



## ROAD SAFETY ANNUAL REPORT 2019

# SWEDEN

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Sweden recorded 324 road fatalities in 2018- a 28.6% increase on 2017 and its highest total since 2009. The surge this year was driven by an uptick in passenger car occupant and motorcycle fatalities. 30% of fatal casualties involved a collision with a heavy truck. Although Swedish roads continue to be among the safest in the European Union with a rate of 3.2 traffic deaths per 100 000 inhabitants, Sweden appears as if it will fall short of its target of reducing road fatalities to under 220 by 2020.

## Trends

Sweden registered an overall **increase in the number of road deaths in 2018**. According to the latest data, 324 persons lost their lives in traffic crashes in Sweden in 2018. This represents a 28.6% increase on 2017. In 2017, 252 road deaths were reported - a 6.7% decline on 2016. The large increase recorded in 2018 occurred exclusively on the national and regional road networks, especially on roads with a speed limit of 70 - 90 km/h.

### Country Profile

**Population** in 2018: 10.1 million

**GDP per capita** in 2018: 54 448 USD

**Cost of road crashes:** 1.3% of GDP (2011)

**Road network** in 2015: 140 880 kilometres (urban roads 30%)

**Registered motor vehicles** in 2018: 6.3 million (cars 77%; goods vehicles 10%; motorcycles 5%)

**Volume of traffic** : +22% between 2000 and 2018

**Speed limits:** 30 to 50 km/h on urban roads; 60 to 100 km/h on rural roads; 110 or 120 km/h on motorways

**Limits on Blood Alcohol Content:** 0.2 g/l

The **longer-term trend for road deaths** in Sweden has been downwards trending. Between 2000 and 2018, the number of annual road fatalities fell by 45%. However, the trend in the decline of traffic fatalities has stagnated since 2010. The road fatalities total for 2018 is actually a 21.8% increase on 2010's total.

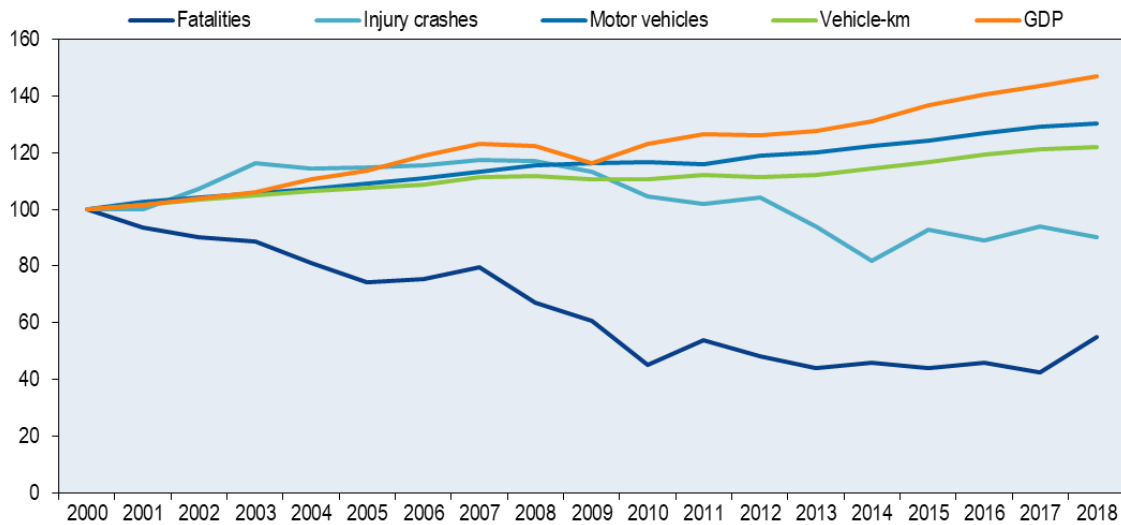
The number of **traffic deaths per 100 000 inhabitants** in Sweden has fallen by 52% between 2000 and 2018. In 2018, 3.2 traffic deaths per 100 000 inhabitants were recorded, compared to 6.7 in 2000. By way of comparison, the average in the European Union is 4.9 deaths per 100 000 inhabitants in 2018.

Measured in **traffic deaths per billion vehicle-kilometres** (vkm) driven, the road safety performance of Sweden shows an encouraging long-term trend. In 2018, this metric stood at 3.8, 55% lower than in 2000.

Sweden recorded 0.5 **road fatalities per 10 000 registered vehicles** in 2018. This represents a decrease of 58% compared to the year 2000, when the rate of deaths to registered vehicles stood at 1.2.

Men comprised 77% of all traffic fatalities in Sweden in 2018. This figure is consistent with previous years where men made up 78% (2017) and 76% (2016) of fatalities.

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



The graph for **fatalities by road user groups** shows that passenger car occupants were the group most severely affected by road crashes. In 2018, passenger car occupants accounted for the largest share of road deaths with 56% of the total. They were followed by motorcyclists with 15% of total fatalities, pedestrians with 10% and cyclists with 7%.

