



# European Road Safety Observatory

Facts and Figures - Gender - 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](https://road-safety.transport.ec.europa.eu/statistics-and-analysis/data-and-analysis/facts-and-figures_en)).

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|-----------------|---|
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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.<br>Date of extraction: 12 May 2022   |

## Disclaimer

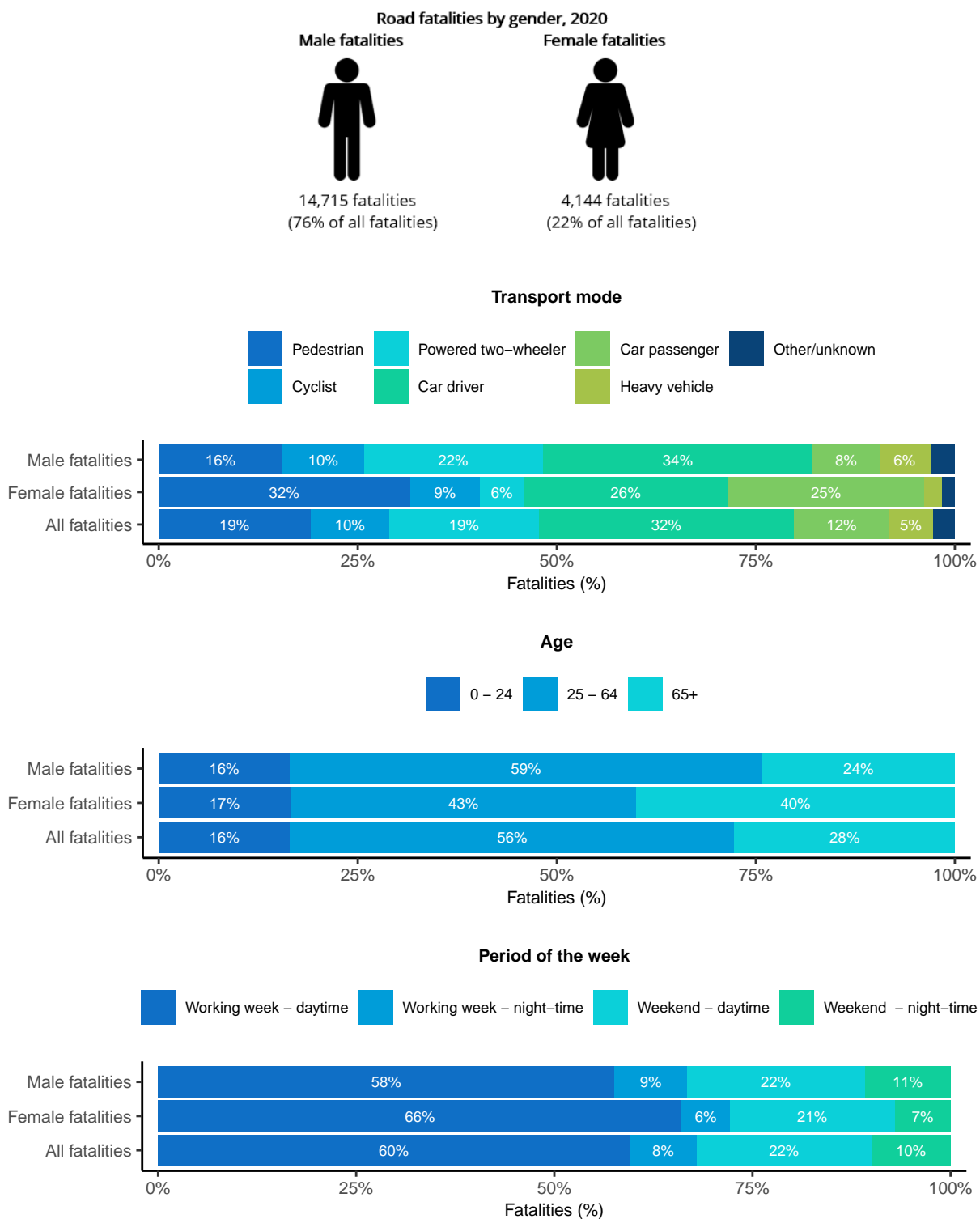
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## 1 Key Facts

Hier heb ik iets veranderd In this Facts and Figures report, road fatalities by gender are discussed. All differences reported were derived from the available data, the statistical significance of the differences between values has not been tested.





## 2 Summary

EU-wide, 76% of people killed on the roads are male. The number of male road fatalities has decreased by 33% in the time period 2011-2020. The number of female road fatalities has decreased by 39%.

The share of serious injuries among males is higher compared to the share of serious injuries among females.

### **There are some noticeable differences for female road fatalities:**

- the proportion of pedestrians is twice as high compared to male fatalities, and the proportion of car passengers was three times as high. In contrast, the share of powered two-wheelers and heavy vehicles is proportionally lower for female fatalities.
- The proportion of elderly people (65+) is higher for female fatalities, while the share of those aged 25-64 years is lower for female fatalities.
- There are proportionally more female fatalities during the working week in daytime (this is noticeable during both the morning peak and the evening peak) and proportionally fewer female fatalities during the night-time (during both the working week and the weekend).
- Female fatalities happen proportionally more often on rural roads, and proportionally less often on urban roads compared to all fatalities.
- There are proportionally more female fatalities at junctions, and proportionally fewer female fatalities on road stretches.

**Both the male and female mortality rates (number of road fatalities per million inhabitants) were highest in Central and Eastern Europe.** Mortality is an important indicator, but does not take into account differences in the road safety performance across countries. In other words, the mortality for males or females may be high because the total mortality rate is high. Therefore, it is important to also look at the proportion or share of male fatalities within the total number of road fatalities. The share of male fatalities is highest in Southern Europe.

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**Basic definitions***Gender:*

On the basis of identification documents/ personal ID number or determined by the police. Gender is unknown (not registered) for 2% of all fatalities.

