



European  
Commission



Facts and Figures  
**Rural Areas**



This document is part of a series of 20 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 most recent figures in this Facts and Figures report of 2024 refer to 2022. 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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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: 29 January 2024

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# 1. Key facts

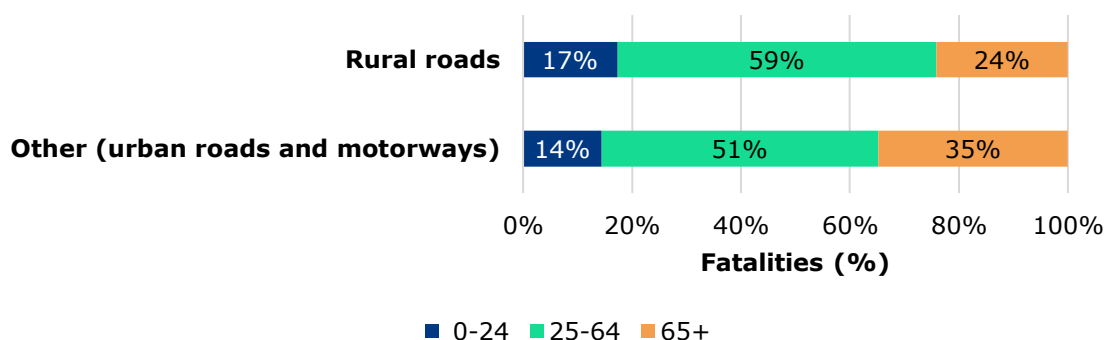
This Facts and Figures report looks at fatalities on rural roads, which are public roads outside urban boundary signs, excluding motorways. All differences reported were derived from the available data, the statistical significance of the differences between values has not been tested. A similar report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

## Fatalities on rural roads in the EU27, 2022

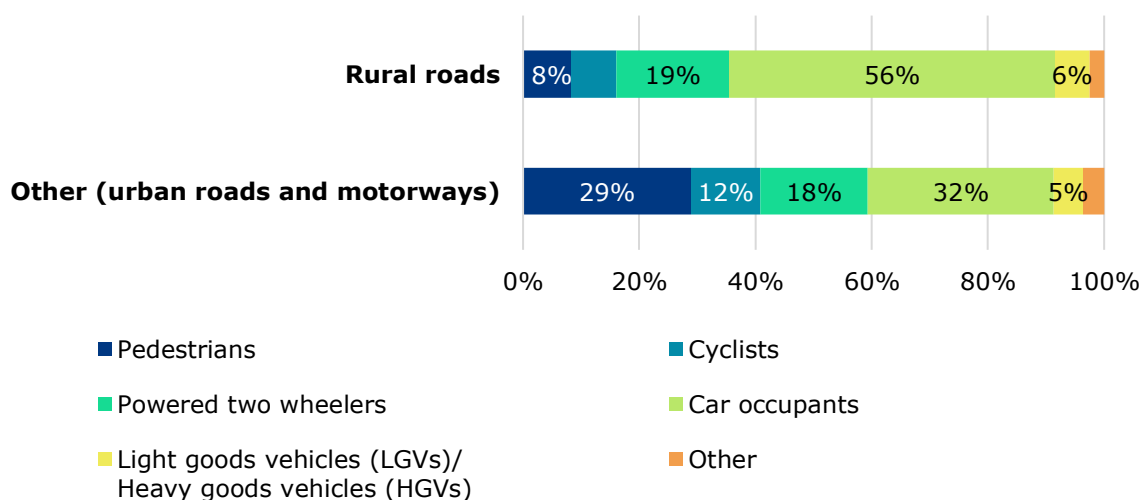


- 10,873 fatalities
- 53% of all road fatalities
- 24% decrease since 2012, compared to 18% decrease on other roads (urban roads and motorways)

### Age



### Transport modes



## 2. Summary

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In **2022, 53% of all road fatalities in the EU27 occurred on rural roads**. In the last decade **between 2012 and 2022**, the number of fatalities on rural roads **decreased by 24%, compared to 18% decrease on other roads (urban roads and motorways)**.

Road fatalities on rural roads also differ in other respects when compared to fatalities on other roads (urban roads and motorways):

- The proportion of **25–64-year-old fatalities on rural roads is higher (59% of all fatalities)** compared to fatalities on other roads (51%). The proportion of **65+ year old fatalities on rural roads is lower (24%)** compared to other roads (35%).
- **Vulnerable road users** (pedestrians, cyclists, mopeds and motorcycles) make up 68% of fatalities on urban roads, while this share is **only 36% for rural roads**.
- **Car occupants make up more than half (56%) of all fatalities on rural roads**. The proportion of fatalities among vulnerable road users (pedestrians, cyclists, mopeds and motorcycles) on rural roads is higher compared to motorways, but lower compared to urban roads.
- The **share of fatalities on rural roads** is proportionally **higher during the daytime at the weekend and lower at night-time on working weeks**.

The highest mortality rates (number of fatalities per million inhabitants) on rural roads in 2022 were observed in Latvia (50.8), Bulgaria (48.1) and Luxembourg (32.5). Cyprus (9.9) and Sweden (12.7) were the countries with the lowest mortality rate. The mortality rate is an important indicator but does not consider differences in the general road safety performance across countries. It is important to also look at the **proportion of fatalities on rural roads within the total number of road fatalities of a country**: this proportion in 2022 was **highest in Norway (78%), Ireland (72%), Finland (71%) and Latvia (70%)**.

---

### **COVID-19 pandemic**

The impact of the global COVID-19 pandemic on the CARE data for 2020 and 2021 is evident. Overall traffic volumes dropped sharply during the pandemic, which was associated with a significant drop in road traffic crashes and fatalities. However, the pattern was not homogeneous throughout the EU-27. For example, the number of fatalities actually increased in three Member States in 2020 during COVID-19. Therefore, the impact varied from country to country and there were also behavioural changes - for example there is some evidence of increased speeding. Further research is needed to understand the impact of the pandemic on road safety.

### **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 Absolute number of road fatalities

**Table 1.** Fatalities on rural roads per country in the EU27 and EFTA (2012-2022). Source: CARE

Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	LT*	ST*
Belgium	456	429	397	415	371	307	305	312	232	256	257	-44%	-18%
Bulgaria	348	354	371	379	428	420	339	351	284	322	329	-6%	-6%
Czechia	455	388	431	483	356	359	404	400	332	323	333	-27%	-17%
Denmark	100	120	122	100	120	110	101	121	97	74	95	-5%	-22%
Germany	2,151	1,934	2,019	1,997	1,853	1,795	1,867	1,758	1,592	1,498	1,593	-26%	-9%
Estonia	-	-	56	-	51	34	54	35	42	44	31	-	-11%
Ireland	112	145	127	121	124	107	78	101	-	-	-	-	-
Greece	432	336	338	352	352	337	272	268	225	272	-	-37%	2%
Spain	1,144	939	957	971	964	1,013	994	896	751	800	926	-19%	3%
France	2,404	2,098	2,150	2,175	2,188	2,156	2,015	1,943	1,497	1,732	1,933	-20%	-1%
Croatia	121	117	95	112	97	123	114	115	76	93	92	-24%	-20%
Italy	1,821	1,652	1,589	1,621	1,546	1,615	1,603	1,532	1,139	1,365	1,531	-16%	0%
Cyprus	17	12	8	14	10	10	15	17	15	13	9	-47%	-47%
Latvia	124	126	143	144	128	92	107	92	97	-	-	-	-
Lithuania	-	-	-	-	75	95	98	91	101	69	74	-	-19%
Luxembourg	20	24	23	28	19	16	26	16	15	18	21	5%	31%
Hungary	364	329	362	349	346	362	349	331	275	300	308	-15%	-7%
Malta	-	-	-	1	9	4	5	-	-	9	-	-	-
Netherlands	280	203	205	305	239	236	256	274	265	254	274	-2%	0%
Austria	330	309	271	310	288	262	279	283	229	230	231	-30%	-18%
Poland	1,875	1,736	1,680	1,629	1,701	1,523	1,559	1,662	1,352	1,299	1,081	-42%	-35%
Portugal	263	241	241	228	223	223	263	227	172	185	228	-13%	0%
Romania	779	677	651	720	698	694	660	608	537	629	578	-26%	-5%
Slovenia	68	56	53	66	62	44	51	61	45	57	31	-54%	-49%
Slovakia	-	-	-	-	156	153	155	168	134	138	148	-	-12%
Finland	186	193	159	189	188	173	172	169	152	160	-	-14%	-5%
Sweden	178	181	158	179	168	161	217	146	131	-	-	-	-
EU	14,316	12,887	12,838	13,173	12,760	12,424	12,358	11,983	9,896	10,469	10,873	-24%	-9%
Iceland	7	11	4	13	13	9	16	6	7	5	4	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	153	117	95	107	84	81	90	70	65	90	-	0%
Switzerland	151	133	138	113	109	118	111	98	105	102	133	-12%	36%

