

Road Safety Outlook

Vehicles users, habits, and perceptions in Mexico

Introduction

According to the World Health Organization (WHO), road safety is the adoption of measures to reduce the risk of injuries and deaths caused by transit.¹

The problem with road safety is significant, both globally and in our country. According to the WHO, traffic accidents are the ninth top cause of death at the global level and cause the loss of over 1.3 million lives. The outlook in our country is no different, since traffic events are the ninth cause of death, and the second among people between the ages of 15 and 34.2

People need to be aware of the serious consequences of not following road safety recommendations and change those behaviors that put all mobility users at risk. That is why it is important to have clear information about the traffic rules, the negative effects of these behaviors, and most of all, the benefits of using existing safety devices.

The activities of Aleatica Foundation for Road Safety are all aligned with the Agenda 2030, with efforts being targeted specifically towards achieving SDG 3.6, which proposes halving the number of global deaths and injuries from road traffic accidents by 2030..



¹ WHO (2015). Global status report on road safety. Available at: https://www.who.int/violence_injury_prevention/road_safety_status/2015/Summary_GS-RRS2015_SPA.pdf?ua=1 2 WHO (2017) . Save lives: A road safety technical package. Available at: https://apps.who.int/iris/handle/10665/255308

Aligned with the Second Decade of Action for Road Safety (2021-2030), the Aleatica Foundation guides its actions using the Safe System Approach.

Road safety requires more roads to be well constructed, comfortable and sustainable.

- The Safe System approach seeks to guarantee that users will arrive to their destinations safe and well. This approach recognizes that tangible change will only be possible if various different sectors are involved.
- Aleatica Foundation for Road Safety is aligned with the United Nations Sustainable Development Goals, primarily goal 3.6, which seeks to halve the number of global deaths and injuries from road traffic accidents.
- Goal 7.2 Accessible and clean energy: The Aleatica Foundation seeks to implement actions with renewable energy in transport systems.
- Goal 9.1 Industry, innovation and infrastructure: The Aleatica Foundation performs actions that involve mobility infrastructure that this reliable, sustainable and high quality.
- Goal 11.2 Sustainable Cities and Communities: The Aleatica Foundation promotes transport systems that are safe, affordable, accessible and sustainable.
- Goal 16.1 Peace, justice and solid institutions: The Aleatica Foundation contributes by carrying out actions to reduce all forms of violence and crime on highways and transportation systems.
- Goal 17.1 Alliances to achieve goals: being aware of the fact that road safety involves us all, the Aleatica Foundation promotes and develops national and international alliances.

In Mexico there are over **16,000** deaths per year from road accidents—it is the seventh highest cause of death in the country, and over **32,000** people suffer permanent disability as a result of this cause. The results of road accidents in Mexico—both deaths and injuries—represent a human capital cost that ranges between **19 and 39 billion pesos** per year.

The high level of deaths and injuries caused by road accidents in Mexico have caused this issue to be prioritized as a public problem that requires coordinated action by various sectors.

2 Global outlook for road safety

The WHO has stated that road safety is the adoption of measures to reduce the risk of injuries and deaths caused by transit. It consists of providing safe mobility through the implementation of initiatives and strategies for reducing traffic incident caused deaths for vehicle occupants, pedestrians, cyclists and motorcyclists.³

Through coordination and collaboration among sectors, countries of the Americas Region can improve legislation on road safety, creating an environment that is safer, accessible and sustainable for both the transport systems and for all users. Excess speed is responsible for approximately one third of all deaths caused by transit in high-income countries, and for half in middle- and low-income countries.

It is important that countries implement measures that make the streets and highways even safer, not only for the people in the cars, but also for the more vulnerable users, like pedestrians, cyclists and motorcyclists. Vulnerable users represent the majority of deaths in low- and middle-income countries in the Region. In fact, motorcyclist deaths caused by transit went up from 15% in 2010 to 20% in 2013, reflecting the increase in the number of motorcyclists in the Region. Young people in the Americas Region have a higher risk of suffering injuries or death due to injuries caused by transit, and these are the main cause of death for children between the ages of 5 and 14, and the second highest cause in the 15 to 19 age group.



