



ROAD SAFETY ANNUAL REPORT 2019

CHILE

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In 2018, Chile registered 1 955 road deaths - a 1.6% increase on a record-low fatalities total in 2017. In 2018, pedestrians continue to account for more than a third (36%) of Chilean road deaths. The Ministry of Transport and Telecommunications announced the National Accord for Road Safety and the upcoming National Road Safety Strategy 2020-2030, which sets a goal of 30% fewer annual road fatalities by the year 2030 compared to the average number of fatalities in the period 2011-2019. In August 2018, the Chilean congress approved a bill to reduce the urban speed limit from 60 to 50 km/h.

Trends

Chile registered an overall **increase in the number of road deaths in 2018**. According to the latest available data, 1 955 persons lost their lives in traffic crashes in Chile in 2018. This represents a 1.6% increase on 2017. In 2017, 1 925 road deaths were reported - an 11.6% decline on 2016.

The **longer-term trend for road deaths** in Chile shows stagnation. Between 2000 and 2018 the number of annual road fatalities has fluctuated around a level of 2 000 deaths per year. Compared to 2000, fatalities fell by 11% in 2018.

The number of **traffic deaths per 100 000 inhabitants** in Chile has fallen by 13% between 2010 and 2018. In 2018, **10.5 traffic deaths per 100 000** inhabitants were recorded, compared to 12.1 in 2010. By way of comparison, the average in the European Union is 4.9 deaths per 100 000 inhabitants in 2018.

Chile recorded **3.6 road fatalities per 10 000 registered vehicles** in 2018. This represents a decrease of 66% compared to the year 2000 when the rate of deaths to registered vehicles stood at 10.6.

Country Profile

Population in 2018: 18.6 million

GDP per capita in 2018: 16 075 USD

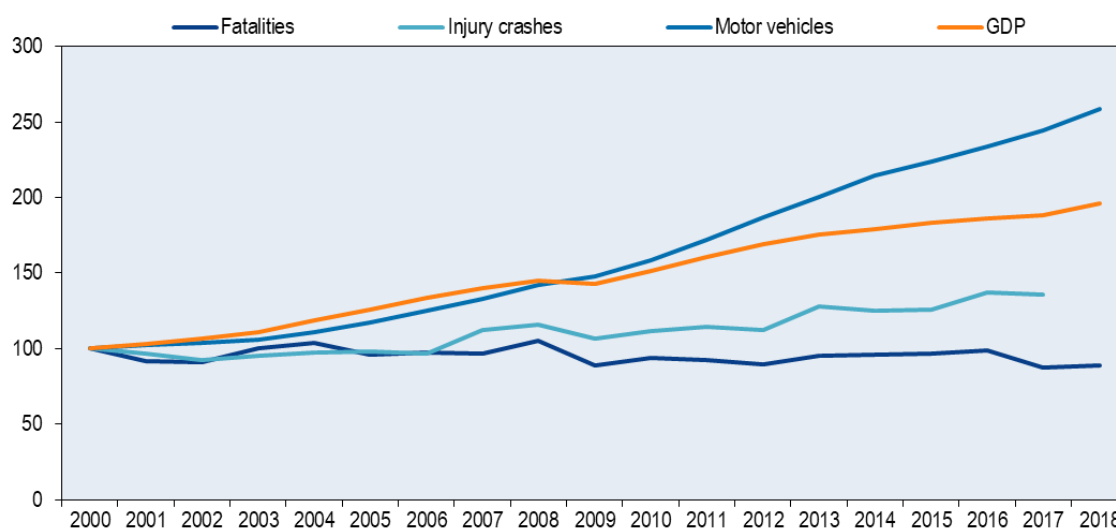
Cost of road crashes: 2.1% of GDP (2018)

Registered motor vehicles in 2018: 5.4 million (cars 68%; goods vehicles 26%; motorcycles 4%)

Speed limits: 50 km/h on urban roads (maximum default speed limit but can vary according to the type of road); 100 km/h on rural roads; 120 km/h on motorways (maximum default speed limit)

