



LUXEMBOURG

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Luxembourg recorded 22 road fatalities in 2019 - a decrease of 14 deaths on the year prior. The figure for 2019 is the lowest annual fatality total on record. In 2019, the mortality rate was 3.6 deaths per 100 000 population. The Luxembourgish government remains committed to the Vision Zero philosophy as the basis for its road safety policy.

Trends

Luxembourg registered an overall **decrease in the number of road deaths in 2019**. According to the latest available data, 22 persons lost their lives in Luxembourg's traffic crashes in 2019. This represents a decrease of 14 deaths on 2018. In 2018, Luxembourg reported 36 road deaths, a 44% increase on 2017.

In 2019, 7 out of the 22 people killed (34%) on Luxembourg's roads were other countries' residents. Luxembourg's roads are characterised

by high volumes of cross-border traffic from neighbouring countries.

The **longer-term trend for road deaths** in Luxembourg points downward. Between 2000 and 2019, the number of annual road fatalities fell by 71%. The most significant reductions occurred in the 2000-08 period. Since 2008, road death reductions have stagnated, with annual road fatalities regularly totalling in the mid-thirties.

The number of **traffic deaths per 100 000 inhabitants** in Luxembourg has fallen by 80% between 2000 and 2019. In 2019, 3.6 traffic deaths per 100 000 inhabitants were recorded, compared to 17.5 in 2000. By comparison, the average in the European Union is 5.1 deaths per 100 000 inhabitants in 2019.

Luxembourg recorded 0.4 **road fatalities per 10 000 registered vehicles** in 2019. This represents a decrease of 81% compared to the year 2000 when the rate of deaths to registered vehicles stood at 2.4. However, this indicator does not appropriately assess Luxembourg's road safety performance, since many vehicles operating in the country are registered abroad.

Country Profile

Population in 2019: 0.6 million

GDP per capita in 2019: 115 826 USD

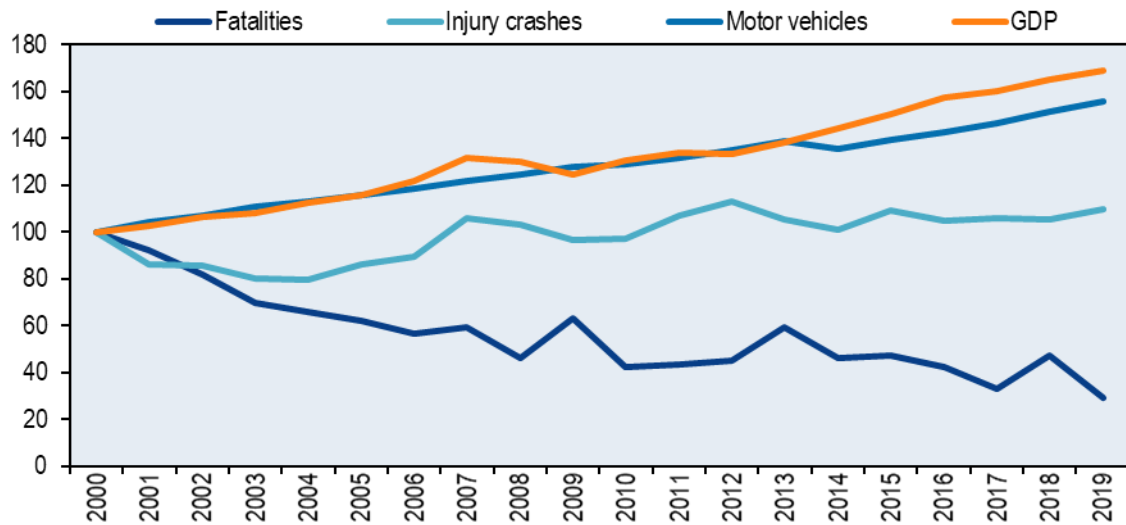
Road network in 2018: 2 912 kilometres (motorways 6%)

Registered motor vehicles in 2019: 0.5 million (cars 84%; goods vehicles 9%; motorcycles 4%)

Speed limits: 50 km/h on urban roads; 90 km/h on rural roads; 130 km/h on motorways (110 km/h in wet weather)

Limits on Blood Alcohol Content: 0.5 g/l for general drivers; 0.2 g/l for professional drivers and novice drivers

