



CHILE

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In 2019, Chile registered 1 973 road deaths – a 0.9% increase on 2018. Pedestrians account for a third of Chilean road deaths. In December 2020, the Ministry of Transport and Telecommunications released the National Road Safety Strategy 2021-30, setting a goal of 30% fewer annual road fatalities by the year 2030, compared to the average for 2011-19.

Impact of Covid-19

In response to the Covid-19 pandemic, Chile introduced lockdown measures on 18 March 2020. A so-called state of constitutional exception was decreed on 26 March 2020, affecting the movement of people and goods on the road and in turn the exposure to road crashes.

The implementation of sanitary measures resulted in a drop in the use of public transport and a decrease in road traffic. As an illustration, in the capital Santiago the number of vehicles in traffic decreased by 65% year on year in April 2020. The number of road fatalities also decreased, dropping by 30% in April 2020, compared with the average for 2017-19.

However, the decline in traffic was accompanied by an increase in speed, in particular in urban areas, which are usually congested. Mobility patterns also changed, with increased use of private vehicles and bicycles, resulting in an increase in fatalities for cyclists and motorcyclists.

Table 1. Road fatalities by month

	Average 2017-2019	2020	% change
January	200	190	-5.2
February	161	199	23.7
March	158	185	17.0
April	171	120	-29.8
May	166	130	-21.9
June	174	139	-20.0
July	168	110	-34.3
August	160	125	-22.0
September	143	121	-15.2
October	141	155	9.8
November	143	145	3.7
December	170	162	-4.7

Trends

Chile registered an overall **increase in the number of road deaths in 2019**. According to the latest available data, 1 973 persons lost their lives in traffic crashes in Chile in 2019. This represents a 0.9% increase on 2018 when 1 955 road deaths were reported, itself a 1.6% increase on 2017.

The **longer-term trend for road deaths** in Chile shows stagnation.

Between 2000 and 2019 the number of annual road fatalities fluctuated around 2 000 deaths per year. Compared to 2000, fatalities fell by 11% in 2019.

The number of **traffic deaths per 100 000 inhabitants** in Chile fell by 13% between 2010 and 2019, when 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 was 5.1 deaths per 100 000 inhabitants in 2019.

Chile recorded **3.5 road fatalities per 10 000 registered vehicles** in 2019. This represents a decrease of 67% compared to the year 2000, when the rate of deaths to registered vehicles stood at 10.6.

Country Profile

Population in 2019: 18.7 million

GDP per capita in 2019: USD 15 076

Cost of road crashes: 2.2% of GDP (2019)

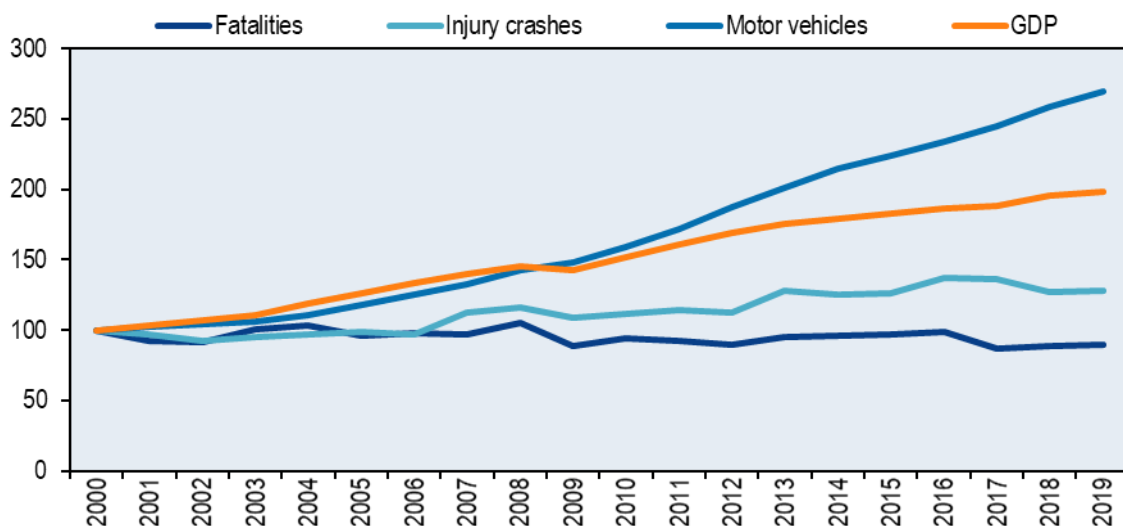
Registered motor vehicles in 2019: 5.6 million (cars 68%; goods vehicles 26%; motorcycles 4%)

