



HUNGARY

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Hungary recorded 460 road fatalities in 2020, representing a 24% decrease compared to 2019. The Road Safety Action Programme 2020-2022 prioritises the safety of vulnerable road users and the related action plan contains several specific actions for this category. It does not have any numeric target but accepts the EU goals.

Road safety management and strategy

According to Prof. Dr Péter Holló, researcher of the Institute for Transport Sciences (KTI), the history of Hungarian road safety can be divided into the following periods:

- 1976-87: relatively stable period. The 30-day definition for road accident fatalities was introduced in 1976.
- 1987-90: substantial deterioration, similar to all countries where the political, social and economic systems changed following the collapse of the socialist bloc. This political change was accompanied by negative side effects for road safety, due to weak police control, less political attention to road safety, a false interpretation of freedom, explosion in the size and changes in the structure of the vehicle fleet, etc. The worst ever year for Hungarian road safety was in 1990, with nearly 2 500 road deaths.
- 1990-2000: significant improvements and major initiatives.
- 1993: adoption of the first Hungarian National Road Safety Programme, with a quantitative target. Road safety measures were implemented, such as lower speed limits in built-up areas, mandatory daytime running lights and obligatory use of rear safety belts outside built-up areas, intensified police control and road safety campaigns, more severe sanctions, etc.
- 2000 was the least dangerous year until 2008, with a reduction of more than 50% in the number of people killed (1 200) compared to 1990. Some demographic and

Hungary: Quick facts

Population: 9.8 million

GDP per capita: USD 15 867

Road network: 213 848 km (2019)

- urban roads: 31%
- rural roads: 38%
- motorways: 1%

Registered motor vehicles: 4.8 million (without mopeds)

- cars: 82%
- goods vehicles: 11%
- motorcycles: 4%

Speed limits:

- urban roads: 50 km/h
- rural roads: 90 km/h
- motorways: 130 km/h (110 km/h on motor roads)

Limits on Blood Alcohol Content: 0.0 g/l

Road fatalities: 460

- pedestrians: 23%
- cyclists: 9%
- car occupants: 48%
- motorcyclists: 12%
- other: 7%

Road fatalities per 100 000 population: 4.7

Road fatalities per 10 000 vehicles: 1.0

Cost of road crashes: 3.4% of GDP (2019-21)

All data 2020 unless otherwise stated.

economic factors contributed to the positive trend: a decrease in the number of young, novice drivers and an increase in vehicle operating and insurance costs.

- 2000-06: deterioration, mainly outside built-up areas. In 2001, the speed limits outside built-up areas were raised. The level of police enforcement was insufficient, as was the organisation and funding of road safety activities.
- 2006-13: after several years of increasing road fatalities, the 2007 situation was back to 2000. In 2008, there was a remarkable decrease in fatalities – to under 1 000. In 2013, the number of road fatalities was as low as 50 years earlier. The improvement in the passive safety of vehicles is considered an essential factor contributing to these positive results. Several other factors (introduction of owner responsibility, installation of automatic speed cameras, further development of point demerit system, etc.) and the economic recession have also contributed to the reduction in the number of road deaths.
- 2013-19: the number of road deaths fluctuated between 603 and 644 without a clear trend, and the number of injury crashes showed an increasing trend. The decrease in fatalities in 2016 could be attributed to the introduction of automated speed cameras. However, their effects may have already diminished.
- 2020: the number of road crashes and injuries decreased due to the restrictions taken to respond to the Covid-19 pandemic.

Responsibility for the organisation of road safety in Hungary lies with the Ministry of the Interior and the Ministry for Innovation and Technology. Overall responsibility for transport policy rests with the state secretary of the Ministry for Innovation and Technology.

The current Hungarian Road Safety Action Programme covers 2020-22. It focuses mainly on the safety of vulnerable road users and the related action plan contains several specific actions to improve the safety of this category. The programme does not have any numeric target.

The programme for 2023-25 is already under development. It will set the target to halve the number of fatalities and seriously injured by 2030, with 2020 as the baseline.

