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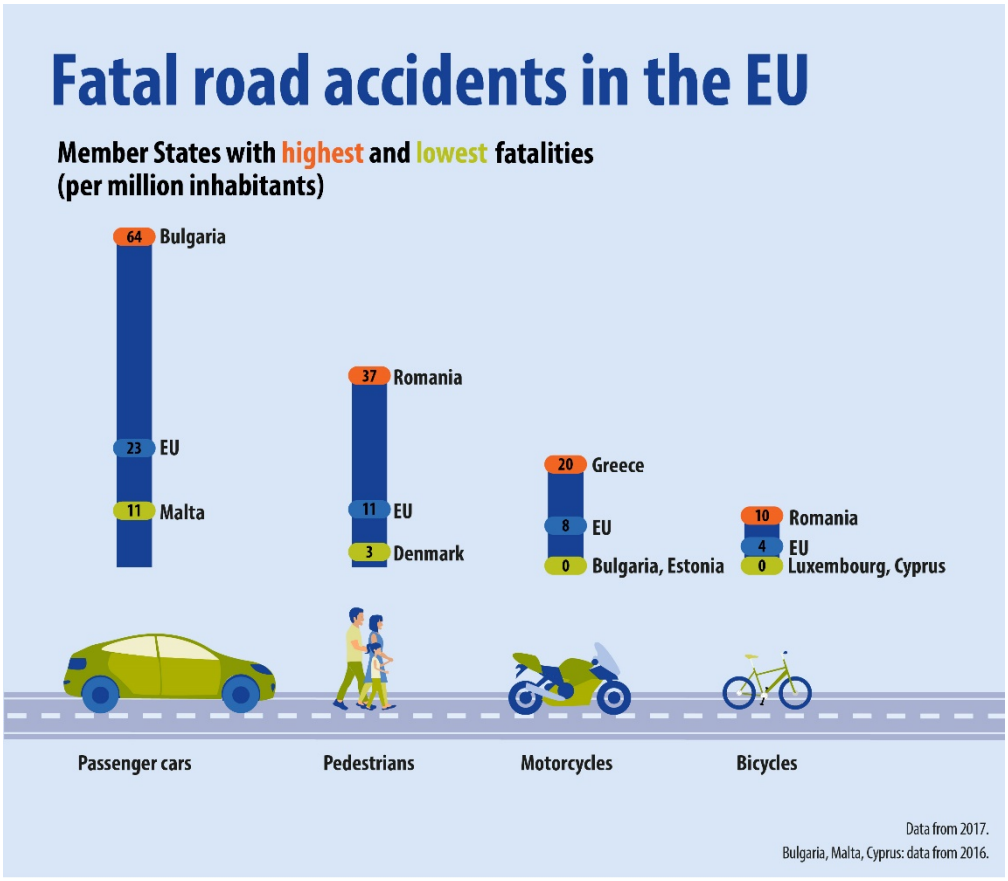
Road accident fatalities - statistics by type of vehicle

Data extracted in June 2019.
Planned article update: June 2020.

Highlights

In 2017, 45.7% of road accident fatalities in the EU involved passenger cars followed by pedestrians (21.2%).

In 2017, the highest rates of fatal road accidents in the EU for passenger cars were recorded in Bulgaria, and for pedestrians in Romania.



Fatal road accidents in the EU, 2017

Member States with highest and lowest rates, fatalities per million inhabitants

This article focuses on the number of road accident fatalities by type of vehicle for the year 2017. The data are extracted from the CARE database (the Community database on road accidents resulting in death or injury). CARE has detailed data on individual accidents collected by the Member States from police and hospital sources. This allows a high level of disaggregation, but consolidation takes considerable time. This means that only data for 2017 were available at the time of writing.

Full article

Ratio per inhabitants: Denmark, Sweden and the United Kingdom appear safest

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In 2003, the European Commission adopted its third European action programme for road safety, which aimed to halve the number of road deaths by 2010. While the initial target was not quite met by the end of 2010, it was decided to continue with a target of halving the overall number of road deaths in the EU by 2020, starting from 2010.