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 (BAC): 0.3 g/l

Figure 1. Road safety, vehicle stock and GDP trends

Index 2000 = 100



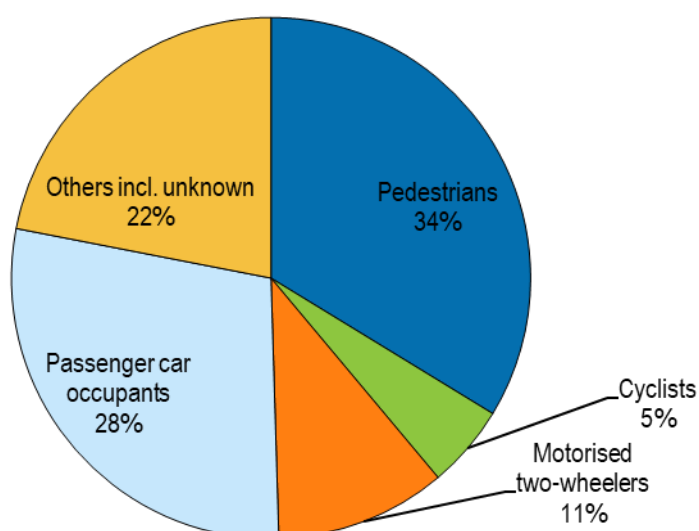
Data for **fatalities by road user group** shows that pedestrians continue to be the group the most affected by road crashes. In 2019, pedestrians accounted for the largest share of

road deaths, with 34% of the total. They were followed by occupants of passenger cars (29%), motorised two-wheelers (11%) and cyclists (5%).

Riders and passengers of motorised two-wheelers registered the largest year-on-year increase in 2019, suffering 15% more deaths than in 2018. All other users groups saw the number of road deaths decrease in 2019.

The long-term trend shows that road safety trends in Chile diverge across road user groups. Between 2010 and 2019, the number of fatalities decreased for pedestrians (-18%) and cyclists (-46%). On the other hand, the number of fatalities increased by 89% for motorcyclists and 18% for passenger car occupants during the same period.

Figure 2. Road fatalities by road user group, 2019



There were substantial differences in **road deaths by age group** in 2019 when compared to 2018. People aged 15-17 saw a 26.5% year-on-year increase in fatalities, and those aged 18-20 a 16.9% rise. Those between 21 and 24, on the other hand, had 9.2% fewer road fatalities over the same period.

The longer-term trend also depends on the age group. The most significant reduction in fatalities from 2000 to 2019 occurred among 0-14 year olds, who registered 125 fewer deaths (-66%) in 2019 compared to 2000. People over 75 experienced 30 more deaths (+35%) in 2019 than in 2000.

Despite recent improvements, young people continue to be the age group the most at risk in traffic, with a mortality rate well above average. The 21-24 age group suffers traffic fatalities at a rate of 14.3 per 100 000 persons, and the elderly above 65 are also at higher risk, with a rate of 13.9 per 100 000 inhabitants.

The road mortality rate among the young is especially worrying, as they represent a high share of the population. In 2014, 20% of the population was less than 15 years old, whereas 10% was older than 65.

