European Road Safety Observatory

Facts and Figures – Roads outside urban areas - 2022

This document is part of a series of 16 *Facts and Figures* reports. The purpose of these *Facts and Figures* reports is to provide recent statistics related to a specific road safety topic, for example a specific age group or transport mode. The *Facts and Figures* reports replace the Basic Fact Sheets series that were available until 2018 (containing data up to 2016). The most recent figures in this *Facts and Figures* report of 2022 refer to 2020. These reports can be found on the ERSO website (https://road-safety.transport.ec.europa.eu/statistics-and-analysis/data-and-analysis/facts-and-figures_en).

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Sources	Information in this document is based largely on data in the CARE database (Community database on Accidents on the Roads in Europe). Other data are taken from Eurostat. Date of extraction: 12 April 2022

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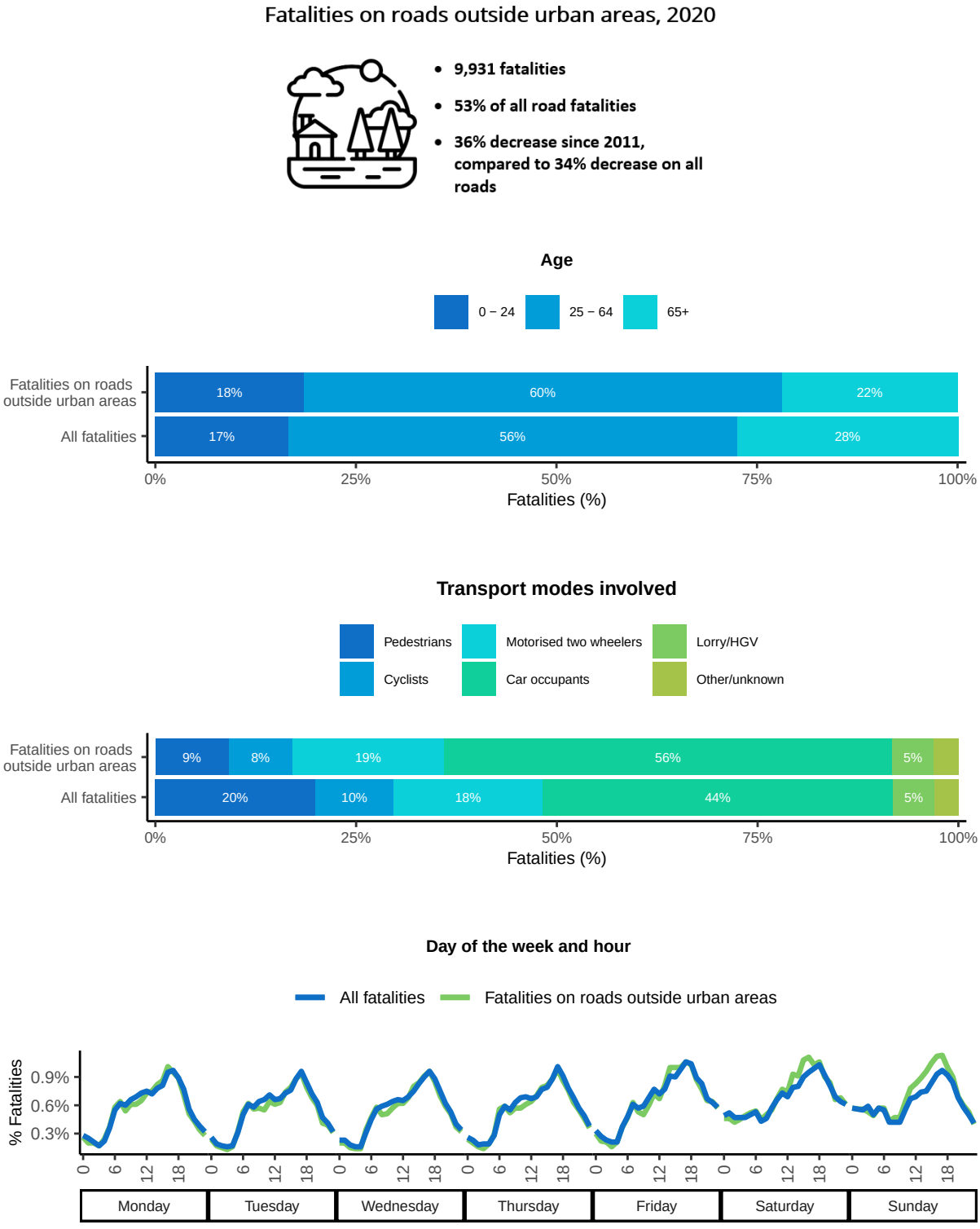
1 Key Facts

This Facts and Figures report looks at fatalities on roads outside urban areas, which means public roads outside urban boundary signs (excluding motorways). All differences reported were derived from the available data, the statistical significance of the differences between values has not been tested. A similar report on roads inside urban areas has also been published.



- **9,931 fatalities**
- **53% of all road fatalities**
- **36% decrease since 2011, compared to 34% decrease on all roads**

2 Summary

In 2020, 53% of all road fatalities in the EU27 occurred on a road outside urban areas. **The number of fatalities on roads outside urban areas decreased by 35% between 2011 and 2020, compared to an overall 34% decrease on all roads over the same time period**. The proportion of fatalities on roads outside urban areas has remained constant since 2011. The decrease of fatalities was higher on roads outside urban than on roads inside urban roads and motorways.

Road fatalities on roads outside urban areas also differed in other respects when compared to all fatalities combined:

- The proportion of 65+ year old fatalities on roads outside urban areas was lower compared to all fatalities. In 2020, 22% of fatalities on roads outside urban areas were 65 years or older, compared to 28% of all fatalities.
- Car occupants make up more than half of all fatalities on roads outside urban areas. The proportion of fatalities among vulnerable road users (pedestrians, cyclists, powered two-wheelers) on roads outside urban areas is higher compared to motorways, but lower compared to roads inside urban areas.
- The share of fatalities on roads outside urban areas was proportionally lower during the daytime of the working week and higher during the daytime at the weekend.

The highest mortality rates (number of fatalities per million inhabitants) on roads outside urban areas were observed in Latvia, Bulgaria and Lithuania. Sweden had the lowest mortality rate. **The mortality rate on roads outside urban areas was generally higher in Eastern EU countries.** The mortality rate is an important indicator, but does not take into account differences in the general road safety performance across countries. It is important to also look at the proportion of fatalities on roads outside urban areas within the total number of road fatalities: **this proportion was highest in Northern Europe**, and was also high in parts of Western Europe.

Basic definitions
Road outside urban areas:
Public road outside urban boundary signs, excluding motorways.