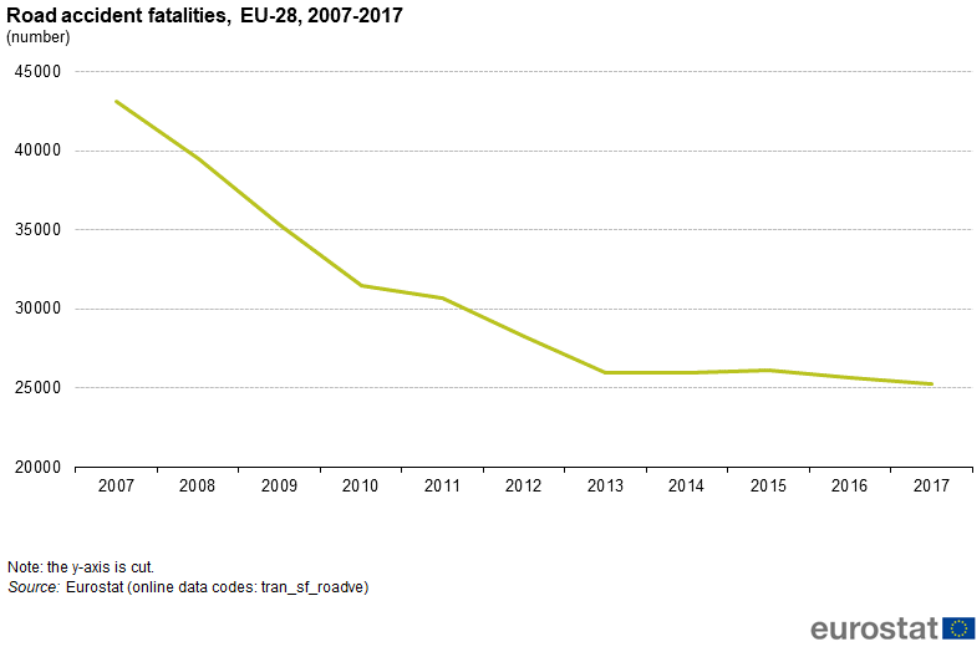


Figure 1: Road accident fatalities, EU-28, 2007-2017

(number)

Source: Eurostat (tran_sf_roadve)

The number of fatalities counted in road traffic accidents has fallen considerably over the last 20 years: EU fatalities fell by 41 % between 2007 and 2017. In 2017, however, the figure was roughly unchanged compared to 2016, at around 25 000, or around 50 fatal accidents per million inhabitants. Given the insignificant change in road accident fatalities between 2013 and 2017, further efforts will be needed to meet the 2020 target.

Overall, the road traffic accident fatality rate in the EU in 2017 has been calculated at 49.7 persons per million inhabitants. Differences between Member States are considerable: the values range from well under 30 deaths per million inhabitants (the United Kingdom and Sweden) to over 90 in Bulgaria and Romania. The mortality rates show a clear gap between low and middle-income countries, on the one hand, and high income countries, on the other. The north-western EU Member States generally rank higher than their southern- and eastern-European counterparts. There may be a combination of reasons such as differences in the vehicle stock, better road design, and stricter enforcement of traffic rules in certain countries.

Ratios for passenger cars in 2017 differ drastically

For the ratios for individual vehicle categories, Table 1 shows that Bulgaria ranks highest in the passenger car category with 63.7 deaths per million inhabitants. This is almost six times the lowest ratio, that of Malta (at 11.1). Conversely, the bicycle-friendly Netherlands, as one would expect, has a relatively high ratio for deaths among cyclists of 5.9 per million inhabitants. However, Romania, Hungary, Lithuania and Belgium (where cycling is far less widespread) have considerably higher ratios (between 6.9 and 9.7).

Road accident fatalities by category of vehicles, 2017
(number per million inhabitants)