Limits on Blood Alcohol Content: 0.3 g/l

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

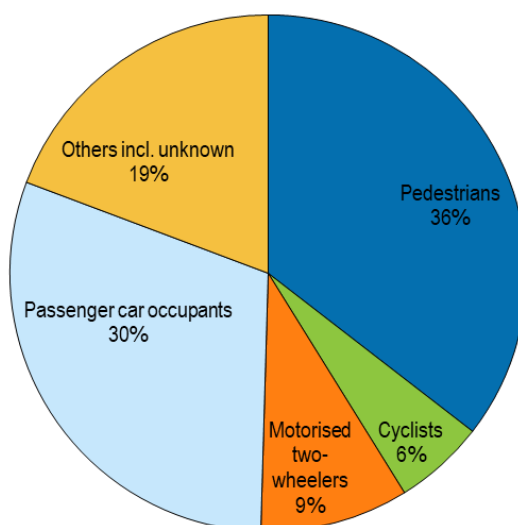


The graph for **fatalities by road user groups** shows that pedestrians continue to be the group the most affected by road crashes. In 2018, pedestrians accounted for the largest share of road deaths with 36% of the total. They were followed by passenger car occupants (30%), motorised two-wheelers (9%) and cyclists (6%).

Passenger car occupants registered the largest year-on-year increase in 2018, suffering 16.1% more deaths than in 2017. All other users groups saw the number of road deaths decrease in 2018. Users of motorised two-wheelers saw the largest decrease with 12.9% fewer deaths, followed by cyclists with 10.5% fewer and pedestrians with 0.3% fewer deaths.

The long-term trend shows that road safety trends in Chile diverge across road user groups. Since 2010, pedestrians (-14%) and cyclists (-41%) have seen marked reductions in fatality figures.

Motorcyclists and passenger car occupants, however, have seen significant increases in the number of annual traffic fatalities with 64% and 24%, respectively, more fatalities in 2018 than in 2010.

Figure 2. Road fatalities by road user group in percentage of total, 2018

Road deaths by age group in 2018 showed some changes compared to 2017. People aged 21-24 saw a significant increase of 26.1% more deaths this year than in the year prior. Persons between 18 and 20 years of age, on the other hand, saw 18.9% fewer road fatalities this year than the year prior.

Looking at the longer-term trend, since 2000, the number of annual road deaths remained stable or decreased for all groups with the exception of the elderly above 75. The strongest reduction in fatalities over this period occurred among 0-14 year olds, who registered 117 fewer deaths (62%) in 2018 compared to 2000. People aged over 75 experienced 28 more deaths (+32%) in 2018 than in 2000.

Despite recent improvements, young people continue to be the age group the most at risk in traffic with a mortality rate much above the average. 21-24 year olds suffer traffic fatalities at a rate of 15.5 per 100 000 persons. The elderly above 65 are also at higher risk, however, with a rate of 14.0 per 100 000.

The road mortality rate among younger populations is especially worrying because of the large proportion of Chile's population that is young. As of 2014, 20% of Chile's population is less than 15 years old whereas 10% is older than 65. By comparison, the European Union averages in 2013 were 16% and 18%, respectively.

Figure 3. Road fatality rates by age group, 2002-2018
Deaths per 100 000 population in a given age group