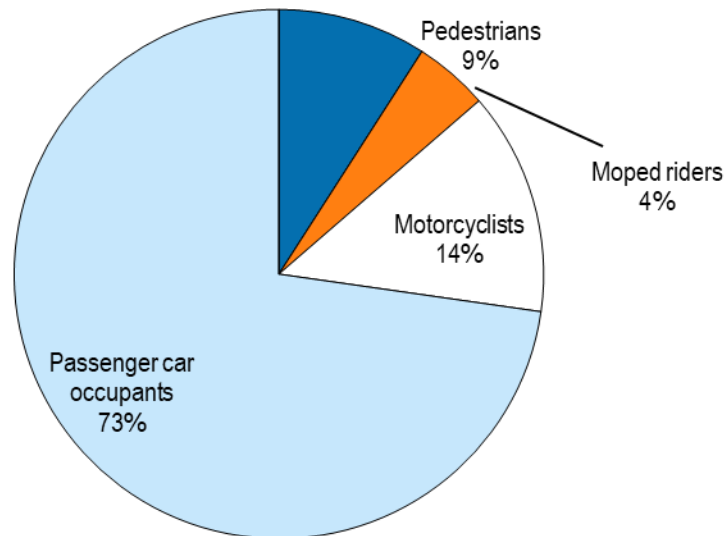
Figure 1. Road safety, vehicle stock and GDP trends
Index 2000 = 100



The graph for **fatalities by road user groups** shows that passenger car occupants continue to be most affected by road crashes. In 2019, passenger car occupants accounted for the largest share of road deaths, with 73% of the total. They were followed by motorcyclists (14%), pedestrians (9%) and moped riders (5%).

All road user groups saw fatalities halved on average in 2019. The exception is moped riders, who suffered one additional road death. Cyclists registered the largest decrease, with no road fatality in 2019. Compared to 2018, motorcyclists suffered six fewer road deaths, pedestrians one less, and passenger car occupants three fewer fatalities.

The long-term trend shows that traffic in Luxembourg has become safer for all road user groups. The most substantial decline occurred among pedestrians, who saw an 82% decline in annual traffic fatalities since 2000. Likewise, car occupants and motorcyclists are significant beneficiaries of road safety developments thus far this century with a 70% and 62% decrease in fatalities in the same period. Cyclist fatalities have remained mostly stable in the past two decades.

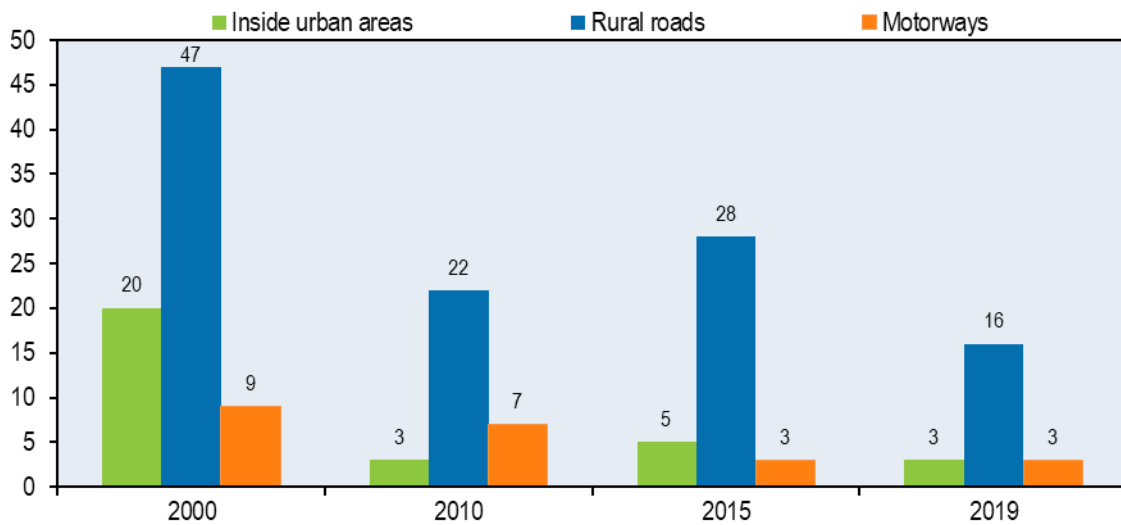
Figure 2. Road fatalities by road user group as percentage of the total, 2019

Road deaths by age group show that most age groups have benefitted from road safety improvements since 2000. Luxembourg's youngest road users (0 to 17 years) and the oldest ones (75 years and older) saw road fatalities decreased to zero in 2019. For the 65-74 years age group, the number of road deaths decreased by 33%.