	Passenger cars	Goods vehicles	Buses and coaches	Bicycles	Mopeds	Motorcycles	Pedestrians	Other	TOTAL
EU-28 (1)	22.7	2.5	0.2	3.9	1.2	7.5	10.5	1.1	49.7
Belgium	25.4	4.1	0.1	6.9	2.1	6.8	8.4	0.4	54.2
Bulgaria (2)	63.7	0.0	0.7	4.9	1.1	0.0	16.5	12.0	99.0
Czechia	26.4	3.2	0.4	5.4	0.2	6.5	12.2	0.3	54.5
Denmark	17.2	1.2	0.0	4.7	1.6	1.9	3.5	0.3	30.4
Germany	17.4	2.2	0.3	4.6	0.7	7.1	5.9	0.3	38.5
Estonia	20.5	0.8	0.0	0.8	0.8	0.0	7.6	6.1	36.5
Ireland (3)	19.0	1.3	0.0	2.1	0.0	4.7	6.6	0.9	34.6
Greece	26.5	6.1	0.0	1.0	3.0	20.1	11.0	0.3	67.9
Spain	17.2	3.6	0.1	1.7	1.1	7.7	7.5	0.5	39.3
France	26.5	2.4	0.2	2.6	1.8	10.0	7.2	0.9	51.6
Croatia	45.0	3.1	0.2	5.5	1.9	10.1	13.5	0.2	79.7
Italy	24.3	2.8	0.3	4.2	1.5	12.1	9.9	0.6	55.8
Cyprus (2)	11.8	7.1	1.2	0.0	2.4	11.8	16.5	3.5	54.2
Latvia	30.3	3.6	0.0	5.6	3.1	0.5	26.2	0.5	69.7
Lithuania (3)	39.4	1.4	0.3	7.5	1.0	4.5	27.7	1.0	82.8
Luxembourg	22.0	1.7	0.0	0.0	0.0	11.9	6.8	0.0	42.3
Hungary	28.3	3.2	0.4	8.3	1.7	4.4	17.4	0.2	63.8
Malta (2)	11.1	0.0	0.0	2.2	0.0	20.0	17.8	0.0	51.1
Netherlands	11.4	1.6	0.0	5.9	2.1	3.1	3.7	3.5	31.3
Austria	20.7	3.2	0.0	3.6	1.6	9.5	8.3	0.2	47.2
Poland	34.1	0.4	0.1	5.8	1.4	6.1	23.0	3.6	74.6
Portugal	19.8	8.0	0.1	2.4	4.2	10.3	12.6	1.1	58.4
Romania	41.3	4.3	0.4	9.7	0.9	2.6	37.3	2.8	99.3
Slovenia	14.5	1.5	0.0	5.3	1.9	12.1	4.8	10.2	50.3
Slovakia (4)	31.7	3.7	0.0	5.0	0.0	5.0	23.4	0.0	68.8
Finland	24.2	4.5	0.4	4.2	0.9	2.4	4.9	1.8	43.2
Sweden	13.1	0.9	0.4	2.6	0.1	3.9	3.7	0.6	25.3
United Kingdom	12.4	1.0	0.2	1.6	0.0	5.4	7.4	0.2	28.2
Iceland	26.6	3.0	5.9	5.9	0.0	5.9	0.0	0.0	47.3
Liechtenstein (5)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	80.8	80.8
Norway	10.8	0.8	0.4	1.7	0.2	3.8	2.1	0.4	20.2
Switzerland	9.3	1.1	0.1	4.4	0.2	6.1	5.6	0.6	27.3

(1) Estimated.
(2) 2016 data instead of 2017.
(3) 2015 data instead of 2017.
(4) 2010 data instead of 2017.
(5) 2014 data instead of 2017.
Source: Eurostat (online data codes: tran_sf_roadve and demo_pjan)

eurostat

Table 1: Road accident fatalities by category of vehicles, 2017

(number per million inhabitants)

Source: Eurostat (tran_sf_roadve) and (demo_pjan)

The high ratios for motorcyclists in Greece, Malta and Italy may be explained by greater use of motorised two-wheelers there, because motorcycle use is much more dependent on weather and the season. A more accurate evaluation of road accident fatalities can be obtained if road accident data are compared with total traffic. Reliable road traffic data are however difficult to obtain.

Finally, while pedestrian deaths in the EU are calculated at 10.5 fatalities per million inhabitants, the statistical risk of getting killed in traffic is almost 3 times higher in Latvia and Lithuania and almost 4 times higher in Romania.

Road accident fatalities: 46.4 % involve passenger car occupants while pedestrians accounted for 21 % of road traffic deaths

Unsurprisingly, car drivers and passengers represent the largest category of road traffic deaths (45.7 % of all road traffic fatalities in 2017 — see Figure 2), pedestrians (21 %) are the second largest category in the EU, slightly ahead of drivers and passengers of motorcycles and mopeds (17.7 %). Cyclists account for 7.9 % of EU road deaths, but in individual countries, this proportion can be as high as 19 %. Moreover, cycling deaths are under-reported: some accidents involving cyclists are not reported to police. Shares of 7.7 % were accounted for by the remaining categories: goods vehicles, buses and coaches and 'other' (essentially, agricultural tractors and other motorised vehicles).