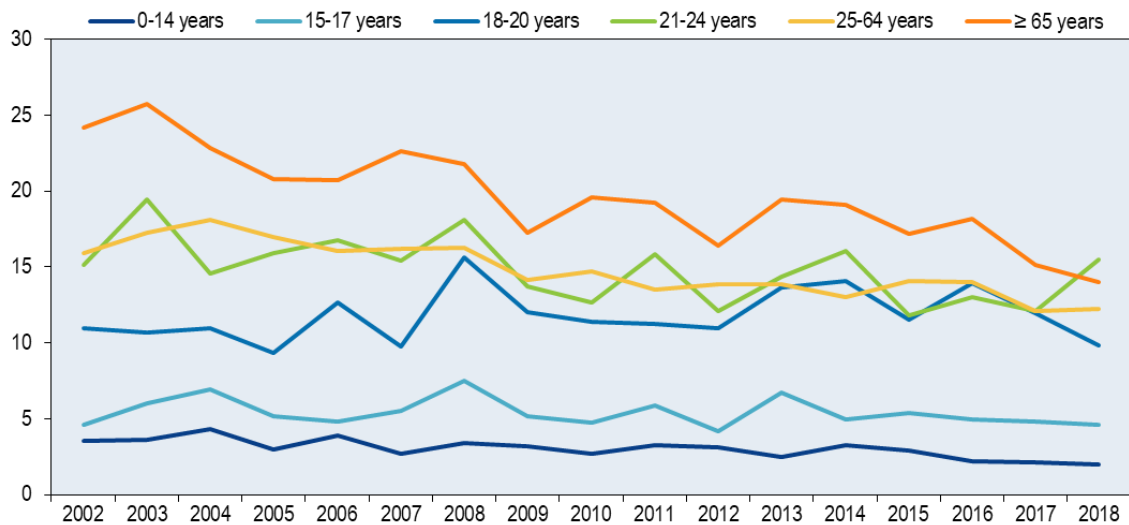
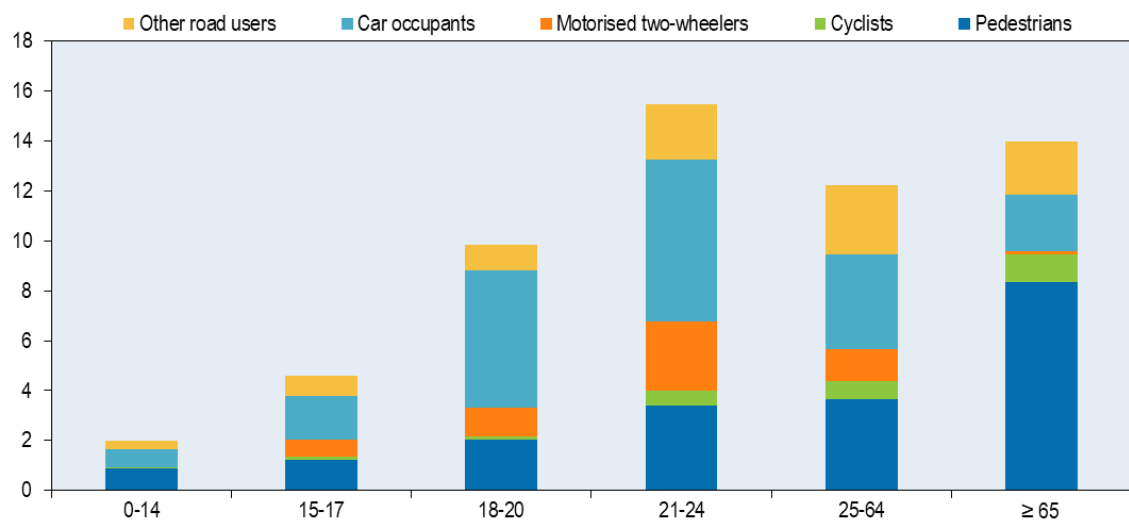


Figure 4. Road fatality rate by age and road user group, 2018
Fatalities per 100 000 population



Analysis of **fatalities by road type** shows that the non-urban network is the deadliest. In 2018, 62% of deaths occurred outside of urban areas while 38% occurred inside urban areas. This repartition has changed slightly over the past decade as non-urban areas have come to claim a higher percentage of total fatalities. In 2008, urban roads accounted for 43% of deaths while non-urban areas registered the remaining 57% of deaths.

In 2018, in comparison to 2017, the number of road deaths decreased by 0.9% on urban roads while they increased by 3% on non-urban roads.

Since 2010, fatalities in urban areas decreased by 21%, while they increased on non-urban roads by 7% in the same period.