*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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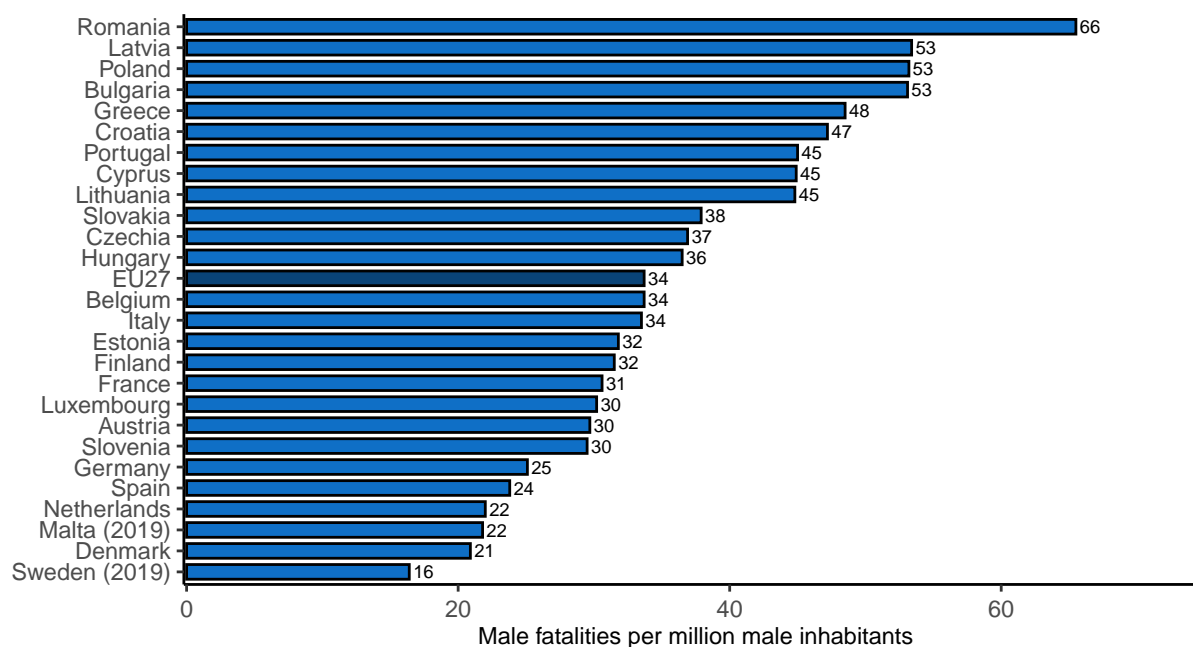
### 3 Main trends

#### 3.1 Mortality rate: number of road fatalities per million inhabitants

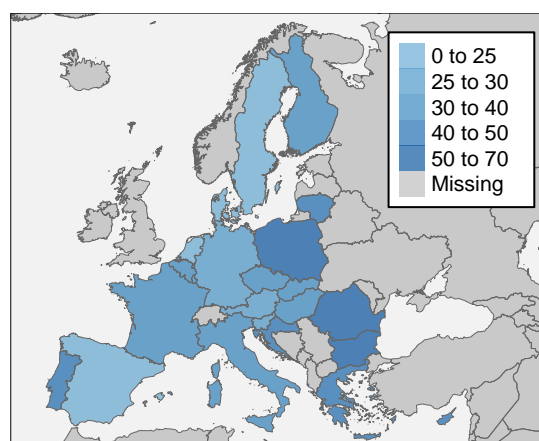
**The male mortality rate (number of male road fatalities per million male inhabitants) is highest in Central and Eastern Europe:** Romania, Latvia and Poland had the highest mortality rate. However, the mortality rate is also high in some West and South European countries such as Greece and Portugal. The lowest mortality rate is found in Sweden and Denmark.

**The female mortality rate (number of female road fatalities per million female inhabitants) is also high in Central and Eastern Europe,** Latvia and Romania have the highest mortality rate. In these two countries, there is both a high male and female mortality rate. The lowest female mortality rate can be found in Sweden. Greece, which has a high male mortality rate, has one of the lowest female mortality rates.

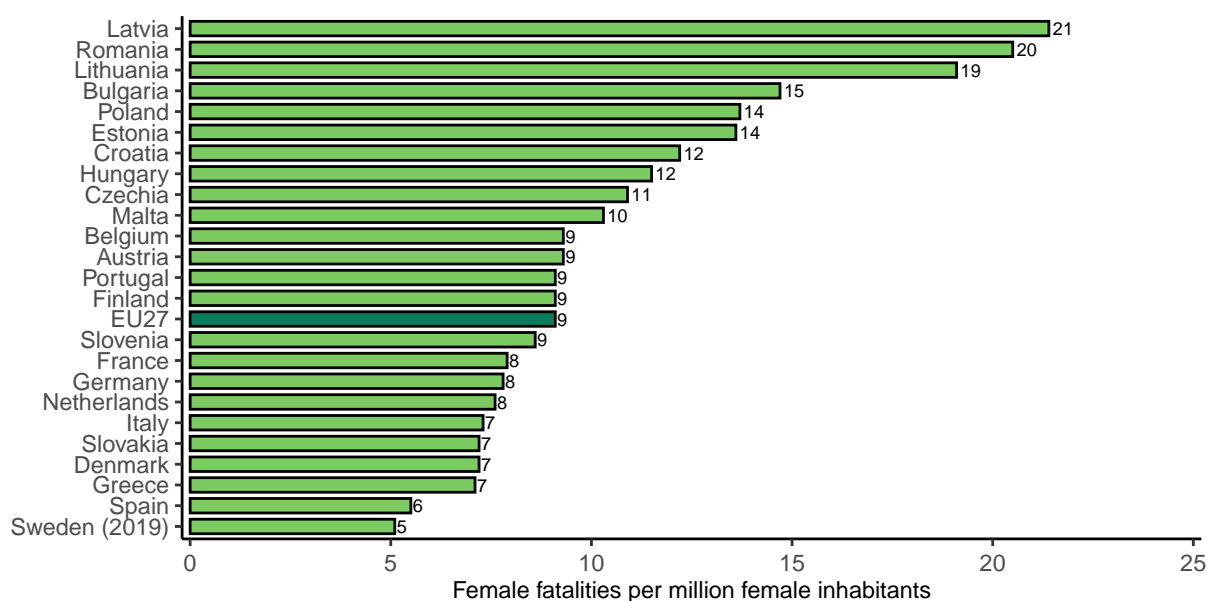
**Figure 1.** Male fatalities per million male inhabitants per country in the EU27 (2020). Source: CARE, EUROSTAT



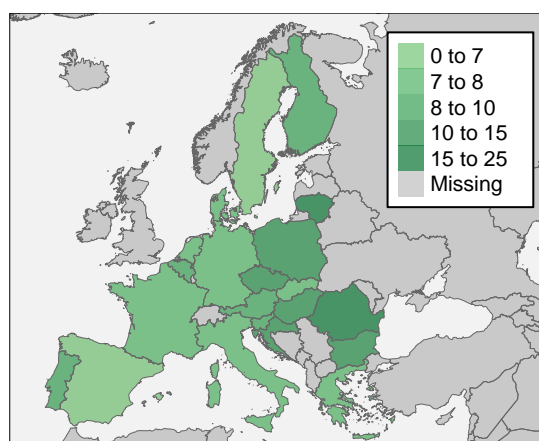
Note: Ireland is not included in the Figure because there is no data for this country after 2016