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

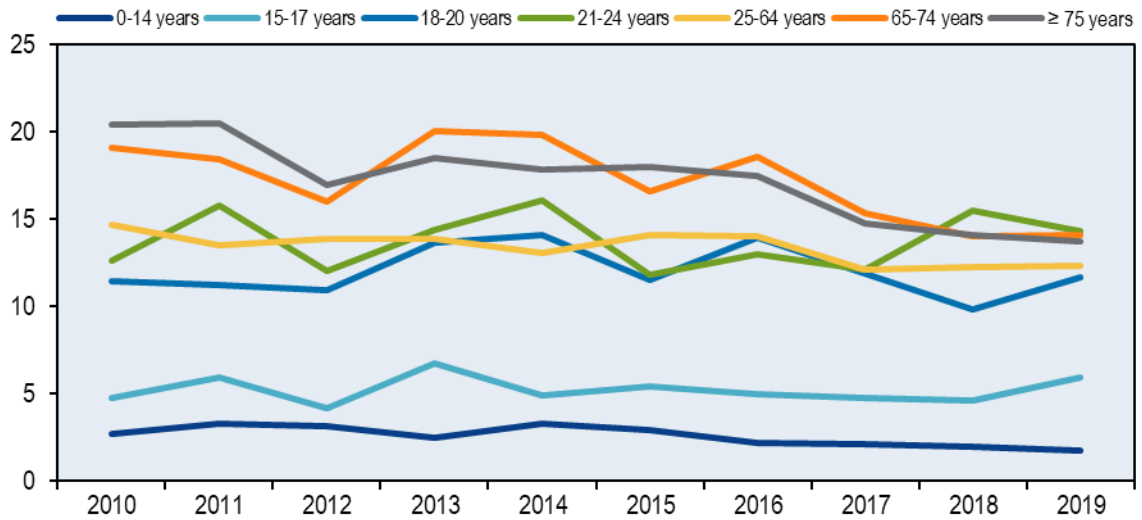
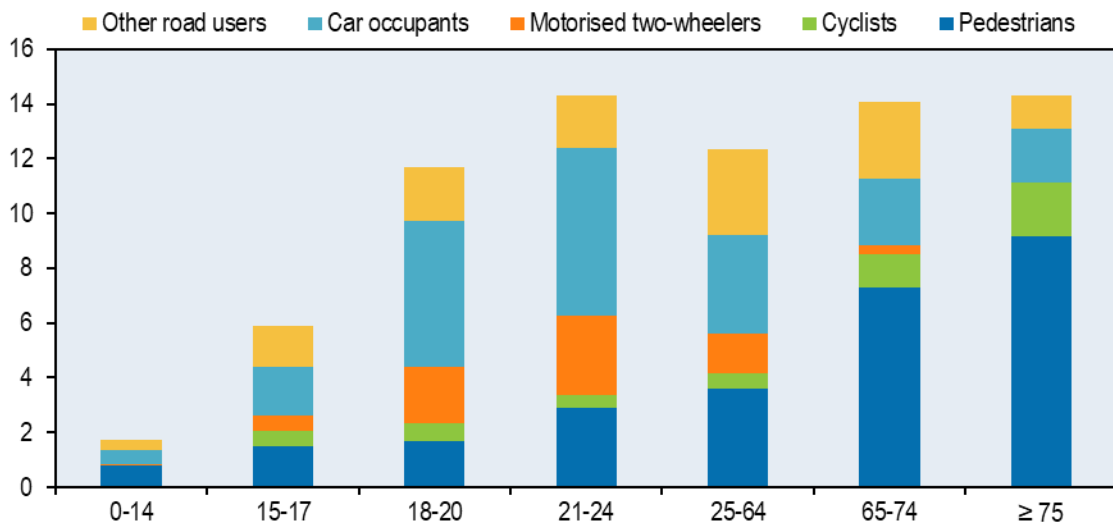


Figure 4. Road fatality rate by age and road user group, 2019
Fatalities per 100 000 inhabitants



Analysis of **fatalities by road type** shows that the non-urban network is the deadliest. In 2019, 62% of deaths occurred outside of urban areas, while 38% occurred in 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, non-urban roads accounted for 57% of deaths, while urban areas accounted for 43%.

Fatalities in urban areas have decreased by 20% since 2010, while they have increased on non-urban roads by 8% in the same period.