Despite recent improvements, young people continue to be at the highest risk of all age group, with a traffic mortality rate far above the average. The 21-24 year old age range has a mortality rate of 16.1 per 100 000 persons, nearly four times the average rate.

Analysis of **fatalities by road type** shows that the rural network claims the most victims. In 2019, 73% of Luxembourg's traffic deaths occurred on rural roads, 14% on motorways and 14% on urban roads. This repartition has remained stable in recent years.

Urban roads in Luxembourg are notably safe. Since 2000, fatalities in urban areas fell by 85%, compared to a 66% decrease on rural roads and motorways. This could be partly explained by a reduction in vehicle speeds due to the speed limit decrease in urban areas from 60 to 50 km/h and the development of 30 km/h zones and shared spaces.

Figure 3. Road fatalities by road type

Fatality data are essential to understand road safety issues, but not sufficient. Information on **serious injuries from crashes** is also critically important. For these, Luxembourg has observed a downward trend. In the year 2000, 400 persons were hospitalised following a traffic crash. In 2019, the reported number of hospitalised road casualties stood at 248 - a reduction of 38%.

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 leading causes of road crashes. In 2019, speeding was the presumed contributing factor for 59% of fatalities and 31% of crashes in Luxembourg that resulted in serious injuries.

Luxembourg's Ministry of Mobility and Public Works allows and supports local authorities to lower the speed limit to promote the creation of attractive public spaces for pedestrians and cyclists. Speed limits can be reduced from 50 km/h to 30 km/h or less on local roads and state-owned roads inside their jurisdictional areas. This requires that all structural traffic-calming measures are implemented.

Table 2. Passenger car speed limits by road type, 2020

	General speed limit
Urban roads	50 km/h
Rural roads	90 km/h
Motorways	130 km/h 110 km/h (in rain)

Drink driving was the primary cause of 41% of road fatalities and 14% of crashes resulting in serious injuries in 2019, according to estimates. However, the small total number of road fatalities must be taken into consideration.

The maximum authorised blood alcohol content (BAC) in Luxembourg is 0.5 g/l for novice drivers and 0.2 g/l professional drivers. The Grand Duchy defines an alcohol-related crash as an injury crash where at least one of the involved drivers or pedestrians has a BAC above 0.5 g/l.

Since 1 June 2015, the malus system with 12 credit points has been tightened. Driving with a BAC above 0.5 g/l is now penalised by the withdrawal of 4 points instead of 2 points. For a BAC above 8 g/l, the penalty has increased from 4 to 6 points.

In 2019, the drivers' drug level was higher than the authorised level in 4 out of 22 fatal crash injuries and may have led to the crash.

The maximum blood drug content authorised for the following drugs in Luxembourg is 2 ng/ml for THC; 20 ng/ml for morphine and 50 ng/ml for amphetamine, methamphetamine, MDMA, MDA, cocaine and benzoylecgonine.

Distraction or inattention is the second most-observed contributing factors to accidents after speed. Using hand-held **phones while driving** is forbidden in Luxembourg. The use of hands-free devices while driving has been authorised since 2009. A new law with tougher sanctions is in force since April 2015. It also covers the use of laptops and tablets while driving. Making phone calls while driving is a growing concern, yet smartphones' expanding communication functions are an even more significant issue. Multiple road safety actors in Luxembourg have stepped up awareness campaigns to combat the dangers of distracted driving.

Seat belt use has been compulsory in front seats in Luxembourg since 1975 and in rear seats since 1992. The use of child restraints has been mandatory since 1992. In 2015, seat belt use in passenger cars reached 90% in the front seat and 76% in rear seats. In 2019, three killed persons and eight seriously injured were not wearing seat belts at the moment of the crash.

Table 3. Seat belt wearing by car occupancy
Percentages

	2015
Front seats	
General (driver + passenger)	90
Rear seats	
General	76

Helmets have been compulsory for all motorcycle and moped riders since 1976. The compliance rate is not available for Luxembourg but is estimated close to 100%.

Road safety management and strategies

There are several **influencing factors on Luxembourg's road safety performance**. A Surrounded by larger countries, Luxembourg has a high share of transit traffic that includes many heavy goods vehicles. Approximately 45% of Luxembourg's workforce commute from Belgium, Germany or France, making Luxembourg the most common destination for cross-border commuters in the European Union in 2019.