millions people receive non-fatal injuries worldwide



main cause of death for people between the ages

15-29 ^{yea}

³ WHO (2015). Global status report on road safety. Available at: https://www.who.int/violence_injury_prevention/road_safety_status/2015/Summary_GS-RRS2015_SPA.pdf?ua=1

Nearly half (49%) of people who lose their lives in traffic accidents around the world are pedestrians, cyclists and motorcyclists. Traffic accidents are also the main cause of death for people between the ages of 15 and 29.45

Traffic accidents are a serious public health and development problem, and the health and socioeconomic costs are high. Injuries caused by transit cause considerable economic losses for people, their families and countries as a whole. These losses are the result of the treatment costs and loss of productivity of the people who die or become disabled by their injuries, and the work or study times that the family members of the injured parties lose as a result of having to care for them.⁶ Traffic collisions cost most countries 3% of their GDP per year.⁷

Around 90% of the deaths and trauma caused by transit occur in low and middle income countries, where only close to 54% of the total licensed vehicles around the globe are on the roads. Although traffic accidents are a commonplace reality and an outcome arising from the interaction of various factors, they are also predicable and avoidable.

Traffic collisions cost most countries 3% of their GDP per

 $^{4\,}WHO\,(2017).\,Save\,lives:\,A\,road\,safety\,technical\,package.\,Available\,at:\,https://apps.who.int/iris/handle/10665/255308$

⁵ WHO (2017). Save lives: A road safety technical package. Available at: https://apps.who.int/iris/handle/10665/255308

⁶ WHO (2017). Save lives: A road safety technical package. Available at: https://apps.who.int/iris/handle/10665/255308 7 WHO (2017). Save lives: A road safety technical package. Available at: https://apps.who.int/iris/handle/10665/255308

⁸ WHO (2017). Save lives: A road safety technical package. Available at: https://apps.who.int/iris/handle/10665/255308



As part of the search for solutions, the Safe System Approach put forward by the United Nations Global Road Safety Plan, was created, with this plan consisting of a comprehensive approach to improving road safety.

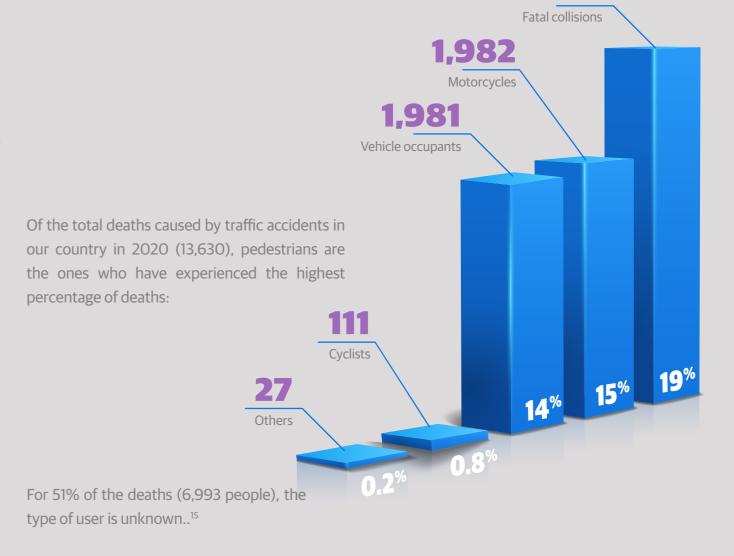
It is based on the premise that traffic accidents are inevitable, but that their severity can be reduced through the implementation of safety methods for highways, vehicles and users.⁹

The United Nations Safe System Approach is based on five key measures: multimodal transport and land usage planning, safe roadway infrastructure, safe vehicles, safe use of transit roadways and post-accident care. Viewing this panorama, the United Nations (UN) declared the period from 2011-2020 as the Decade of Action for Road Safety. It also encouraged countries to join this global initiative to take on this important burden caused by the traffic incidents that occur around the world. In 2020, a Second Decade of Action for Road Safety was declared for the years 2021-2030, which commenced in October 2021 with the ambitious objective of preventing at least 50% of the deaths and trauma caused by traffic collisions from now until 2030.