Figure 5. Road fatalities by road type, 2010, 2015 and 2019

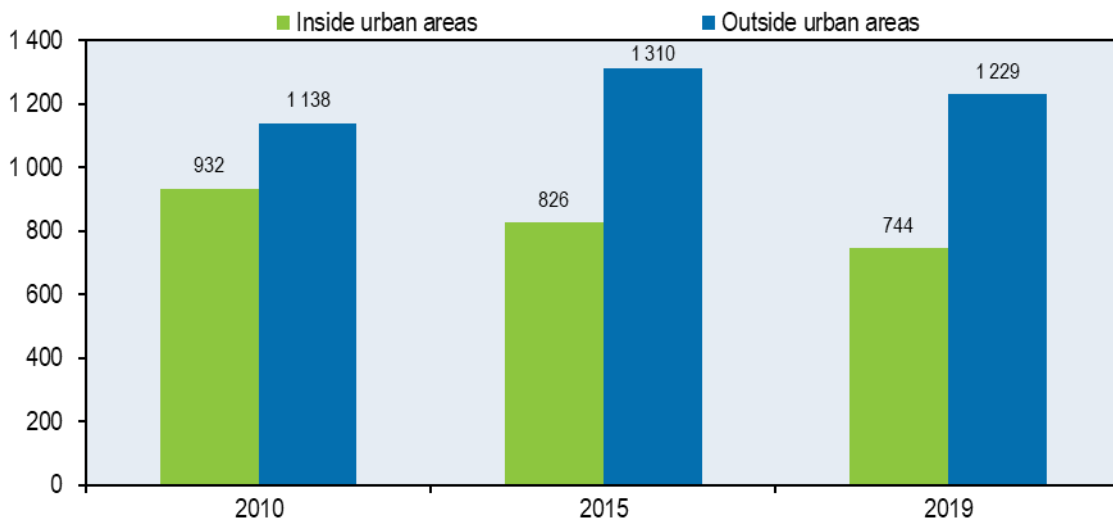
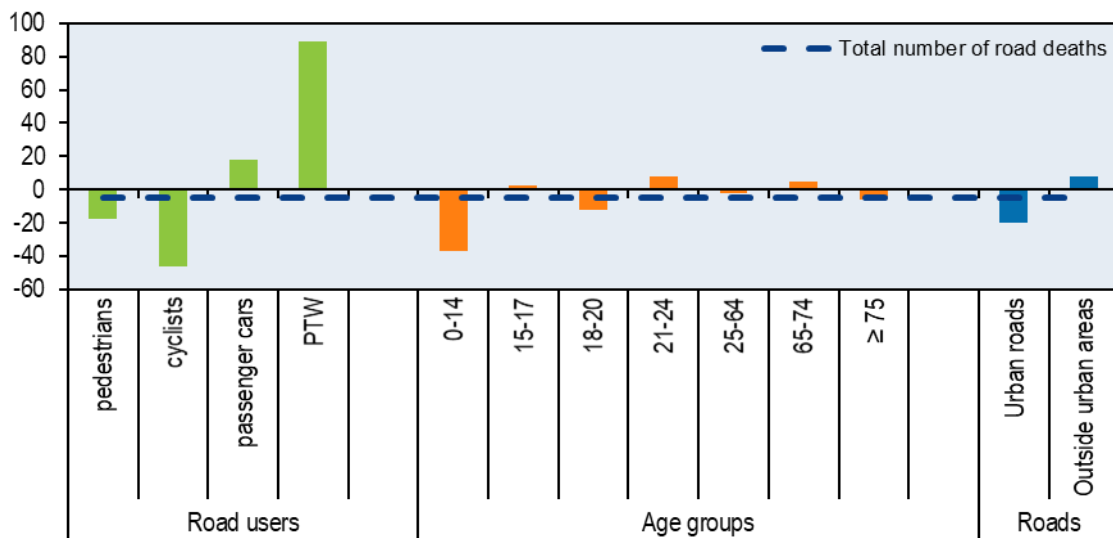


Figure 6. Evolution of road deaths by user category, age group and road type, 2010-19



Economic costs of road crashes

The National Road Safety Commission (*Comisión Nacional de Seguridad de Tránsito*, or CONASET) has reviewed several methodologies to assess the cost of road crashes. As a starting point, it uses the 2011 “Simplified methodology for estimating the social benefits of reducing accidents in interurban road projects” from the Road and Urban Transport Programme 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 (i.e. the 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 vice ministry of the environment (GreenLabUC, 2014).

Based on this, the estimated cost of traffic crashes for 2019 was USD 5.4 billion, equivalent to approximately 2.2% 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 4 559 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 crashes, 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 2. Passenger car speed limits by road type, 2020

	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	100 (maximum default limit but can vary according to the type of road)
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 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 drunk 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 almost 30% with the introduction of the zero-tolerance law: from 267 in 2011 to 192 in 2012. The share of alcohol-related fatalities has stabilised at around 10% of total fatalities in recent years. In 2019, 190 road deaths (9.6% of total road deaths) were related to alcohol and driving.