Fatalities:
Total number of persons fatally injured; correction factors applied when needed. Death within 30 days of the road crash, confirmed suicide and natural death are not included.

Seriously injured:
Total number of seriously injured persons corrected by correction factors when needed. Injured (although not killed) in the road crash and, in principle, hospitalised for at least 24 hours within 30 days from the crash.

More detailed data:
This Facts and Figures report is accompanied by an Excel file (available online) containing a large set of additional detailed data. Each sheet in the excel file corresponds to a Figure/Table in the report.

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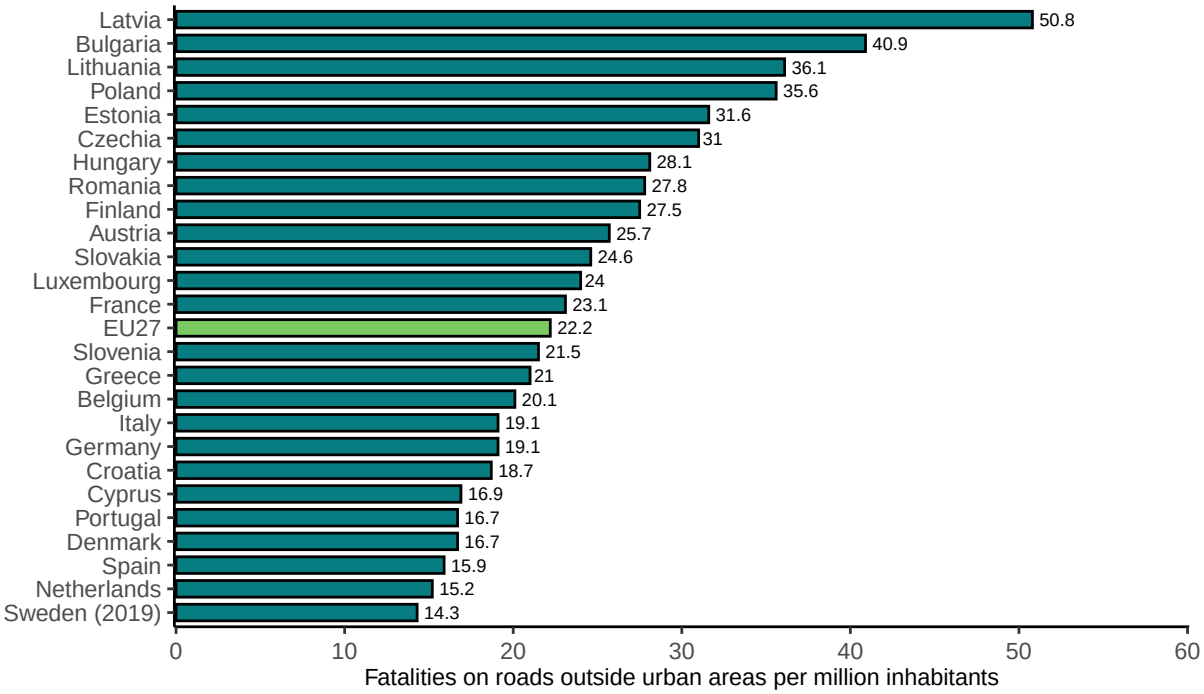
3 Main trends

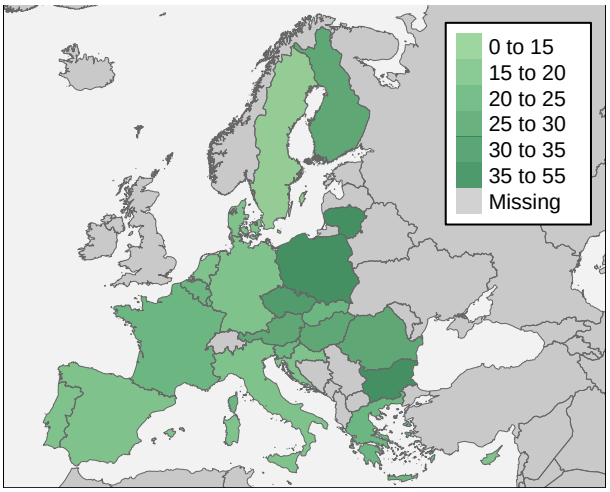
3.1 Mortality rate: number of road fatalities per million inhabitants

The mortality rate on roads outside urban areas is relatively higher in Eastern Europe, and highest in Latvia, Bulgaria and Lithuania. The mortality rate is lowest in Sweden. Of the countries with the highest number of fatalities on roads outside urban areas (Germany, France, Poland and Italy), only Germany and Italy have a mortality rate slightly below the European average.

Figure 1. Fatalities on roads outside urban areas per million inhabitants per country in the EU27 (2020). Source: CARE



Note: countries that are not included in the Figures are Ireland and Malta because these countries have missing



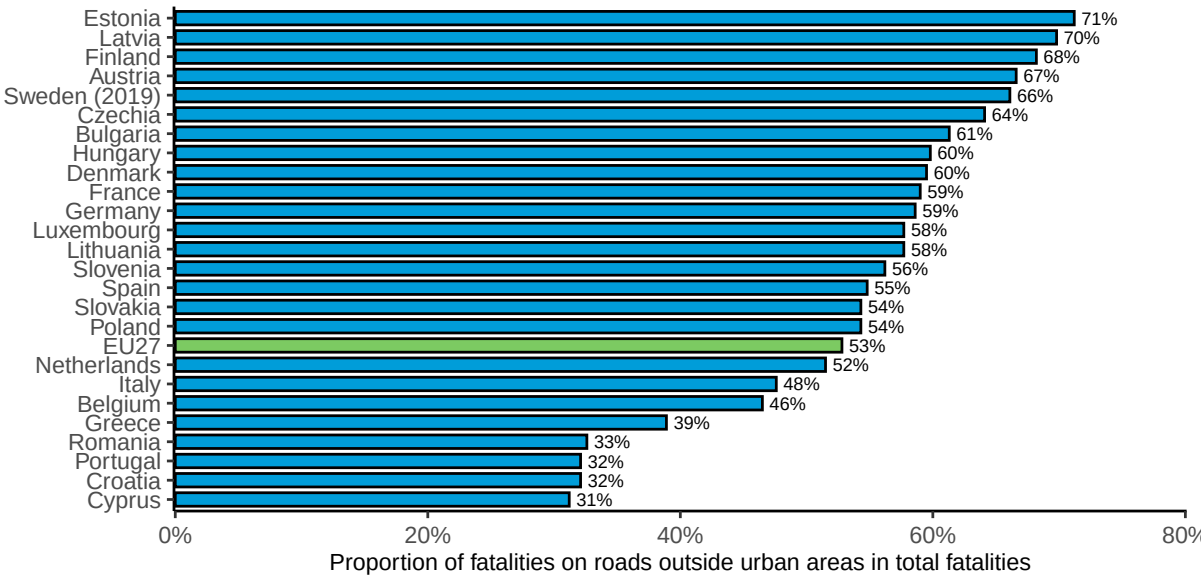
3.2 Number of fatalities on roads outside urban areas as a proportion of total fatalities

The mortality rate is an important indicator, but does not take into account differences in the general road safety performance across countries. In other words, the mortality rate on roads outside urban areas in a specific country may be high because the total mortality rate for all road users in that country is also high. Therefore, it is important to also look at the proportion or share of fatalities on roads outside urban areas in the total number of road fatalities.