The KTI Institute for Transport Sciences continuously monitors the road safety situation and each year publishes a detailed evaluation based on outcome indicators (number of deaths and injury crashes). It also publishes one on a set of safety performance indicators (such as the use of seat belts, child restraints, daytime running lights, etc.). Based on the evaluation of the previous programme, KTI recommends dedicating further efforts to the following: increasing the use of seat belts (especially in rear seats) and child seats, installing more speed cameras, introducing speed section control, increasing police enforcement, strengthening the driver education system with road safety modules and better protecting vulnerable road users.

Latest road safety measures

The Hungarian Police has implemented a new speed enforcement strategy that includes the use of radars embedded in unmarked vehicles and the suppression of online information related to the location of speed cameras.

Since November 2020, due to the emergency period for the Covid-19 pandemic, roadside police checks after 8 p.m. have increased.

Costs of road crashes

Traffic crashes represent a high cost for society. In 2013, it was estimated at around EUR 1.88 billion (1.8% of GDP). The original estimation was calculated using both a willingness-to-pay and a human-capital approach. Later, the estimation was based on a methodology by McMahon and Dahdah (2008) that calculates the statistical value of a road fatality and a person seriously injured.

This estimation was updated in 2017 based on the methodology developed for the European Safety Cube project. Additionally, a model has been elaborated to estimate the statistical value of a person slightly injured. According to this methodology, the total cost of road crashes was equivalent to 2.5% of GDP in 2017.

In 2019, the cost was estimated at EUR 719 116 per road death, EUR 176 642 per seriously injured and EUR 15 670 per slightly injured. Considering the preliminary data for 2021, the estimated cost for 2019-21 was EUR 4.1 billion (3.4% of GDP).

Safety performance indicators

Speed

According to on-site police investigations, in 2020, speeding was a contributing factor in about 35% of crashes and 42% of fatal crashes.

To intensify speed enforcement, automatic speed cameras are being introduced. As of September 2016, 365 fixed and 160 intelligent mobile cameras (VÉDA) were installed. Since 2019, the VÉDA cameras have been able to identify the non-wearing of seat belts in the front seats of cars. The use of motorway tolling systems as section control devices is being discussed. To respond to the deterioration of road safety, the Hungarian police introduced a new speed enforcement strategy in 2019. The police are now equipped with radars embedded in unmarked cars. Police have stopped giving information about the location of mobile speed cameras.

Drink-driving

Driving under the influence of alcohol is another cause of road crashes in Hungary. In 2020, police reported that 9.7% of all injury crashes were caused by a driver under the influence of alcohol.

In Hungary, drivers are forbidden to drive under the influence of alcohol. The theoretical maximum blood alcohol content (BAC) is 0.0 g/l. In practice, drivers are convicted only if their BAC is above 0.2 g/l. However, the law was temporarily softened in July 2011 and driving licences could be withdrawn on the spot only if drivers were seriously under the influence of alcohol. Now, zero-tolerance has been re-introduced. Driving licences can be revoked on the spot (following control or crash) if drivers have any alcohol in their blood.

In Hungary, all persons involved in a road crash are tested for their blood alcohol concentration. A crash is recorded as alcohol-related when the person responsible for the crash is under the influence of alcohol.

Drugs and driving

Driving under the influence of drugs is defined in the criminal code and is listed among the potential contributing factors to crashes in accident forms. Unlike alcohol, there is no limit regarding drug consumption.

Saliva tests are not yet used in Hungary, making drug driving enforcement very difficult. Drivers may be tested (from blood or urine samples) when suspected of impairment and when the alcohol test is negative. This happens very rarely and no random testing is being carried out, partly due to the costs of toxicology tests. Therefore, statistics on drug-driving fatalities are not representative of the reality. In 2019, driving under the influence of drugs was reported as a contributing factor in 49 injury crashes, of which 4 were fatal.

Use of mobile phones while driving

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Seat belt and helmet use

Seat belt wearing has been compulsory in Hungary since 1976 in front seats. In rear seats, it has been mandatory outside urban areas since 1993 and in urban areas since 2001. Dedicated child restraint use is compulsory for children of 150 cm or under.