The largest increase in road fatalities was registered among passenger car occupants: from 130 deaths in 2017 to 181 in 2018 – a 39.2% year-on-year increase. Likewise, Swedish riders of motorised two-wheelers (a group encompassing motorcyclists and moped riders) faced 35% more deaths than the year prior. Pedestrians and cyclists saw year-on-year road fatality reductions in 2018 with declines of 8.1% and 11.5%, respectively.

What stands out most in the analysis of the 2018 statistics is the large increase in head-on crashes; 68% more deaths were recorded from this collision type in 2018 than in 2017. Head-on crashes between passenger cars and heavy trucks comprised about half of the increase. 78 people were killed in crashes involving heavy trucks. This marks an increase of 129% compared to 2017. In 9 out of 10 cases, the passenger car moved into the oncoming lanes. Roads without a median barrier and a speed limit of 70 and 90 km/h were the setting for most of those killed in a heavy truck collision.

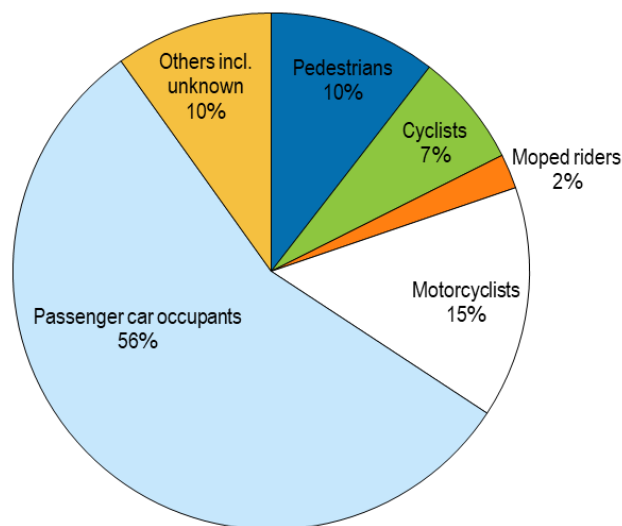
The long-term trend shows that traffic in Sweden has become safer all road user groups, with the exception of motorcyclists. In the period 2000 to 2018, passenger car occupants (-54%), pedestrians (-53%) and cyclists (-51%) saw strong declines in the number of road fatalities. On the contrary, motorised two-wheelers experienced a 10% increase in road fatalities in the same time period.

Cyclists and motorists still account for about 80% of all persons seriously injured in traffic, according to the Swedish Transport Administration. The number of seriously injured motorists continues to decline, and there is reason to believe that the trend will

continue in the longer term, largely due to safer cars and improved infrastructure. The number of injured cyclists, on the other hand, has not improved to any great extent and remains around 2 000 per year.

In order to reduce these injuries, the responsible road managers must, in the short term, ensure that walking and cycling routes are maintained properly. At the latest survey in 2017-18, 36% of prioritized walking and cycling routes were maintained with good quality. The goal for 2020 is for the proportion to reach 70% - leaving much work to be done. Speed-secured pedestrian, bicycle and moped passages are another area that is important to keep in focus. The proportion of passengers with good safety standards has not improved in 2018.

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



Note: The "other" category includes bus passengers, tractors, light trucks, heavy trucks, four-wheelers, etc. In 2018, among the 32 people killed in that category, 12 were occupants of small trucks, 4 of heavy trucks and 6 of four-wheelers.

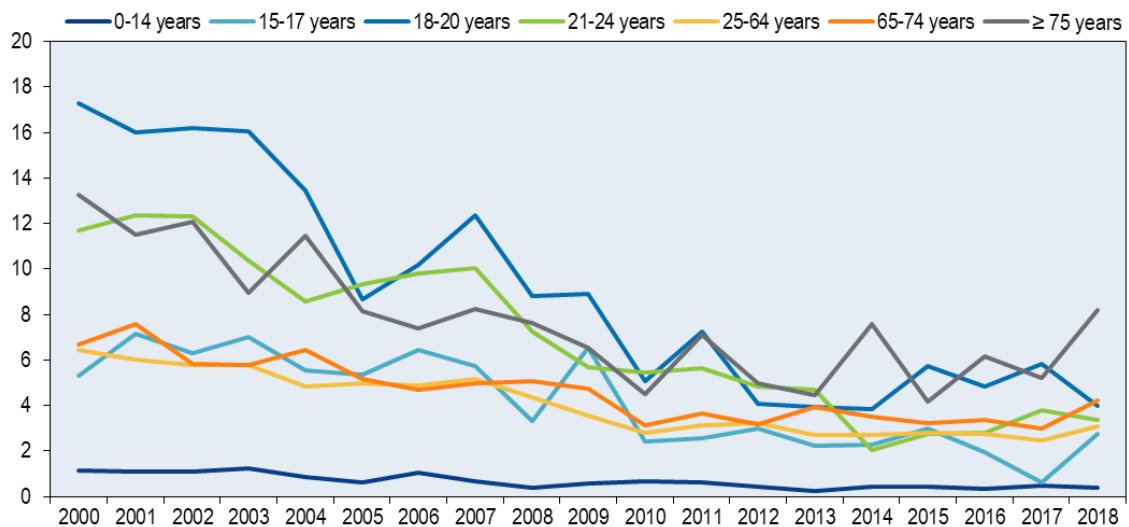
**Road deaths by age group** in 2018 showed that road users above 75 years old are now the age group at highest risk in traffic. These elderly users suffered road fatalities at a rate of 8.0 persons per 100 000 in 2018. The 18-20 and 65-74 year old age groups drew for second place with rates of 4.0 per 100 000 each, followed by 21-24 year olds at 3.3, and 25-64 year olds at 3.1. Proportional to their population, youths under 18 suffered the fewest road fatalities in 2018 with 15-17 year olds and 0-14 year olds recording rates of 2.8 and 0.4 deaths per 100 000, respectively.