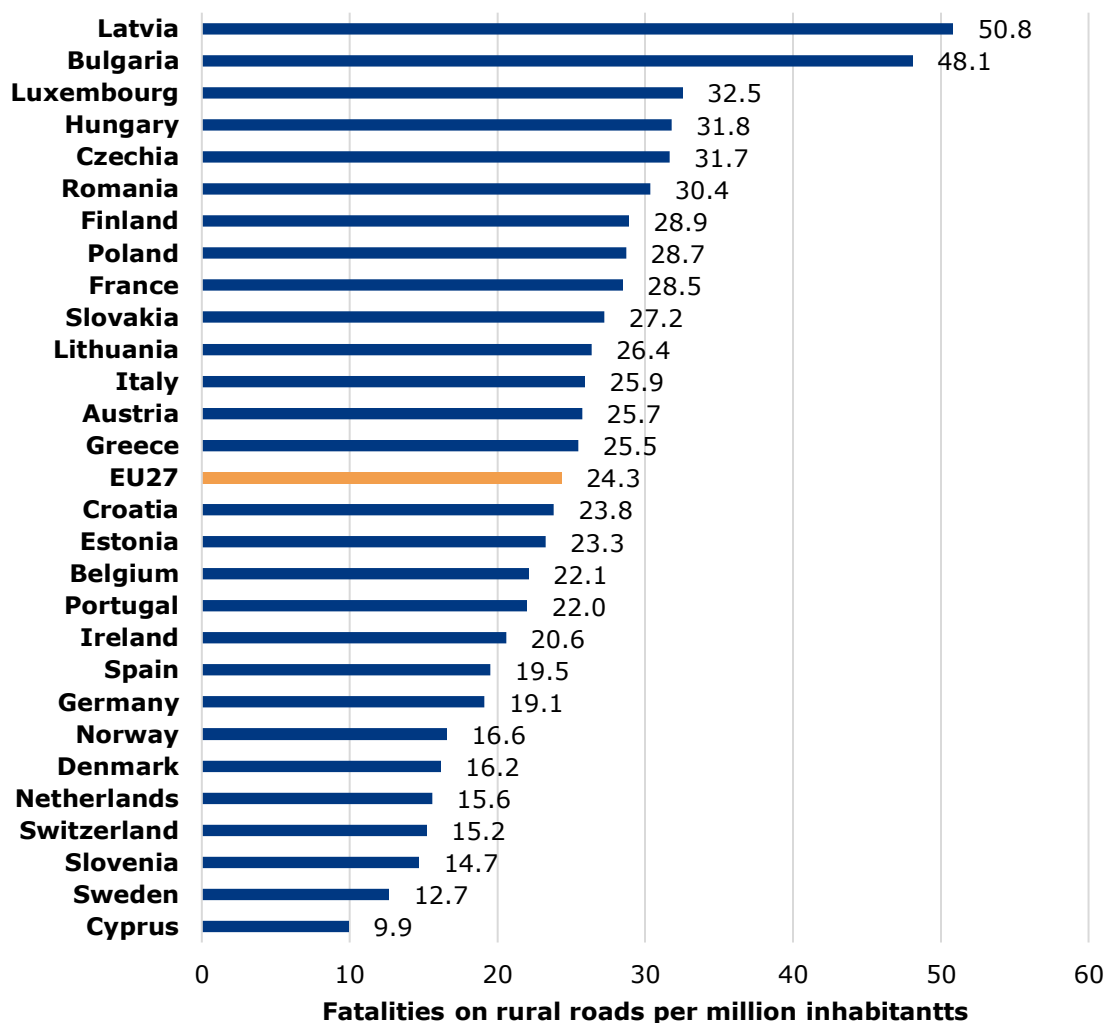
\*LT = Long term change of last available year over 2012.

\*ST = Short term change of last available year over 2019.

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

The mortality rate on rural roads is highest in Latvia (50.8) and Bulgaria (48.1). The mortality rate is lowest in Cyprus (9.9) and Sweden (12.7). When looking at the countries with the highest number of fatalities on rural roads (France, Germany, Italy and Poland), only Germany has a mortality rate below the European average.

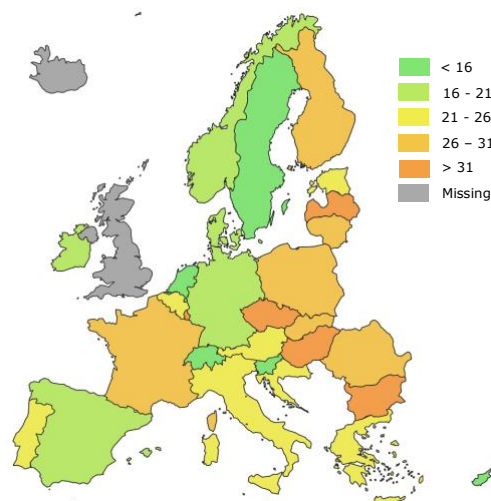
**Figure 1.** Fatalities on rural roads per million inhabitants per country in the EU27 and EFTA (2022). Source: CARE, EUROSTAT



Notes:

- Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- For Ireland, Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.





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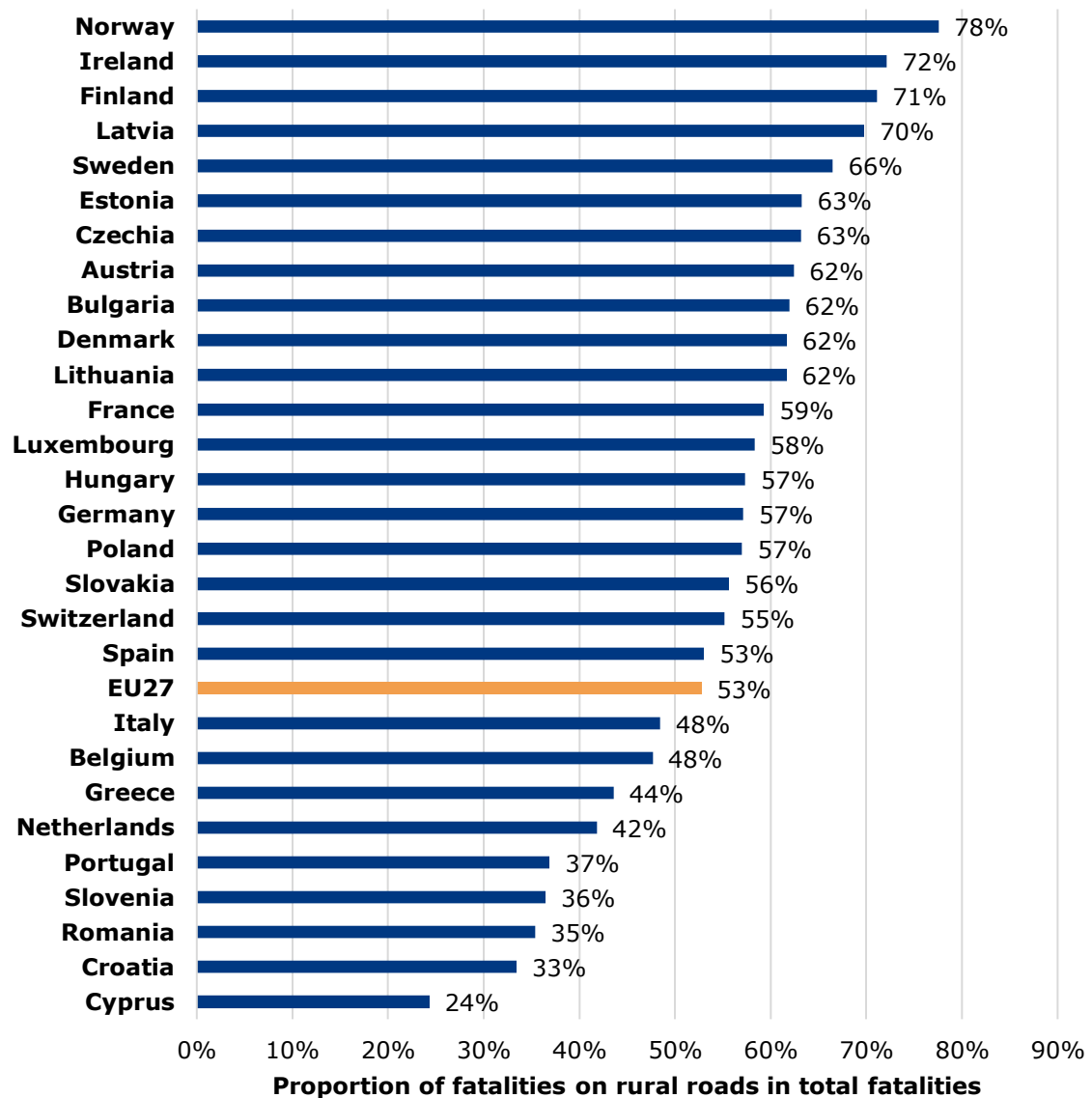
### 3.3 Share of fatalities on rural roads in the total number of road fatalities