In 2021, 94.6% of drivers on motorways, 90.6% on rural roads and 97.7% in urban areas wore a seat belt. For passengers, the rates were 96.6%, 90.6% and 97.7%, respectively. In 2018 and 2019, 71% of rear-seat passengers wore a seat belt. There is still improvement needed to increase seat belt use in rear seats.

For motorcyclists, helmet wearing is the most effective passive safety measure. Helmet wearing has been compulsory since 1965 for motorcyclists, since 1997 for moped riders outside built-up areas, and since 1998 for moped riders inside built-up areas. The compliance rate by motorcyclists is nearly 100%.

There is no mandatory helmet use law for cyclists.

Road safety data for Hungary at a glance

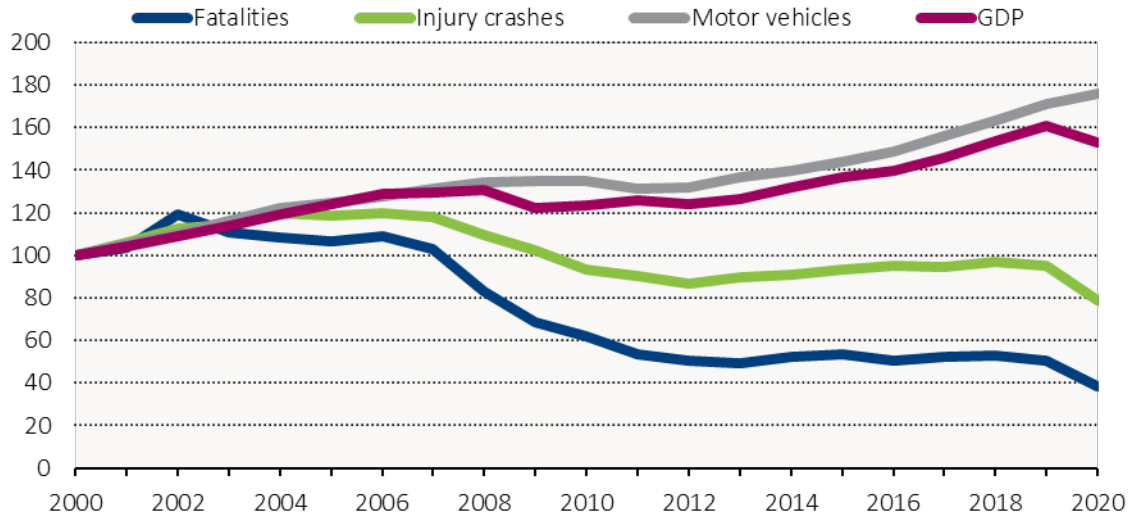
Long-term road safety trends for Hungary

	1990	2000	2010	2018	2019	2020	2020 % change over			
							2019	2010	2000	1990
Reported safety data										
Fatalities	2 432	1 200	740	633	602	460	-23.6	-37.8	-61.7	-81.1
Injury crashes	27 801	17 493	16 299	16 766	16 627	13 778	-17.1	-15.5	-21.2	-50.4
Deaths per 100 000 population	23.4	11.7	7.4	6.5	6.2	4.7	-23.2	-36.0	-59.7	-79.8
Deaths per 10 000 registered vehicles	11.2	4.4	2.0	1.4	1.3	1.0	-25.7	-52.4	-78.2	-91.4
Deaths per billion vehicle kilometres	..	..	..	..	12.8	..	..	..	..	..
Fatalities by road user										
Pedestrians	803	346	190	164	143	108	-24.5	-43.2	-68.8	-86.6
Cyclists	313	182	92	70	63	40	-36.5	-56.5	-78.0	-87.2
Moped riders	95	33	18	14	10	16	60.0	-11.1	-51.5	-83.2
Motorcyclists	143	52	49	49	63	42	-33.3	-14.3	-19.2	-70.6
Passenger car occupants	974	500	330	291	272	220	-19.1	-33.3	-56.0	-77.4
Other road users	104	87	61	46	52	34	-34.6	-44.3	-60.9	-67.3
Fatalities by age group										
0-14 years	107	44	20	6	15	10	-33.3	-50.0	-77.3	-90.7
15-17 years	99	18	10	4	9	6	-33.3	-40.0	-66.7	-93.9
18-20 years	162	64	33	16	16	12	-25.0	-63.6	-81.3	-92.6
21-24 years	191	114	40	36	33	25	-24.2	-37.5	-78.1	-86.9
25-64 years	1 365	736	487	386	372	295	-20.7	-39.4	-59.9	-78.4
65-74 years	..	..	77	95	83	63	-24.1	-18.2	..	..
≥ 75 years	..	..	72	91	73	49	-32.9	-31.9	..	..
Fatalities by road type										
Urban roads	1 231	497	270	242	224	148	-33.9	-45.2	-70.2	-88.0
Rural roads	..	654	425	345	331	280	-15.4	-34.1	-57.2	..
Motorways	..	49	44	48	48	32	-33.3	-27.3	-34.7	..
Traffic data										
Vehicle kilometres (millions)	..	..	..	..	47 163	..	..	..	..	..
Registered vehicles (thousands)	2 163	2 706	3 640	4 418	4 625	4 757	2.8	30.7	75.8	119.9
Registered vehicles per 1 000 population	208.5	264.7	363.5	451.8	473.3	486.9	2.9	33.9	83.9	133.5