The elderly aged 65 and above saw 53.8% more deaths in 2018 than the year prior. The number of fatal casualties also increased for 15-17 year olds from 2 to 9 persons and for 25-64 year olds from 125 to 158 persons (26.4%) on the year. Notably, there was a year-on-year decrease for young adults – historically a high risk group; the number of road fatalities among 18-20 year olds and 21-24 year olds fell in 2018 (respectively from 19 to 13 and from 20 to 17).

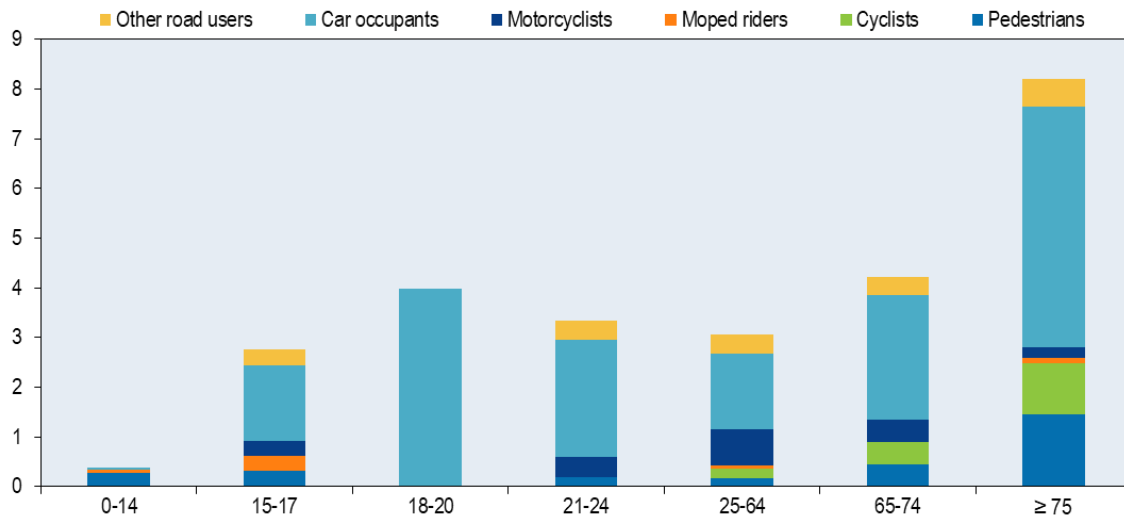
Looking at the long-term trend since 2000, the number of road deaths decreased for all age groups. Younger Swedes have benefitted the most from road safety improvements in the past two decades; the strongest reduction in fatalities over this period occurred among 18-24 year olds for whom road fatalities were cut by 71%. Swedes aged 0-14 experienced 63% fewer deaths in 2018 than in 2000. Likewise, those aged 15-17 saw a reduction of 44% in the same time period. The 25-64 age range saw a reduction in road fatalities of 47% while the elderly above 65 experienced a 22% drop during this time.

Sweden has an ageing population that is still very active in the road transport system. Therefore, there are more vulnerable persons exposed to injury risk. This development is directly linked to population ageing in Sweden, due to the fact that people live longer and have fewer children. A forecast made by Statistics Sweden predicts an increase in the share of the senior population by 30% between 2010 and 2050, meaning that a quarter of the Swedish population is expected to be 65 years or older by 2050.

**Figure 3. Road fatality rates by age group, 2000-2018**  
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 fatalities increased across all road types in 2018. Rural roads claimed 65% of road fatalities, 24% occurred on urban roads, and 7% occurred on motorways. This repartition has remained relatively stable in recent years.

In 2018, in comparison to 2017, the number of road deaths increased by 34.2% on rural roads, by 22.2% on urban roads and by 20.0% on motorways.

Since 2000, fatalities in rural areas decreased by 48%, on urban roads by 53% and 4% on motorways.