The Global Plan for the Decade of Action for Road Safety highlights the importance of adopting a holistic approach to road safety and urges for continual improvement in the design of cities, highways and vehicles, refinement of the laws and their application, and the prompt provision of vital emergency attention to the injured. The Global Plan also promotes transport and design policies for highways that make it possible to walk, ride a bike and move using public transport all safely, in this way making it possible to prioritize transport that is healthy and respectful of the environment.¹²

3 Road safety in Mexico

Traffic incidents are the ninth cause of death in Mexico, and the second cause of death among the population from 15 to 34 years of age.¹³ Our country also hold the seventh position in fatalities at the global level, and the second in Latin America.¹⁴



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¹³ INEGI. Statistics of Registered Deaths. Available at: https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2022/EDR/EDR2021_10.pdf
14 National Institute of Public Health of Mexico (2018). Mexico ranks seventh in the world in traffic accidents. Available at:
https://www.insp.mx/avisos/4761-seguridad-vial-accidentes-transito.html
15 Ministry of Health (2021). Report on the situation of road safety in Mexico 2021. Available at:

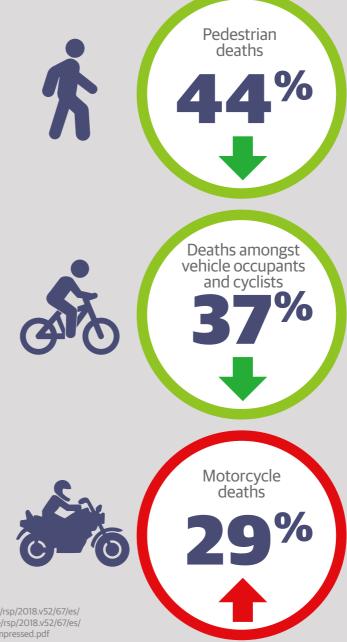
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This situation represents a significant social and economic cost. Mexican Institute of Competitiveness has indicated that the consequences caused by traffic incidents absorb

of Mexico's
Gross Domestic
Product.¹⁶

Since 2003, Mexico has collaborated with the WHO/PAHO and other players to implement road safety initiatives, and as part of the promotion of the Decade of Action for Road Safety 2011-2020 promoted by the United Nations, the federal government, through the Ministry of Communications and Transport and the Ministry of Health, published an Agreement resulting in the implementation of the National Road Safety Strategy 2011–2020.¹⁷ With this, the country committed to halving the number of deaths by traffic accidents projected for 2020, and to reduce as much as possible the injuries and disabilities associated with this public health problem.¹⁸

This goal has been partially met, as data from the National Technical Ministry Board for Accident Prevention shows that, in 2020, compared to 2015, the number of pedestrian deaths has gone down by 44%, while deaths amongst vehicle occupants and cyclists are down 37%. However, motorcycle deaths have gone up by 29%.¹⁹



¹⁷ Híjar, Martha (2018). Mexico's progress in the middle of the Decade of Action for Road Safety 2011-2020. Revista Salud Pública 52 (5). Available at: https://www.scielosp.org/article/rsp/2018.v52/67/es/
18 Híjar, Martha (2018). Mexico's progress in the middle of the Decade of Action for Road Safety 2011-2020. Revista Salud Pública 52 (5). Available at: https://www.scielosp.org/article/rsp/2018.v52/67/es/
19 Ministry of Health (2021). Report on the situation of road safety in Mexico 2021. Available at: https://www.gob.mx/cms/uploads/attachment/file/818181/Informe_SV_2021_HD2_compressed.pdf

On May 17, 2022, the new Mobility and Road Safety Law was published, and the provisions establish that everyone has the right to safe mobility under safe conditions with respect to the roadway, accessibility, efficiency, sustainability, quality, inclusion and equality. The above resulted in creation of the National Mobility and Road Safety System (SNMySV, Spanish acronym) to guarantee the constitutional right to comprehensive safe mobility with a gender perspective.

The SNMySV is a mechanism to assist in coordination amongst the three branches of government and organized civil society sectors, and its goal is to promote the principles of the referred law, the National Development Plan, and creation of the National Mobility and Road Safety Strategy.

Currently, the National Mobility and Road Safety Strategy (ENAMOV, Spanish acronym) 2023-2040 is in the process of being developed and is expected to be published in May 2023. The goal of the Strategy is to reduce fatal and non-fatal injuries by 50% by 2030, and to address the states diagnostics and planning in order to optimize road infrastructure and urban services ²⁰

Importance of road education

There are many reasons why a person may have a traffic accident. One of these reasons is the lack of care or thoughtlessness of the driver, and damages to infrastructure in many cases can also cause a road incident; however, the main cause is education and knowledge about road safety.