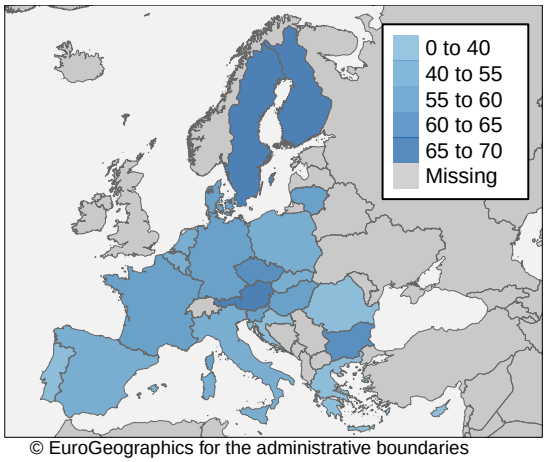
The proportion of fatalities on roads outside urban areas in total fatalities tends to be high in Northern Europe and parts of Western Europe. Cyprus and Croatia have the lowest proportion of fatalities on roads outside urban areas, while this proportion is highest in Estonia. Latvia has a high mortality rate on roads outside urban areas as well as a high proportion of fatalities on these roads within total road fatalities.

Differences between countries in the proportion of fatalities on roads inside urban areas can also be explained, in part, by the degree of urbanisation, the make-up of the road network and the relative traffic levels on urban and rural roads in each country.

Figure 2. Proportion of fatalities on roads outside urban areas in the total number of fatalities, per country in the EU27 (2020). Source: CARE



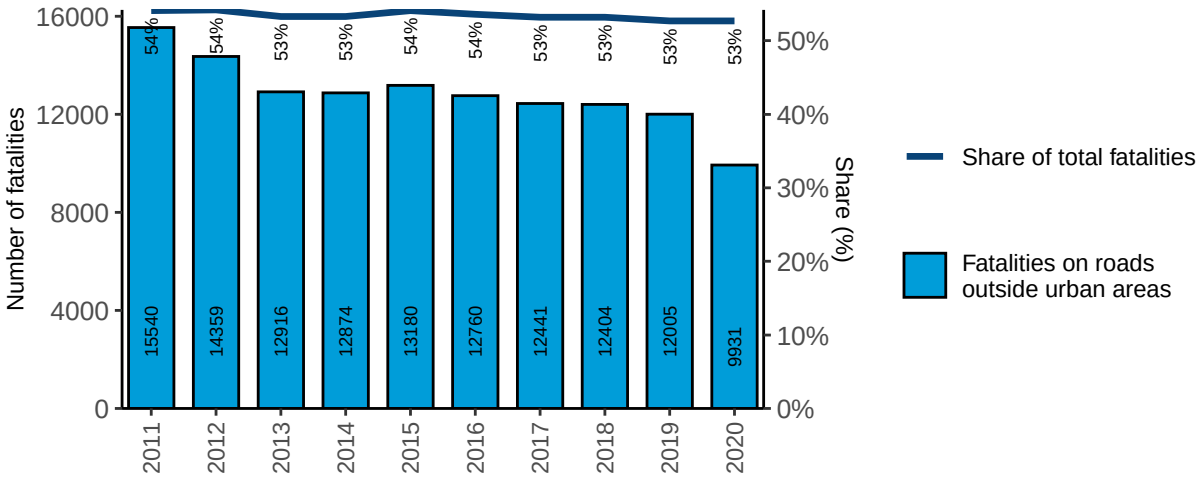
Note: countries that are not included in the Figures are Ireland and Malta because these countries have missing values in the last years



3.3 Trend in the number of fatalities

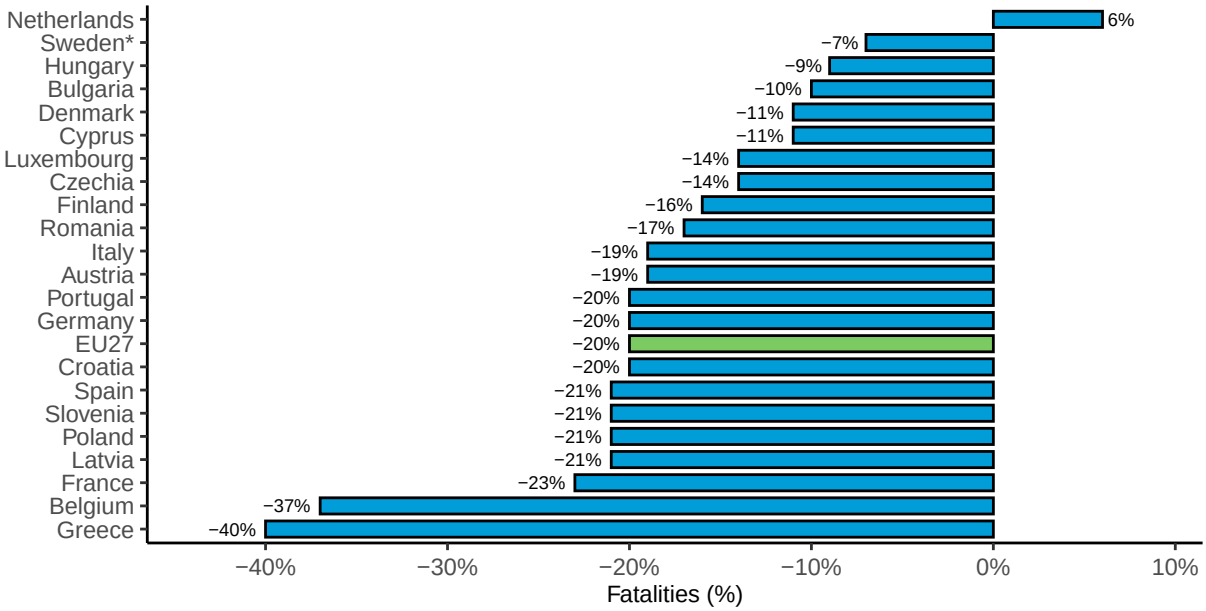
In 2020, 53% of all road fatalities in the EU27 occurred on roads outside urban areas. The relative proportion of fatalities on these roads has remained the same in the time period 2011-2020. **The number of fatalities outside urban areas decreased by 36% between 2011 and 2020, while the total number of fatalities decreased by 34% over the same time period.**

Figure 3. Annual number of fatalities on roads outside urban areas, and their share in the total number of fatalities in the EU27 (2011-2020). Source: CARE



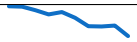
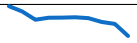
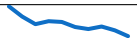
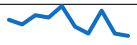
The number of fatalities outside urban areas decreased in almost all European Member States, except for the Netherlands, where there is an increase of 6%. Among the EU Member States with the highest number of fatalities outside urban areas, France and Poland show a slightly more pronounced decrease compared to the EU average, while the decline in both Germany and Italy is the same as the EU average. There was a notable decrease in the number of fatalities outside urban areas in Greece and Belgium.