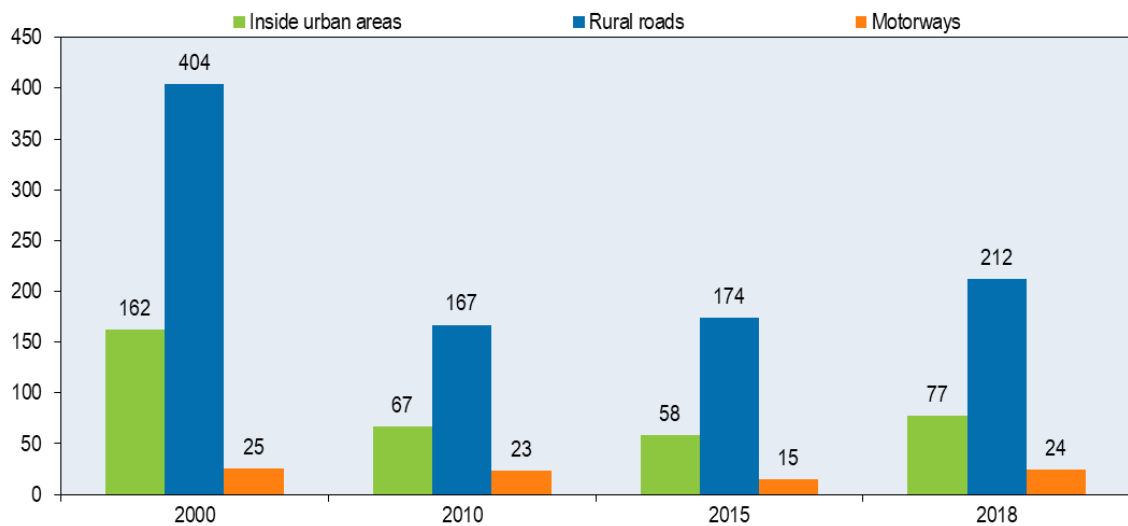
Over the past 20 years, there has been a major improvement over the whole road network. The urban road environment was improved through the construction of mini-roundabouts, cycle lanes and other infrastructure measures. As there has been less positive development recently in the safety of vulnerable road users, future efforts will focus on safer municipal passages for pedestrians, cyclists and moped riders.

On rural roads, improvements in road safety since 2000 are in part due to the implementation of speed cameras and the generalisation of the "2+1" roads (i.e. the transformation of traditional two wide lane roads into three narrow lane roads with a median barrier). The central lane alternates between traffic directions at regular intervals to provide ample passing opportunities. After years of discussion and debate, the first 2+1 road was built, and it has proven to be cost effective by reducing head-on collisions on rural roads. The consistent trend towards safer vehicles and an increased focus on injury prevention has also supported road safety.

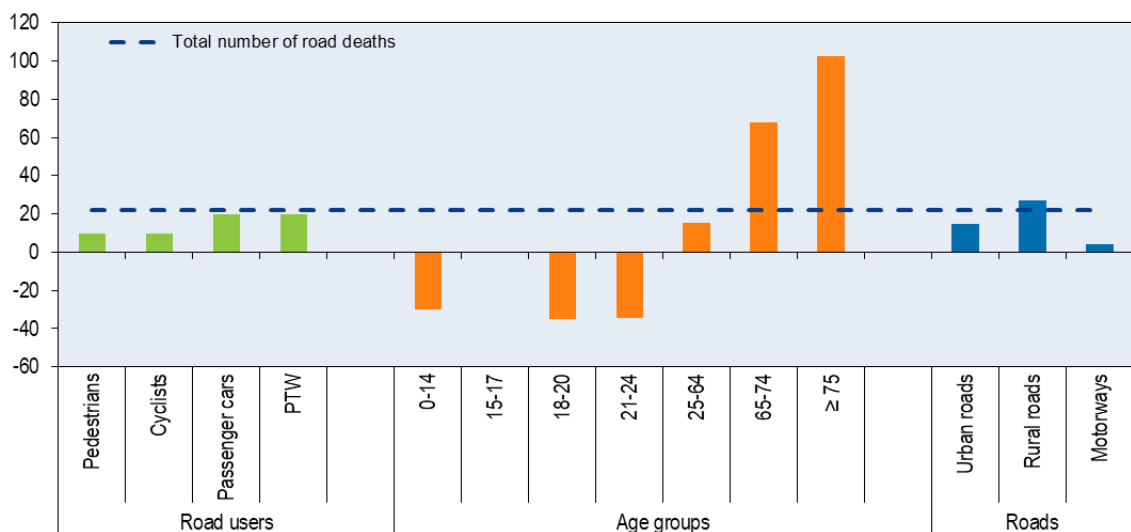
The goal for 2025 is that all rural roads with an average annual daily traffic (AADT) above 2000 vehicles/day should have median barrier or a speed limit at or below 80 km/h.

The new infrastructure safety plan for the period 2018-29 was released and includes a strong focus on the upgrade of bridges. See more information at: <https://www.trafikverket.se/for-dig-i-branschen/Planera-och-utreda/Planer-och-beslutsunderlag/Nationell-planering/nationell-transportplan-2018-2029/>

**Figure 5. Road fatalities by road type 2018**



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



Fatality data are essential to understand road safety issues, but hardly sufficient. Information on **serious injuries from crashes** is also critically important. In 2018, 921 persons suffered MAIS 3+ injuries in Sweden: 40% were cyclists and 31% were occupants of passenger cars. In 2017, 903 persons suffered MAIS 3+ injuries.

In 2018, 2 195 persons were recorded to have been severely injured due to a road traffic accident according to police data.