The mortality rate is an important indicator but does not consider differences in the general road safety performance across countries. In other words, the mortality rate on rural roads 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 rural roads in the total number of road fatalities of a country.

**The proportion of fatalities on rural roads 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 rural roads while this proportion is highest in Norway and Ireland. Latvia has a high mortality rate on rural roads as well as a high proportion of fatalities on these roads within total road fatalities. The high fatality numbers on rural roads may be explained by the missing or hardly existing motorway network in these countries.

Differences between countries in the proportion of fatalities on rural roads 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.

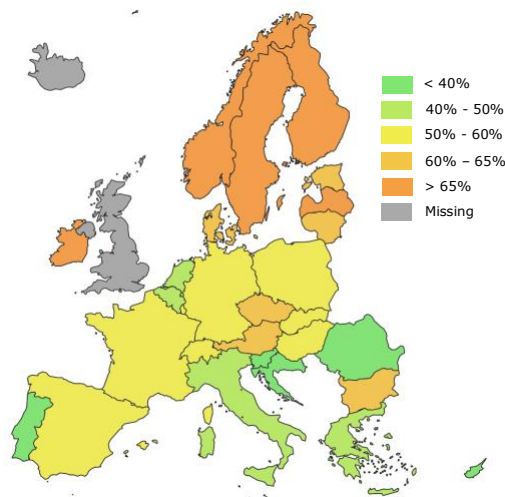
**Figure 2.** Proportion of fatalities on rural roads in total number of road fatalities, per country in the EU27 and EFTA (2022). Source: CARE



Notes:

- Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.

- For Ireland, Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.

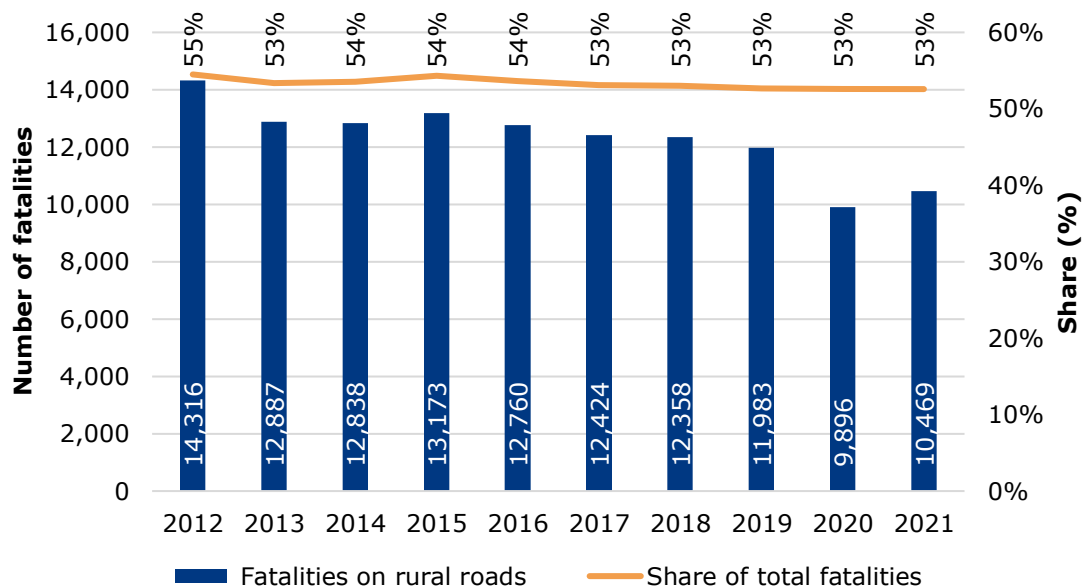


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### 3.4 Trend in the number of fatalities

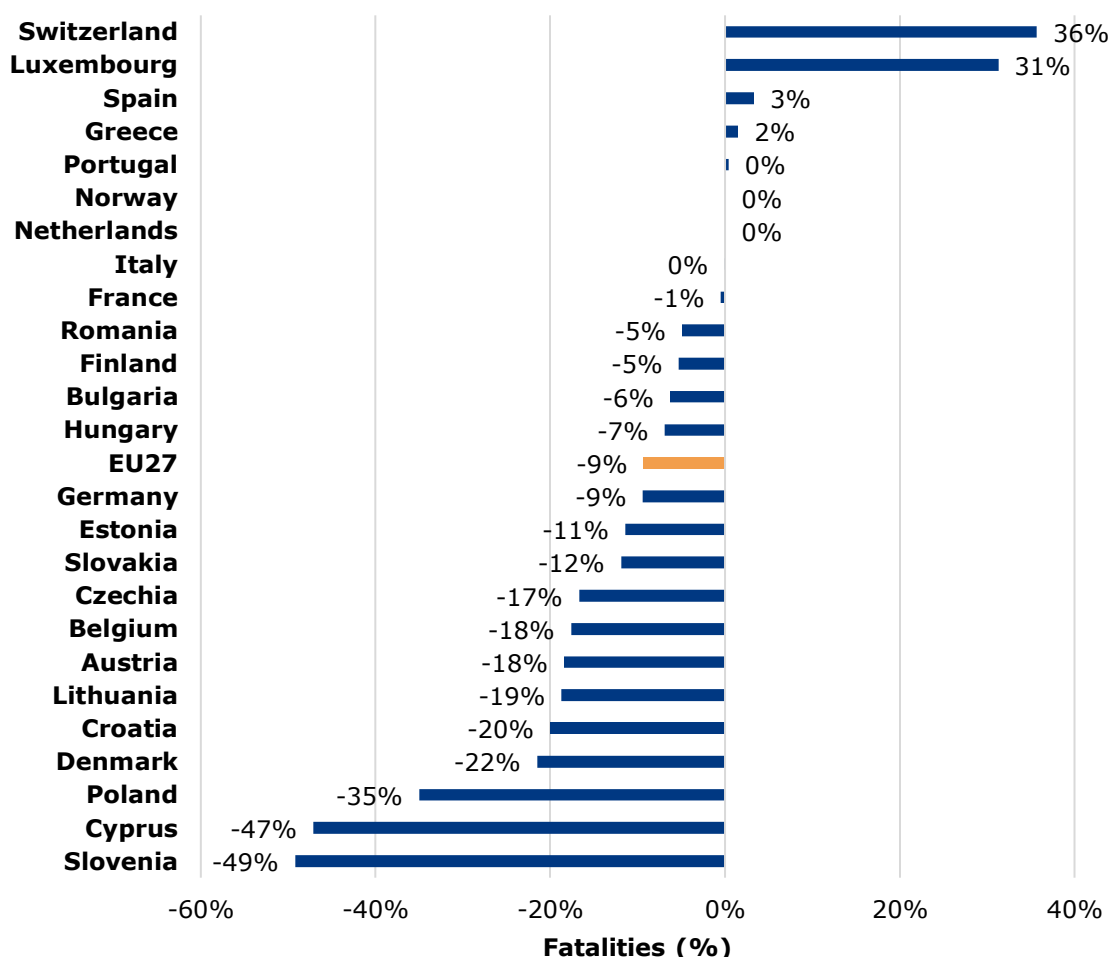
**In 2022, 53% of all road fatalities in the EU27 occurred on rural roads.** The relative proportion of fatalities on these roads has remained steady in the time period 2012-2022. **The number of fatalities on rural roads decreased by 24% between 2012 and 2022**, while the total number of fatalities on other roads (urban roads and motorways combined) decreased by 18% over the same time period.