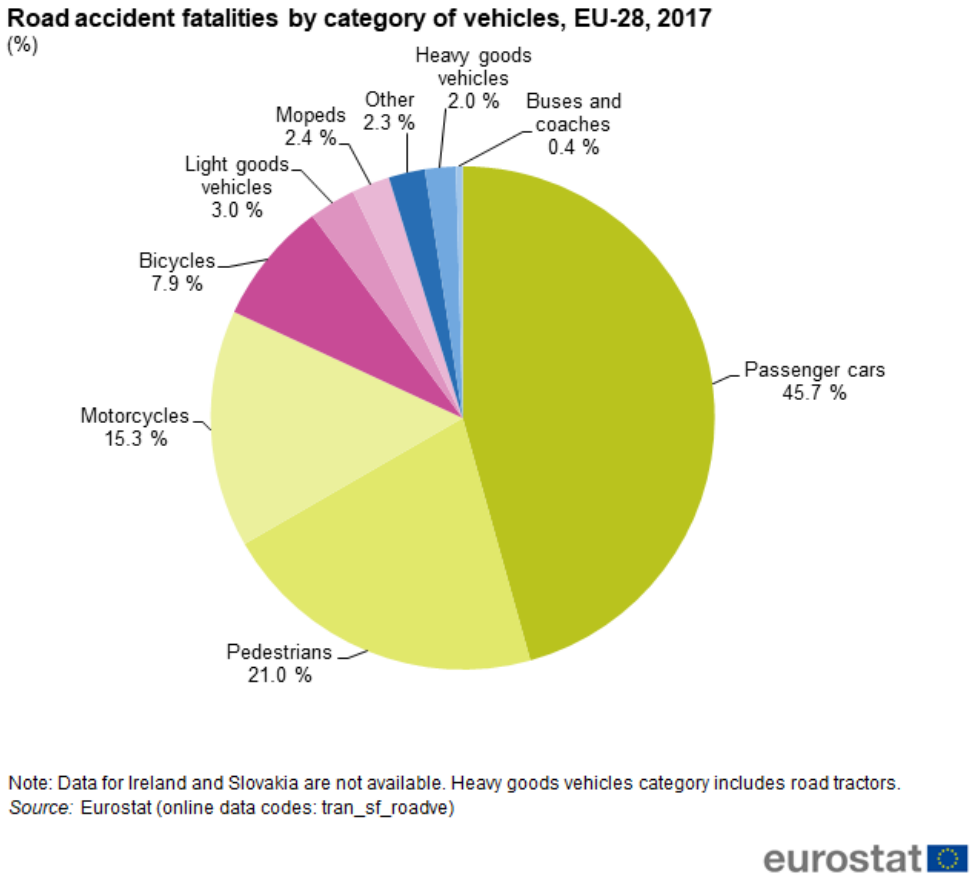


Figure 2: Figure 2 : Road accident fatalities by category of vehicles, EU-28, 2017

(%)

Source: Eurostat (tran_sf_roadve) and national publications

Over the last decade, the largest drop in the number of fatalities in the EU-28 was among buses and coaches (-51.2 %), followed by car drivers and their passengers (-44.7 %), and occupants of goods vehicles (-44.3 %). This shows that the many measures taken to improve road safety are paying off. The fall in the number of fatalities among cyclists (-26.6 %) and pedestrians (-37.1 %), though, was smaller.

The pattern for buses and coaches in Figure 3 stands out from the rest as a single severe accident can significantly change the trend. There were 108 deaths in the EU in this category in 2011, 107 in 2012, but the number increased to 149 in 2013 before falling to 119 deaths in 2014 and to 112 in 2017.