## Economic costs of road crashes

Traffic crashes represent a significant cost for society, estimated in 2011 at around EUR 5.2 billion, or 1.3% of Gross Domestic Product (GDP). The cost of road crashes was first evaluated in 1990 by the ASEK Group, on the basis of a willingness-to-pay approach to assess the unit cost of a fatality, a hospitalised person, a slightly injured person and a property-damage-only crash. Since then, these unit costs are regularly re-evaluated taking into account the evolution of GDP and of the Consumer Price Index (CPI).

**Table 1. Costs of road crashes, 2011**

	Total [EUR] <sup>2</sup>
Fatalities	900 million
Serious injuries	2 700 million
Slight injuries	800 million
Property damage costs	800 million
<b>Total</b>	<b>5.2 billion</b>
<b>Total as % of GDP</b>	<b>1.3%</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. Improved speed compliance with the consequence of lowered speed levels is the area estimated to have the greatest potential to reduce road fatalities. However, speed levels on Swedish roads have remained largely unchanged since 2012 and have not improved to any great extent.

In 2018, the proportion of traffic adhering to the current speed limit was only 45% - about the same level as when measurements started in 1996. The goal of 80% compliance by 2020 has therefore been assessed as unreachable.

In the short term, it is important to improve speed compliance via different forms of monitoring. Currently, there are about 1 800 speed camera units in use nationwide with a target set for approximately 2 300 units in use by 2020. Speed cameras have positive effects on speed compliance, but total route coverage remains insufficient.

Therefore, it is important to increase the police presence. The number of fines issued for speeding through manual monitoring fell sharply between 2011 and 2016 and has since flattened.

In the longer term, it is important to ensure that existing road infrastructure appropriately matches posted speed limits. Starting in 2016 and 2017, the Swedish



Transport Administration initiated a major speed review with the goal of adapting speed limits to current road safety standards. For the period up to and including 2020, about 220 miles of 90 km/h roads will be lowered to 80 km/h, while just over 40 miles of 90 km/h roads will have a median barrier installed and changed to 100 km/h limits. Thus far, about 45 of the 220 miles have been reduced, whilst 20 miles have been separated. It is important that the work of adapting speed limits continue according to existing plans and that road safety infrastructure of this type be intensified.

The table below summarises the main speed limits in Sweden.

**Table 2. Passenger car speed limits by road type, 2019**

	General speed limit
Urban roads	30-50 km/h
Rural roads	60-100 km/h
Motorways	110 km/h or 120 km/h

**Driving under the influence of alcohol** is another major cause of road crashes in Sweden, as in most IRTAD countries. In 2018, 75 people died in alcohol or drug related crashes (23% of all road fatalities) compared with 81 people in 2017. In 2016, 67 out of the 270 fatalities (or 24%) involved a driver, rider, pedestrian or cyclist under the influence of alcohol. This share has remained stable over the years – an indication that more needs to be done to address the issue of drink-driving.

In Sweden, a crash is defined as alcohol-related if a BAC level of above 0.2 g/l can be proven in the driver, rider, pedestrian or cyclist involved.

Enforcement against drink-driving is becoming a challenge, as only a very small proportion of the driving population is under the influence of alcohol. In 2017, only 0.26% of all drivers in random tests were above the legal limit. The goal is that, by 2020, at least 99.9% of drivers operate under the legal BAC limit of 0.2 g/l. Police sobriety checks, which have decreased in number in recent years, represent an important measure for improving this indicator. Quick and reliable breath tests also play an important role in future efforts to prevent drink driving.

The number of administered breathalyzer tests dropped sharply after 2011 and then levelled in 2016. For 2018, this figure remained at the levels of 2016 and 2017 - indicating that the reduction in tests seen in recent years has been halted. In 2018, the police authority and the Swedish Transport Administration made a joint request to the Government to allow for the introduction of a new professional category: traffic controllers. The thinking here is that traffic controllers could carry out sobriety checks, thus relieving police and other control authorities to pursue other priorities. The government has not, as of yet, returned to this issue.

In the long term, there is great potential in new technology to combat drink driving. "Alco-Gates" automate part of the sobriety check systems at ports and the government is currently considering installing the equipment in three to five additional ports.

Nonetheless, in the short term, police surveillance plays an important part in reducing drink-driving, as well as improved measures in reducing reoffending.

**Drug usage and driving** is another worrying cause of crashes in Sweden. A drug related crash is defined as any crash where one of the persons involved has any trace of an illegal drug in the body. In 2017, 40 fatalities (or 16%) involved a driver under the influence of illegal drugs; amphetamines being the substance most commonly found, with some overlap on alcohol-related fatalities where a driver has been under the influence of both alcohol and drugs.

It is forbidden to drive a motor vehicle under the influence of illegal drugs. A driver who is under suspicion of driving after taking illegal drugs must leave a sample of blood or saliva to be analysed. It is up to the driver to decide whether to drive when using medication. If the medication has a negative effect on driving, the person is not allowed to drive.

An increasing problem for traffic safety in Sweden is **distraction**, for instance through the use of mobile phones while driving or crossing a street. The Swedish Road Traffic Ordinance requires drivers to pay sufficient attention to driving. To avoid crashes, road users shall "observe the care and attention that the circumstances demand". However, from 2013, the government has strengthened this by-law, forbidding the use of communications devices when driving if "the use influences the driving in an unfavourable way". In 2015, the government decided to undertake an assessment of the safety effect of the new by-law. The Swedish Transport Agency carried out an evaluation and the result showed a need for further research along with investment in technological developments that discourage use of hand held phones while driving. Hand held mobile phone use while driving is now prohibited.