In 2014, the so-called 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 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. The substances detected by this device include cocaine, marihuana, opiates, methamphetamines and amphetamines.

In 2019, **distracted driving** was recorded in police data as the main contributing factor for 172 road fatalities (8.7% of total fatalities) and 1 814 serious injuries, representing a decrease of respectively 12% and 10% compared to 2018 data. 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 is a large increase compared to the previous study in 2015, when the use of mobile phones stood at only 4%.

According to police data, around 2% of traffic deaths in 2018 and 2019 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 nine years of age had to be seated in the rear seat and be adequately restrained. Since March 2016, children up to 12 years of age have to be seated in the rear seat. Since 2017, the obligation to use child restraints applies to children from 0 to 9 years of age or those under 135 cm tall and weighing less than 33 kg.

Table 3. 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 2019, 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 CONASET, an inter-ministerial body created as a presidential advisory commission through Supreme Decree 223, of 27 December 1993.

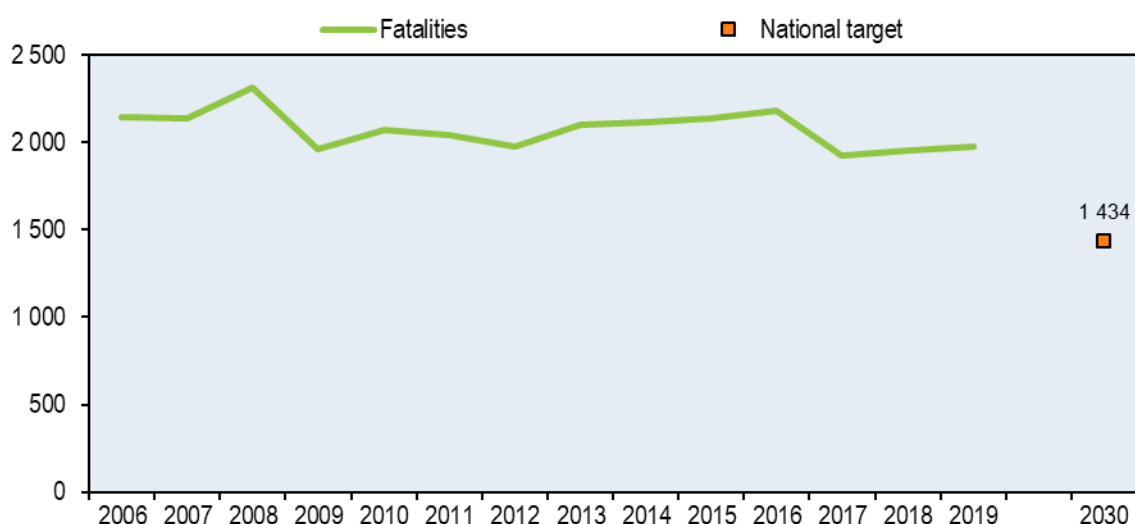
CONASET has a board of 10 ministers (Ministry of Interior Affairs, Ministry of the General Secretariat of the Presidency, Ministry of the General Secretariat of Government, Ministry of Education, Ministry of Justice, Ministry of Public Works, Ministry of Health, Ministry of Housing and Urban Development, Ministry of Labour and Ministry of Transport and Telecommunications), plus the National Police General 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 presented a **National Accord for Road Safety** in September 2018. This national accord laid out priority actions that were immediately implemented and supported the development of the framework for the **National Road Safety Strategy 2021-2030** through citizen participation. It includes a new target to reduce road fatalities by 30% by the year 2030 in comparison to the average number of fatalities in the period 2011-19.

Figure 7. 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: In June 2019, certain measures of the National Accord for Road Safety were launched.

In December 2020, the National Road Safety Strategy 2021-2030 document was released.

In 2020, a decree established the National Day of Remembrance for Road Traffic Victims on the third Sunday of November each year.

Speed management: The Ministry of Transport and Telecommunications is pursuing legislation in congress to allow for automated speed management.

Road users: In April 2019, a new drug test device that uses saliva was launched.

An educational project was approved in 2019 to give road safety education courses in educational establishments in the metropolitan region.