The most common risk factors are: speed, driving under the effects of alcohol or other psychoactive substances, not using helmets, seatbelts or child restraint systems, distractions while driving, lack of safety in road infrastructure, lake of safety in vehicles, among others.²¹

City culture is a key area for people to have this feeling of empathy for motorcyclists, car drivers, cyclists and pedestrians, so it is important to exercise co-responsibility on the road to allow for a higher level of commitment by each individual.

People need to be aware of the serious consequences of not following road safety recommendations, and changing behaviors that put mobility users at risk, which can be achieved by providing information about traffic rules, the negative effects of such behaviors, and the benefits of using safety devices.

Road culture in Mexico: result of Aleatica Foundation opinion survey

Aleatica Foundation for Road Safety conducted a road safety opinion survey from April 11 to 23, 2023, with the goal of understanding the perceptions and regular use habits of vehicle drivers in Mexico.

The main findings of the survey show that there are habits and perceptions among the Mexican population that weaken the road culture in the country, which is concerning, since there are no clear signs that the upcoming generations have better practices or precautions when driving. The results also indicate that having a higher education level is not a determining factor in having a higher road culture level.

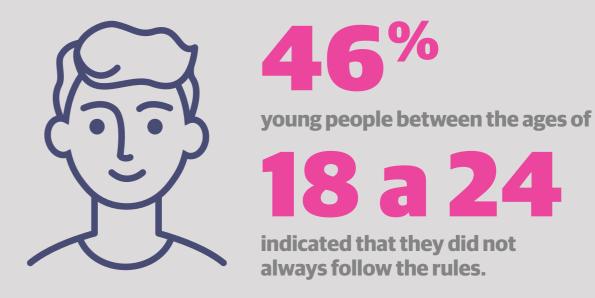
Below is a description of some of the main findings obtained in the opinion survey.

²² To perform this survey, a total of 385 valid responses were collected through digital methods, with participants from all age groups over the age of 18, of both genders, residents in Mexico and people who had driven at least in the last 6 months; the sample size has a margin of error of +-5% and a reliability level of -+95%. This survey was performed for informative, not academic, purposes.

Violation of traffic rules

According to the responses obtained, 5 out of every 10 survey respondents indicated that they follow the traffic rules most of the time. Those surveyed also indicated that when they do not follow them is not that they are unaware of the traffic rules, as 9 out of 10 stated that they know them pretty well.

In addition, 46% of the people surveyed who indicated that they did not always follow the rules were young people between the ages of 18 and 24.



Violation of traffic rules



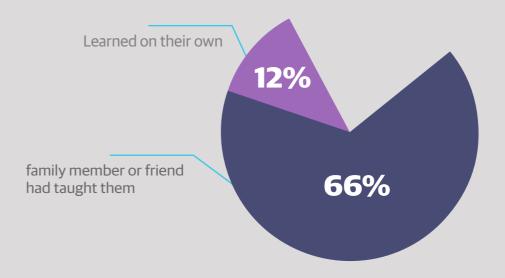
This is an alarming situation, since according to data published by the National Institute of Statistics and Geography (INEGI, Spanish acronym) collected by the Mexican Institute of Transportation (IMT, Spanish acronym) motor vehicle traffic accidents are identified as the main cause of death among children between the ages of 1 and 14 and young people from 15 to 24 years of age. In addition, studies by the National Institute of Public Health (INSP, Spanish acronym) indicate that 22 young people between the ages of 15 and 29 die due to this cause each day.²⁴

If the traffic rules regulating driving under the effects of alcohol, seatbelt use, speed limits, respecting signage, using the phone while driving, wearing helmets and child restraint systems are not followed, it will not be possible to achieve the proposed reduction in traffic deaths and trauma related to specific behaviors. Therefore, if the traffic rules are not followed, or if there is a perception that they do not need to be followed, it is very likely that they will not be respected and it is very unlikely that they will influence people's behaviors.

In order for these standards to be applied, it is important to regularly update the prevention structures in place for these risk factors at the national, municipal and local levels. This includes defining appropriate penalties for violation.