**Fatigue and sleepiness** may be a stronger cause of road crashes than alcohol, as it interacts with alcohol and drugs in a dramatic way. Sweden has no clear facts on the magnitude of the problem, but it is estimated that 10-20% of all crashes are caused by fatigue. Fatigue mostly concerns single-car crashes.

**Seat-belt wearing** has been compulsory in Sweden since 1975 in front seats and since 1986 for rear seats. It has been compulsory for children under 135 cm to use a child-restraint system since 1988. The medical recommendation is that a booster seat or similar device must be used up to the age of 12.

There has been a long-term upward trend in the use of seat belts. This trend will probably continue due to the increasing percentage of cars with seat belt reminders or warning functions. The driver's use of seat belts in passenger cars was recorded at 99% during 2018. The proportion of car drivers killed who were unrestrained has decreased since 2001 and stood at 33% in 2017. In rear seats, children have always had a much higher rate of belt use than adults. In 2016, 98% of children in the rear seat wore seat belts.

**Table 3. Seat belt and helmet wearing rates**  
Percentages

	2000	2014	2016	2018
<b>Front seats</b>				
Driver	90	98	98	99
Passenger	92	96	96	99
<b>Rear seats</b>				
General	81	89		94
Children (use of child restraint)	89	95	98	93
<b>Helmet</b>				
Moped riders	..	96	95	93

For motorcyclists, **helmet wearing** is the most effective passive safety habit. In Sweden, helmets have been compulsory for users of all of powered-two wheelers since 1975. The helmet-wearing rate of riders of powered two-wheelers is high, at 96-99%.

In Sweden, it is mandatory for children under 15 years of age to use a helmet while cycling, and 60-70% of children comply. About 30% of adults use helmets, but this varies greatly by city. Sweden has set a helmet usage goal of 70% by 2020, although it appears likely that it will fall short of that figure.

## Road safety management and strategies

There are several **factors of influence on Sweden's road safety performance** as captured by the above indicators. The number of road fatalities reached a peak in 1965 and 1966, at 1 313 road deaths each year. Since, road deaths have decreased by almost 80%.

This overall positive trend can partly be explained by gradual improvements in infrastructure, vehicle fleet, an increased focus on injury prevention and reduced speeds. Both the safe national road indicators and safe vehicle indicators are improving, and road design has long embraced greater safety.

**Responsibility for the organisation of road safety** in Sweden lies with several agencies. Transportstyrelsen, the Swedish Transport Agency, has overall responsibility for drawing up regulations and ensuring that authorities, companies, organisations and citizens comply with them. Trafikverket, the Swedish Transport Administration, is responsible for long-term planning of the transport system for all types of traffic, as well as for building, operating and maintaining public roads and railways. The Swedish Transport Administration is also responsible for administering the theoretical and practical driving tests needed for a driving licence for both professional and private drivers. Trafikanalys, Transport Analysis, reviews the bases for decisions, assesses measures, and is responsible for statistics.

Sweden is divided into 290 municipalities and 20 county councils. These municipalities and counties hold responsibility for local road safety. Local government has a long tradition in Sweden. The country's municipalities, county councils and regions are responsible for providing a significant proportion of all public services, including road safety. They have a considerable degree of autonomy, as well as independent powers of taxation. Local self-government and the right to levy taxes are stipulated in the Instrument of Government, one of the four pillars of the Swedish Constitution.

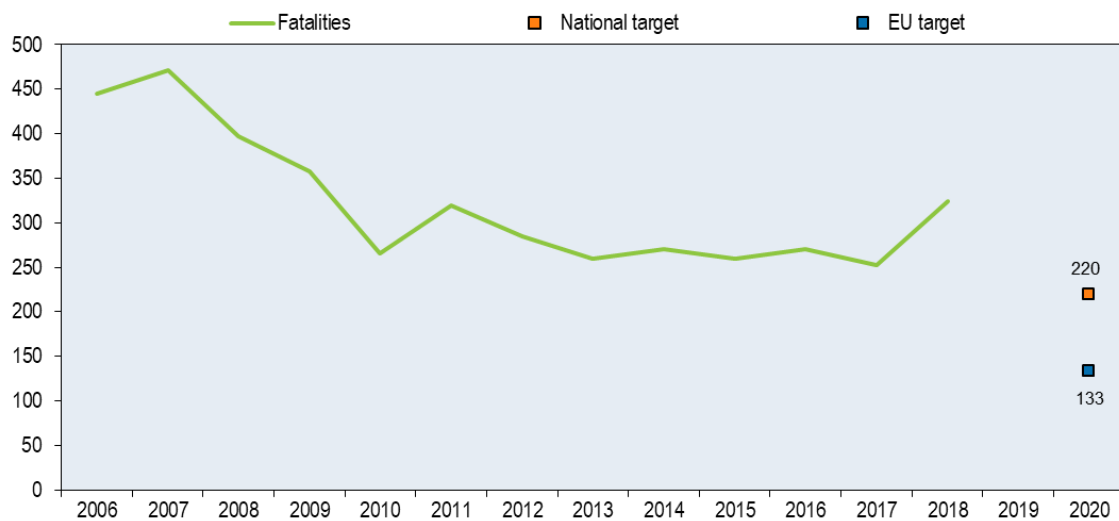
The basis of Swedish road safety work is **Vision Zero**, a strategic approach towards a safe system, whereby no one is at risk of being fatally or severely injured while using road transport. There is no safety plan in a traditional sense.