Figure 4. Percentage change in the number of fatalities on roads outside urban areas per country in the EU27 (2018-2020 and 2011-2013). Source: CARE



Notes:
−Countries that are not included in the Figure are Estonia, Ireland, Lithuania, Malta and Slovakia because there is no data on fatalities outside urban areas in the time series 2011−2020
−The trend is not shown if there are fewer than 10 fatalities in one year
−*For Sweden, the trend is calculated by comparing the time period 2010−2012 with the time period 2017−2019

Table 1. Number of and trend in fatalities on roads outside urban areas per country in the EU27 and EFTA (2011-2013 versus 2018-2020). Source: CARE

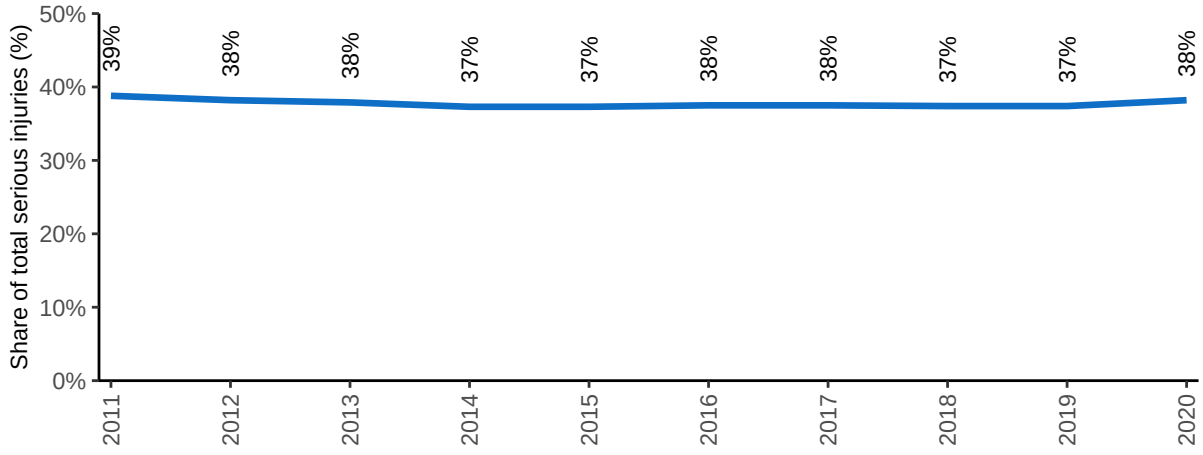
	2011	2018	2019	2020	Trend 2018 - 2020 vs 2013 - 2011	Miniplot: trend since 2010
Austria	338	279	283	229	-19%	
Belgium	459	305	312	232	-37%	
Bulgaria	385	339	351	284	-10%	
Croatia	143	114	115	76	-20%	
Cyprus	24	15	17	15		
Czechia	472	404	400	332	-14%	
Denmark	139	101	121	97	-11%	
Estonia	76	54	35	42		
EU27	**15540**	**12404**	**12005**	**9931**	**-20%**	
Finland	207	172	169	152	-16%	
France	2599	2015	1943	1497	-23%	
Germany	2441	1867	1758	1592	-20%	
Greece	501	272	268	225	-40%	
Hungary	355	349	331	275	-9%	
Iceland	9	16	6	7		
Ireland	139	-	-	-		
Italy	1778	1603	1532	1139	-19%	
Latvia	126	107	92	97	-21%	
Lithuania	-	98	91	101		
Luxembourg	22	26	16	15	-14%	
Malta	-	5	-	-		
Netherlands	266	256	274	265	6%	
Norway	126	81	90	70		
Poland	2193	1559	1662	1352	-21%	
Portugal	320	263	227	172	-20%	
Romania	731	660	608	537	-17%	
Slovakia	-	155	168	134		
Slovenia	74	51	61	45	-21%	
Spain	1266	994	896	751	-21%	
Sweden	217	217	146	-		
Switzerland	165	111	98	105	-30%	

Note:
The trend is not shown if there are fewer than 10 fatalities in one year

3.4 Serious injuries

While 53% of all road fatalities in the EU27 occurred on roads outside urban areas, only 38% of all serious injuries occurred on such roads in 2020. The relative proportion of serious injuries has remained constant over the time period 2011-2020.

Figure 5. Share of serious injuries on roads outside urban areas in the total number of serious injuries in the EU27 (2011-2020). Source: CARE

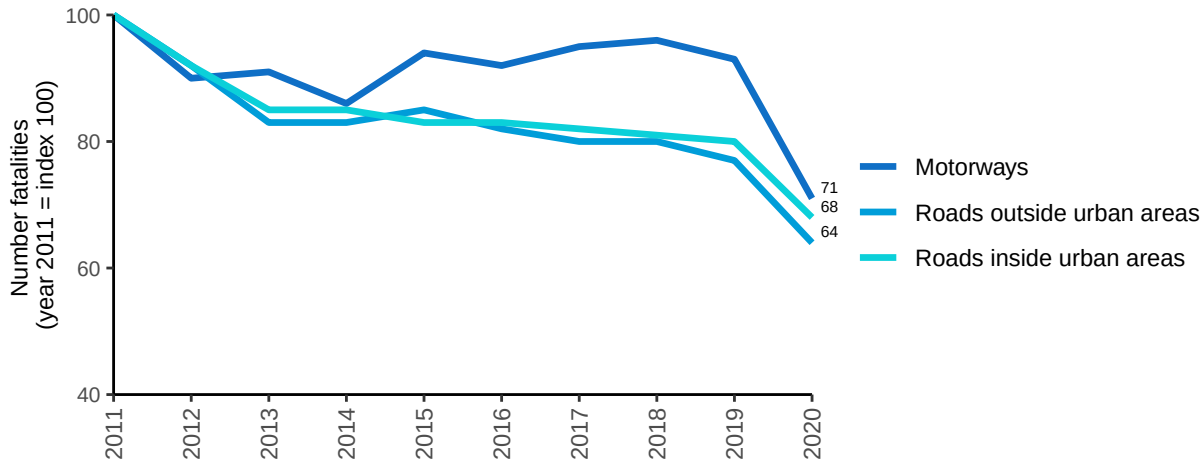


Notes:
−Countries that are not included in the Figure are France, the Netherlands, Ireland, Italy and Estonia due to problems of comparability, missing data or a break in the time series
−Germany accounts for a disproportionately high share of 40% of all serious injuries

3.5 Comparison of roads outside urban areas with other road types

The Figure below shows the total number of fatalities by type of road over the time period 2011-2020. The number of fatalities on roads outside urban areas has decreased the most (-36%) out of all road types. The number of fatalities on motorways has decreased the least in the last 10 years (-29%).