The high proportion of cross-border inbound commuters is reflected in the high volume of outbound traffic during evening rush hour. As a result, most crashes happen between 5 pm and 7 pm when commuters are on their way home from work.

Despite an increase in traffic, road safety has improved significantly due to important measures, including:

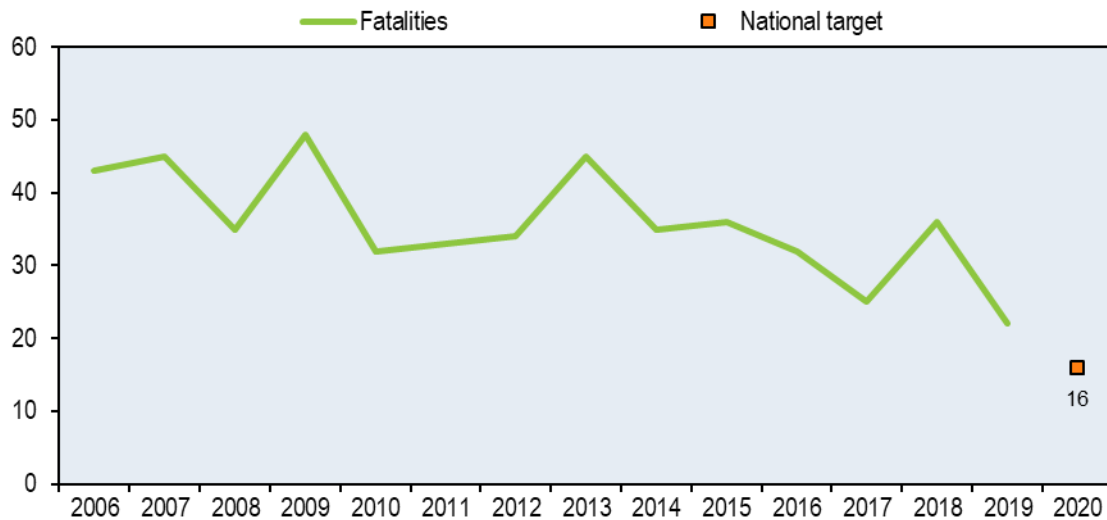
- the adoption of a Vision Zero safety strategy;
- a reduction in speed limits, associated with awareness and enforcement campaigns;
- awareness campaigns designed to promote respect for all road users, especially the vulnerable ones.

Responsibility for the organisation of road safety in Luxembourg lies with the Department of Transport in the Ministry of Sustainable Development and Infrastructure.

The government of Luxembourg uses the Vision Zero framework to shape its road safety policy. In this context, the government adopted a National Charter for Road Safety in 2015. The charter sets zero fatalities and serious injuries on Luxembourg's roads as a long-term target.

To highlight the priority status of road safety policy, the Ministry of Transport launched Luxembourg's first National Day of Road Safety on 26 September 2016, as part of the National Road Safety Action Plan.

Luxembourg adopted the European Union (EU) target to halve the number of annual road fatalities by 2020, against a 2010 baseline. The government defined its target by analysing the reasons and circumstances under which fatal and serious injury crashes occur. To meet the EU target, there should be no more than 16 fatalities by 2020. The already low number of road fatalities in Luxembourg in 2010 (32 deaths) makes it particularly challenging to meet this target. For the UN Decade of Action for Road Safety 2021-30, Luxembourg also adopted the EU target to halve fatalities and seriously injured by 2030 compared to 2020.

Figure 4. Trends in road fatalities towards the national target

Measures

Road users

In May 2019, the Minister of Mobility and Public Works presented a new National Road Safety Action Plan for 2019-23. The plan lists eleven challenges and includes 31 measures, see <https://gouvernement.lu/dam-assets/documents/actualites/2019/05-mai/Plan-d-action-securite-routiere.pdf>

In April 2019, the Ministry of Mobility and Public Works presented a motorcycle action plan featuring 13 security measures. The primary approach is fighting excessive speed. Other important measures are the securing dangerous zones by slides, organising the fourth "Fit Your Bike Day" and the increased use of social media to establish a relationship with foreign motorcyclists.

At the same time, the Ministry and the police in collaboration with Road Safety Luxembourg and the Administration for Bridges and Roadways announced a new safety campaign targeting motorcyclists under the slogan "D'Strooss ass keng Rennstreck" ("The road is no racetrack"). The objective is to raise awareness for the fatal risk of excessive speed and increase acceptance for the fact that not adapting driving behaviour to circumstances and road conditions can have serious, even fatal consequences.