²³ Ministry of Health (2021). Report on the situation of road safety in Mexico 2021. Available at: https://www.gob.mx/cms/uploads/attachment/file/818181/Informe_SV_2021_HD2_compressed.pdf 24 Mexican Institute of Transportation (2019). Profile of mortality caused by traffic. Available at: https://imt.mx/archivos/Publicaciones/PublicacionTecnica/pt554.pdf

Driver learning habits



Of the total survey respondents, 66% indicated that a family member or friend had taught them how to drive, while 12% indicated that they had learned on their own.

Also, in response to the survey question about the type of theory or practical exam the driver had taken to obtain their driver's license, 24% responded they had not taken one.

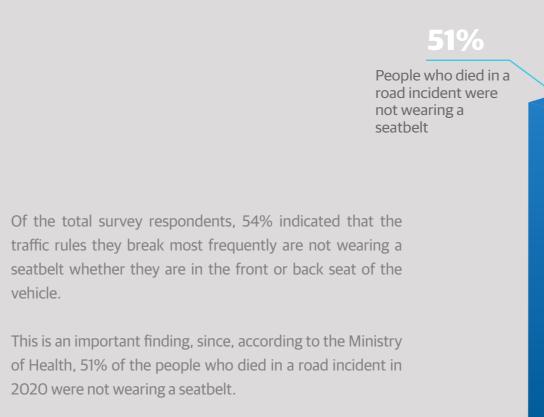
This data shows that road education is necessary to raise awareness and educate responsible drivers, since opting to learn how to drive without the supervision and guidance of a professional does not guarantee that the drivers will obtain sufficient knowledge to drive appropriately on the different types of roads.

In addition, bad practices or habits while driving, as well as lack of awareness of the traffic rules, are passed down generation to generation, making it impossible to transition to road safety improvement and making it difficult to achieve the goal of reducing deaths and injuries caused by traffic accidents by 50%.

This situation represents a risk for all road users, particularly considering that traffic events are the ninth cause of death in Mexico and that nearly 71% of road accidents in our country occur due to causes related to the human factor.²⁵

²⁵ Mexican Institute of Transportation (2021). 2021's statistical yearbook of collisions on federal highways. Available at: https://imt.mx/archivos/Publicaciones/DocumentoTecnico/dt85.pdf

Seatbelt use



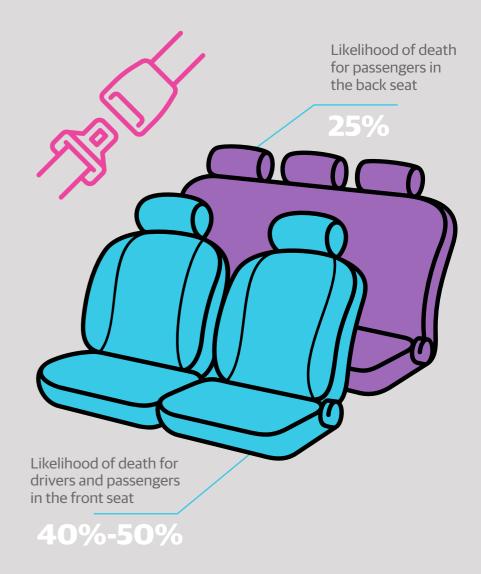
Not wearing a seatbelt

Seatbelt use

Unfortunately, of this nearly 60% that indicated that they did not always wear a seatbelt, 6 out of 10 had obtained a maximum education level of bachelor's or post-graduate studies, so a higher education level does not necessarily translate into a higher level of awareness about seatbelt use.

Not wearing a seatbelt is an important risk factor for death or injury of vehicle passengers. Passengers who were not wearing a seatbelt at the time of collision represent most fatal victims in road accidents. In addition, passengers who are not wearing a seatbelt and that suffer frontal impact have a higher probability of suffering a head injury.²⁷

Seatbelt use reduces the likelihood of death by between 40 and 50% for drivers and passengers in the front seat, and by nearly 25% for passengers in the back seat.²⁸



26 WHO (2009). Seat-belts and child restraints: A road safety manual for decision makers and professionals. Available at: https://www.grsproadsafety.org/wp-content/uploads/Seat-belts-child-restriants_Spanish-.pdf
27 WHO (2009). Seat-belts and child restraints: A road safety manual for decision makers and professionals. Available at: https://www.grsproadsafety.org/wp-content/uploads/Seat-belts-child-restriants_Spanish-.pdf
28 WHO (2009). Seat-belts and child restraints: A road safety manual for decision makers and professionals. Available at: https://www.grsproadsafety.org/wp-content/uploads/Seat-belts-child-restriants Spanish-.pdf