Figure 6. Trend of fatalities on motorways, roads outside urban areas and roads inside urban areas in the EU27 (2011-2020). Source: CARE



4 Road user

4.1 Gender

78% of all road fatalities in 2020 are men, compared to 80% of fatalities on roads outside urban areas. Large differences can be observed between EU Member States. The proportion of female fatalities on roads outside urban areas ranges between 35% and 7%.

Figure 7. Distribution of fatalities on roads outside urban areas and all fatalities by gender in the EU27 (2020). Source: CARE

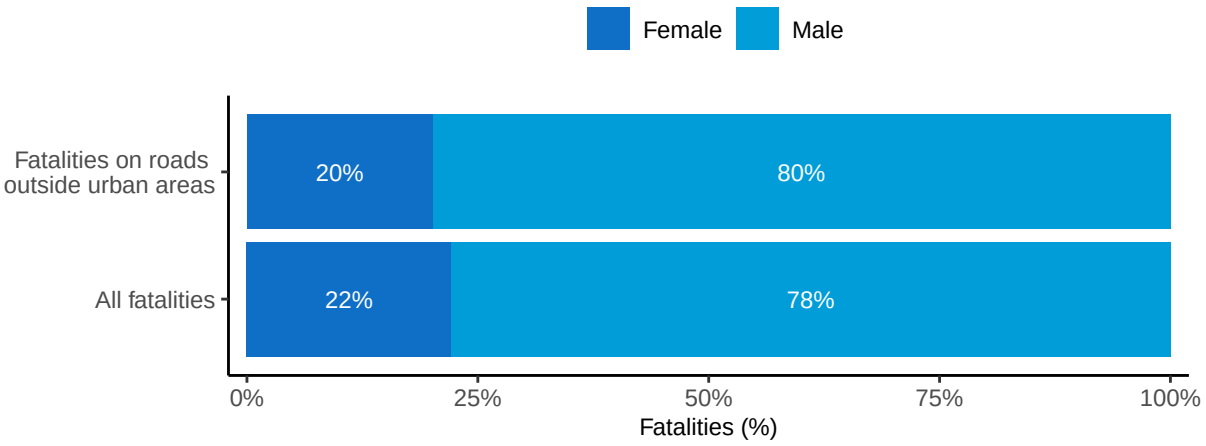
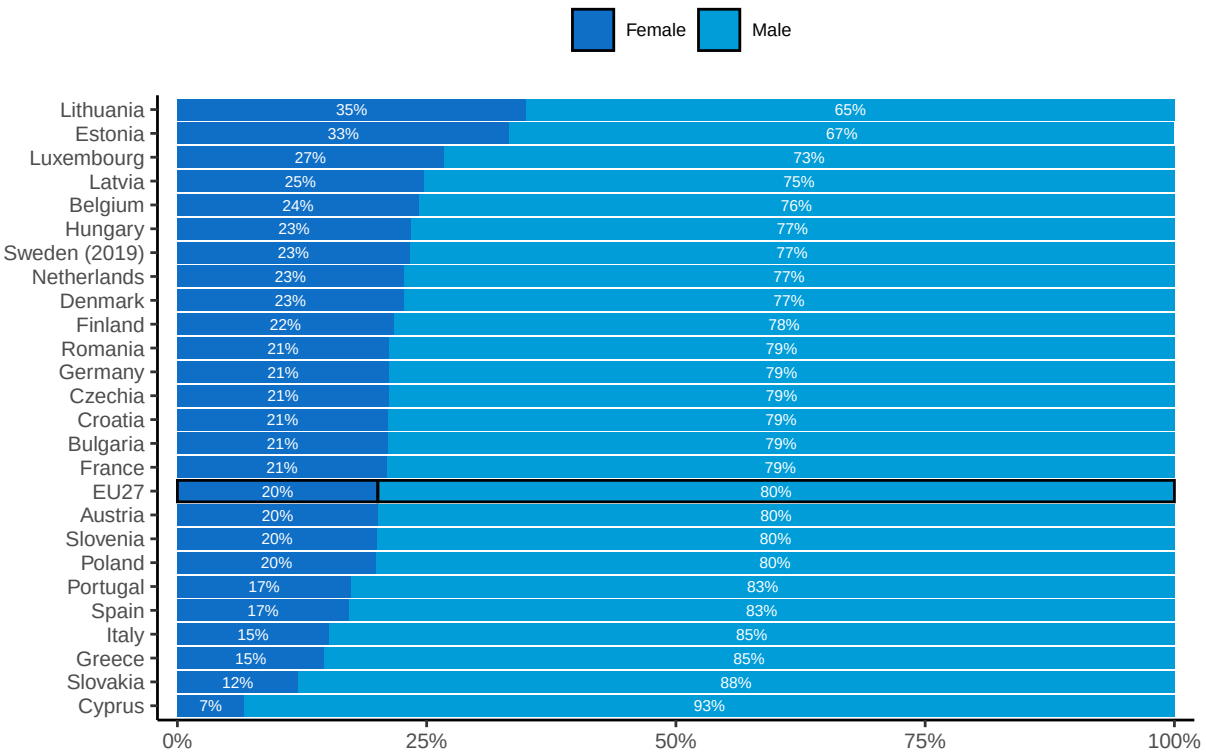


Figure 8. Distribution of fatalities on roads outside urban areas by gender per country in the EU27 (2020). Source: CARE



Note: countries that are not included in the Figure are Ireland and Malta because these countries have missing values in the last years

4.2 Age

The age distribution of fatalities on roads outside urban areas differs slightly from the age distribution of road fatalities generally. **The proportion of 65+ year old fatalities is lower on roads outside urban areas compared to all fatalities**. In 2020, 22% of fatalities on roads outside urban areas are 65 years or older old, compared to 28% of all fatalities.

The proportion of fatalities among those aged 65 or more on roads outside urban areas ranges between 33% and 10% in the EU Member States.

