











# SWEDEN



# **SWEDEN**

Sweden recorded 221 road fatalities in 2019, a 32% decrease on 2018, and the lowest total since 2000. The basis of Swedish road safety work is Vision Zero. The Swedish government set up new interim targets for 2030, including a reduction in fatalities of 50% and a reduction in serious injuries of 25% based on the average for 2017-19. The action plan for the period 2019-22 includes 111 measures designed to increase road traffic safety. The measures address specific priority action areas such as appropriate speed, sober driving and safe cycling. If the measures described in the action plan are fully implemented, 40-50 fewer fatalities per year could by recorded after 2022.

# Impact of Covid-19

In response to the Covid-19 pandemic, Sweden had a milder lockdown than many other countries. In the spring of 2020, several measures were introduced, such as recommendations to work from home, limit all travel, close universities and schools for children over 16, study at home for students, ban visits to elderly care centres and maintain social distancing.

Traffic volume decreased by 20% in April 2020, compared with the average for 2017-19, while the number of road deaths decreased by 18%. Preliminary data on road deaths in 2020 show a decrease in all months, except January, compared with the average for 2017-19.

Table 1. Road fatalities by month

|           | Average 2017-19 | 2020 | % change |
|-----------|-----------------|------|----------|
| January   | 17              | 20   | 17.6     |
| February  | 16              | 15   | -6.3     |
| March     | 17              | 7    | -58.8    |
| April     | 17              | 14   | -17.6    |
| May       | 25              | 17   | -32      |
| June      | 26              | 18   | -30.8    |
| July      | 32              | 17   | -46.9    |
| August    | 29              | 17   | -41.4    |
| September | 21              | 19   | -9.5     |
| October   | 22              | 11   | -50      |

Table 2. Road motor vehicle traffic by month on state-owned roads (vehicle-kilometres)

|          | Average 2017-19 | 2020  | % change |
|----------|-----------------|-------|----------|
| January  | 4 066           | 4 115 | 1.2      |
| February | 4 110           | 4 202 | 2.2      |
| March    | 4 217           | 3 802 | -9.8     |
| April    | 5 198           | 4 138 | -20.4    |
| May      | 4 345           | 3 564 | -18      |
| June     | 5 279           | 4 774 | -9.6     |
| July     | 5 952           | 5 469 | -8.1     |
| August   | 5 782           | 5 512 | -4.7     |

### **Trends**

Sweden registered an overall decrease in the number of road deaths in 2019. According to the latest data, 221 persons lost their lives in traffic crashes in Sweden in 2019. This represents a 31.8% decrease on 2018, when 324 road deaths were reported, a 28.6% increase on 2017.

The **longer-term trend for road deaths** in Sweden has been downwards trending. Between 2000 and 2019, the number of annual road

#### **Country Profile**

Population in 2019: 10.2 million
GDP per capita in 2019: USD 51 889
Cost of road crashes: 2.6% of GDP (2017)
Road network in 2018: 140 800 kilometres

(urban roads 30%)

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

Volume of traffic: +21% between 2000 and 2019

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 (BAC): 0.2 g/l

fatalities fell by 63% and the road fatalities total for 2019 is a 17% decrease on the 2010 total.

The number of **traffic deaths per 100 000 inhabitants** in Sweden has fallen by 68% between 2000 and 2019. In 2019, 2.2 traffic deaths per 100 000 inhabitants were recorded, compared to 6.7 in 2000. By way of comparison, the average in the European Union was 5.1 deaths per 100 000 inhabitants in 2019.

Measured in **traffic deaths per billion vehicle-kilometres** (vkm) driven, the road safety risk in Sweden shows an encouraging long-term trend. In 2019, this metric stood at 2.6, 69% lower than in 2000.

Sweden recorded 0.3 **road fatalities per 10 000 registered vehicles** in 2019. This represents a decrease of 72% compared to the year 2000, when the rate of deaths to registered vehicles stood at 1.2.