© EuroGeographics for the administrative boundaries

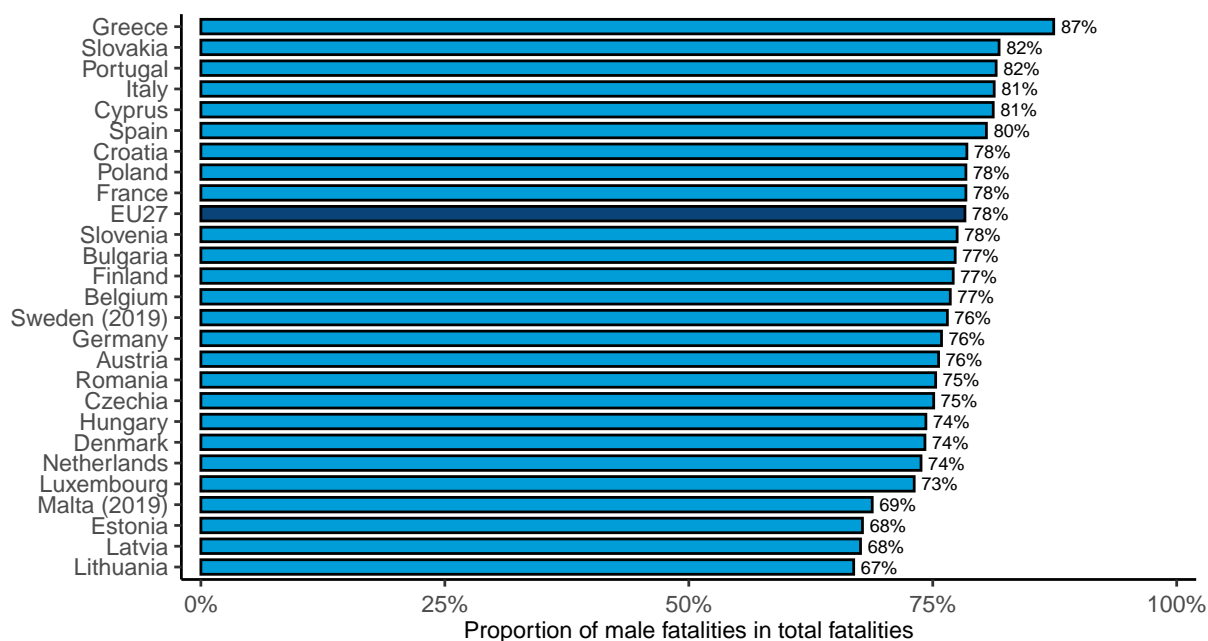
**Figure 2.** Female fatalities per million female inhabitants per country in the EU27 (2020). Source: CARE, EUROSTAT**Notes:**

- Ireland is not included in the Figure because there is no data for this country after 2016
- Cyprus, Luxembourg and Malta are not included in the Figure because of small numbers

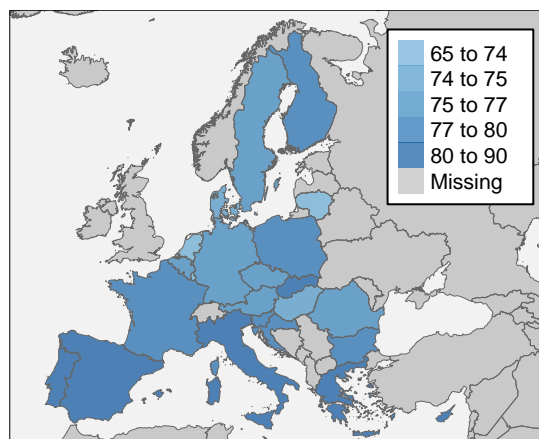


### 3.2 Number of male road fatalities as a proportion of total fatalities

Mortality is an important indicator, but does not take into account differences in the general state of road safety across countries. **The share of male road fatalities is highest in Southern Europe:** Greece, Portugal and Italy have a share of male fatalities of 80% or more. European Member States with a high male mortality rate have a low share of male fatalities (such as Latvia).

**Figure 3.** Proportion of male fatalities in the total number of fatalities, per country in the EU27 (2020). Source: CARE

Note: Ireland is not included in the Figure because there is no data for this country after 2016



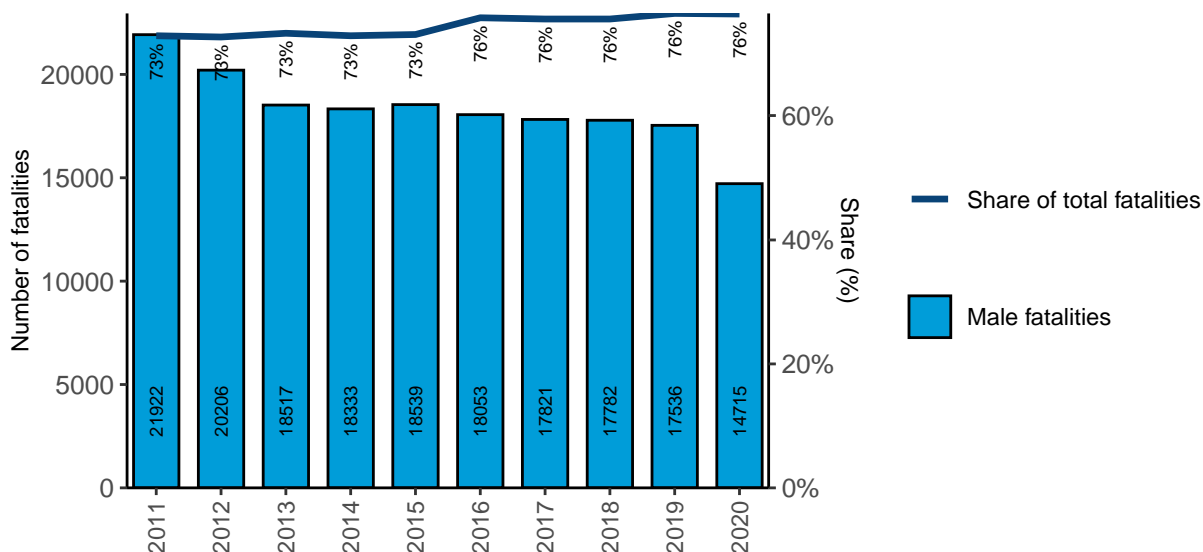
### 3.3 Trend in the number of road fatalities

The number of male fatalities has decreased by 33% in the time period 2011-2020, which is very similar to the overall decrease in road fatalities (-34%). The share of male fatalities has increased slightly in this time period, from 73% in 2011 to 76% in 2020.

