Immediate Care of Motorcyclist Head Injuries (NOM-206-SCFI/SSA2-2018) was published in the Official Journal of the Federation and became effective in September 2018.

In 2017, the Ministry of Communications and Transport published the Official Mexican Standard NOM-087-SCT-2-2017, establishing driving and rest times for drivers of federal motor transport services.

The minimum training programme for professional drivers to obtain a federal licence has been reviewed and updated. This revision proposes the inclusion of concepts and themes that allow for strengthening the attitudinal aspect of the driver through the promotion of a culture of road safety and respect for standards, as well as knowledge of the negative consequences generated by the various risk factors and dangerous behaviour.

In 2016, the National Road Safety Training Program of CONAPRA incorporated crash prevention issues for vulnerable users (pedestrians and cyclists). It also considers the implementation of online training, with the aim of reaching more people in the general population, as well as improving the efficiency of available resources.

Every year the General Directorate of Federal Transportation carries out inspections to check the physical condition of federal drivers that operate on the RCF, with special attention paid to the detection of alcohol and drugs while driving.

Every year the IMT offers an international road safety course, which covers topics related to the human factor in road crashes, audits in road safety, treatment of sites with a high crash rate and the investigation and reconstruction of road crashes. The courses are aimed at professionals (authorities, technicians and operators) involved in the prevention of road crashes.

Together with the IMT and the Spanish Civil Guard, the Police Development System (SIDEPOL) organises a certification in traffic acts and road safety every year. Moreover, it trains more than 140 staff from the National Guard and similar police organisations from other countries. The focus of the course is on specific procedures in the investigation of road crashes occurring on the RCF.

Since 2009, the Health Agency has promoted and strengthened strategic action against drink-driving. Regular alcohol checkpoints have been put in place since 2017. More than 29 000 alcohol checkpoints were set up in 2018, with 1.4 million breath tests conducted.

**Infrastructure:** The Sectoral Program for Communications and Transport 2020-24 sets out the following priority strategies:

- Improve the physical state of the RCF through conservation and reconstruction to increase the welfare, connectivity and safety of road infrastructure users.
- Improve the safety of the RCF for the welfare of all users by addressing problem points, designing and implementing a preventive road safety programme, strengthening horizontal and vertical signalling and protective barriers in accordance with current regulations, implementing road safety audits and conducting road safety campaigns.
- Promote long-term strategic planning of the transport sector based on criteria of regional and logistic development, social inclusion, connectivity, sustainability and technological innovation in order to contribute to sustained economic and social development; this includes designing and implementing a programme for investigating transport accidents.

In 2018, the Ministry of Communications and Transport's General Directorate of Technical Services (DGST) updated the Manual of Highway Geometric Design, which was first published in 1970. The updated manual incorporates new guidelines for the design of safe roads (DGST, 2018a).

With the support of the IMT, the DGST prepared a manual for road safety audits. The objective is to ensure that road projects prioritize the safety of all road users from their earliest stages and are forgiving of human error (DGST, 2018b).

In co-ordination with the Ibero-American Vial Institute (IVIA), the IMT has been providing the online course Training Road Auditors to train technicians and managers in auditing since 2015.

The IMT has studied the feasibility of current standards in relation to the geometric design of roads, such as the required over-width in horizontal curves, while taking the dimensions of the vehicles currently circulating on federal roads into account.

A project was conducted to assess the performance and condition of the federal highway network using the methodology of the international road assessment programme (iRAP). This has facilitated the development of an investment plan for safer roads. The iRAP Mexico project has helped address significant road safety problems and identify appropriate solutions (e.g. vertical signs and road markings).

Several important infrastructure improvement projects are being carried out, such as the installation of protective barriers, improved intersections, pedestrian bridges, bus stops, road markings, emergency braking ramps, railway crossings and pavement markings with thermoplastic paint and impact dampers.

In Mexico, the priority is shifting from car occupants to the most vulnerable road users. The country has more than 1 800 road safety auditors in 32 states, including 162 members of the National Guard. Each state is required to implement at least three changes in infrastructure, giving priority to pedestrians within the context of the multi-national road traffic safety project Vision Zero.

**Vehicles:** In 2017, the Ministry of Communications and Transport revised and updated the official Mexican standard NOM-012-SCT-2-2017 on the weight and maximum dimensions for motor transport vehicles on federal roads.

In 2016, the Ministry of Economy published the official Mexican standard NOM-194-SCFI-2015 to regulate the essential safety devices in new vehicles that are commercialised in Mexico.