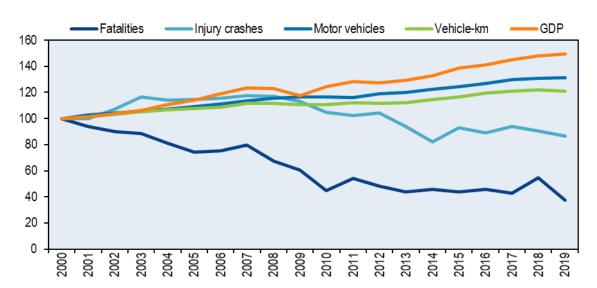


Figure 1. Road safety, vehicle stock, traffic and GDP trends, 2000-19

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 2019 and accounted for 47% of total road deaths. They were followed by motorcyclists with 14% of total fatalities, pedestrians with 12% and cyclists with 8%.

The number of road fatalities decreased for all road user groups in 2019. The largest decrease was registered among passenger car occupants: from 181 deaths in 2018 to 103 in 2019, a 43.1% year-on-year decrease. Likewise, riders of motorised two-wheelers recorded 35.2% less deaths than the previous year. In 2019, pedestrians saw a drop of 20.6% in year-on-year road fatalities and cyclists a 26.1% decrease.

The long-term trend shows that traffic in Sweden has become safer for all road user groups. In the period 2000 to 2019, strong declines in the number of road fatalities were observed for passenger car occupants (-74%), cyclists (-64%) and pedestrians (-63%). However, riders of motorised two-wheelers experienced only a 29% decrease in road fatalities over the same period.

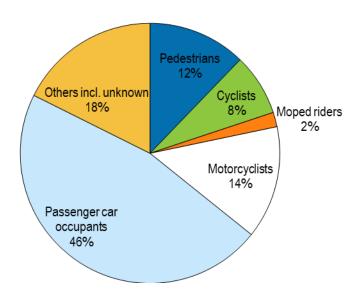


Figure 2. Road fatalities by road user group, 2019

**Road deaths by age group** in 2019 showed that road users over 75 are now the age group at highest risk in traffic. Elderly users suffered road fatalities at a rate of 4.5 persons per 100 000 in 2019. The 65-74 age group was the second most at risk, with a rate of 3.1 per 100 000, followed by 2.5 for the 21-24 age group and 2.3 for the 25-64 age group. Proportional to their population, youths under 18 suffered the fewest road fatalities in 2019, with a rate of 1.5 deaths per 100 000 inhabitants for 15-17-year-olds and a rate of 0.2 for 0-14-year-olds.

Looking at the long-term trend since 2000, the number of road deaths have decreased for all age groups. Younger road users have benefited the most from road safety improvements in the past two decades; the strongest reduction in fatalities over this period has occurred among 18-20 year-olds, with road fatalities decreasing by 87.0%. Road users aged 0-14 experienced 80.0% fewer deaths in 2019 than in 2000. Likewise, those aged 15-17 saw a reduction of 69.0% in the same period. The 25-64 age range saw a reduction in road fatalities of 61.0%, while those over 65 experienced a 51.3% drop during this time.

Sweden has an ageing population due to the fact that people live longer and have fewer children. As a result, there are more vulnerable persons exposed to injury risk. A forecast made by Statistics Sweden predicts an increase in the senior population of 30% between 2010 and 2050, meaning that a quarter of the Swedish population is expected to be 65 or older by 2050.

25-64 years 0-14 years 18-20 years = 21-24 years 65-74 years « 15-17 years ■≥ 75 years 

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

Note: In 2018 there was an exceptionally high number of fatalities, especially for people over 75.

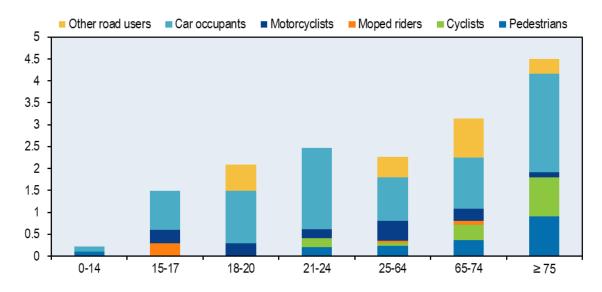


Figure 4. Road fatality rate by age and road user group, 2019

Deaths per 100 000 inhabitants

Analysis of **fatalities by road type** shows that fatalities decreased across all road types in 2019. Rural roads claimed 64% of road fatalities, 22% occurred on urban roads and 9% occurred on motorways. This division has remained relatively stable in recent years.