Figure 5. Road fatalities by road type

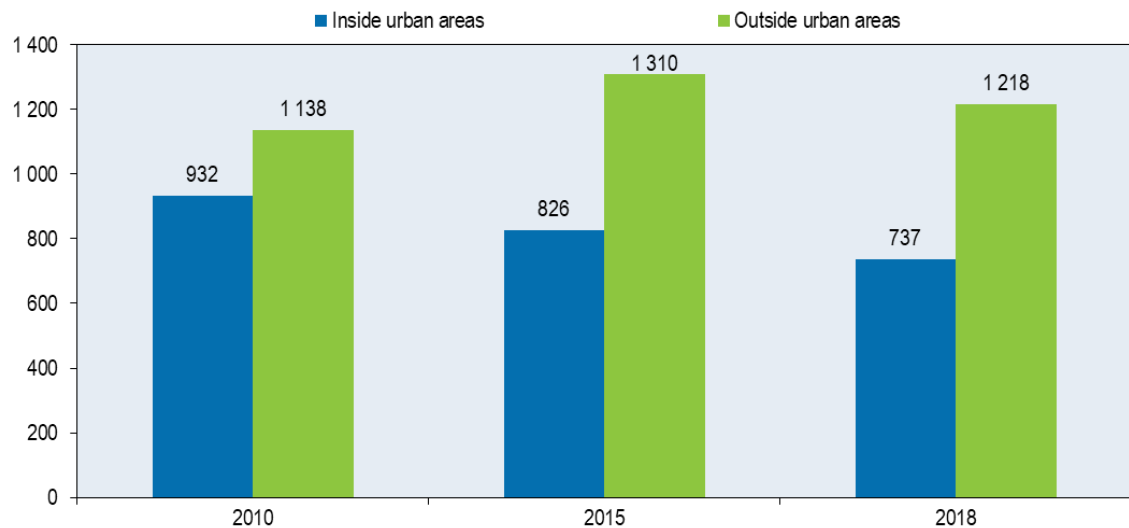
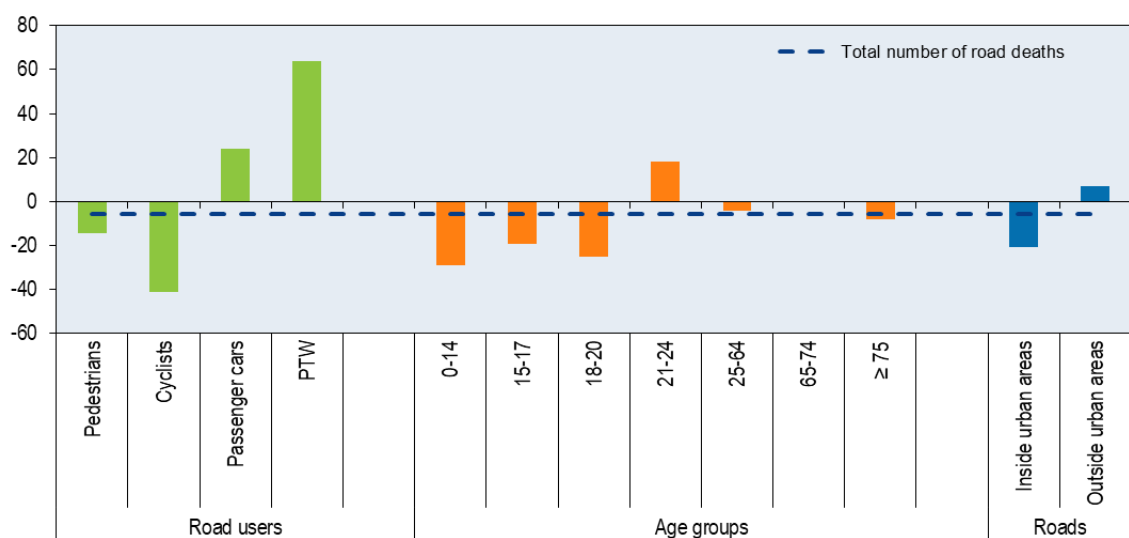


Figure 6. Evolution of road deaths by user category, age group and road type, 2010-2018



Economic costs of road crashes

CONASET has reviewed several methodologies to assess the cost of road crashes. As a starting point, it uses the 2011 "Simplified methodology of estimates of social benefits due to the reduction of crashes in interurban roads" from the Road and Urban Transport Program of the Ministry of Transport and Telecommunications and the Ministry of Social Development (SECTRA-MDS, 2011). This methodology takes into account material damage to vehicles, treatment of injured people, administrative costs and loss of

productivity (human capital approach). In addition, CONASET uses the “willingness to pay” approach to evaluate the benefit of preventing a road death, based on a 2014 study commissioned by the Environment Vice Ministry (GreenLabUC, 2014).