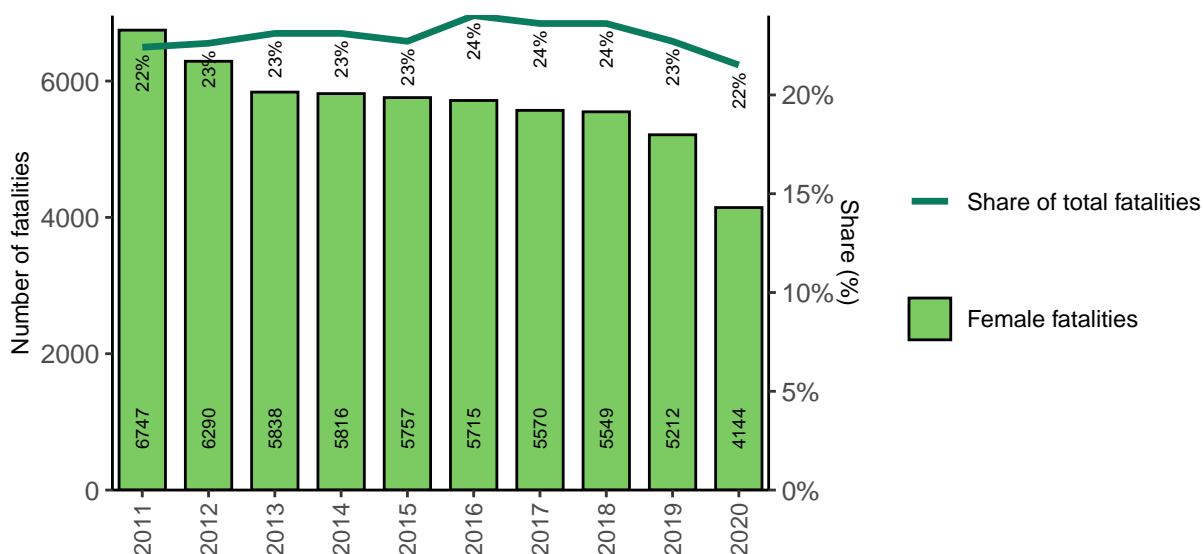
**The number of female road fatalities has decreased more sharply over the same time period.**

There is a decrease of 39%, which is slightly more than the overall decrease in fatalities. The share of female fatalities increased slightly until 2018. From 2019, the share in the total number of fatalities decreased again, so that by 2020 it was at the same level as in 2011.

**Figure 4.** Annual number of male fatalities, and their share in the total number of fatalities in the EU27 (2011-2020).  
Source: CARE



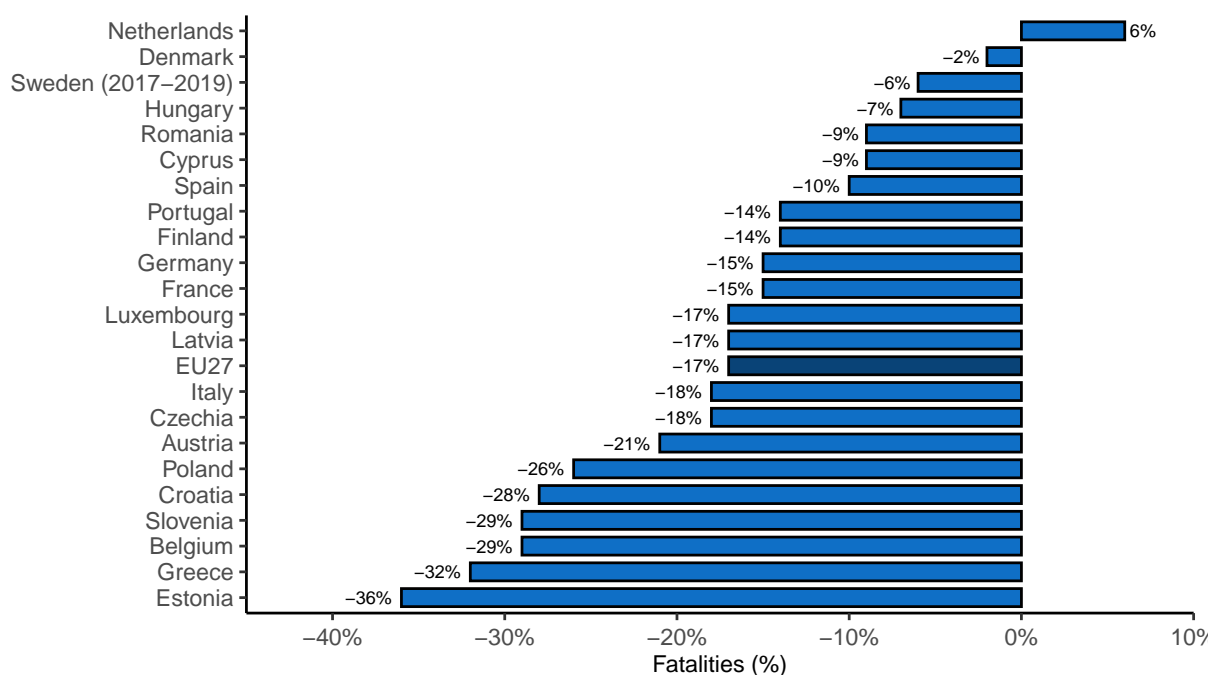
**Figure 5.** Annual number of female fatalities, and their share in the total number of fatalities in the EU27 (2011-2020).  
Source: CARE



This is also reflected when three year averages (2011-2013 versus 2018-2020) are compared. The percentage change for male fatalities is 17%, while the percentage change for female fatalities is 21%. This again shows that the number of female fatalities is decreasing faster than the number of male fatalities.