In comparison to 2018, the number of deaths decreased 36.4% on rural roads, 33.0% on urban roads and 16.7% on motorways in 2019. Fatalities have decreased 65% on rural roads, 70% on urban roads and 20% on motorways since 2000.

There has been a major improvement over the whole road network in the past 20 years. The urban road environment has been improved through the construction of miniroundabouts, cycle lanes and other infrastructure. There has been less progress in improving the safety of vulnerable road users, so future efforts will focus on safer municipal passages for pedestrians, cyclists and moped riders.

On rural roads, improvements in road safety since 2000 have been in part due to the implementation of speed cameras and the generalisation of the so-called 2+1 roads, i.e. roads with three narrow lanes and 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 in 1998, 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 2 000 vehicles/day should have median barriers 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: <a href="https://www.trafikverket.se/for-dig-i-branschen/Planera-och-utreda/langsiktig-planering-av-infrastruktur/nationell-plan/nationell-plan-20182029/">https://www.trafikverket.se/for-dig-i-branschen/Planera-och-utreda/langsiktig-planering-av-infrastruktur/nationell-plan/nationell-plan-20182029/</a>.

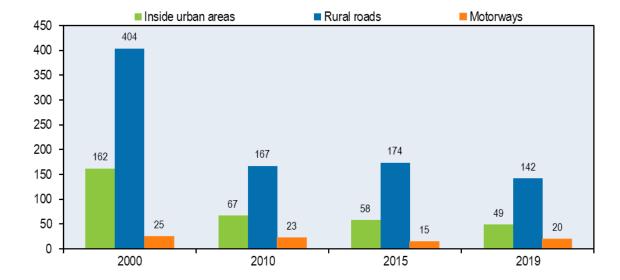


Figure 5. Road fatalities by road type, 2000-19

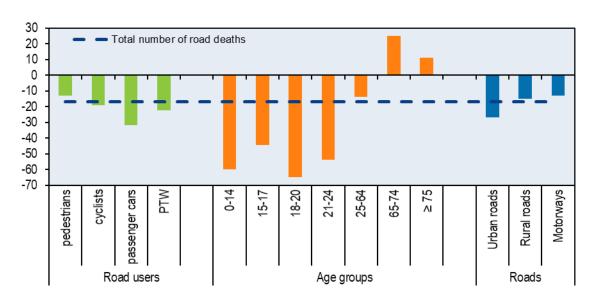


Figure 6. Evolution of road deaths by user category, age group and road type, 2010-19

Fatality data are essential for understanding road safety issues, but represent only a part of the picture. Information on **serious injuries from crashes** is also critically important. In 2018, in Sweden 921 persons suffered Maximum Abbreviated Injury Scale (MAIS) 3+ injuries (40% were cyclists and 31% were occupants of passenger cars), representing a slight increase on the 903 persons who suffered MAIS 3+ injuries in 2017.

In 2019, according to police data, 1 951 persons were recorded to have been severely injured due to a road traffic accident.

### **Economic costs of road crashes**

Traffic crashes represent a significant cost for society, estimated in 2017 at around EUR 13.4 billion, or 2.6% of Sweden's 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). These costs are calculated using ASEK 7.0 and based on the official statistics for 2017, using police reported accidents (not corrected for under-reporting).

Table 3. Costs of road crashes, 2011

|                         | Total (EUR)   |
|-------------------------|---------------|
| Fatalities              | 1.32 billion  |
| Other reported injuries | 12.07 billion |
| Total                   | 13.39 billion |
| Total as % of GDP       | 2.6%          |

#### 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, resulting in lower 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 2019, the proportion of traffic adhering to the speed limit on state roads was only 47%, around the same level as when measurements started in 1996. The goal of 80% compliance by 2020 was therefore assessed as unattainable.