**Figure 3.** Annual number of fatalities on rural roads and their share in the total number of fatalities in the EU27 (2012-2022). Source: CARE



**The number of fatalities on rural roads decreased in almost all European countries between 2019 and 2022, except for Spain (+3%), Greece (+2%) and Portugal, Norway, the Netherlands and Italy (0%). The increase in the number of fatalities on rural roads was the highest in Switzerland (+36%) and Luxembourg (+31%). Among the EU Member States with the highest number of fatalities on rural roads, Poland shows a slightly more pronounced decrease compared to the EU average, while the decline in France is slightly below the EU average. There was a notable decrease in the number of fatalities on rural roads in Slovenia (-49%) as well as in Cyprus (-47%).**

**Figure 4.** Percentage short term change in the number of fatalities on rural roads per country in the EU27 and EFTA (2019-2022). Source: CARE



Notes:

- Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the time series 2019-2022.
- Ireland, Latvia and Sweden are not included in the figure because there is no data on fatalities in the years 2021 and 2022.
- For Greece and Finland the percentage short term change in the figure is based on 2019-2021.
- For some countries with comparatively low numbers of fatalities, caution is required when interpreting the data due to considerable annual fluctuations.

**Table 2.** Number of and trend in fatalities on rural roads per country in the EU27 and EFTA (2012-2022). Source: CARE

	2012	2019	2020	2021	2022	ST*	Miniplot: trend since 2012
Belgium	456	312	232	256	257	-18%	
Bulgaria	348	351	284	322	329	-6%	
Czechia	455	400	332	323	333	-17%	
Denmark	100	121	97	74	95	-22%	
Germany	2,151	1,758	1,592	1,498	1,593	-9%	
Estonia	-	35	42	44	31	-11%	
Ireland	112	101	-	-	-	-	
Greece	432	268	225	272	-	2%	
Spain	1,144	896	751	800	926	3%	
France	2,404	1,943	1,497	1,732	1,933	-1%	
Croatia	121	115	76	93	92	-20%	
Italy	1,821	1,532	1,139	1,365	1,531	0%	
Cyprus	17	17	15	13	9	-47%	
Latvia	124	92	97	-	-	-	
Lithuania	-	91	101	69	74	-19%	
Luxembourg	20	16	15	18	21	31%	
Hungary	364	331	275	300	308	-7%	
Netherlands	280	274	265	254	274	0%	
Austria	330	283	229	230	231	-18%	
Poland	1,875	1,662	1,352	1,299	1,081	-35%	
Portugal	263	227	172	185	228	0%	
Romania	779	608	537	629	578	-5%	
Slovenia	68	61	45	57	31	-49%	
Slovakia	-	168	134	138	148	-12%	
Finland	186	169	152	160	-	-5%	
Sweden	178	146	131	-	-	-	
EU27	14,316	11,983	9,896	10,469	10,873	-9%	
Norway	-	90	70	65	90	0%	
Switzerland	151	98	105	102	133	36%	

\*ST = Short term change of last available year over 2019.

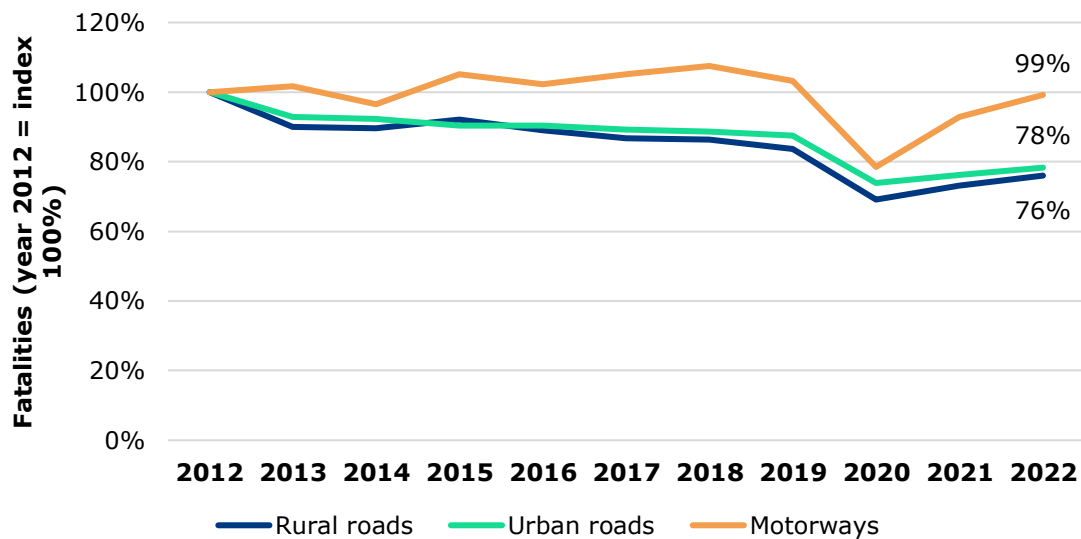
Notes:

- Malta, Iceland and Liechtenstein are not included in the table because there are fewer than 10 fatalities in the time series 2012-2022.

### 3.5 Comparison with other road types

The figure below shows the total number of fatalities by type of road over the time period 2012-2022. The **number of fatalities on rural roads has decreased the most (-24%) out of all road types**. The number of fatalities on motorways has decreased the least in this time period (-1%) and the number of fatalities on urban roads has decreased by 22%.