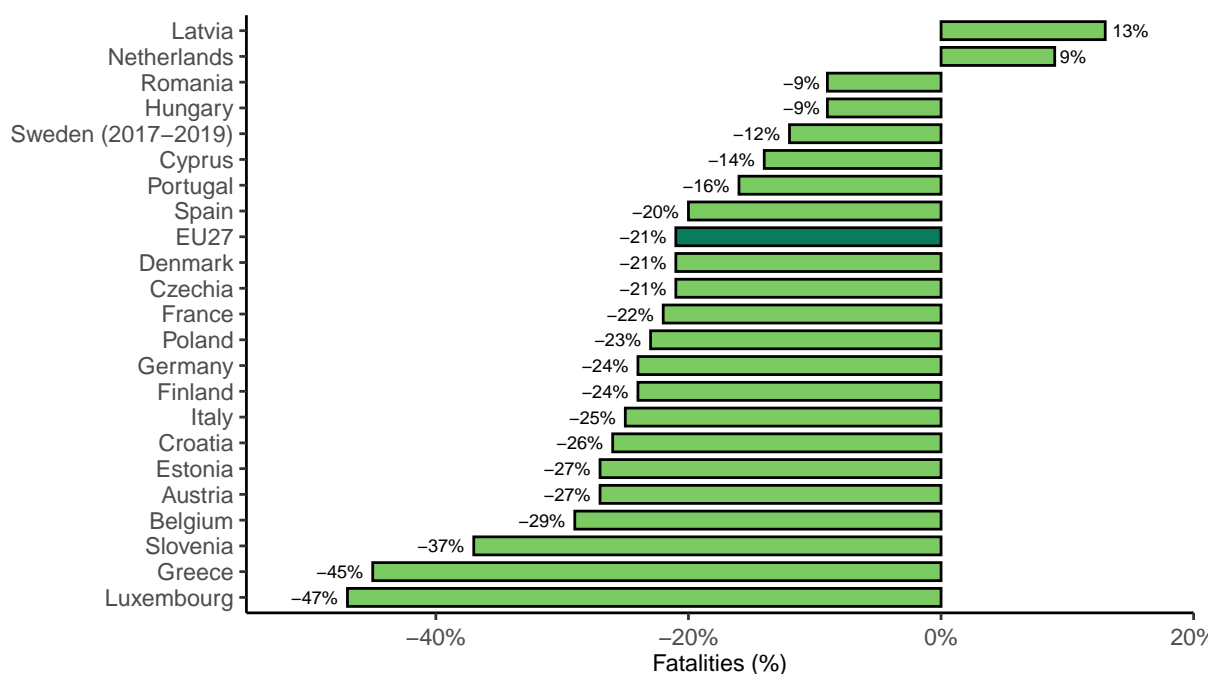
In the Netherlands, the number of both male and female fatalities has increased in the last decade. There is also an increase in the number of female fatalities in Latvia. In several countries, such as Greece, Slovenia, Belgium, Austria and Croatia, both the number of male and female fatalities has decreased more than the EU average. There is a large decrease in female fatalities in Luxembourg (in this country, the decrease in the number of male fatalities is equal to the EU average) and Greece.

**Figure 6.** Percentage change in the number of male fatalities per country in the EU27 (2011-2013 and 2018-2020). Source: CARE



Note: Bulgaria, Ireland, Lithuania, Malta and Slovakia are not included in the Figure because these countries have missing values in the time series 2011-2020

**Figure 7.** Percentage change in the number of female fatalities per country in the EU27 (2011-2013 and 2018-2020). Source: CARE



Note: Bulgaria, Ireland, Lithuania, Malta and Slovakia are not included in the Figure because these countries have missing values in the time series 2011-2020

**Table 1.** Number of and trend in male fatalities per country in the EU27 and EFTA (2011-2013 versus 2018-2020). Source: CARE

|                    | 2011         | 2018         | 2019         | 2020         | Trend 2018 - 2020 vs 2011 - 2013 | Miniplot: trend since 2010 |
|--------------------|--------------|--------------|--------------|--------------|----------------------------------|----------------------------|
| <b>Austria</b>     | 385          | 311          | 302          | 260          | -21%                             |                            |
| <b>Belgium</b>     | 675          | 442          | 500          | 383          | -29%                             |                            |
| <b>Bulgaria</b>    | -            | 451          | 466          | 358          |                                  |                            |
| <b>Croatia</b>     | 334          | 251          | 238          | 186          | -28%                             |                            |
| <b>Cyprus</b>      | 58           | 39           | 40           | 39           | -9%                              |                            |
| <b>Czechia</b>     | 574          | 482          | 467          | 389          | -18%                             |                            |
| <b>Denmark</b>     | 161          | 122          | 156          | 121          | -2%                              |                            |
| <b>Estonia</b>     | 74           | 47           | 35           | 40           | -36%                             |                            |
| <b>EU27</b>        | <b>21922</b> | <b>17782</b> | <b>17536</b> | <b>14715</b> | <b>-17%</b>                      |                            |
| <b>Finland</b>     | 211          | 176          | 164          | 172          | -14%                             |                            |
| <b>France</b>      | 3024         | 2491         | 2504         | 1989         | -15%                             |                            |
| <b>Germany</b>     | 2971         | 2480         | 2290         | 2063         | -15%                             |                            |
| <b>Greece</b>      | 920          | 563          | 580          | 506          | -32%                             |                            |
| <b>Hungary</b>     | 467          | 467          | 431          | 342          | -7%                              |                            |
| <b>Iceland</b>     | 8            | 12           | 5            | 7            |                                  |                            |
| <b>Ireland</b>     | 130          | -            | -            | -            |                                  |                            |
| <b>Italy</b>       | 3005         | 2673         | 2566         | 1947         | -18%                             |                            |
| <b>Latvia</b>      | 109          | 111          | 107          | 94           | -17%                             |                            |
| <b>Lithuania</b>   | -            | 121          | 138          | 117          |                                  |                            |
| <b>Luxembourg</b>  | 22           | 31           | 18           | 19           | -17%                             |                            |
| <b>Malta</b>       | -            | 13           | 11           | -            |                                  |                            |
| <b>Netherlands</b> | 384          | 419          | 412          | 380          | 6%                               |                            |
| <b>Norway</b>      | 118          | 82           | 78           | 75           | -35%                             |                            |
| <b>Poland</b>      | 3243         | 2102         | 2220         | 1954         | -26%                             |                            |
| <b>Portugal</b>    | 675          | 557          | 505          | 437          | -14%                             |                            |
| <b>Romania</b>     | 1545         | 1385         | 1416         | 1239         | -9%                              |                            |
| <b>Slovakia</b>    | -            | 197          | 204          | 202          |                                  |                            |
| <b>Slovenia</b>    | 113          | 70           | 83           | 62           | -29%                             |                            |
| <b>Spain</b>       | 1589         | 1399         | 1381         | 1103         | -10%                             |                            |
| <b>Sweden</b>      | 241          | 249          | 169          | -            |                                  |                            |
| <b>Switzerland</b> | 240          | 172          | 139          | 179          | -28%                             |                            |

Note:

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



**Table 2.** Number of and trend in female fatalities per country in the EU27 and EFTA (2011-2013 versus 2018-2020). Source: CARE