In the short term, it is important to improve speed compliance via different forms of monitoring. Currently, there are around 2 000 speed camera units in use nationwide, with a target set of approximately 2 300 units in use by 2020. Speed cameras have positive effects on speed compliance but route coverage remains insufficient. Therefore, it is important to increase 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 limit review, with the goal of adapting speed limits to current road safety standards. For the period up to and including 2020, around 2 200 kilometres of 90 km/h roads will be lowered to 80 km/h, while just over 400 kilometres of 90 km/h roads will have a median barrier installed and the speed limit increased to 100 km/h. So far around 450 of the 2 200 kilometres have had speed limits reduced, while 200 kilometres have been separated. It is important that the work of adapting speed limits continues 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 4. Passenger car speed limits by road type, 2020

|             | 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 2019, 53 people died in alcohol or drug-related crashes (24% of all road fatalities) compared with 75 people in 2018. In 2017, 81 out of the 252 fatalities (32%) involved a driver, rider, pedestrian or cyclist under the influence of alcohol.

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 2019, only 0.25% 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 spot 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 breathalyser tests dropped sharply after 2011 and then levelled out from 2016-18, starting to increase again in 2019. In 2018, the police authority and the Swedish Transport Administration made a joint request to the government to allow the introduction of a new professional role: traffic controllers. The reasoning here is that traffic controllers could carry out sobriety checks, thus relieving police and other control authorities to pursue other priorities. This is being looked at on behalf of the government at the moment, as part of a bigger investigation into the control of commercial traffic on roads, and findings will be presented in March 2021.

In the long term, there is great potential in new technology to combat drink-driving. So-called 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 2019, 22 fatalities (or 10% of all traffic fatalities) involved a driver under the influence of illegal drugs, with amphetamines being the substance most commonly found. There is some overlap with alcohol-related fatalities where a driver had 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, starting in 2013 the government 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 the use of handheld phones while driving. From 2018, handheld mobile phone use while driving was prohibited.

**Fatigue and sleepiness** may be a more significant cause of road crashes than alcohol, particularly due to the often dramatic interaction with alcohol and drugs. 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 childrestraint 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 likely continue due to the increasing percentage of cars with seat-belt reminders or warning functions. Driver's use of seat belts in passenger cars was recorded at 99% during 2019. The proportion of car drivers killed who were unrestrained has decreased since 2001 and stood at 25% in 2019. In rear seats, children have always had a much higher rate of belt use than adults. In 2019, 95% of children and 90% of adults in the rear seats wore seat belts.

Table 5. Seat belt and helmet-wearing rates, 2000-19
Percentages

|               | 2000 | 2014 | 2016 | 2019   |
|---------------|------|------|------|--------|
| Front seats   | -    | -    | -    | •      |
| Driver        | 90   | 98   | 98   | 99     |
| Passenger     | 92   | 96   | 96   | 98     |
| Rear seats    |      |      |      |        |
| Adults        | 72   | 81   | 90   | 90     |
| Children      | 89   | 95   | 94   | 95     |
| Helmet        |      |      |      |        |
| Moped riders  |      | 96   | 95   | 93     |
| Motorcyclists |      |      |      | 96-99% |

For motorcyclists, **helmet wearing** is the most effective passive safety habit. In Sweden, helmets have been compulsory for users of all 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. Around 30% of adults use helmets, but this varies greatly by city. Sweden 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 then, 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. 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 to obtain a driving licence for both professional and private drivers. Trafikanalys, Transport Analysis, reviews the basis for decisions, assesses measures, and is responsible for generating statistics.

Sweden is divided into 290 municipalities and 20 county councils. These municipalities and counties hold responsibility for local road safety. Local government is well established 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 whilst using road transport. There is no specific 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 undertaken 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. From 2017, results are reported annually each May. An investigation into a new default speed limit of 40 km/h in urban areas was undertaken by Trafikanalys, with results presented in October 2017. Trafikanalys was also tasked to undertake an investigation of traffic safety goals and performance indicators post-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, which

translates to a maximum of 220 road deaths in 2020. The number of persons seriously injured on the road is to be reduced by a quarter over the same period. In addition to the current national targets, there is an interim target at the EU level, for halving the number of road deaths between 2010 and 2020, which 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 EU level, and so the interim target of no more than 220 road deaths remains.

The Swedish Government set a new interim target for 2030 of reducing fatalities by 50% between 2020 and 2030 (based on the average number of fatalities for 2017-19), which corresponds to a maximum of 133 road deaths in 2030, and to reduce the number of persons seriously injured by 25% during the same period.