**Figure 5.** Trend of fatalities on motorways, rural roads and urban roads in the EU27 (2012-2022). Source: CARE

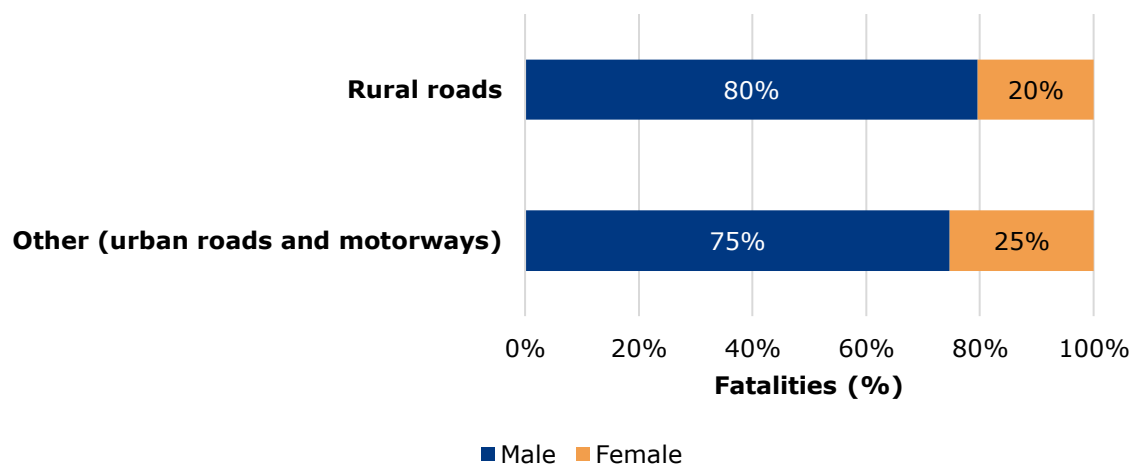


## 4. Road user

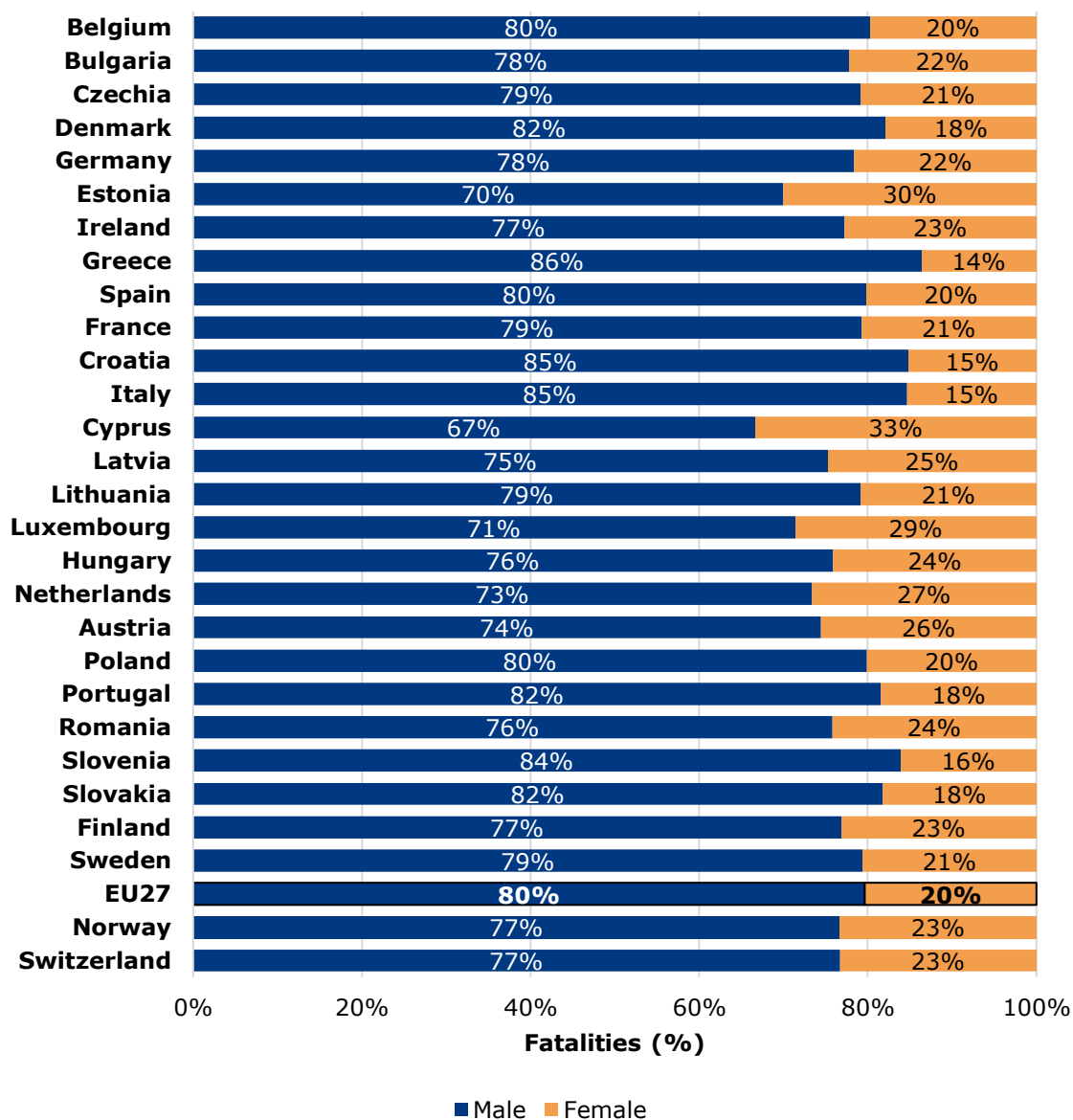
### 4.1 Gender

**80% of fatalities on rural roads in 2022 were male, compared to 75% of fatalities on other roads (urban roads and motorways).** A more detailed look at the data reveals differences between the EU Member States and the EFTA countries. The proportion of female fatalities on rural roads ranges between the countries from 14% to 33%.

**Figure 6.** Distribution of fatalities on rural roads and other roads (urban roads and motorways) by gender in the EU27 (2022). Source: CARE



**Figure 7.** Distribution of fatalities on rural roads by gender per country in the EU27 and EFTA (2022). Source: CARE

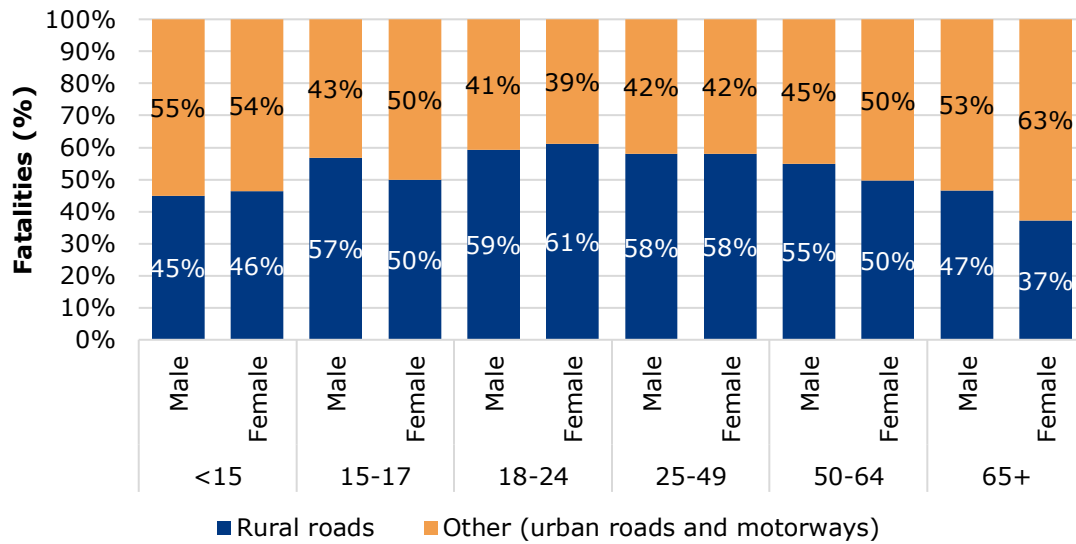


Notes:

- Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- For Ireland, Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.



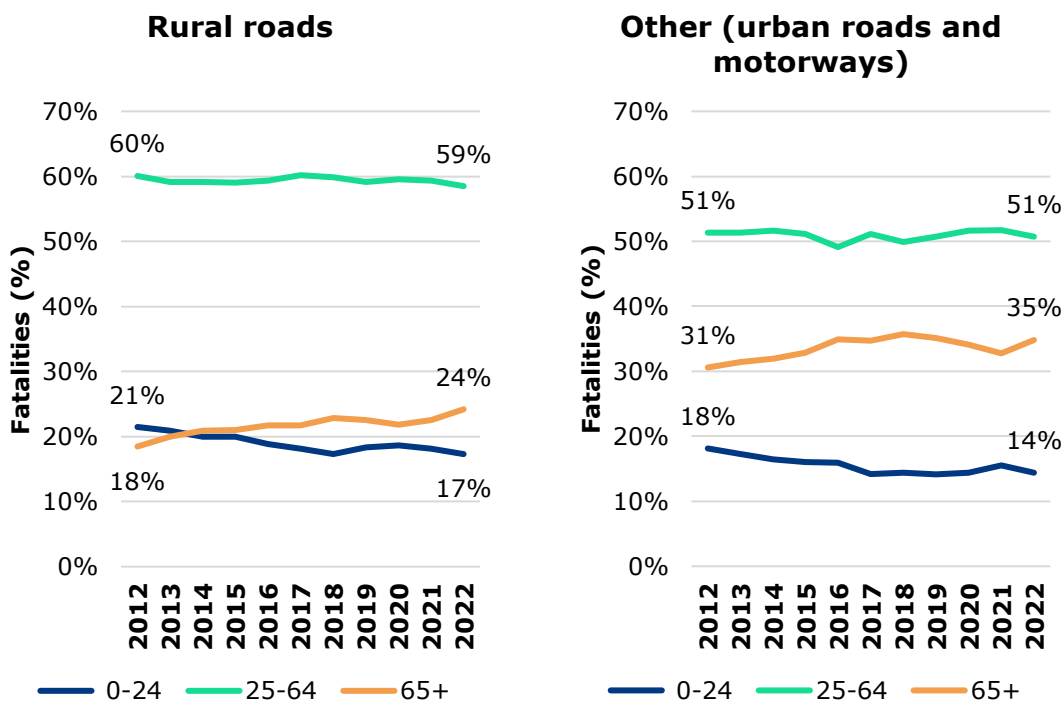
**Figure 8.** Distribution of fatalities on urban roads and other roads (urban roads and motorways) by age, gender and road type in the EU27 (2022). Source: CARE