During 2015 and 2016, the Ministry of Enterprise relaunched Vision Zero. An extensive review of traffic safety work was done in collaboration with relevant parties. In particular, three new assignments were presented. The Swedish Transport Administration was tasked to lead the national collaboration for increased traffic safety. Results are reported annually, in May, starting in 2017. An investigation of a new default speed limit of 40 km/h in urban areas was undertaken by Trafikanalys with results presented in October 2017. Trafikanalys was tasked to undertake an investigation of traffic safety goals and performance indicators after 2020.

The current interim **targets** were adopted by the Swedish Parliament in 2009 and specify that the number of road fatalities should be halved between 2007 and 2020. That translates into a maximum of 220 road deaths in 2020. The number of seriously injured on the road is to be reduced by a quarter. In addition to the current national target, there is an interim target at the EU level, for halving the number of road deaths between 2010 and 2020. This corresponds to a more stringent interim target of a maximum of 133 road deaths in 2020. No decision has been made to adjust the Swedish target to this level, and so the interim target of no more than 220 road deaths remains.

An interim target for 2030 is under reflection. Trafikanalys has proposed that the new interim target be a reduction of fatalities of 50% between 2015 and 2030 and a reduction of seriously injured of 25% between 2015 and 2030. The use of Disability Adjusted Life Years (DALY) is suggested to be further investigated as a measure to monitor road safety performance.

As part of its assignment to lead overall collaboration in road safety work for road traffic, the Swedish Transport Administration has produced an **action plan for safe road traffic for the period 2019-2022** together with the relevant authorities and actors. The plan includes a total of 111 measures designed to increase road traffic safety. Among other things, the measures address specific priority action areas such as appropriate speed, sober driving and safe cycling. If actions described in the action plan are implemented in full, it is estimated that this can contribute to the order of 40–50 fewer fatalities per year after 2022.

**Figure 7. Trends in road fatalities towards national target**

## Measures

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

### Road safety management

- The renewed commitment to Vision Zero, presented in 2016, aims to intensify transport safety work in Sweden due to the stagnation in the number of road casualties seen since 2010. Future safety work should consider vulnerable road users with infrastructure design and maintenance tailored to their needs.
- The Swedish government presented a national strategy for cycling in April 2017 that is intended to function as a platform for future safety work. Five areas of action were highlighted: higher priority for cyclists in social planning, higher focus on different groups of cyclists, promotion of a more functional and user-friendly infrastructure and promotion of a safer environment for cyclists.
- The Swedish Transport Administration has a mission to investigate how their use of ISO 39001 Road Traffic Safety Management Systems can be used to spread the use of ISO 39001 and make it more efficient.

### Road users

- A Vision Zero training in e-learning format has been developed. Targeted towards a professional audience working in the sphere of road transport systems, the training seeks to spread knowledge about the Vision Zero, its safety philosophy, and the principles that apply to the design of a safe road transport system. It is not currently available in English (<https://www.trafikverket.se/tjanster/Utbildningar/nollvisionen-for-vagtrafik---webbutbildning/>).

- In 2018, the police authority and the Swedish Transport Administration made a joint request to the Government to allow for the introduction of a new professional category: traffic controllers. These traffic controllers could carry out sobriety checks, thus relieving police and other control authorities. The government has not as of yet returned to this issue.

## Vehicles

- The development of Anti-lock Braking Systems (ABS) as standard equipment on motorcycles has moved quickly over the last three years. From being standard with only one manufacturer and an expensive option with the others, ABS has become a natural piece of standard equipment on the majority of major motorcycle models. Moreover, since 2016-17 the EU mandates ABS for new motorcycles that have an engine displacement greater than 125 cc. The percentage of motorcycles by traffic volume fitted with ABS increased from 9% in 2007 to 55% in 2017.

## Infrastructure

- A new Infrastructure Plan 2018-2029 has been published. (<https://www.trafikverket.se/for-dig-i-branschen/Planera-och-utreda/Planer-och-beslutsunderlag/Nationell-planering/nationell-transportplan-2018-2029/>).
- The largest road maintenance measures from the 2019-2022 Maintenance Plan released by the Swedish Transport Administration consist of bridge measures, such as the replacement of the bridges over the Kalix river and over Helgeå in Kristianstad as well as repair of Älvsborgsbron in Gothenburg, the bridge over the Nordre river at Kungälv and Tjörnbron.