Note: registered vehicles do not include mopeds.

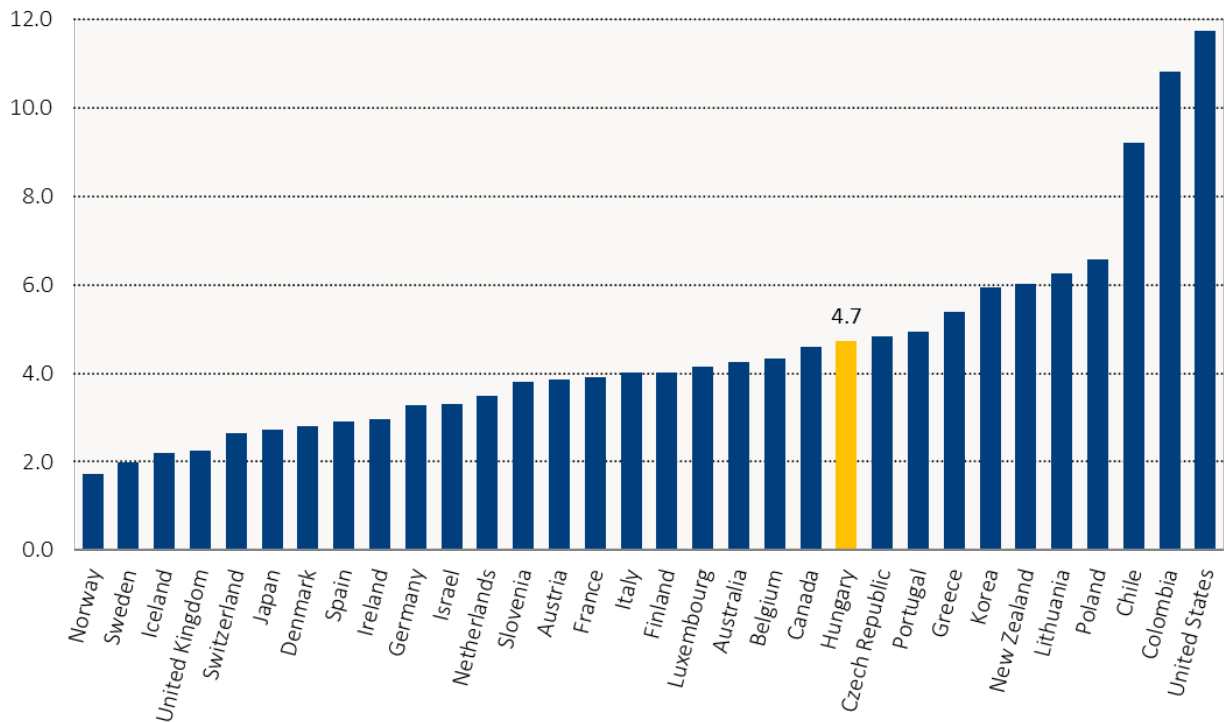
Evolution of road fatalities, injury crashes, motorisation, traffic and GDP in Hungary, 2000-20