The process to implement a digital driving licence began in 2020. This is expected to reduce document falsification and raise safety standards on the roads, What's more, the process comes with a modernisation of the whole licence granting system.

The *Revisa tu silla* (Check your seat) program was created in 2019 to assist parents with the installation of child restraint systems.

A new theoretical exam for motorcycle licences was launched in 2020.

Vehicles: A ministry of Transport and Telecommunications accreditation has been required for motorcycle helmets since 2019.

An anti-lock braking (ABS) system has been required for light vehicles since 2020.

Infrastructure: Along with CONASET, the Ministry for Transport and Telecommunications published a guide in 2020 to provide technical support for the implementation of tactical bike lanes, sidewalk extensions for walking and queuing, public transport sanitisation and physical distancing for passengers.

The decree no. 71/2019 was published in 2020, modifying the road-traffic sign manual to incorporate the new design of information signs related to road traffic co-existence. This modification was the result of the working groups that originated from the road co-existence law, with the participation of the Ministry of Public Works, Ministry of Transport and CONASET.

Definition, methodology, data collection

A road fatality is a person who dies from injuries within 48 hours of the crash. To conform to the international definition – a death occurring within 30 days of a road crash – CONASET applies a correction factor of 1.2. Fatality data in this report correspond to the corrected data.

A seriously injured person is someone who is hospitalised for more than 24 hours. According to the 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 use the Data Collection Form of Road Traffic Accidents (SIEC 2). 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.

Resources

Recent research

CONASET (2019), *Preliminary Study Use of safety elements and habits of bicycle drivers in the Metropolitan Region*,

<https://www.conaset.cl/wp-content/uploads/2020/01/Informe-Final-CONASET-Enero-2020.pdf>.

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>.

Websites

CONASET: <https://www.conaset.cl/>.

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

References

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* [Simplified methodology for estimating the social benefits of reducing accidents in interurban road projects], <http://www.ministeriodesarrollosocial.gob.cl/btca/txtcompleto/mideplan/metod.benef.soc-accidentab.vialurb.pdf>.

Road safety and traffic data

	1990	2000	2010	2017	2018	2019	2019 % change over			
							2018	2010	2000	1990
Reported safety data										
Fatalities	2 063	2 207	2 070	1 925	1 955	1 973	0.9%	-4.7%	-10.6%	-4.4%
Injury crashes	..	30 772	34 331	41 743	39 194	39 246	0.1%	14.3%	27.5%	..
Deaths per 100,000 population	15.7	..	12.1	10.5	10.5	10.5	0.0%	-13.0%	..	-32.9%
Deaths per 10,000 registered vehicles	..	10.6	6.3	3.8	3.6	3.5	-3.0%	-43.8%	-66.8%	..
Fatalities by road user										
Pedestrians	811	696	694	665	-4.2%	-18.0%	..	..
Cyclists	189	124	111	102	-8.1%	-46.0%	..	..
Motorised two-wheelers	111	209	182	210	15.4%	89.2%	..	..
Passenger car occupants	477	510	592	563	-4.9%	18.0%	..	..
Other road users	482	387	377	433	14.9%	-10.2%	..	..
Fatalities by age group										
0-14 years	..	190	103	77	73	65	-11.0%	-36.9%	-65.8%	..
15-17 years	..	34	42	36	34	43	26.5%	2.4%	26.5%	..
18-20 years	..	92	103	95	77	90	16.9%	-12.6%	-2.2%	..
21-24 years	..	179	147	138	174	158	-9.2%	7.5%	-11.7%	..
25-64 years	..	1 421	1 290	1 210	1 238	1 265	2.2%	-1.9%	-11.0%	..
65-74 years	..	177	177	187	177	185	4.5%	4.5%	4.5%	..
≥ 75 years	..	87	125	116	115	117	1.7%	-6.4%	34.5%	..
Fatalities by road type										
Urban roads	932	744	737	744	0.9%	-20.2%	..	..
Rural roads	1 138	1 182	1 218	1 229	0.9%	8.0%	..	..
Traffic data										
Registered vehicles (thousands)	..	2 079	3 299	5 080	5 383	5 600	4.0%	69.7%	169.4%	..
Registered vehicles per 1,000 population	193.0	276.5	290.1	299.0	3.1%	54.9%	..	..