## Definition, methodology, data collection

A road fatality is defined as any person who dies following a road crash. When a person does not die at the scene of the crash but rather at, or on the way to, the hospital, they are reported an injured person. In this report, road fatalities are those registered in the mortality database of the National Health Information System (SINAIS) and recorded as caused by a motor vehicle traffic crash, according to the codes of the International Classification of Diseases (10<sup>th</sup> Review).

An injured person is defined as a person suffering minor or severe injuries following a road crash.

(All traffic safety-related definitions are available through the national statistics agency.)

The main sources of information for road crashes are the National Institute of Statistics and Geography (INEGI) for urban and suburban areas and the National Guard for federal areas. Crash statistics include data on the date and time of the crash, location, type of crash, vehicle type, crash contributing factors, road user category and condition of the casualties (injured or killed). INEGI is also in charge of compiling statistics at a national level.

Crash data for urban and suburban areas are collected on an INEGI form through the state and municipal safety and traffic agencies. Crash statistics are compiled based on the recommendations of the Organization of American States (OAS).

Crashes occurring on the federal road network are reported on a different form through the regional offices of the National Guard (140 locations around the country). These crash forms are then processed in the crash database for federal roads.

Currently, Mexico does not have an integrated road crash database that collates data from INEGI and the National Guard. As both systems (INEGI and the National Guard) have different variables and definitions, it is difficult to obtain a precise count of the total number of crashes in the country. The most accurate source of data on road deaths and serious

injuries is the health database of the Ministry of Health, which is based on health certificates and hospital discharges. Injury data are recorded based on the 10<sup>th</sup> edition of the international classification of diseases (ICD).

Efforts are underway to improve data collection and monitoring of road crashes. As part of the Road Safety Programme 2013-18, state observatories are being established. A total of 32 state observatories have been in operation since 2018 (STCONAPRA, 2019). Of these 16 report crash data on a common platform (RAVMex) through mobile and web applications, enabling them to report on contributing factors to crashes. The registration of injury data is also being improved through multisectoral collaboration.

## Resources

### Recent research

In co-ordination with STCONAPRA, INEGI and the National Guard, and through the working subgroup 4A, the IMT is working with the agencies responsible for collecting information on road crashes in the country. It aims to standardise the information collected by different police agencies, as well as identify opportunities for improvement in the process of collecting, analysing and generating road safety statistics.

The IMT participates in the Subcommittee No. 2 – Vehicle Specifications, Parts, Components and Identification Elements of the National Advisory Committee of Land Transport Normalisation (CCNN-TT). As such it supports the General Directorate of Federal Transportation (DGAF) with studies on incorporating safety aspects in the regulations on operating motor transport.

Together with the Inter-American Development Bank (IDB) and the ITDP Institute for Transportation and Development Policies, the STCONAPRA drew up and published the guide for low-cost and high impact interventions. It included strategies for implementing changes in road infrastructure, with an emphasis on vulnerable users.

A strategy for consolidating this has been implemented since 2018 in all 32 states, with the creation of Safe-Infrastructure Subcommittees. These have brought together at the municipal and state levels the agencies in charge of maintaining, preserving, equipping and improving roads, thus facilitating the required management and implementation.

Lastly, the STCONAPRA helped put together *Street Manual: Road Design for Mexican Cities*: [https://www.gob.mx/cms/uploads/attachment/file/509173/Manual\\_de\\_calles\\_2019.pdf](https://www.gob.mx/cms/uploads/attachment/file/509173/Manual_de_calles_2019.pdf).

### Websites

IMT: <https://www.gob.mx/imt>.

Secretaría de Salud: <http://www.gob.mx/salud/>.

Instituto Nacional de Estadística y Geografía (INEGI): <http://www.inegi.org.mx>.



Secretaría de Comunicaciones y transportes (SCT): <https://www.gob.mx/sct>.

Road Safety Action Plan 2013-18:

[https://www.gob.mx/cms/uploads/attachment/file/63376/PAE\\_SV.pdf](https://www.gob.mx/cms/uploads/attachment/file/63376/PAE_SV.pdf).

## References

ANASEVI (2020), "APROBADA la Reforma Constitucional en materia de Seguridad Vial y Movilidad Sustentable", e-mail from Alianza Nacional por la Seguridad Vial, sent by Dr. Arturo Cervantes to Nadia Gómez, 15 October, 2020.