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 2019-22**, together with the relevant authorities and actors. The plan includes 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. It is estimated that the full implementation of the measures described in the action plan could contribute to 40-50 fewer fatalities per year after 2022.



Figure 7. Trends in road fatalities towards national target, 2006-20

#### **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: greater priority for cyclists in social planning, 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 the use of ISO 39001 Road Traffic Safety Management Systems can be used to make the use of ISO 39001 more efficient and widespread.

**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 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, but can be accessed in Swedish here: www.trafikverket.se/tjanster/Utbildningar/nollvisionen-for-vagtrafik---webbutbildning/.

Following a request from the police authority and the Swedish Transport Administration, the government decided in March 2021 to introduce traffic controllers. These traffic controllers will out sobriety checks, thus relieving police and other control authorities.

**Vehicles:** The introduction of advanced driver assistance systems have been rapid in Sweden. In 2019, the share of new cars in Sweden with auto-brake at low speeds was 85%, lane departure warning systems 63% and auto-brake for vulnerable road users 74%.

The development of Anti-lock Braking Systems (ABS) as standard equipment on motorcycles has moved quickly, from being standard with only one manufacturer and an expensive option with the others, ABS has become a standard piece of equipment on the majority of major motorcycle models over the last three years. 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 2018-29 has been published and can be accessed here:

http://trafikverket.diva-portal.org/smash/get/diva2:1363916/FULLTEXT01.pdf.

# Definition, methodology, data collection

A road fatality is defined as any person killed in a traffic crash, or who dies within 30 days as a result of injuries sustained in the crash. Suicides have been excluded from official statistics since 2010.

A slightly injured person is described as any person slightly injured in road traffic crashes reported by the police.

For serious injuries, two definitions are used. For generating official statistics, road traffic accidents with fatal and severe personal injuries reported by the police are used. For preventive road safety work, the definition of serious injury is based on health loss following a traffic injury. If the individual does not recover after a certain amount of time, they are defined as seriously injured. The risk of permanent medical impairment (RPMI) can be calculated and is being used in preventive road safety work.

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%. Today, the medical impairment cut-off for a person to be defined as a seriously injured is 1%, but discussions are ongoing regarding adding a complementary category of 10% or higher.

Therefore, Sweden does 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; and STRADA hospital, based on medical information and including information on 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 a 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 to the police are reported in STRADA.

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

#### Resources

#### Recent research

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#### Websites

2019-2022 Infrastructure Maintenance Plan: <a href="https://trafikverket.ineko.se/Files/en-us/61006/Ineko.Product.RelatedFiles/2019">https://trafikverket.ineko.se/Files/en-us/61006/Ineko.Product.RelatedFiles/2019</a> 066 undehallsplan 2019 2022.pdf.

Renewed Commitment to Vision Zero:

www.government.se/4a800b/contentassets/b38a99b2571e4116b81d6a5eb2aea71e/trafiksakerhet 160927 webny.pdf.

#### ROAD SAFETY REPORT 2020 | **SWEDEN**

Swedish National Road and Transport Research Institute, VTI: <a href="https://www.vti.se">www.vti.se</a>.

Swedish Transport Administration: <a href="https://trafikverket.ineko.se/se/">https://trafikverket.ineko.se/se/</a>.

Swedish Transport Agency: <a href="https://transportstyrelsen.se/en/road/">https://transportstyrelsen.se/en/road/</a>.

Transport Analysis: <a href="www.trafa.se/en/">www.trafa.se/en/</a>.

Vision Zero Training Academy:

www.trafikverket.se/en/startpage/operations/Operations-road/vision-zero-academy/.