As a result, the estimated cost of traffic crashes for 2018 was USD 5.8 billion, equivalent to approximately 2.1% of GDP.

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. A study conducted in 2014-15 revealed that at any given time 50% of drivers exceed the speed limit on interurban roads and 40% do so in urban areas. The research also showed speeding was more prevalent during the night and on weekends.

It is estimated that speeding is responsible for around 30% of fatal crashes. In the last decade, speeding has been the leading cause of death with 4 436 road fatalities attributed to it.

In August 2018, the Chilean congress approved a bill to reduce the urban speed limit from 60 to 50 km/h – an initiative the Ministry of Transport and Telecommunications had pursued for many years. A year after the reduction in speed limit there has been a slight decrease in accidents, fatalities and injured people reported by the police. There will be a more thorough evaluation of the new regulation once more data are validated and available.

The table below summarises the speed limits in Chile.

Table 1. Passenger car speed limits by road type, 2019

	General speed limit	Comments
Urban roads	50 km/h	50 (maximum default limit but can vary according to the type of road)
Rural roads	100 km/h	
Motorways	120 km/h	Maximum default speed limit

A traffic crash is defined as **alcohol-related** when either a driver or another person involved in the crash (including motorcyclists, cyclists or pedestrians) has a measurable or estimated blood alcohol content (BAC) of 0.3 g/l or above.

In 2012, the government of Chile introduced a new law to support the zero-tolerance policy for drink driving. It sets the maximum permissible BAC at 0.3 g/l. The law defines:

- driving under the influence of alcohol as driving with a BAC between 0.3 g/l and 0.8 g/l;

- driving while intoxicated, which entails much tougher sanctions, as driving with a BAC of 0.8 g/l or higher.

Sanctions associated with this law are related to licence suspension or annulment.

The number of fatalities due to drink driving declined significantly with the introduction of the zero-tolerance law: from 267 in 2011 to 192 in 2012. This decline has stabilised and has remained at 9% of total fatalities over recent years. In 2018, 190 road deaths were related to alcohol and driving.

In 2014, the “Emilia’s law” was implemented to more severely punish drunk drivers responsible for serious injury or fatal crashes. This new law complements the zero-tolerance law enacted in 2012 and increases sanctions for drunk driving, such as disqualifying the driver for life. The driver is also subject to at least one year of imprisonment. In addition, fleeing the scene or refusing an alcohol test is now a criminal offence.

The implementation of “Emilia’s law” has strengthened the effect of the zero-tolerance law.

Currently there is no systematic drug test process following a crash. This procedure is carried out on an ad-hoc basis at the request of the judge in charge of the investigation. Therefore, the estimate of only 0.1% of deaths attributed to **driving under the influence of drugs** is largely underestimated. Also, a road crash is defined as caused by drugs only when the police see the act of consuming or any physical evidence of drug consumption that can lead to a judicial drug test order.

In April 2019, a new drug test device that uses saliva was launched for testing drivers. This device looks to prevent the use of drugs while driving and is used as an additional prevention tool along with alcohol testing. The substances that will be controlled by this device are: cocaine, marihuana, opiates, methamphetamines and amphetamines.

Police data reported that in 2018, 195 road fatalities and 1 645 serious injuries were related to **distracted driving**, increases of 22% and 8%, respectively, on 2017. Chilean traffic law considers **driving while using a mobile phone** a serious traffic violation, unless the person is using a hands-free device.

A behavioural study undertaken in 18 cities in 2017 revealed that 16% of light vehicle drivers use their cell phone while driving. This was a large increase on the previous study in 2015 when the use of mobile phones stood at only 4%.

According to police data, 2% of traffic deaths in 2017 and 2018 were related to **fatigue**. This figure is probably underreported, because it is difficult for the police to discern the physical condition of drivers when crashes occur.

Seat-belt use has been compulsory for front seats since 1985 and rear seats since 2005. A survey undertaken in 2017 showed that the wearing rate was 75% for drivers,

64% for front seat passengers and around 17% for rear seat passengers. The survey also revealed disparities between regions.