DGST (2018a), *Manual de Proyecto Geométrico de Carreteras 2018*, Tercera edición, Dirección General de Servicios Técnicos, Subsecretaría de Infraestructura, Secretaría de Comunicaciones y Transportes, Mexico City.

DGST (2018b), *Manual de Auditorías de Seguridad Vial 2018*, Primera edición, Dirección General de Servicios Técnicos, Subsecretaría de Infraestructura, Secretaría de Comunicaciones y Transportes, Mexico City.

IMT (2020), *Anuario estadístico de accidentes en carreteras federales, 2019*, Instituto Mexicano del Transporte, Documento Técnico No. 89.

<https://imt.mx/archivos/Publicaciones/DocumentoTecnico/dt80.pdf>.

INEGI (2020), *Accidentes de tránsito terrestre en zonas urbanas y suburbanas*, Instituto Nacional de Estadística y Geografía, Mexico City,

<https://www.inegi.org.mx/programas/accidentes>.

McMahon, K. and S. Dahdah (2008), "The True Cost of Road Crashes: Valuing life and the cost of a serious injury", International Road Assessment Programme (iRAP), Basingstoke,

[http://www.alternatewars.com/BBOW/ABM/Value\\_Injury.pdf](http://www.alternatewars.com/BBOW/ABM/Value_Injury.pdf).

SCT (2020), *Programa Sectorial de Comunicaciones y Transportes 2020-2024. Secretaría de Comunicaciones y Transportes,*

[https://www.gob.mx/cms/uploads/attachment/file/565614/Programa\\_Sectorial\\_de\\_Comunicaciones\\_y\\_Transportes\\_2020-2024.pdf](https://www.gob.mx/cms/uploads/attachment/file/565614/Programa_Sectorial_de_Comunicaciones_y_Transportes_2020-2024.pdf).

STCONAPRA (2019), *Informe sobre la situación de la seguridad vial, México 2018*, Primera Edición, Secretariado Técnico del Consejo Nacional para la Prevención de Accidentes, Secretaría de Salud, Mexico City.

## Road safety and traffic data

	2000	2010	2017	2018	2019	2019 % change over		
						2018	2010	2000
<b>Reported safety data</b>								
Fatalities	14 028	16 559	15 866	15 574	14 673	-5.8%	-11.4%	4.6%
Injury crashes	83 804	114 708	73 950	72 451	74 448	2.8%	-35.1%	-11.2%
Injured persons hospitalised	..	26 335	24 079	23 833	..	..	..	..
Deaths per 100,000 population	13.9	14.5	12.8	12.4	11.6	-6.7%	-20.0%	-16.6%
Deaths per 10,000 registered vehicles	9.0	5.2	3.5	3.3	2.9	-11.0%	-44.6%	-67.7%
Deaths per billion vehicle kilometres	..	..	27.4	26.3	23.9	-9.3%	..	..
<b>Fatalities by road user</b>								
Pedestrians	5 509	4 786	3 852	3 587	3 120	-13.0%	-34.8%	-43.4%
Cyclists	107	178	165	148	128	-13.5%	-28.1%	19.6%
Motorised two-wheelers	158	704	1 932	1 890	1 952	3.3%	177.3%	1135.4%
Passenger car occupants	2 967	3 357	2 177	1 964	1 658	-15.6%	-50.6%	-44.1%
Other road users	5 287	7 534	7 740	7 985	7 815	-2.1%	3.7%	47.8%
<b>Fatalities by age group</b>								
0-14 years	1 543	1 341	960	887	783	-11.7%	-41.6%	-49.3%
15-17 years	656	815	703	629	624	-0.8%	-23.4%	-4.9%
18-20 years	961	1 269	1 152	1 084	988	-8.9%	-22.1%	2.8%
21-24 years	1 370	1 592	1 671	1 578	1 508	-4.4%	-5.3%	10.1%
25-64 years	7 699	9 372	9 270	9 239	8 748	-5.3%	-6.7%	13.6%
65-74 years	865	1 032	987	1 021	1 007	-1.4%	-2.4%	16.4%
≥ 75 years	775	930	836	826	763	-7.6%	-18.0%	-1.5%
<b>Traffic data</b>								
Registered vehicles (thousands)	15 612	31 635	45 854	47 815	50 594	5.8%	59.9%	224.1%
Vehicle kilometres (millions)	..	..	579 605	591 822	614 718	3.9%	..	..
Registered vehicles per 1,000 population	154.7	278.1	369.7	381.5	399.7	4.8%	43.7%	158.3%