## 4.2 Age

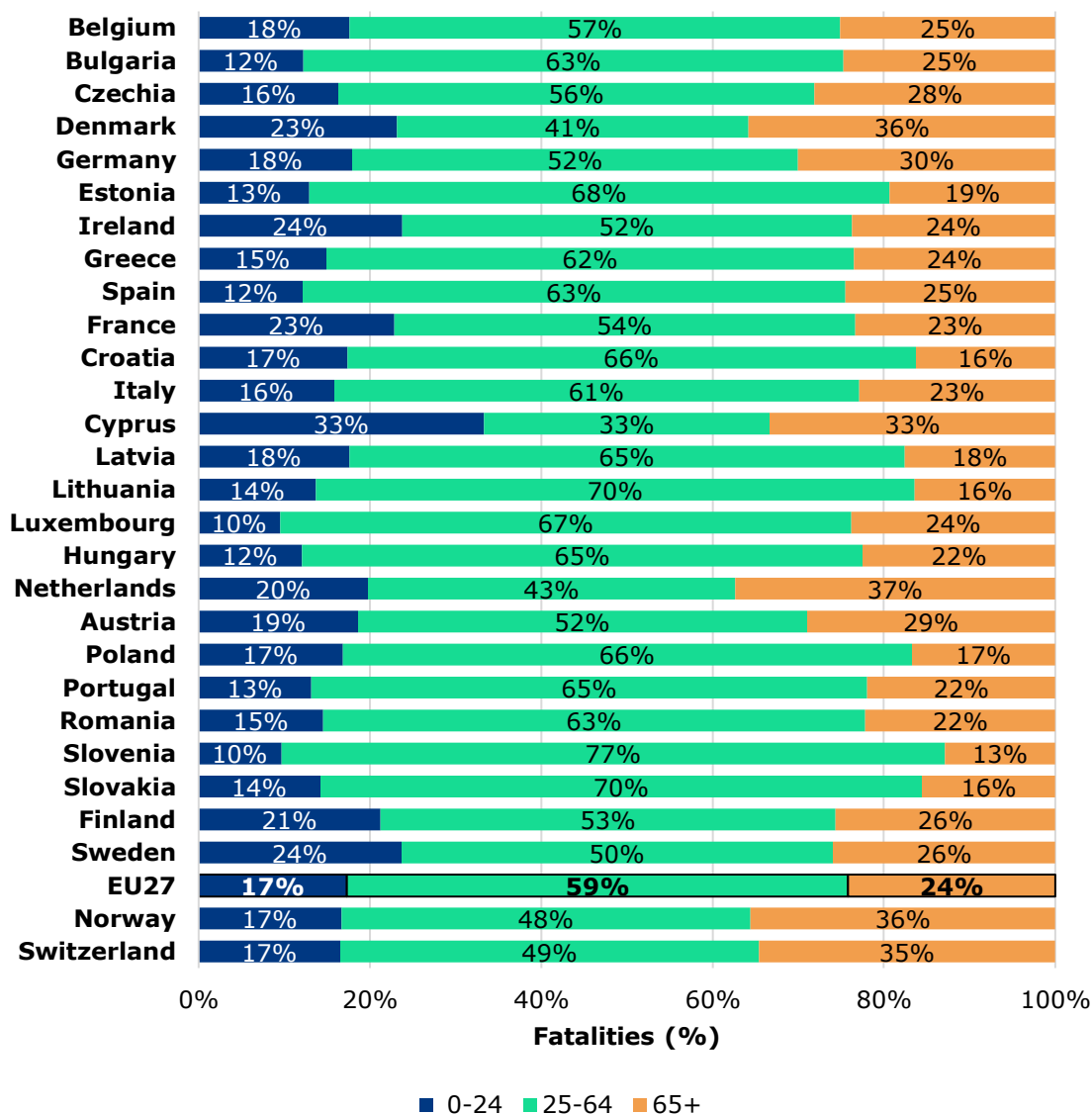
The age distribution of fatalities on rural roads differs from the age distribution of road fatalities on other roads (urban roads and motorways). **The proportion of 25–64-year-old fatalities is higher on rural roads compared to other roads.** In 2022, 59% of fatalities on rural roads were 25 to 64 years old, compared to 51% of fatalities on other roads (urban roads and motorways). **The proportion of fatalities aged 65 years or older in 2022 is 24% on rural roads, compared to 35% of fatalities on other roads (urban roads and motorways).**

**Figure 9.** Trend of fatalities on rural and other roads (urban roads and motorways) by age group in the EU27 (2012-2022). Source: CARE



**The 25-64 age group represents the highest proportion of fatalities on rural roads in all countries,** with an exception in Cyprus, where each age group (0-24, 25-64, 65+) amounts to one third. **The proportion of 65+ years old fatalities on rural roads ranges between 13% in Slovenia up to 37% in the Netherlands.** In some countries, such as Denmark, Cyprus, Norway, Switzerland and the Netherlands, the over-65-year-olds account for more than a third of all rural roads fatalities, despite the relatively low fatality rate on rural roads in these countries. **In Denmark, Ireland, France, Cyprus, the Netherlands, Finland and Sweden the proportion of 0-24-year-olds among road fatalities on rural roads is 20% or more.**

**Figure 10.** Distribution of fatalities on rural roads by age groups per country in the EU27 and EFTA (2022). Source: CARE



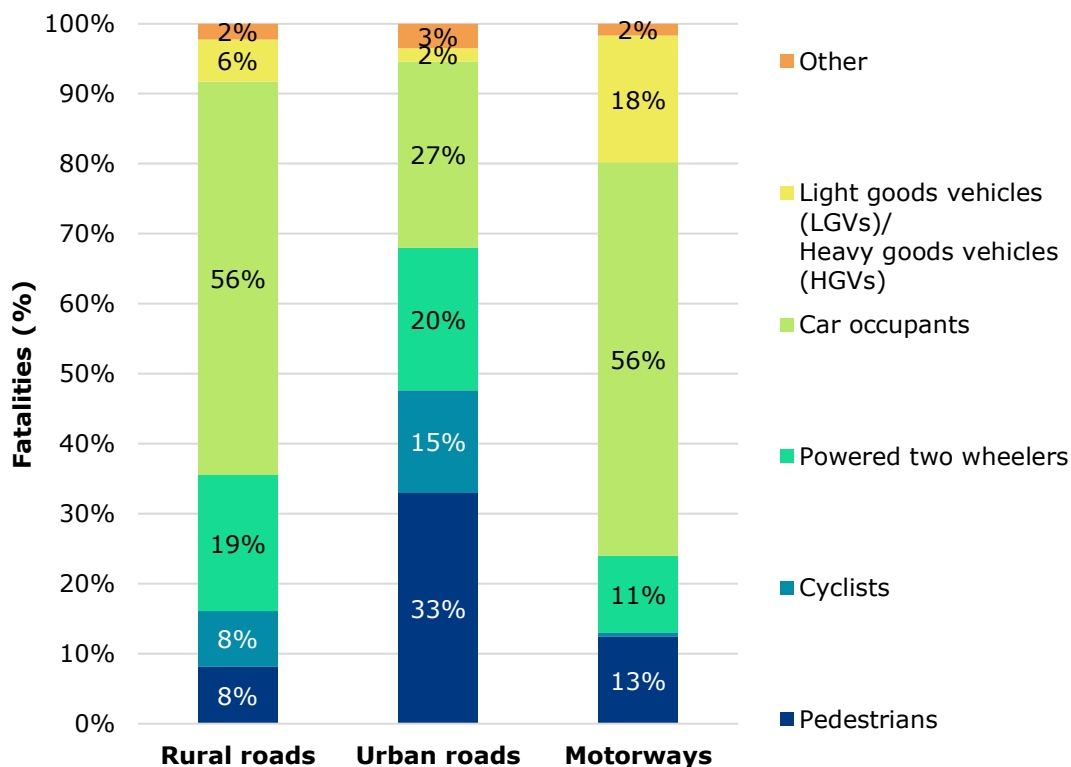
Notes:

- Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- For Ireland, Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.