Until 2015, children under 8 years of age had to be seated in the rear seat and be adequately restrained. Since March 2016, this applies to children up to 12 years of age. As of 2017, the obligation to use child restraints applies to children from 0 to 8 years of age or those under 1.35 m tall and weighing less than 33 kg.

Table 2. Seat belt and helmet wearing rates
Percentages

	2015	2017
Front seats		
Driver	76	75
Passenger	59	64
Rear seats		
General	14	17
Child restraint use	73	49
Helmet		
Riders of motorcycles	98	100
Passengers of motorcycles	99	100

Helmet use by all riders of motorised two-wheelers has been compulsory since 1985 when the transit law was published. The helmet wearing rate is high at 99% for riders and passengers.

For cyclists, wearing helmets has been required from 2005 but only in urban areas.

Road safety management and strategies

There are several **factors of influence on Chile's road safety performance** as captured by the above indicators. Between 2000 and 2018, fatalities in Chile fluctuated with no clear trend emerging. This can be explained in part by the exponential increase in the number of vehicles and motorcycles on the roads during the same period.

Responsibility for the organisation of road safety in Chile lies with the National Road Safety Commission (CONASET), an inter-ministerial body created as a presidential advisory commission through Supreme Decree 223, of 27 December 1993.

CONASET has a board of 10 ministers (Ministry of Interior Affairs, Ministry of the General Secretariat of the Presidency, Ministry of the General Secretariat of Government, Ministry of Education, Ministry of Justice, Ministry of Public Works, Ministry of Health, Ministry of Housing and Urban Development, Ministry of Labour and Ministry of Transport and Telecommunications) plus the National Police Director. CONASET is led by the Minister of Transport and Telecommunications and CONASET's Executive Secretary is in charge of the National Road Safety Strategy, which is agreed on by the board.

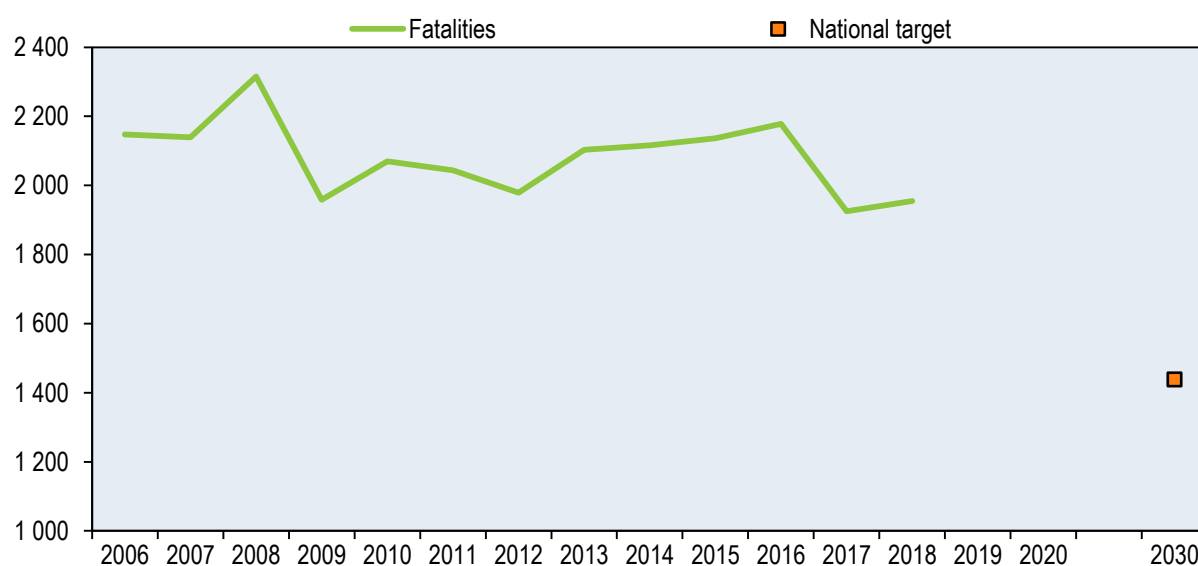
In 2017, Chile updated its **National Road Safety Policy**, originally written in 1993 and serving until now as the general strategic guide. This new policy was created through a participative process with representatives of public and private entities, citizens' associations, road traffic victims' association, experts and relevant stakeholders of road safety. With this new Road Safety Policy, Chile looks to subscribe to the Safe System approach by adopting its principles and holds "Vision Zero" as its long-term goal regarding road traffic deaths and seriously injured people.