Figure 9. Distribution of fatalities on roads outside urban areas and all fatalities by age group in the EU27 (2011-2020). Source: CARE & EUROSTAT

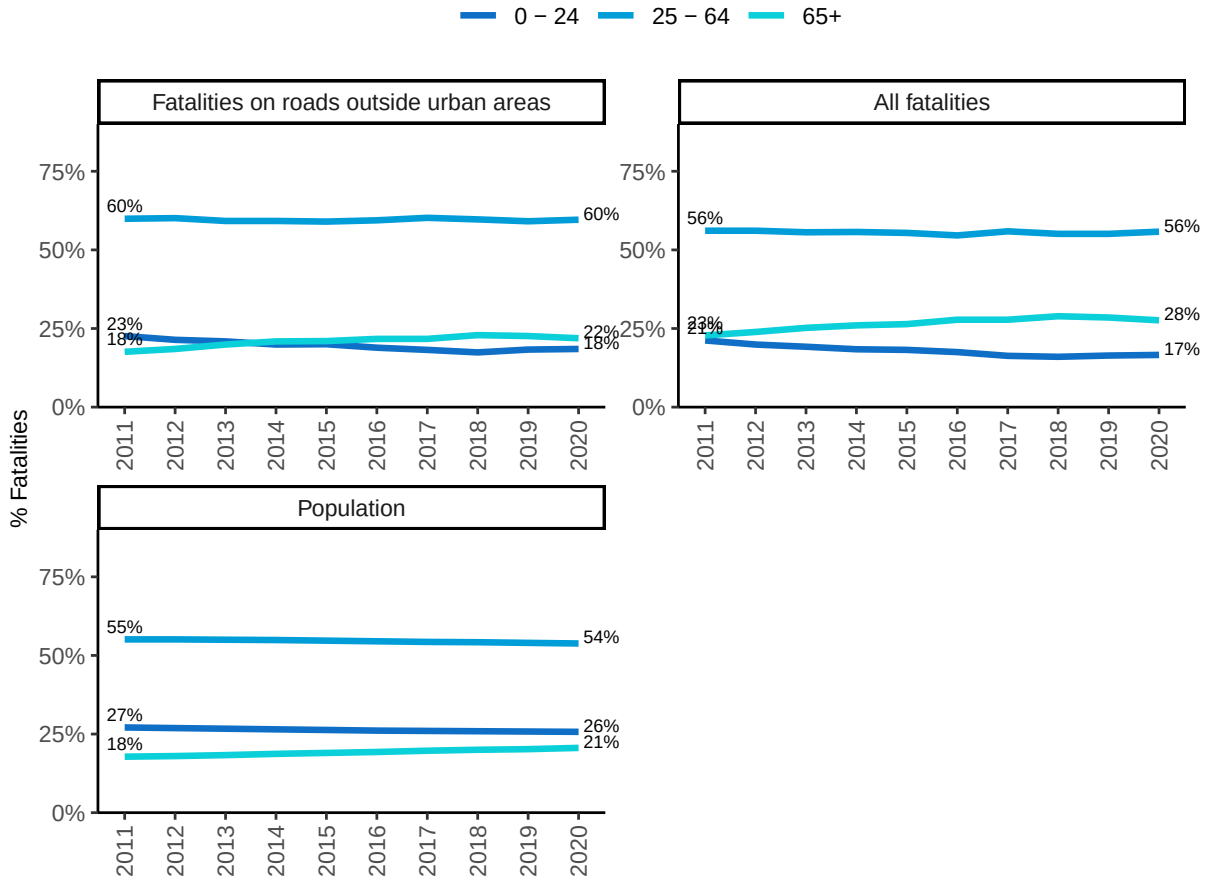
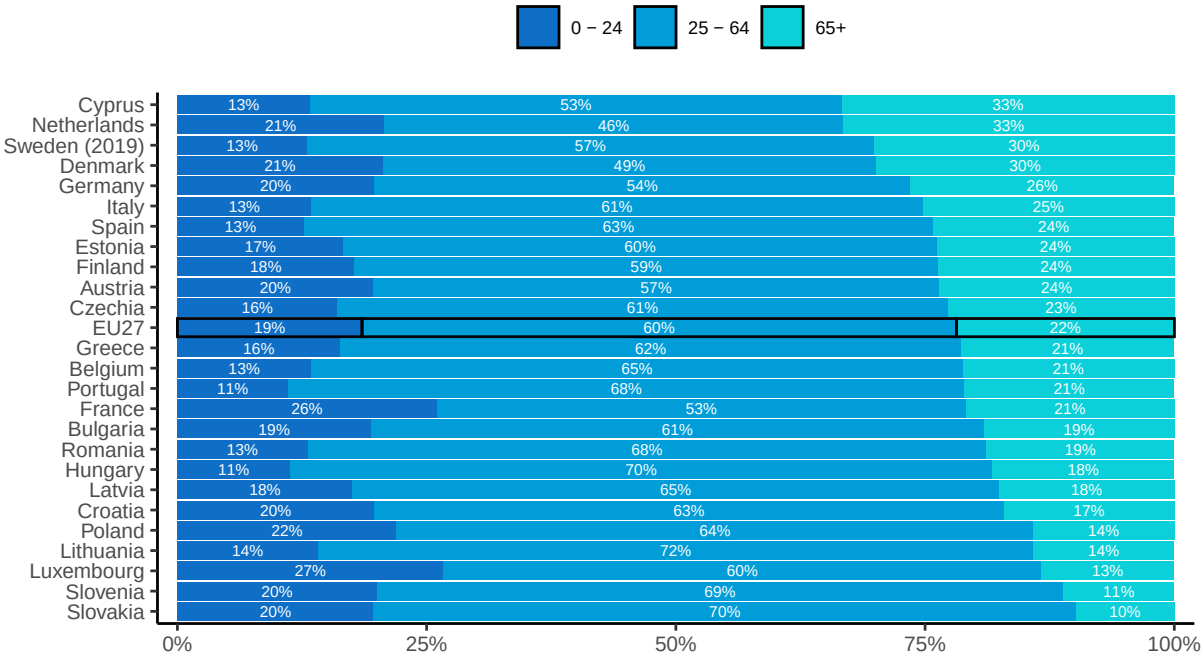


Figure 10. Distribution of fatalities on roads outside urban areas by age groups per country in the EU27 (2020). Source: CARE