Index 2000 = 100

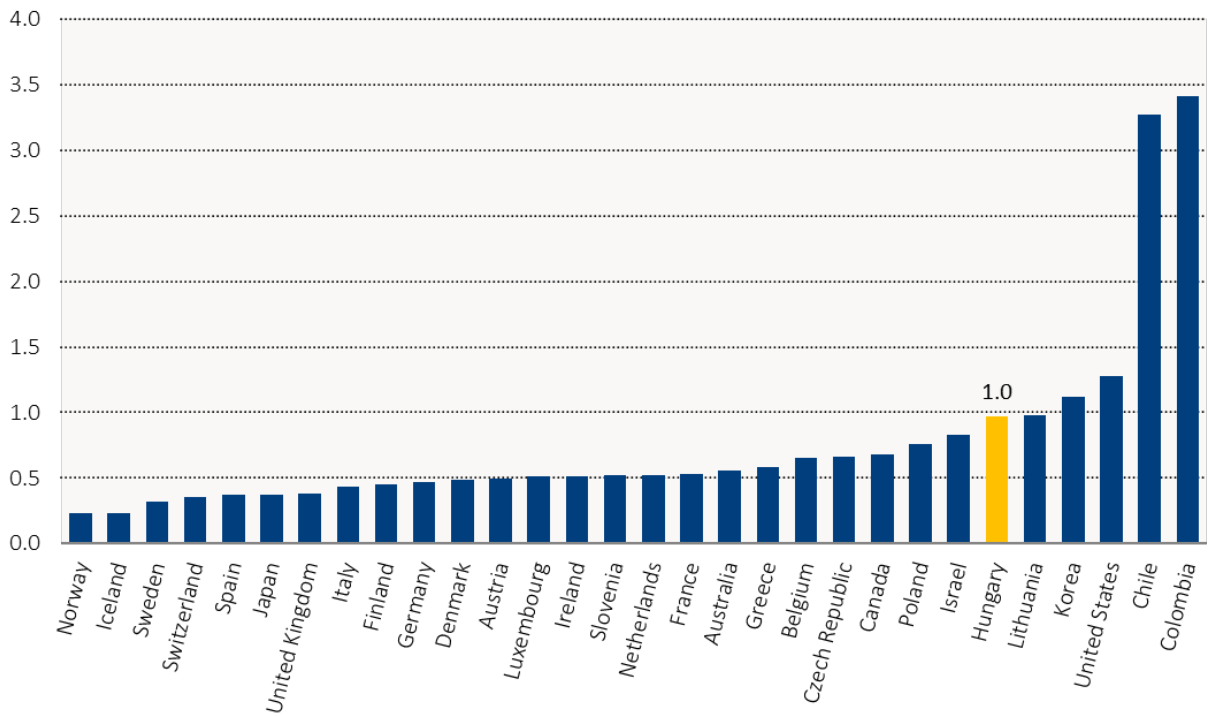


Note: registered vehicles do not include mopeds.

Road fatalities per 100 000 inhabitants in Hungary in comparison with IRTAD countries, 2020