This new policy delivers a strategic framework to develop a concrete strategy and action plans focused on the five strategic pillars established in the Decade of Action for Road Safety. The development of this strategy and action plan seeks to serve as a guideline for all actions related to road safety carried out in Chile, with measurable targets and timeframes to meet such targets.

Chile announced the **National Accord for Road Safety** in September 2018. This national accord document lays out priority actions and the action framework for the **National Road Safety Strategy 2020-2030**. The general objective of the new strategy is to reduce transport fatalities by 30% by the year 2030 in comparison with the average number of fatalities in the period 2011-2019.

The National Accord document prioritises 11 themes and includes 42 associated action measures to be carried out during 2019 to address road safety in Chile. The themes are listed below:

- The right of children to be transported safely;
- Institutional management and financing;
- Statistics;
- Road safety education;
- Integrated care for victims of transport crashes;
- Drivers licence procedures;
- Vehicle standards;
- Roadway signage and design;
- Speed limit enforcement;
- Workplace and commuter road safety;
- Professional driver certification and education.

Figure 7. Trends in road fatalities towards national target

Note: the target has been calculated as 30% of the average number of road deaths in the period 2011-2018.

Measures

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

Speed management

- In August 2018, the Chilean congress approved a bill to reduce the urban speed limit from 60 to 50 km/h.

Road users

- In April 2019, a new drug test device that uses saliva was launched for testing drivers.
- In November 2018, a new law was enacted aiming to promote mutual respect among road users of all modes of transportation. The law was titled the "modes coexistence law".
- In 2016, a bill to create subcategories for the C class licence according to the motorcycle's cylinder capacity was proposed. The C Class Licence Gradualism bill is currently under examination by the Senate.
- A new practical exam for motorcycle licence applicants was developed in 2015 and is currently being launched.

Vehicles

- As of 2017, new light vehicles must be produced with isofix/latch anchors in order to install child restraint systems.

- Since 2016, a Ministry of Transport and Telecommunications accreditation is required for motorcycle helmets. This regulation will take effect in September 2019.
- In 2015, the front licence plate for motorcycles was eliminated.
- As of 2015, airbags are required for the driver and front passenger's seat in light vehicles.

Infrastructure

- In 2016, the Ministry of Housing and Urban Development developed a "Recommendation Manual" for the design of high standard bike paths.
- The Ministry of Transport and Telecommunications announced its intention to pursue legislation in Congress to allow for fine collection on speed infractions using automatic camera speed traps.

Definition, methodology, data collection

- Road fatality: a person who dies from injuries within 24 hours of the crash. To conform to the international definition (a death occurring within 30 days of a road crash), the National Road Safety Commission (CONASET, *Comisión Nacional de Seguridad de Tránsito*) applies a correction factor of 1.3. Fatality data in this report correspond to the corrected data.
- Seriously injured: a person injured and hospitalised for more than 24 hours. According to Chilean Penal Code, a serious injury has occurred when a person has a disease or is unable to work (disabled) for over 30 days as a result of a crash.

Following a traffic crash, the police (Carabineros de Chile) at the site of the crash are required to record the Data Collection Form of Road Traffic Accidents (SIEC 2) used throughout the country. The information is later entered and stored in the police road traffic crash database. In cases of crashes involving deaths or serious injuries, the crash report is sent by the police to the relevant judges. The police records only include data for the first 24 hours after the crash has occurred.

The official data, on the other hand, are generated through the National Vital Statistics Agreement (CNEV), whose members are the National Statistics Institute, the Ministry of Health and the Civil Registry and Identification Service. Cause of death is coded by the Ministry of Health using the International Statistical Classification of Diseases and Related Health Problems (ICD-10). The collection and validation process also involves cross checking with police data. This process is not yet automated resulting in a delay in reporting data on vital statistics.