### 4.3 Transport modes

**Car occupants make up more than half of all fatalities (56%) on rural roads.** The **proportion of fatalities among vulnerable road users** (pedestrians, cyclists and powered two wheelers (mopeds and motorcycles)) **on rural roads (35%)** is higher compared to motorways (24%), but lower compared to urban roads (68%).

**Figure 11.** Distribution of fatalities by transport mode and type of road in the EU27 (2022). Source: CARE

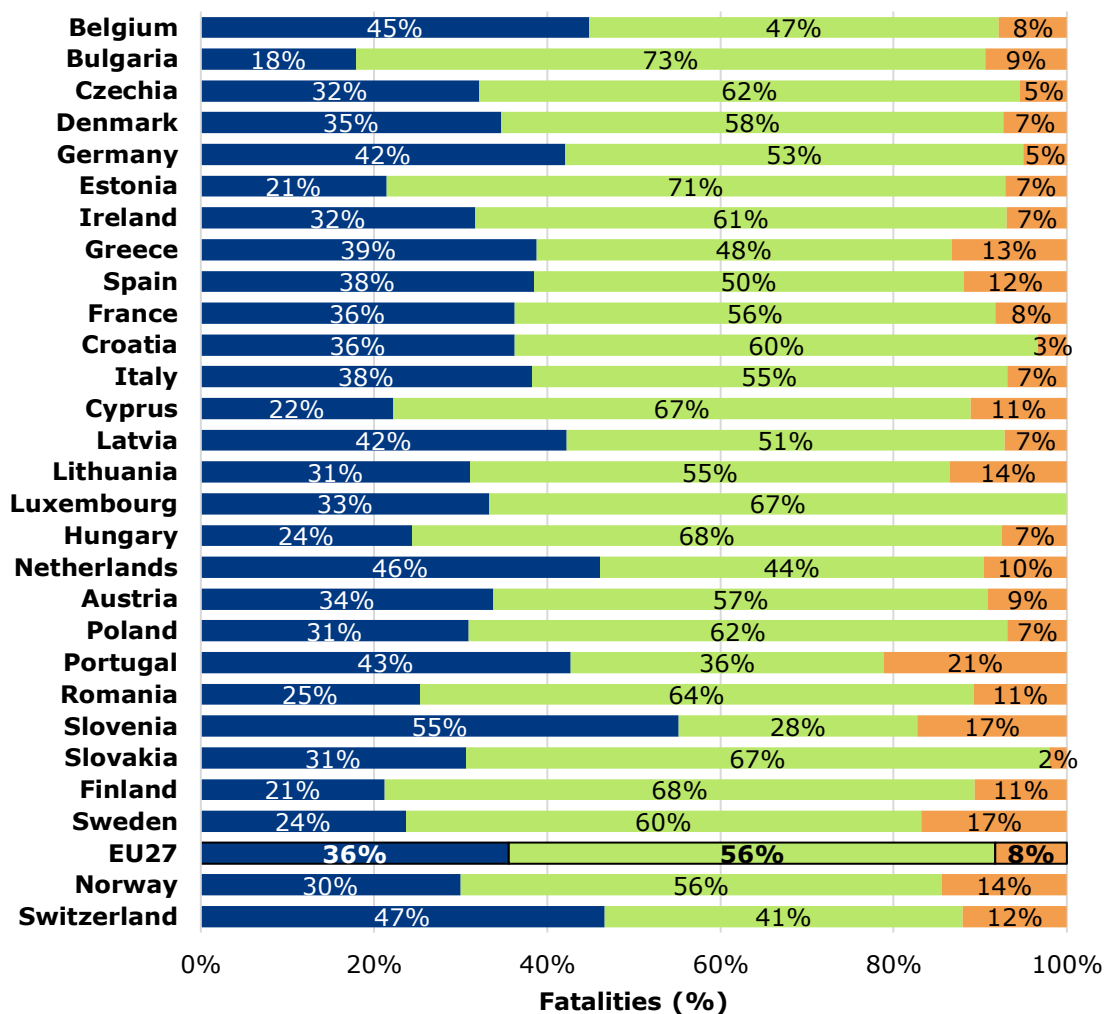


Notes:

- The share of pedestrians that die on motorways include vehicle occupants who have left their vehicles on the motorway in particular.

**The proportion of vulnerable road users (pedestrians, cyclists and powered two wheelers) among road fatalities on rural roads within Europe ranges from 18% to 55%.** This proportion is influenced by numerous factors including appropriate infrastructure but also by the extent to which bicycles, mopeds or motorcycle are used (exposure). The highest proportion is found in Slovenia, Switzerland, the Netherlands and Belgium. Countries with the lowest proportion of vulnerable road users among fatalities on rural roads are Bulgaria, Finland, Estonia and Cyprus.

**Figure 12.** Distribution of fatalities on rural roads by transport mode per country in the EU27 and EFTA (2022). Source: CARE



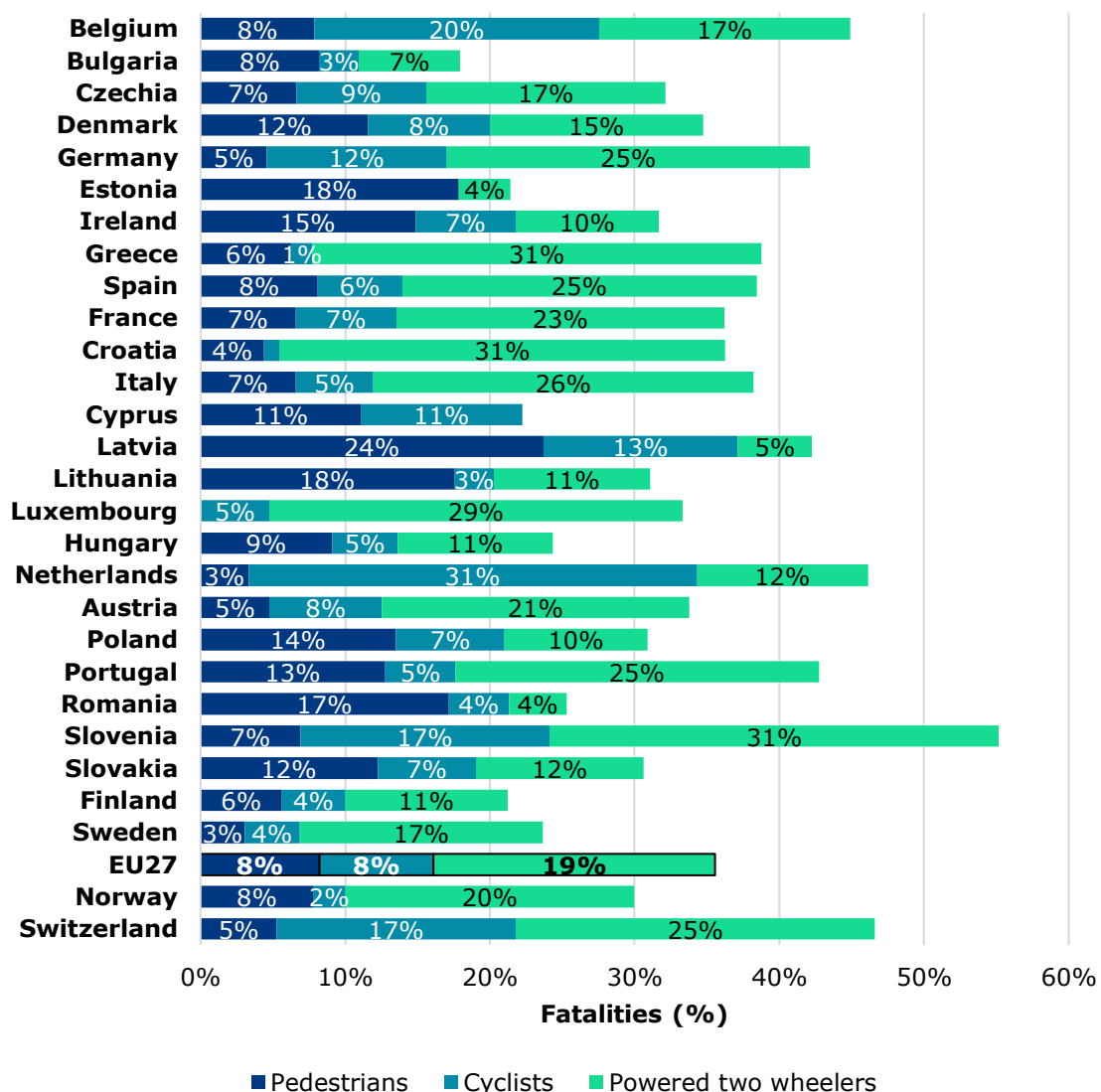
- Vulnerable Road Users (pedestrians, cyclists, mopeds, motorcycles)
- Car occupants
- Others

Notes:

- Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- For Ireland, Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.