|                    | 2011        | 2018        | 2019        | 2020        | Trend 2018 - 2020 vs 2011 - 2013 | Miniplot: trend since 2010 |
|--------------------|-------------|-------------|-------------|-------------|----------------------------------|----------------------------|
| <b>Austria</b>     | 138         | 98          | 114         | 84          | -27%                             |                            |
| <b>Belgium</b>     | 188         | 153         | 135         | 109         | -29%                             |                            |
| <b>Bulgaria</b>    | -           | 158         | 162         | 105         |                                  |                            |
| <b>Croatia</b>     | 84          | 66          | 59          | 51          | -26%                             |                            |
| <b>Cyprus</b>      | 13          | 10          | 12          | 9           |                                  |                            |
| <b>Czechia</b>     | 187         | 151         | 131         | 118         | -21%                             |                            |
| <b>Denmark</b>     | 59          | 49          | 43          | 42          | -21%                             |                            |
| <b>Estonia</b>     | 27          | 20          | 17          | 19          | -27%                             |                            |
| <b>EU27</b>        | <b>6747</b> | <b>5549</b> | <b>5212</b> | <b>4144</b> | <b>-21%</b>                      |                            |
| <b>Finland</b>     | 81          | 63          | 47          | 51          | -24%                             |                            |
| <b>France</b>      | 939         | 755         | 733         | 549         | -22%                             |                            |
| <b>Germany</b>     | 1038        | 795         | 755         | 655         | -24%                             |                            |
| <b>Greece</b>      | 221         | 137         | 108         | 78          | -45%                             |                            |
| <b>Hungary</b>     | 169         | 163         | 169         | 117         | -9%                              |                            |
| <b>Iceland</b>     | 4           | 6           | 1           | 1           |                                  |                            |
| <b>Ireland</b>     | 56          | -           | -           | -           |                                  |                            |
| <b>Italy</b>       | 855         | 661         | 607         | 448         | -25%                             |                            |
| <b>Latvia</b>      | 8           | 37          | 25          | 44          | 13%                              |                            |
| <b>Lithuania</b>   | -           | 51          | 48          | 57          |                                  |                            |
| <b>Luxembourg</b>  | 11          | 5           | 4           | 7           |                                  |                            |
| <b>Malta</b>       | -           | 5           | 5           | -           |                                  |                            |
| <b>Netherlands</b> | 162         | 176         | 170         | 134         | 9%                               |                            |
| <b>Norway</b>      | 50          | 26          | 30          | 18          | -47%                             |                            |
| <b>Poland</b>      | 938         | 757         | 684         | 535         | -23%                             |                            |
| <b>Portugal</b>    | 216         | 143         | 182         | 99          | -16%                             |                            |
| <b>Romania</b>     | 473         | 482         | 448         | 405         | -9%                              |                            |
| <b>Slovakia</b>    | -           | 63          | 65          | 40          |                                  |                            |
| <b>Slovenia</b>    | 28          | 21          | 19          | 18          | -37%                             |                            |
| <b>Spain</b>       | 465         | 407         | 370         | 265         | -20%                             |                            |
| <b>Sweden</b>      | 78          | 75          | 52          | -           |                                  |                            |
| <b>Switzerland</b> | 80          | 61          | 48          | 48          | -37%                             |                            |

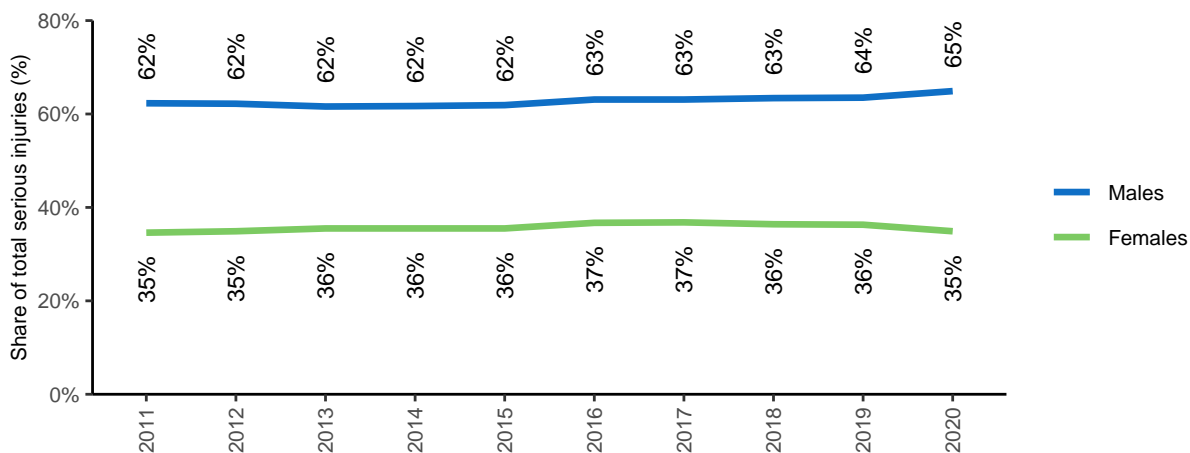
Note:

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

### 3.4 Trend in the number of serious injuries

The proportion of serious injuries of males is much higher than the proportion of serious injuries of females (65% versus 35%). Both the proportion of male and female serious injuries have remained constant in the time period 2011-2020.

**Figure 8.** Share of serious injuries for males and females 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

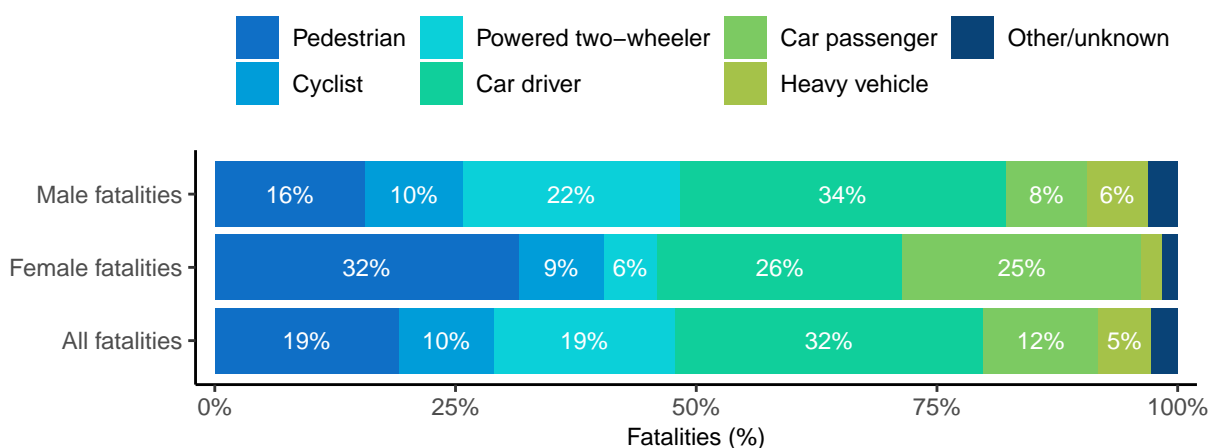
## 4 Road user

### 4.1 Transport mode

The distribution of transport modes among male road fatalities is very similar to the distribution for all fatalities. The proportion of pedestrians and car passengers are slightly lower, while the proportion of powered two-wheelers and car drivers are proportionally slightly higher compared to all fatalities.

The same can not be said for female road fatalities. **The proportion of pedestrians within female fatalities is twice as high as the proportion of pedestrians within male fatalities. The same is true for the share of car passengers:** 25% of female fatalities are car passengers, compared to only 8% of male fatalities. The proportion of powered two-wheelers and heavy vehicles are proportionally lower for female fatalities.