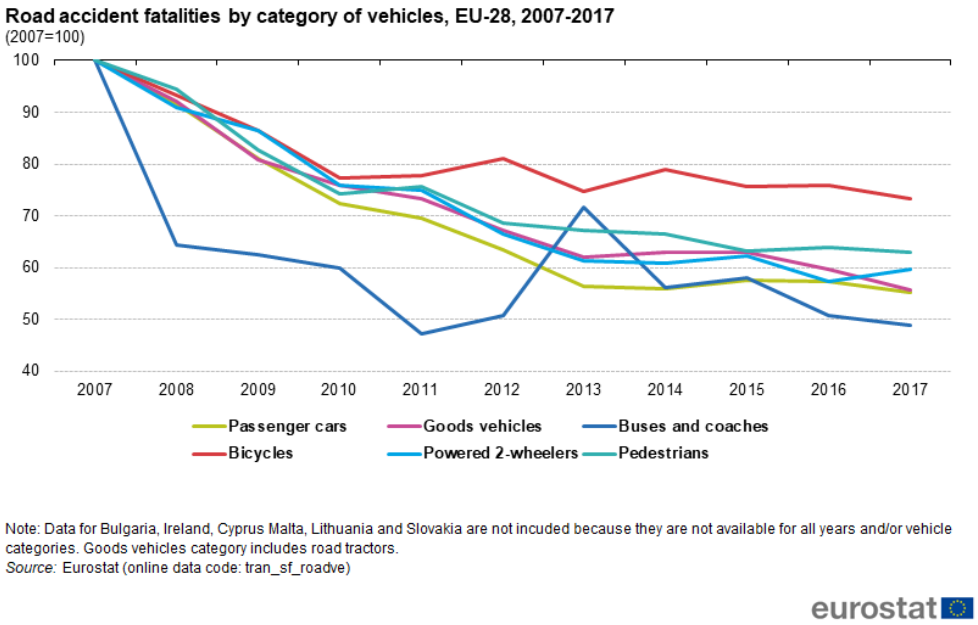


Figure 3 : Road accident fatalities by category of vehicles, EU-28, 2007-2017

(2007=100)

Source: Eurostat (tran_sf_roadve)