On 1 May 2018, Luxembourg introduced new road signs and new regulations for cyclists. The new rules establish a minimum passing distance of 1.5 m and allow children up to 12 years of age to cycle on the pavement (together with an accompanying adult).

Following an increase in the number of motorcyclists killed, the Minister of Transport decided in 2018 to implement new actions, including road signs indicating dangerous segments for motorcyclists and awareness campaigns on the conditions of vehicles.

Infrastructure

A new radar section was installed between Waldhof and Gonderange in mid-June 2020.

A pilot project on the N25 between Wilts and Kautenbach to improve motorcyclists' safety introduced specific markings encouraging motorcyclists to keep a safe distance from the centre line. In addition, new signs on road sections with high volumes of motorcycle traffic warn riders of a hazardous segment of their journey.

Installation of motorcycle guardrails has continued. In 2018, about 8 km of guardrails were installed.

Luxembourg's Public Roads Administration chaired a working party dealing with all relevant questions related to infrastructure safety. Road safety audits are in place to improve safety on specific road network sections, particularly those with most crashes.

Definition, methodology, data collection

Luxembourg defines a **road fatality** as a person who died immediately or within 30 days of a crash. A **serious injury** is defined as an injury causing a person to be hospitalised for at least 24 hours, a slight injury as an injury requiring less than 24 hours of hospitalisation.

Luxembourg is currently not using the Maximum Abbreviated Injury Scale of three or more (MAIS3+) to define serious injuries. However, the Ministry of Health, the Ministry of Transport and hospitals are working towards this objective.

In Luxembourg, **crash data** are collected by the police at the scene of crashes. The national statistical institute STATEC consolidates the data at the national level. STATEC also compiles a list of fatal crashes reported in general media. This list is used to double-check the number of deadly crashes.

Resources

Road Safety Luxembourg:

<http://www.securite-routiere.lu/online/www/content/homepage/FRE/index.html>

Ministry of Sustainable Development and Infrastructure: <http://www.mt.public.lu/>

STATEC: <http://www.statistiques.public.lu/fr/index.html>

Ministry of Mobility and Public Works: <https://mmtg.gouvernement.lu/en.html>

Action plan for road safety:

<https://gouvernement.lu/dam-assets/documents/actualites/2019/05-mai/Plan-d-action-securite-routiere.pdf>

Road safety and traffic data

	1990	2000	2010	2017	2018	2019	2019 % change over			
							2018	2010	2000	1990
Reported safety data										
Fatalities	71	76	32	25	36	22	-38.9%	-31.3%	-71.1%	-69.0%
Injury crashes	1 216	901	876	955	947	988	4.3%	12.8%	9.7%	-18.8%
Injured persons hospitalised	556	400	266	256	273	248	-9.2%	-6.8%	-38.0%	-55.4%
Deaths per 100,000 population	18.7	17.5	6.4	4.2	6.0	3.6	-40.1%	-43.8%	-79.6%	-80.9%
Deaths per 10,000 registered vehicles	3.3	2.4	0.8	0.5	0.7	0.4	-40.7%	-43.0%	-81.4%	-86.6%
Fatalities by road user										
Pedestrians	10	11	1	4	3	2	Figures are too small to make meaningful comparison			
Cyclists	1	1	1	0	3	0				
Moped riders	0	0	0	0	0	1				
Motorcyclists	8	8	1	7	9	3				
Passenger car occupants	51	53	27	13	19	16				
Other road users	1	3	2	1	2	0				
Fatalities by age group										
0-14 years	4	3	0	0	1	0	Figures are too small to make meaningful comparison			
15-17 years	2	1	0	2	1	0				
18-20 years	11	5	6	3	6	1				
21-24 years	8	11	4	1	3	5				
25-64 years	34	45	19	15	22	14				
65-74 years	..	3	1	0	1	2				
≥ 75 years	..	7	2	4	2	0				
Fatalities by road type										
Urban roads	..	20	3	6	1	3	Figures are too small to make meaningful comparison			
Rural roads	..	47	22	16	26	16				
Motorways	..	9	7	3	9	3				
Traffic data										
Registered vehicles (thousands)	214	319	411	466	482	496	3.0%	20.6%	55.6%	131.9%
Registered vehicles per 1,000 population	564.2	735.5	819.5	789.7	800.7	808.5	1.0%	-1.3%	9.9%	43.3%