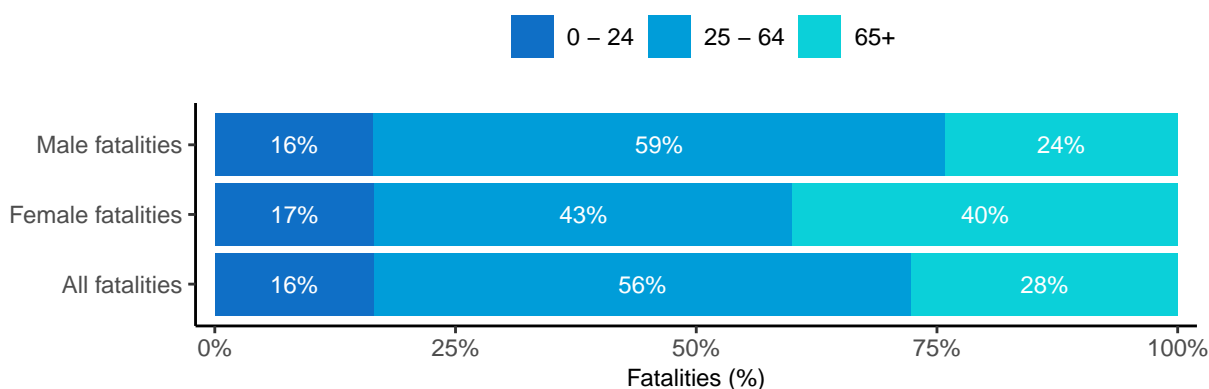
**Figure 9.** Distribution of fatalities by gender and all fatalities by transport mode in the EU27 (2020). Source: CARE



### 4.2 Age

The proportion of young people (aged 0-24) is equal for male fatalities, female fatalities and all fatalities. In contrast, **the proportion of elderly people (65+) is higher within female fatalities, while the proportion of middle aged people (25-64 years old) is lower within female fatalities.**

**Figure 10.** Distribution of motorcyclist and moped fatalities and all fatalities by age group in the EU27 (2020). Source: CARE & EUROSTAT

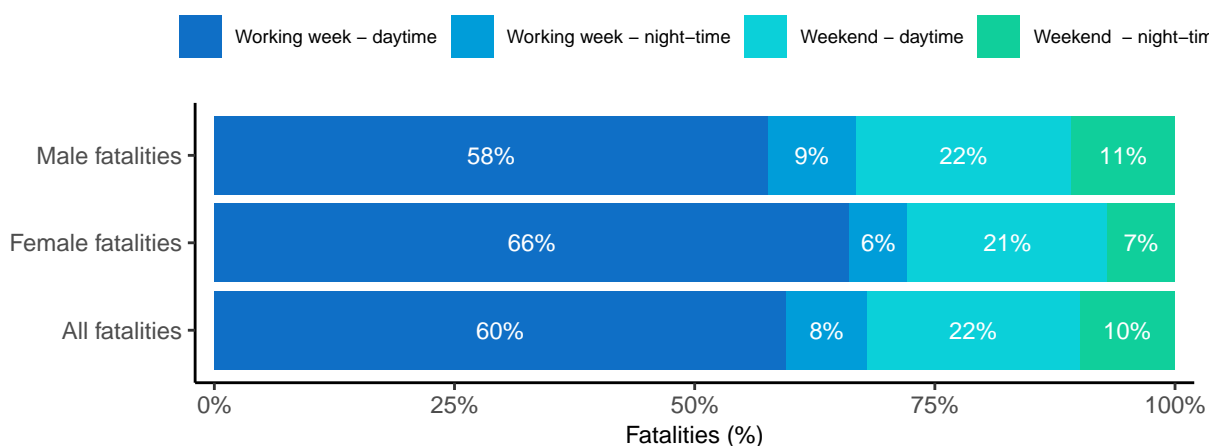


## 5 Time

### 5.1 Period of the week

The distribution according to period of the week is the same for male fatalities compared to all fatalities. However, **there are proportionally more female fatalities during the working week in daytime and proportionally less female fatalities during the night-time** (both during the working week and the weekend).

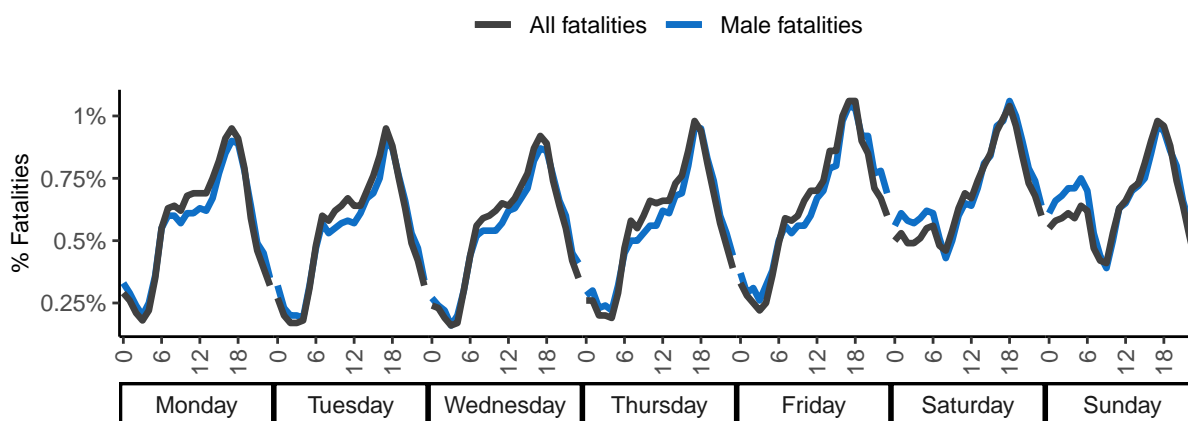
**Figure 11.** Distribution of fatalities by gender and all fatalities according to period of the week in the EU27 (2020). Source: CARE



### 5.2 Day of the week and hour

The distribution of male road fatalities and all road fatalities by hour and day of the week is compared. **The proportion of male fatalities is lower during the morning hours on weekdays, but higher during the weekend nights.**