Seatbelt use

Seatbelts and child restraint systems are secondary safety devices and are designed primarily to prevent or minimize the injuries a vehicle occupant may suffer in the case of an accident. Thus, seatbelts and child restraint systems:

- Reduce the risk of contact with the interior of the vehicle or reduce the severity of injuries in the case of contact;
- Distribute the force of the impact to the strongest parts of the human body;
- Stop the occupant from being expelled from the vehicle in the case of impact;
- Stop other occupants from being injured (for example, in case of frontal impact, passengers in the back seat may be catapulted forward and hit other occupants if they do not have their seatbelt fastened).

The importance of wearing seatbelts is that passengers who have them duly fastened remain in their seats and their speed will therefore reduce at the same rate as the vehicle's, which notably reduces the mechanical energy to which the body is exposed.³⁰

Although seatbelt use is mandatory in our country and failing to wear one is a traffic violation, people commonly continue not to wear them, despite the fatal consequences of this omission. That is why people need to be aware of the serious consequences of not following road safety recommendations and we must all work together to promote a change in these behaviors.

²⁹ WHO (2009). Seat-belts and child restraints: A road safety manual for decision makers and professionals. Available at: https://www.grsproadsafety.org/wp-content/uploads/Seat-belts-child-restriants_Spanish-.pdf
30 WHO (2009). Seat-belts and child restraints: A road safety manual for decision makers and professionals. Available at: https://www.grsproadsafety.org/wp-content/uploads/Seat-belts-child-restriants_Spanish-.pdf

Driving without a license

Despite it being a legal requirement that is mandatory to be able to drive, 5 of every 10 Mexicans believe that it is not dangerous to drive without a license. Also, the younger generations are not demonstrating better habits or practices with respect to road culture, as 9 out of 10 Mexicans without a license are young people between the ages of 18 and 24.



mexicans believe that it is not dangerous to drive without a license.

The first cause of accidents is failure to follow the traffic rules. If we then add in the fact that the public institutions responsible for granting and validating the licenses sometimes perform this work in careless way, as well as the fact that the use of driver's licenses is seen more as a requirement to avoid a fine than as a certification or validation that the person knows how to drive and is aware of the traffic rules, it all results in having irresponsible drivers on the road who feel that driving without a license is not dangerous.³¹

The requirements to obtain a driver's license must be accompanied by mechanisms like having passed a theory and practical exam that assesses whether the future driver has the knowledge necessary to drive; about their car; about the roads; and primarily about the transit rules.

³¹ Najar, Eduardo (2020). Traffic accidents: A problem of public health and civic culture. Revista Medicina y Salud Pública. Available at: https://medicinaysaludpublica.com/noticias/general/accidentes-de-transito-problema-de-salud-publica-y-de-cultura-ciudadana/7095

Conclusions

The data shows that, in order for there to be wellbeing, there needs to be road safety.

Respecting the speed limit, the traffic rules and signs, lights, pedestrian crossings, among others, of course will help to achieve safer and more efficient transit; however, citizen culture and education about roads is key to generating empathy in the people who travel on the public roadway, whether it be on a motorcycle, in a car, on a bike or on foot, and it is important that everyone have co-responsibility on the road, since this awareness will translate into a greater commitment among all mobility users.³²

Although the opinion survey prepared by Aleatica Foundation for Road Safety is not conclusive, it does provide data points and important indications about the habits and perceptions of citizens about topics extensively addressed in academia to continue expanding on these types of studies. This becomes more relevant when we consider that, although there are various risk factors that affect the occurrence of traffic accidents, human error is the main cause.

In order to develop a culture change in the road safety system, it is important to adopt a comprehensive and multi-sector approach that involves collaboration and coordination with the private sector, and the public and civil sectors, in order to ensure that high standards are established for the construction and maintenance of highway infrastructure and to contribute to educating safer road users.

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th-topics/road-traffic-injuries/21323-spanish-global-plan-for-road-safety-for-web.pdf?sfvrsn=65cf34c8_35&do wnload=true

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