# Road safety and traffic data

|  |        |        |        |        |        |        | 20     | 19 % cha | nge ove | r      |
|--|--------|--------|--------|--------|--------|--------|--------|----------|---------|--------|
|  | 1990   | 2000   | 2010   | 2017   | 2018   | 2019   | 2018   | 2010     | 2000    | 1990   |
| Reported safety data                     |        |        |        |        |        |        |        |          |         |        |
| Fatalities                               | 772    | 591    | 266    | 252    | 324    | 221    | -31.8% | -16.9%   | -62.6%  | -71.4% |
| Injury crashes                           | 16 975 | 15 770 | 16 499 | 14 849 | 14 233 | 13 684 | -3.9%  | -17.1%   | -13.2%  | -19.4% |
| Injured persons hospitalised             | 17 180 | 10 897 | 7 701  |        |        |        |        |          |         |        |
| Deaths per 100,000 population            | 9.1    | 6.7    | 2.8    | 2.5    | 3.2    | 2.2    | -32.5% | -24.1%   | -67.6%  | -76.1% |
| Deaths per 10,000 registered vehicles    | 1.7    | 1.2    | 0.5    | 0.4    | 0.5    | 0.3    | -32.1% | -26.2%   | -71.5%  | -79.9% |
| Deaths per billion vehicle kilometres    | 12.0   | 8.5    | 3.5    | 3.0    | 3.8    | 2.6    | -31.2% | -23.9%   | -69.1%  | -78.0% |
| Fatalities by road user                  |        |        |        |        |        |        |        |          |         |        |
| Pedestrians                              | 134    | 73     | 31     | 37     | 34     | 27     | -20.6% | -12.9%   | -63.0%  | -79.9% |
| Cyclists                                 | 68     | 47     | 21     | 26     | 23     | 17     | -26.1% | -19.0%   | -63.8%  | -75.0% |
| Moped riders                             | 22     | 10     | 8      | 1      | 7      | 4      | -42.9% | -50.0%   | -60.0%  | -81.8% |
| Motorcyclists                            | 46     | 39     | 37     | 39     | 47     | 31     | -34.0% | -16.2%   | -20.5%  | -32.6% |
| Passenger car occupants                  | 468    | 393    | 151    | 130    | 181    | 103    | -43.1% | -31.8%   | -73.8%  | -78.0% |
| Other road users                         | 34     | 29     | 18     | 19     | 32     | 39     | 21.9%  | 116.7%   | 34.5%   | 14.7%  |
| Fatalities by age group                  |        |        |        |        |        |        |        |          |         |        |
| 0-14 years                               | 35     | 19     | 10     | 8      | 7      | 4      | -42.9% | -60.0%   | -78.9%  | -88.6% |
| 15-17 years                              | 34     | 16     | 9      | 2      | 9      | 5      | -44.4% | -44.4%   | -68.8%  | -85.3% |
| 18-20 years                              | 88     | 52     | 20     | 19     | 13     | 7      | -46.2% | -65.0%   | -86.5%  | -92.0% |
| 21-24 years                              | 66     | 50     | 26     | 20     | 17     | 12     | -29.4% | -53.8%   | -76.0%  | -81.8% |
| 25-64 years                              | 357    | 300    | 137    | 125    | 158    | 118    | -25.3% | -13.9%   | -60.7%  | -66.9% |
| 65-74 years                              |        | 50     | 28     | 33     | 47     | 35     | -25.5% | 25.0%    | -30.0%  |        |
| ≥ 75 years                               |        | 104    | 36     | 45     | 73     | 40     | -45.2% | 11.1%    | -61.5%  |        |
| Fatalities by road type                  |        |        |        |        |        |        |        |          |         |        |
| Urban roads                              | 218    | 162    | 67     | 63     | 77     | 49     | -36.4% | -26.9%   | -69.8%  | -77.5% |
| Rural roads                              | 484    | 404    | 167    | 158    | 212    | 142    | -33.0% | -15.0%   | -64.9%  | -70.7% |
| Motorw ays                               | 70     | 25     | 23     | 20     | 24     | 20     | -16.7% | -13.0%   | -20.0%  | -71.4% |
| Гraffic data                             |        |        |        |        |        |        |        |          |         |        |
| Registered vehicles (thousands)          | 4 461  | 4 842  | 5 654  | 6 275  | 6 331  | 6 364  | 0.5%   | 12.6%    | 31.4%   | 42.7%  |
| Vehicle kilometres (millions)            | 64 310 | 69 267 | 76 731 | 83 896 | 84 433 | 83 723 | -0.8%  | 9.1%     | 20.9%   | 30.2%  |
| Registered vehicles per 1,000 population | 523.2  | 546.4  | 605.3  | 627.8  | 625.6  | 622.1  | -0.6%  | 2.8%     | 13.8%   | 18.9%  |