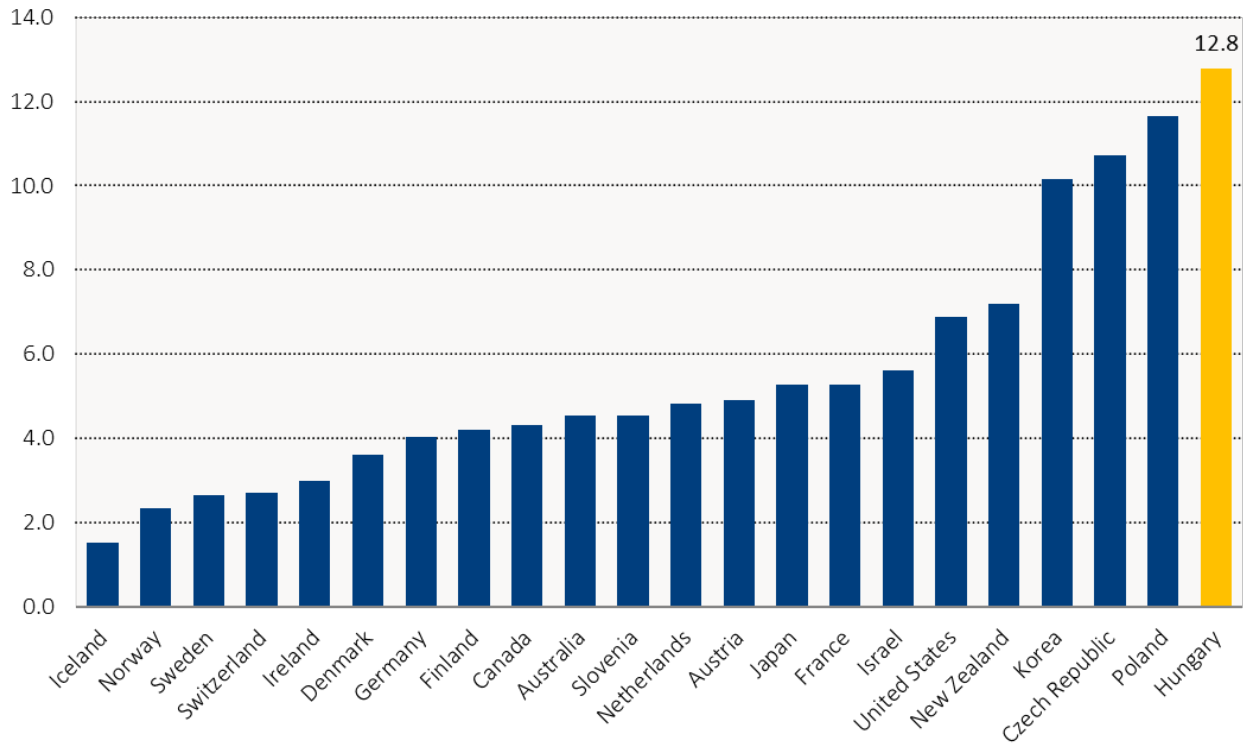


Road fatalities per 10 000 vehicles in Hungary in comparison with IRTAD countries, 2020

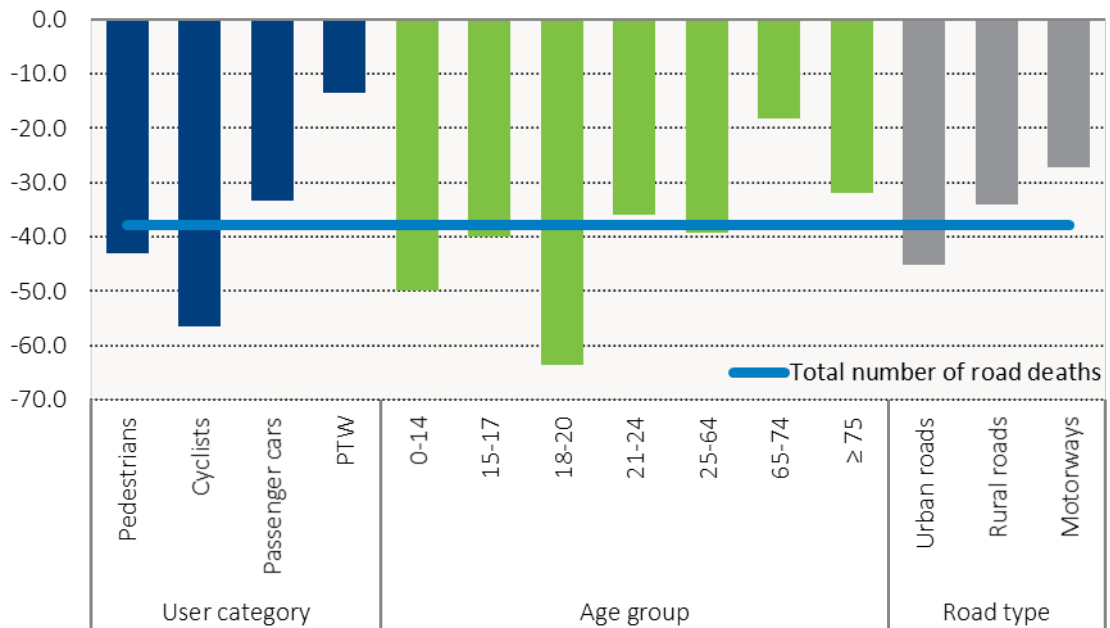


Note: in Belgium, Denmark, Germany and Hungary registered vehicles do not include mopeds.