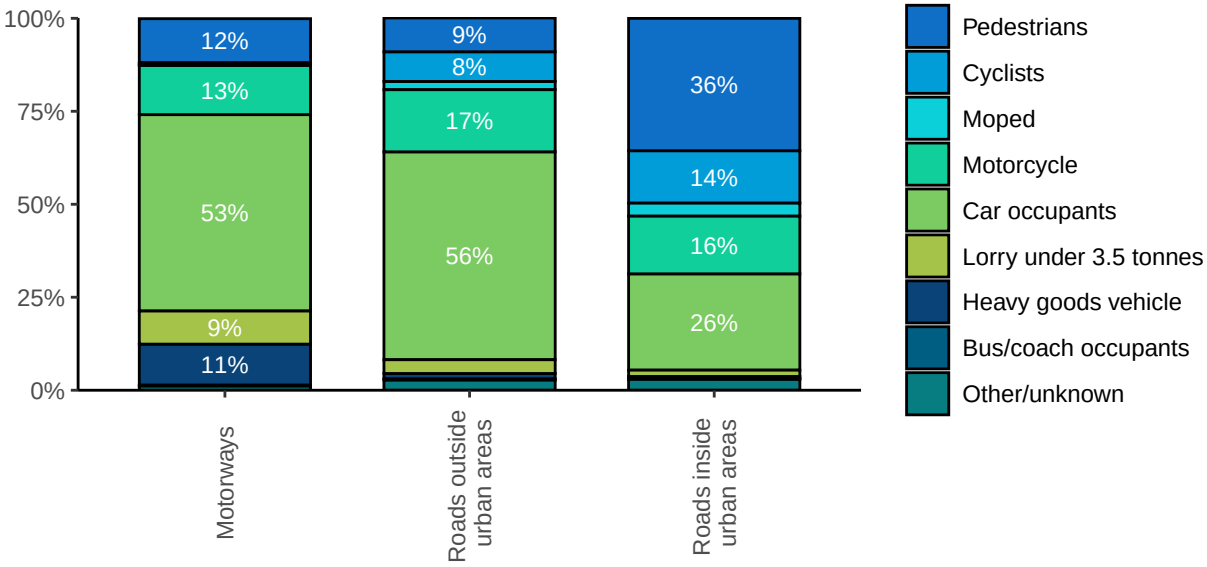


Note: countries that are not included in the Figure are Ireland and Malta because these countries have missing values in the last years

4.3 Transport modes

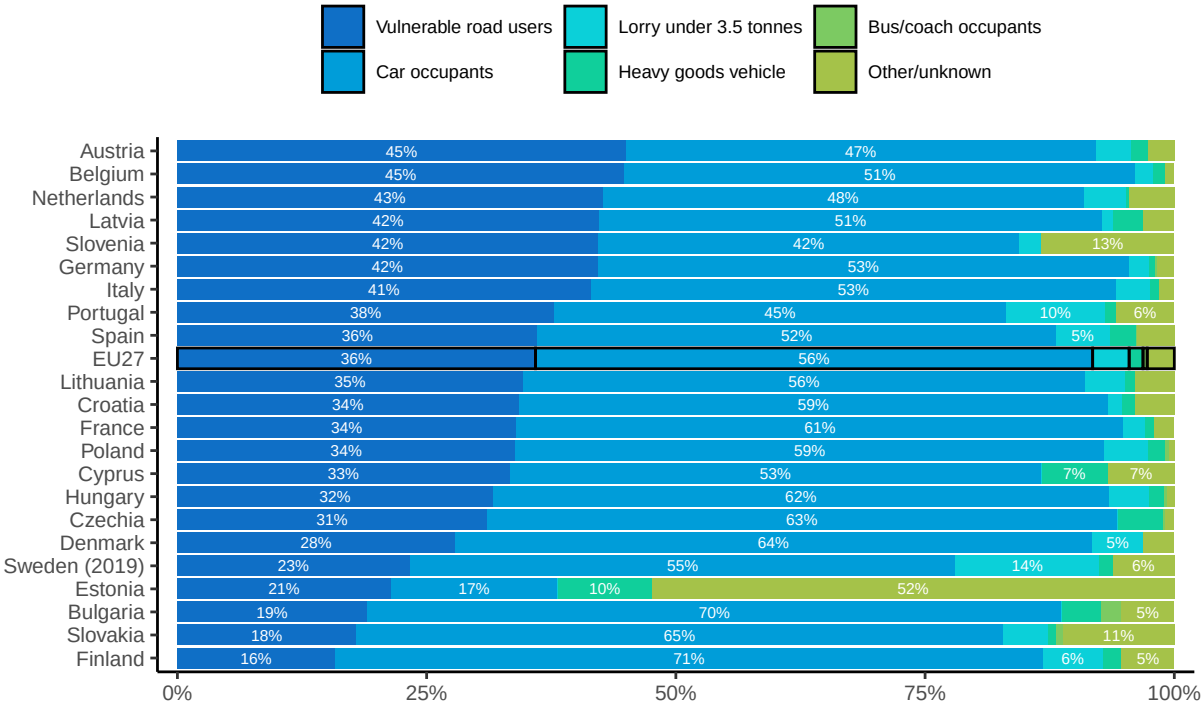
Car occupants make up more than half of all fatalities on roads outside urban areas. The proportion of fatalities among vulnerable road users (pedestrians, cyclists, powered two-wheelers) on roads outside urban areas is higher compared to motorways, but lower compared to roads inside urban areas. The proportion of motorcycle fatalities is highest on roads outside urban areas.

Figure 11. Distribution of fatalities by transport mode and type of road in the EU27 (2020). Source: CARE



The proportion of vulnerable road users among road fatalities on roads outside urban areas ranges from 16% to 45%. The highest proportion is found in Western EU-members, but also in some Eastern European countries. Countries with the lowest proportion of vulnerable road users among fatalities on roads outside urban areas are Finland, Slovakia and Bulgaria.

Figure 12. Distribution of fatalities on roads outside urban areas by transport mode per country in the EU27 (2020). Source: CARE



Notes:
− Countries that are not included in the Figure are Ireland, Greece, Malta and Romania because these countries have missing values in the last years
− Luxembourg is not included in the Figure because there are fewer than 10 fatalities