Due to these challenges, a correction factor of 1.3 is applied to the fatalities data received from the police. This is done to adjust for the number of deaths occurring up to 30 days after the crash in accordance with the criteria set by the World Health

Organisation (WHO). CONASET is currently working together with the police and other relevant institutions to develop an improved form and to create a new database with automated linkage between police and health data. The new system is in place, but it is currently recommended to use the correction factor.

Resources

Recent research

CONASET (2018), *Study of Perceptions and habits in use of child retention system in motorists of Greater Santiago*,

<https://www.conaset.cl/wp-content/uploads/2019/07/RESUMEN-ESTUDIO-SRI-2018-AUT%C3%93MOVIL-CLUB-CONASET.pdf>

CONASET (2018), *Study of Learning around road education in educational establishments*,

<https://www.conaset.cl/wp-content/uploads/2019/07/Presentaci%C3%B3n-Resumen-CONASET.-Estudio-de-Educaci%C3%B3n-Vial-2018.pdf>

CONASET (2017), *Observational study of child restraint system, helmet and distractors present in the driving of light vehicles and motorcycles*,

<https://www.conaset.cl/wp-content/uploads/2018/01/Presentaci%C3%B3n-de-resultados-Estudio-de-Observaci%C3%B3n-20172.pdf>

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National Road Safety Commission (CONASET): <https://www.conaset.cl/>

Ministry of Transport and Telecommunications: <https://www.mtt.cl/>

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GreenLabUC (2014), *Estimación del valor de la vida estadística asociado a contaminación atmosférica y accidentes de tránsito*,

<https://www.dictuc.cl/proyectos/estimacion-del-valor-de-la-vida-estadistica-asociado-a-contaminacion-atmosferica-y-accidentes-de-transit/>

SECTRA-MDS (2011), *Metodología Simplificada de estimación de beneficios sociales por disminución de accidentes en proyectos de vialidad interurbana*,

<http://www.ministeriodesarrollosocial.gob.cl/btca/txtcompleto/mideplan/metod.benef.soc-accidentab.vialurb.pdf>

Road safety and traffic data

						2018 % change over		
	2000	2010	2016	2017	2018	2017	2010	2000
Reported safety data								
Fatalities	2 207	2 070	2 178	1 925	1 955	1.6%	-5.6%	-11.4%
Injury crashes	30 772	34 335	42 285	41 743
Deaths per 100,000 population	..	12.1	12.0	10.5	10.5	0.6%	-13.0%	..
Deaths per 10,000 registered vehicles	10.6	6.3	4.5	3.8	3.6	-4.2%	-42.1%	-65.8%
Fatalities by road user								
Pedestrians	..	811	785	696	694	-0.3%	-14.4%	..
Cyclists	..	189	124	124	111	-10.5%	-41.3%	..
Motorised two-wheelers	..	111	189	209	182	-12.9%	64.0%	..
Passenger car occupants	..	477	658	510	592	16.1%	24.1%	..
Other road users	..	482	423	387	377	-2.6%	-21.8%	..
Fatalities by age group								
0-14 years	190	103	81	77	73	-5.2%	-29.1%	-61.6%
15-17 years	34	42	38	36	34	-5.6%	-19.0%	0.0%
18-20 years	92	103	113	95	77	-18.9%	-25.2%	-16.3%
21-24 years	179	147	151	138	174	26.1%	18.4%	-2.8%
25-64 years	1 421	1 290	1 379	1 210	1 238	2.3%	-4.0%	-12.9%
65-74 years	177	177	218	187	177	-5.3%	0.0%	0.0%
≥ 75 years	87	125	132	116	115	-0.9%	-8.0%	32.2%
Fatalities by road type								
Inside urban areas	..	932	735	744	737	-0.9%	-20.9%	..
Outside urban areas	..	1 138	1 443	1 182	1 218	3.0%	7.0%	..
Traffic data								
Registered vehicles (thousands)	2 079	3 299	4 853	5 080	5 383	6.0%	63.1%	158.9%
Registered vehicles per 1,000 population	..	193	267	276	290	4.9%	50.3%	..