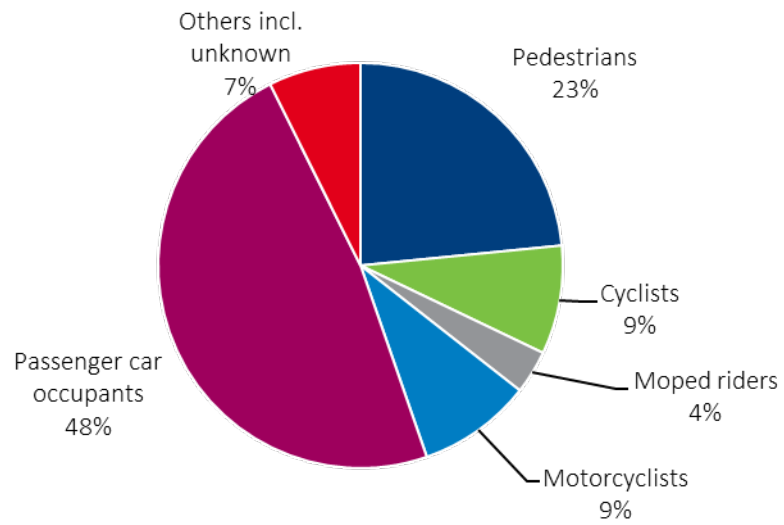
Road fatalities per billion vehicle-kilometres in Hungary in comparison with IRTAD countries, 2019



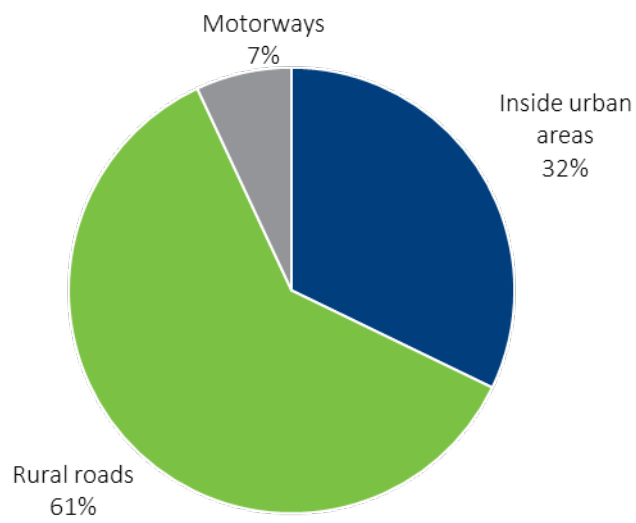
Evolution of road fatalities in Hungary by user category, age group and road type, 2010-20