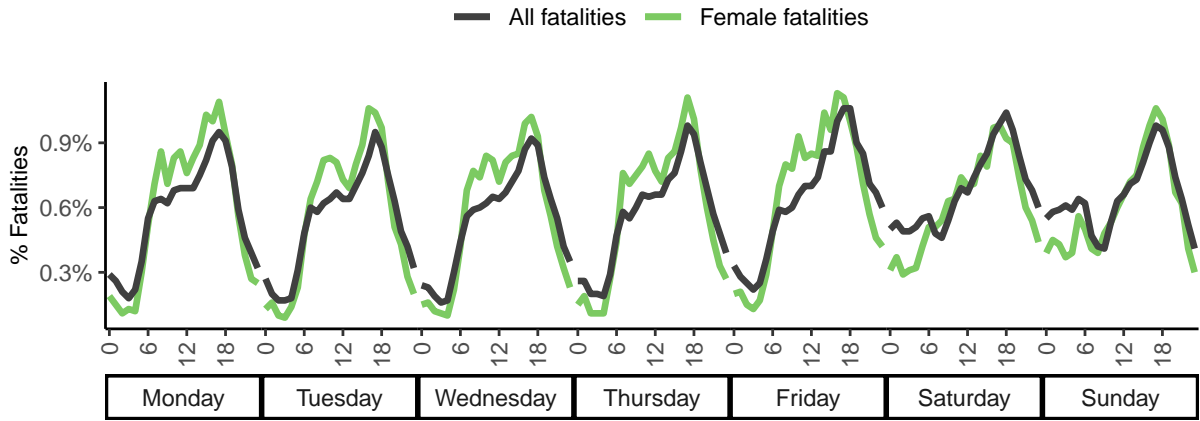
**Figure 12.** Distribution of male fatalities and all fatalities by day of the week and hour in the EU27 (2016-2020). Source: CARE



A comparison between female road fatalities and all road fatalities shows a higher proportion of female fatalities during the day. This is noticeable both during the morning peak and the evening

peak. However, the proportion of female fatalities is lower during the night-time, both on weekdays and during the weekends.

**Figure 13.** Distribution of female fatalities and all fatalities by day of the week and hour in the EU27 (2016-2020). Source: CARE

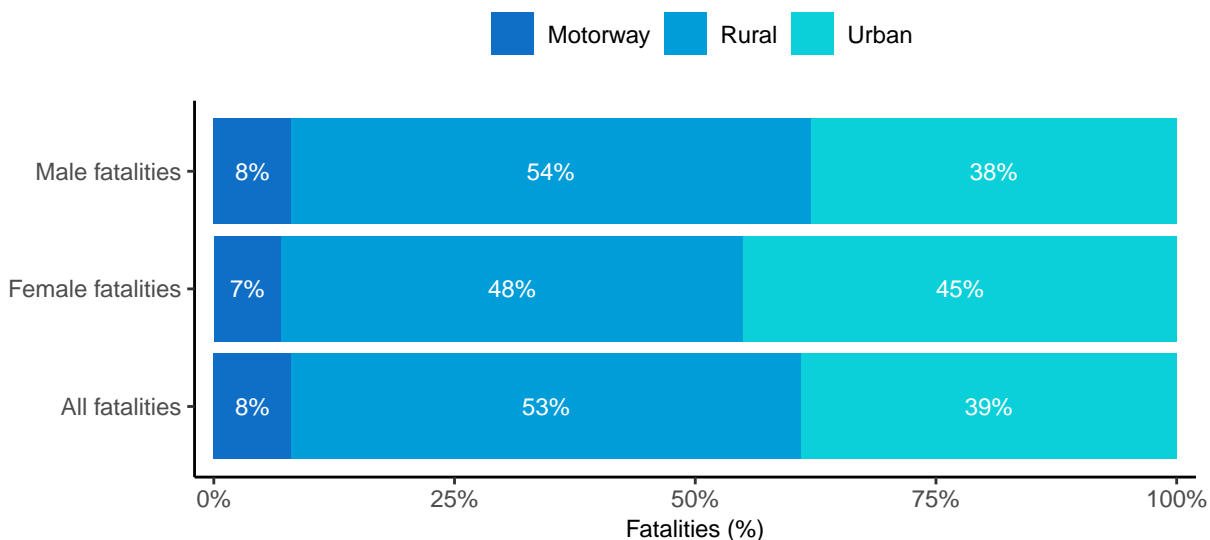


## 6 Location

### 6.1 Road type

Looking at the share of fatalities by road type, no large difference between female and male fatalities and all fatalities can be found. Female fatalities occur proportionally more often on rural roads, and proportionally less often on urban roads compared to all fatalities.

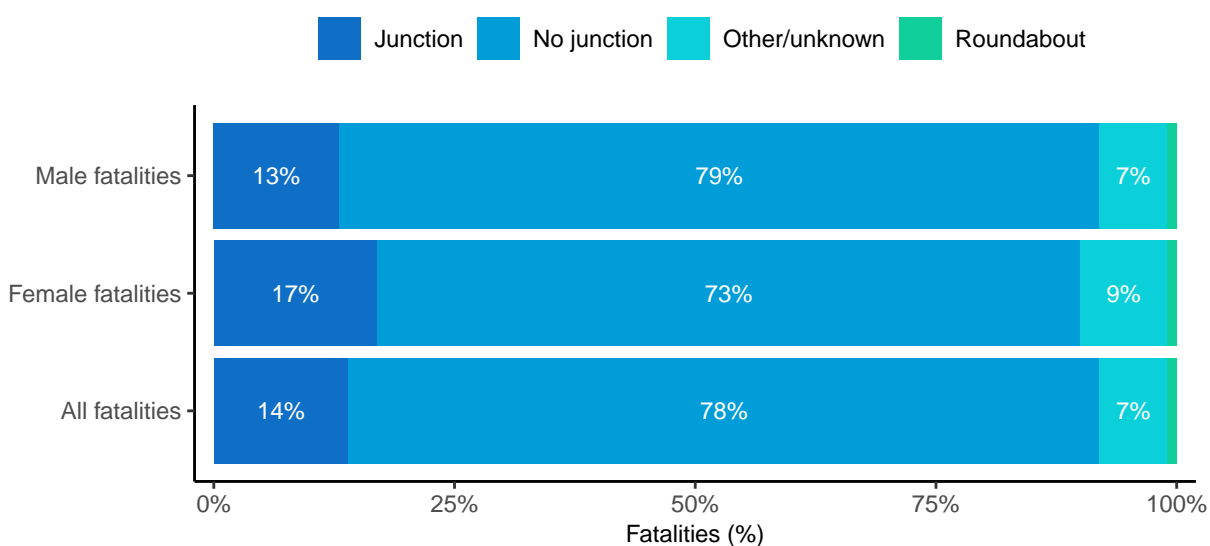
**Figure 14.** Distribution of fatalities by gender and all fatalities by road type in the EU27 (2020). Source: CARE



### 6.2 Junction type

Compared to all road fatalities, there are proportionally more female fatalities at junctions, and proportionally less female fatalities on road stretches.

**Figure 15.** Distribution of fatalities by gender and all fatalities by road type in the EU27 (2020). Source: CARE



## 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](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.

#### **Gender**

On the basis of identification documents/ personal ID number or determined by the police. Gender is unknown (not registered) for 2% of all fatalities.

#### **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.