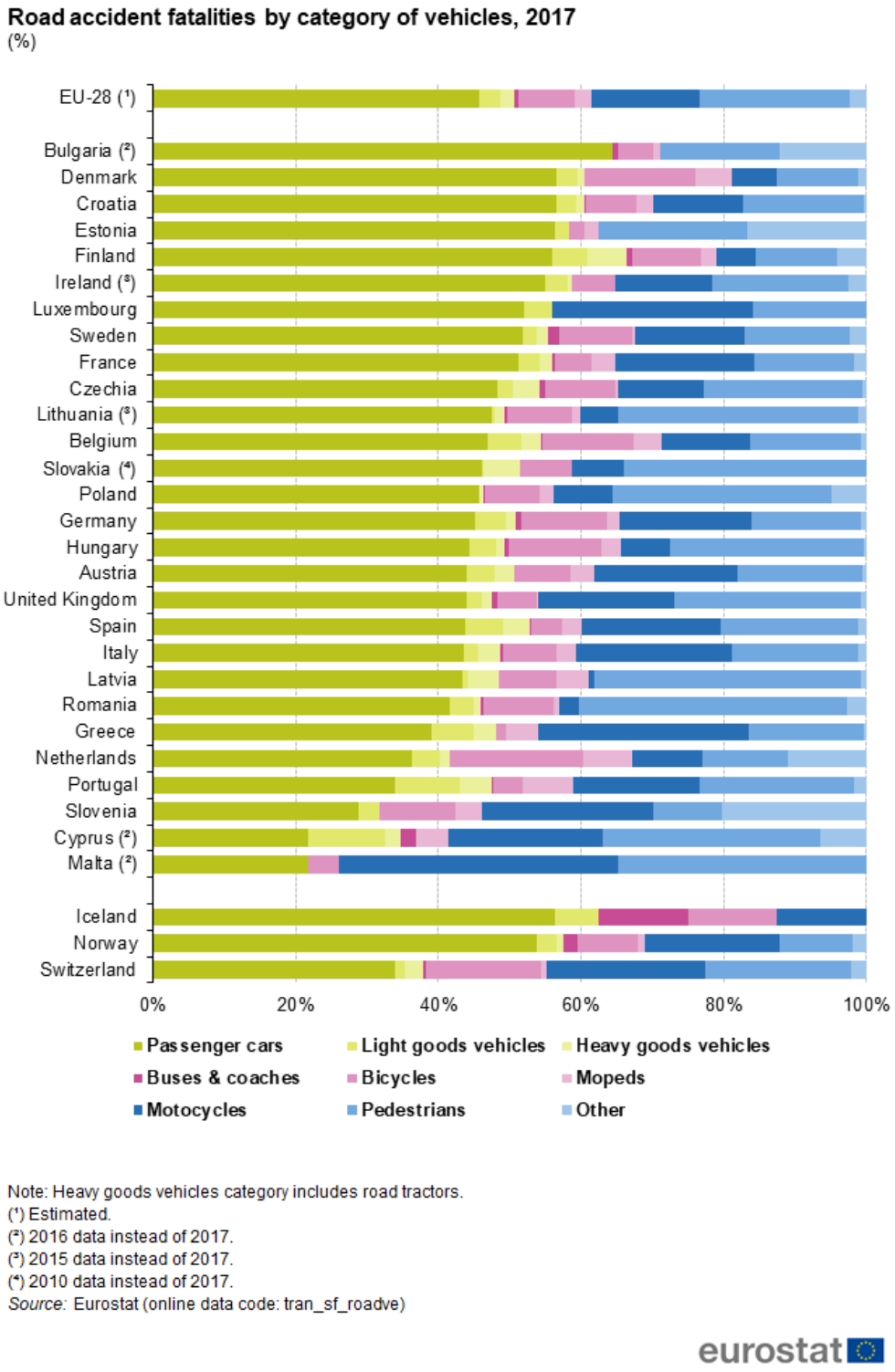
Light goods vehicles: actions taken

Accidents with goods vehicles claimed just below 1 300 lives among their occupants in 2017 (the deaths of drivers/passengers of any other vehicles involved are counted in other categories). Accidents involving light goods vehicles (up to 3.5 t maximum mass) accounted for almost 60 % of the goods vehicle fatalities. These vehicles are often delivery vans, which are not required to have speed-limiting devices and/or tachographs (recording distance, speed and operation times). In various countries,

these vehicles were found to be often involved in accidents. EU-wide studies for light goods vehicles have been carried out e.g. under IMPROVER (Impact Assessment of Road Safety Measures for Vehicles and Road Equipment — see link at the end of this article) and some action has been taken under the ‘roadworthiness package’ (see link) adopted in 2014. This includes enhanced technical inspections for high-mileage vehicles and more roadside inspections.

Considerable differences between Member States

In countries where cycling is widespread, such as the Netherlands or Denmark, it comes as no surprise that cyclists account for a larger share of fatalities than in countries where this is less the case. Indeed, Figure 4 shows that cyclists accounted for 18.9 % of all road accident deaths in the Netherlands; the figure for Denmark was 15.4 %. At the other end of the spectrum, in Greece cyclists accounted for 1.5 % of deaths and in Luxembourg and Cyprus, no cyclists were killed. Greece, however, had the second highest share concerning motorcycle fatalities (among countries for which detailed data are available): 29.5 % of all road accident fatalities in Greece were among motorcyclists. Malta had the highest share (39.1 %). In Portugal and the Netherlands, the remaining ‘two-wheeled’ category — mopeds — accounted for 7.1 % and 6.7 % respectively of all fatalities, a much larger share than in other countries. The figures are shown in Table 2.



Note: Heavy goods vehicles category includes road tractors.
(1) Estimated.
(2) 2016 data instead of 2017.
(3) 2015 data instead of 2017.
(4) 2010 data instead of 2017.
Source: Eurostat (online data code: tran_sf_roadve)

eurostat

Figure 4 : Road accident fatalities by category of vehicles, 2017

(%)

Source: Eurostat (tran_sf_roadve)

Road accident fatalities by category of vehicles, 2017
(number)