5 Time

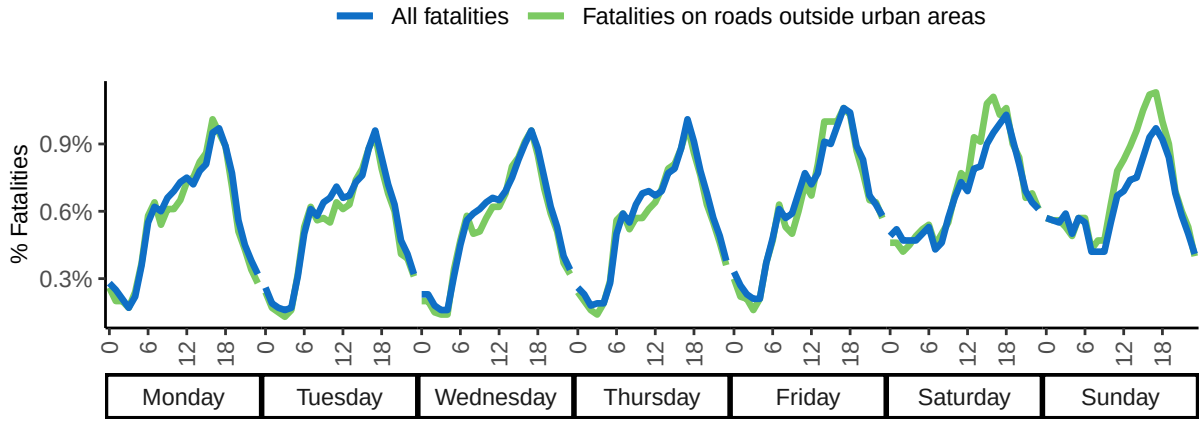
5.1 Period of the week

The distribution of fatalities on roads outside urban areas according to period of the week hardly differs from the same distribution of all road user fatalities. The share of fatalities on roads outside urban areas is proportionally lower during daytime in the working week and proportionally higher during daytime at the weekend.

5.2 Day of the week and hour

The Figure below on fatalities on roads outside urban areas confirms the above finding that **proportionately more fatalities occur on roads outside urban areas during daytime at the weekend**, especially on Sunday.

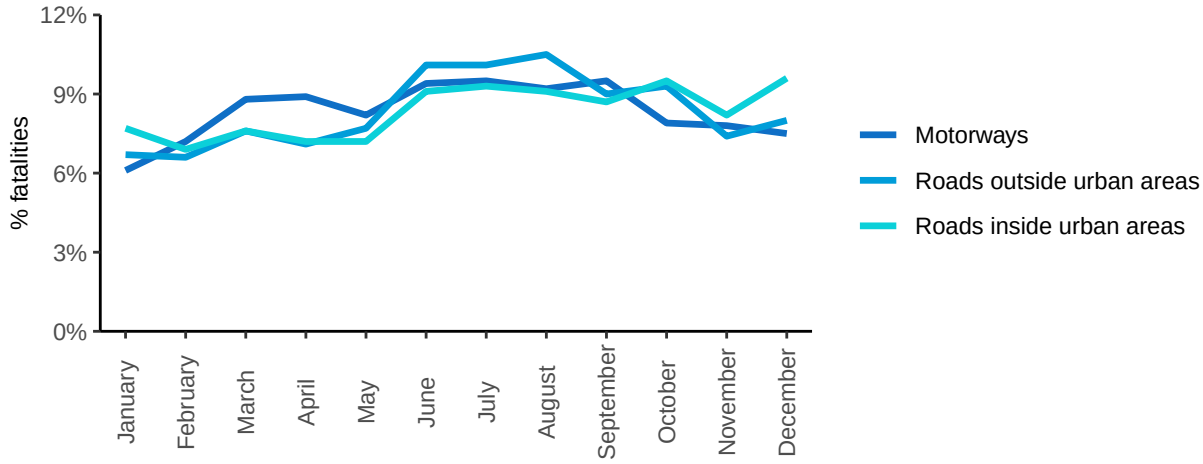
Figure 13. Distribution of fatalities on roads outside urban areas and all fatalities by day of the week and hour in the EU27 (2015-2020). Source: CARE



5.3 Month

The peak period for fatalities on roads outside urban areas is from June until September.

Figure 14. Monthly distribution of fatalities by type of road, in the EU27 (2019). Source: CARE



6 Location

6.1 Surface

Surface conditions were dry in the case of 75% of fatalities on roads outside urban areas and wet for 21% of those fatalities. For only 1% of fatalities were the surface conditions snowy, frosty, or icy. The same findings apply to all fatalities.

6.2 Light conditions

54% of fatalities on roads outside urban areas occur during daylight, which is slightly higher compared to all fatalities. The proportion of fatalities on roads outside urban areas during darkness doesn't differ from the proportion of all fatalities during darkness.

7 Notes

7.1 Definitions

The definitions below are taken from the CADAS Glossary and the UNECE Glossary.

CADAS Glossary: https://road-safety.transport.ec.europa.eu/system/files/2021-07/cadas_glossary_v_3_8.pdf

UNECE/ITF/Eurostat Glossary: https://www.unece.org/index.php?id=52120

Accident / crash
Definition: injury road accident, concerns an incident on a public road involving at least one moving vehicle and at least one casualty (person injured or killed). Note: the definition of "injury" varies considerably among EU countries thus affecting the reliability of cross country comparisons.

Fatalities
Definition: total number of persons fatally injured; correction factors applied when needed. Death within 30 days of the road crash, confirmed suicide and natural death are not included.

Victims
Total of fatalities, seriously injured and slightly injured and injured.

Road outside urban areas
Public road outside urban boundary signs, excluding motorways.

Working week – daytime
Monday to Friday 6.00 a.m. to 9.59 p.m.

Working week – night
Monday 10 p.m. to Tuesday 5.59 a.m.
Tuesday 10 p.m. to Wednesday 5.59 a.m.
Wednesday 10 p.m. to Thursday 5.59 a.m.
Thursday 10 p.m. to Friday 5.59 a.m.

Weekend – daytime
Saturday to Sunday 6.00 a.m. to 9.59 p.m.

Weekend – night
Friday 10 p.m. to Saturday 5.59 a.m.
Saturday 10 p.m. to Sunday 5.59 a.m.
Sunday 10 p.m. to Monday 5.59 a.m.

7.2 Data source

The main data source for this report is CARE (Community database on Accidents on the Roads in Europe). The database contains data obtained from national data sources, not only EU members but also from the UK (up to 2018) and the 4 EFTA countries (Switzerland, Norway, Iceland, and Liechtenstein). The data in the report were extracted on 6 September 2021. As the database is not complete for all countries and all years, additional data were provided by the European Commission in order to be able to calculate the general total for fatalities for the EU27.

7.3 Small cells

Absolute numbers of fatalities can be very small for small countries, which can strongly influence trend indicators and other derived indicators such as mortality. Care should be taken when interpreting these numbers. When commenting on the Figures, countries with small numbers were omitted.

7.4 Missing data

Some countries did not provide data for all years and/or all variables to the CARE database. When data are missing for specific combinations of years and countries, imputation is used to fill in the empty cells. Imputation results for individual countries are never published in the Facts and Figures reports, but they are aggregated to generate an imputed number at EU27 level. The following imputation method for individual countries is used:

- Values missing at the end of a time series are given the last known value in the series.
- Values missing at the beginning of a time series are given the first known value in the series.
- If values are missing in the middle of a time series, linear extrapolation is used.


Publications Office