## Definition, methodology, data collection

- Road fatality: any person killed in a traffic crash or within 30 days of the crash. Suicides have been excluded from official statistics since 2010.
- Slightly injured: any person slightly injured in road traffic crashes reported by the police.
- Serious injury: two definitions are used:
  - Road traffic accidents with fatal and severe personal injury reported by the police are still used as official statistics;
  - Another definition is used in the preventive road safety work. This definition is based on health loss following a traffic injury in which the previous health condition is not recovered within a reasonable amount of time. A person with any percentage of medical impairment, who has not recovered their previous physical health condition, is defined as seriously injured.

Medical impairment is a concept for evaluating various functional impairments, regardless of the reason. The disability scale is based on the level of functional impairment: For example, total paralysis is regarded as 100% impairment, the loss of one hand as 50-65%, and the loss of the outer joint of the ring finger as 2%. A person with any percentage of medical disability who has not recovered their previous physical health condition is therefore defined as seriously injured. Today, the medical impairment cut-off is 1% but discussions are ongoing on adding a complementary category of 10% or higher.

Hence, Sweden is not using the score of three or more on the Maximum Abbreviated Injury Scale (MAIS3+) as a formal measure of a seriously injured person. MAIS3+ is, however, used to calculate the number of persons seriously injured and is therefore an important part of the Swedish efforts to increase the level of road safety.

Sweden's safety data system integrates police and health data. This system, called Swedish Traffic Accident Data Acquisition (STRADA), is composed of two parts:

- STRADA police: based on crash reports by the police, which include detailed information on crashes;
- STRADA hospital: based on medical information and includes information of the crash from the patient.

The system is based on a systematic link between police and health data and allows accurate information on the severity and consequences of crashes to be obtained. STRADA, however, only provides information on seriously injured people and acquires medical information about injured persons visiting the emergency department of a hospital following the crash. The number of people less seriously injured is likely to be underreported. As an example, people suffering from a minor injury requiring only primary care, without being further directed to a hospital, are not recorded in STRADA. However, slightly injured persons known by the police are reported into STRADA.

There is a proposal that emergency hospitals will be obliged by law to report to STRADA. Today, reporting to STRADA is based on the informed consent from the patient.

## Resources

### Recent research

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## Road safety and traffic data

	1990	2000	2010	2016	2017	2018	2018 % change over			
							2017	2010	2000	1990
<b>Reported safety data</b>										
Fatalities	772	591	266	270	252	324	28.6%	20.0%	-45.2%	-58.0%
Injury crashes	16 975	15 770	16 499	14 051	14 849	14 233	-4.1%	1.3%	-9.7%	-16.2%
Injured persons hospitalised	17 180	10 897	7 701	..	..	..	..	..	..	..
Deaths per 100,000 population	9.1	6.7	2.8	2.7	2.5	3.2	27.0%	16.8%	-52.0%	-64.6%
Deaths per 10,000 registered vehicles	1.7	1.2	0.5	0.4	0.4	0.5	27.4%	16.8%	-58.0%	-70.4%
Deaths per billion vehicle kilometres	12.0	8.5	3.5	3.3	3.0	3.8	27.8%	17.4%	-55.0%	-68.0%
<b>Fatalities by road user</b>										
Pedestrians	134	73	31	42	37	34	-8.1%	-19.0%	-53.4%	-74.6%
Cyclists	68	47	21	22	26	23	-11.5%	4.5%	-51.1%	-66.2%
Moped riders	22	10	8	8	1	7	600.0%	-12.5%	-30.0%	-68.2%
Motorcyclists	46	39	37	36	39	47	20.5%	30.6%	20.5%	2.2%
Passenger car occupants	468	393	151	138	130	181	39.2%	31.2%	-53.9%	-61.3%
Other road users	34	29	18	24	19	32	68.4%	33.3%	10.3%	-5.9%
<b>Fatalities by age group</b>										
0-14 years	35	19	10	6	8	7	-12.5%	16.7%	-63.2%	-80.0%
15-17 years	34	16	9	6	2	9	350.0%	50.0%	-43.8%	-73.5%
18-20 years	88	52	20	16	19	13	-31.6%	-18.8%	-75.0%	-85.2%
21-24 years	66	50	26	15	20	17	-15.0%	13.3%	-66.0%	-74.2%
25-64 years	357	300	137	138	125	158	26.4%	14.5%	-47.3%	-55.7%
65-74 years	..	50	28	37	33	47	42.4%	27.0%	-6.0%	..
≥ 75 years	..	104	36	52	45	73	62.2%	40.4%	-29.8%	..
<b>Fatalities by road type</b>										
Urban roads	218	162	67	74	63	77	22.2%	4.1%	-52.5%	-64.7%
Rural roads	484	404	167	168	158	212	34.2%	26.2%	-47.5%	-56.2%
Motorways	70	25	23	17	20	24	20.0%	41.2%	-4.0%	-65.7%
<b>Traffic data</b>										
Registered vehicles (thousands)	4 461	4 842	5 654	6 150	6 261	6 317	0.9%	2.7%	30.5%	41.6%
Vehicle kilometres (millions)	64 310	69 267	76 731	82 602	83 896	84 433	0.6%	2.2%	21.9%	31.3%
Registered vehicles per 1,000 population	523.2	546.4	605.3	624.3	626.4	624.2	-0.4%	0.0%	14.2%	19.3%