Road fatalities in Hungary by user category, 2020

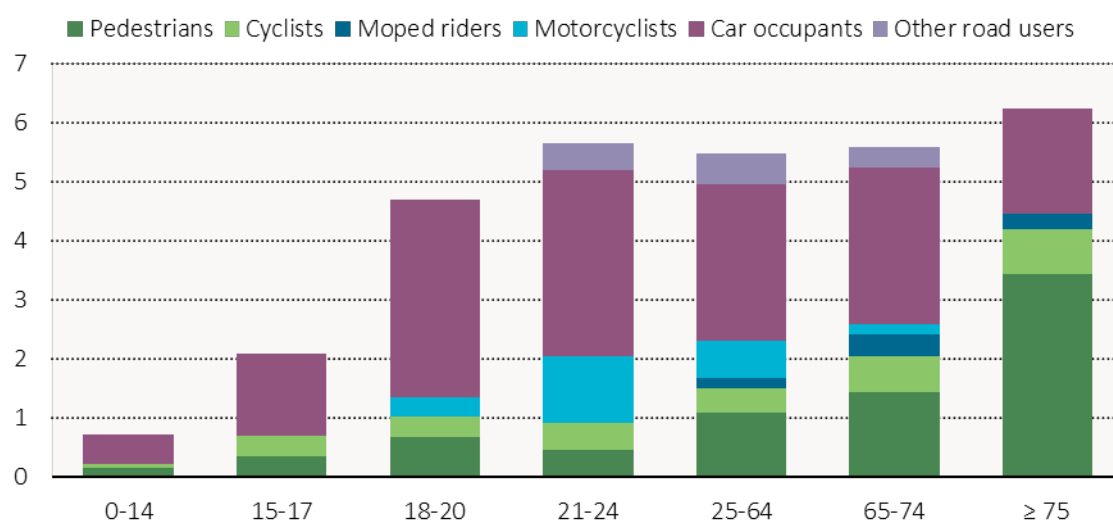


Road fatalities in Hungary by road type, 2020



Road fatality rate in Hungary by user category and age group, 2020

Rate per 100 000 population in the same age group

**Cost of road crashes in Hungary, 2019-21**

	Unit Cost (EUR)	Total (HUF)
Fatalities	719 116	
Seriously injured persons	176 642	
Slightly injured persons	15 670	
Total		1 166 billion
Total as % of GDP		3.4

Seat belt and helmet wearing rates

Percentages

	2000	2010	2021
Front seats			
General (driver and passenger)	49	83	..
Driver	..	82	..
Urban roads (driver)	..	75	98
Rural roads (driver)	..	80	91
Motorways (driver)	..	90	95
Rear seats			
General	8	39	..
Children (use of child restraint)	..	..	..

Research and resources

Publications

Holló, P., D. Henézi and T. Berta (2018), *Comparison of self-reported and observed road safety performance indicators*, Periodica Polytechnica Transportation Engineering, Vol. 46, No. 3.

KTI regularly conducts road safety research projects. More information can be found at <http://kti.hu/>.

McMahon, K. and S. Dahdah (2008), *The true cost of road crashes: Valuing life and the cost of a serious injury*, International Road Assessment Programme (iRAP), Basingstoke, UK, http://www.alternatewars.com/BBOW/ABM/Value_Injury.pdf.

Pauer, G., T. Sipos and Á. Török (2019), *Statistical Analysis of the Effects of Disruptive Factors of Driving in Simulated Environment*, Transport, Vol. 34:(1), pp. 1-8.

Pauer, G., Krizsik, N., Szigeti, Sz., Hamza, Zs. (2021), *Identification of Potential Risk Factors Influencing the Road Safety Level at Designated Pedestrian Crossings*, IOP Conference Series: Materials Science and Engineering, Vol. 1202, Issue 1, id. 012032, 9pp.

Websites

Institute for Transport Sciences (KTI): <http://kti.hu/>.

Definition, methodology, data collection

Road fatality is defined as a person who dies within 30 days due to a traffic crash.

A seriously injured person is any person who sustains an injury that meets one of the following criteria:

- necessitates hospitalisation for more than 48 hours within seven days of the accident
- causes a fracture (except for finger, toe and nose fractures)
- causes cuts resulting in serious bleeding or nerve, muscle or tendon injuries
- causes injury of inner organs
- causes a burn of second or third-degree or a burn affecting more than 5% of the body surface.

Hungary does not use the Maximum Abbreviated Injury Scale to define a serious injury.

Data on personal injury crashes are collected by the police and form the basis of the official Hungarian road crash statistics.

In Hungary, the provision of road traffic crash data is governed by the government decree on the National Statistical Data Collection Programme, in line with the Act on Statistics. It considers Council Decision 93/704/EC, which stipulates the member states provide their safety data to the European Commission for the elaboration of a European community database (CARE). The Hungarian national data collection system has been adjusted to be compatible with the Common Accident Data Set (CADaS) structure.

To fulfil EU requirements, Hungary will report data on the Maximum Abbreviated Injury Scale of 3 or more (MAIS3+). The preparation process related to the implementation of the MAIS3+ method and related legal steps have started recently.

The quality and completeness of police reported data are relatively good for fatal crashes and casualties. However, based on previous research, it is estimated that only 85% of those seriously injured (based on the national definition) and 60% of those slightly injured are reported in police records.