	Passenger cars	Goods vehicles	Buses and coaches	Bicycles	Mopeds	Motorcycles	Pedestrians	Other	TOTAL
EU-28 (1)	*11 631*	*1 266*	*107*	*2 003*	*607*	*3 850*	*5 383*	*584*	*25 431*
Belgium	288	47	1	78	24	77	95	5	615
Bulgaria (2)	456	0	5	35	8	0	118	86	708
Czechia	279	34	4	57	2	69	129	3	577
Denmark	99	7	0	27	9	11	20	2	175
Germany	1 437	182	22	382	59	583	489	26	3 180
Estonia	27	1	0	1	1	0	10	8	48
Ireland (3)	89	6	0	10	0	22	31	4	162
Greece	285	66	0	11	32	216	118	3	731
Spain	799	169	3	78	49	359	351	22	1 830
France	1 767	161	14	173	117	669	480	63	3 444
Croatia	187	13	1	23	8	42	56	1	331
Italy	1 472	169	18	254	92	735	600	38	3 378
Cyprus (2)	10	6	1	0	2	10	14	3	46
Latvia	59	7	0	11	6	1	51	1	136
Lithuania (3)	115	4	1	22	3	13	81	3	242
Luxembourg	13	1	0	0	0	7	4	0	25
Hungary	277	31	4	81	17	43	170	2	625
Malta (2)	5	0	0	1	0	9	8	0	23
Netherlands	194	28	0	101	36	53	64	59	535
Austria	182	28	0	32	14	83	73	2	414
Poland	1 295	17	4	220	55	231	873	136	2 831
Portugal	204	82	1	25	43	106	130	11	602
Romania	812	84	7	191	17	52	733	55	1 951
Slovenia	30	3	0	11	4	25	10	21	104
Slovakia (4)	171	20	0	27	0	27	126	0	371
Finland	133	25	2	23	5	13	27	10	238
Sweden	131	9	4	26	1	39	37	6	253
United Kingdom	815	66	15	103	3	355	485	14	1 856
Iceland	9	1	2	2	0	2	0	0	16
Liechtenstein (3)	0	0	0	0	0	0	0	3	3
Norway	57	4	2	9	1	20	11	2	106
Switzerland	78	9	1	37	2	51	47	5	230

(1) Estimated.
(2) 2016 data instead of 2017.
(3) 2015 data instead of 2017.
(4) 2010 data instead of 2017.
(5) 2014 data instead of 2017.
Source: Eurostat (online data code: tran_sf_roadve)

eurostat

Table 2: Road accident fatalities by category of vehicles, 2017

(number)

Source: Eurostat (tran_sf_roadve)

Pedestrians particularly at risk in Baltic countries and in Romania

As suggested earlier, a high number of pedestrians are killed in road accidents: in 2017, pedestrians accounted for nearly 21.2 % of all road accident deaths in the EU. This share varies considerably between countries, from under 9.6 % in Slovenia to more than 35 % in Latvia and Romania.

Member States have taken a variety of measures to reduce the number of deaths: education campaigns, legal enforcement and infrastructure improvements (pedestrian crossing design, visibility). The industry has also improved vehicle design (making the front of vehicles pedestrian-friendlier) to address this issue.

Source data for tables and graphs

- Road accident fatalities - statistics by type of vehicle 

Data sources

The data presented in this article are from the CARE database (the Community database on road accidents resulting in death or injury). EU countries have long collected road accident data via their own national systems. EU-wide road accident data have been available since 1991 via CARE.

The purpose of CARE is to provide a tool that makes it possible to identify and quantify road safety problems throughout Europe, evaluate the efficiency of road safety measures, determine the relevance of EU action and facilitate the exchange of experience in this field. Parts of the national data sets have been incorporated in the CARE database with their original national structure and definitions. However, as existing national accident data collection systems are not always compatible or comparable between countries, the European Commission provides and applies transformation rules for the national data sets, allowing CARE to have compatible data. Eurostat's reference database uses CARE data in a number of tables linked to road safety. Various tables are available. It is possible that the two sources differ, as there are regular data updates and updating is not synchronised.

Data in this article are limited to the number of persons fatally injured, resulting in death within 30 days of the road accident. Confirmed suicide and natural deaths are not included. Since 2010, all reporting countries apply this rule.

Please note that data referring to the French Départements d'Outre-Mer (overseas territories) and the Portuguese autonomous regions of Açores and Madeira are not available. The 'fatalities per million inhabitants' ratio takes this situation into account.

Regional data collected on voluntary basis has been used for Figure 1.

Context

In response to the growing concern shown by European citizens over road safety, the European Union made this issue a priority of its common transport policy set out in the 2001 White Paper on transport: *European transport policy for 2010: time to decide* and its mid-term review in 2006 (Keep Europe moving — Sustainable mobility for our continent). In the White Paper, the European

Commission set the target of halving the number of road fatalities between 2000 and 2010. A variety of measures helped to cut the total road number of deaths by 44 % between 2000 and 2010. The target of halving the 2000 number was reached in 2012.

Following on from that, the 2011 White Paper Roadmap to a Single European Transport Area — Towards a competitive and resource efficient transport system set out 40 practical measures for the next decade. On road traffic, the Commission has adopted an ambitious road safety programme that aims to cut road deaths in Europe in half between 2010 and 2020. The programme sets out a mix of initiatives, at European and national level, focusing on improving vehicle safety, the safety of infrastructure and road users' behaviour.