Looking at vulnerable road users in detail, **high shares in pedestrian fatalities** on rural roads can be found in **Latvia** (24%) and Lithuania and **Estonia** (18%). **The Netherlands** records a high share in **cyclist fatalities** on rural roads (31%) followed by **Belgium** (20%). **Slovenia, Croatia and Greece** (31%) have high shares in **powered two wheelers fatalities** on rural roads.

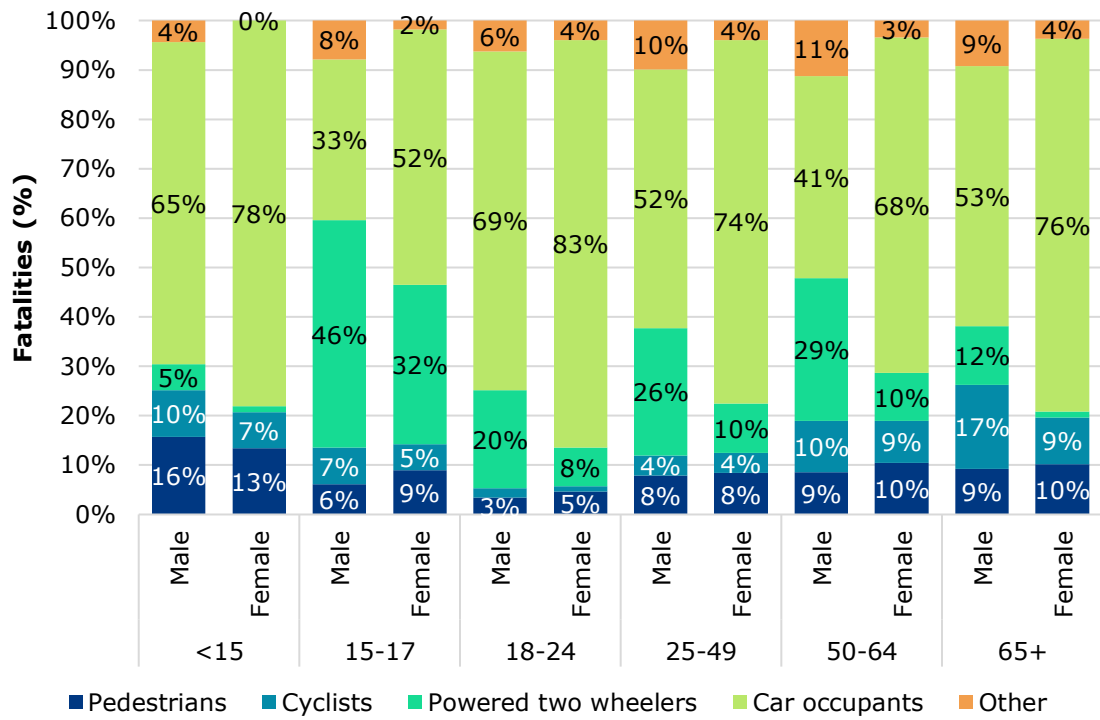
**Figure 13.** Distribution of fatalities on rural roads by transport mode (vulnerable road users) per country in the EU27 and EFTA (2022). Source: CARE



Notes:

- Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- For Ireland, Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.

**Figure 14.** Distribution of fatalities by age, gender and transport mode in the EU27 (2022). Source: CARE

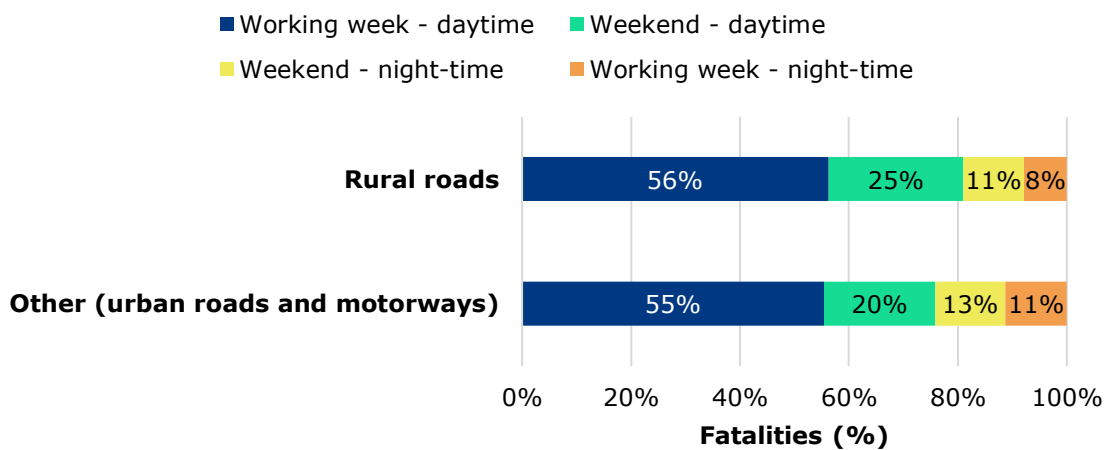


## 5. Time

### 5.1 Period of the week

The distribution of fatalities on rural roads according to the period of the week hardly differs from the distribution of fatalities on other roads (urban roads and motorways). **The share of fatalities on rural roads was proportionally higher during daytime at the weekend and lower at night-time on working weeks** compared to other roads (urban roads and motorways).

**Figure 15.** Distribution of fatalities according to period of the week and by road type in the EU27 (2022). Source: CARE

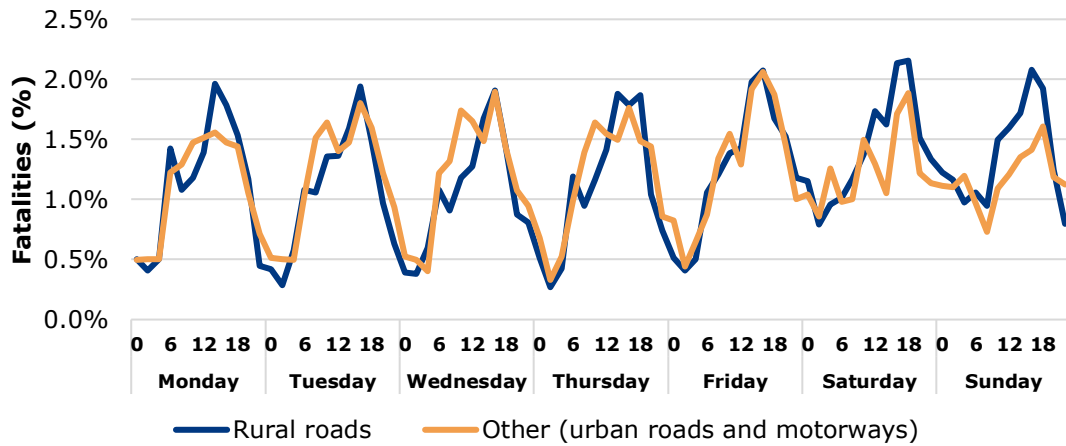


### 5.2 Day of the week, time of the day and hour

The figure below on fatalities on rural roads confirms the above finding that **proportionately more fatalities occurred on rural roads during daytime on Saturday and Sunday.**



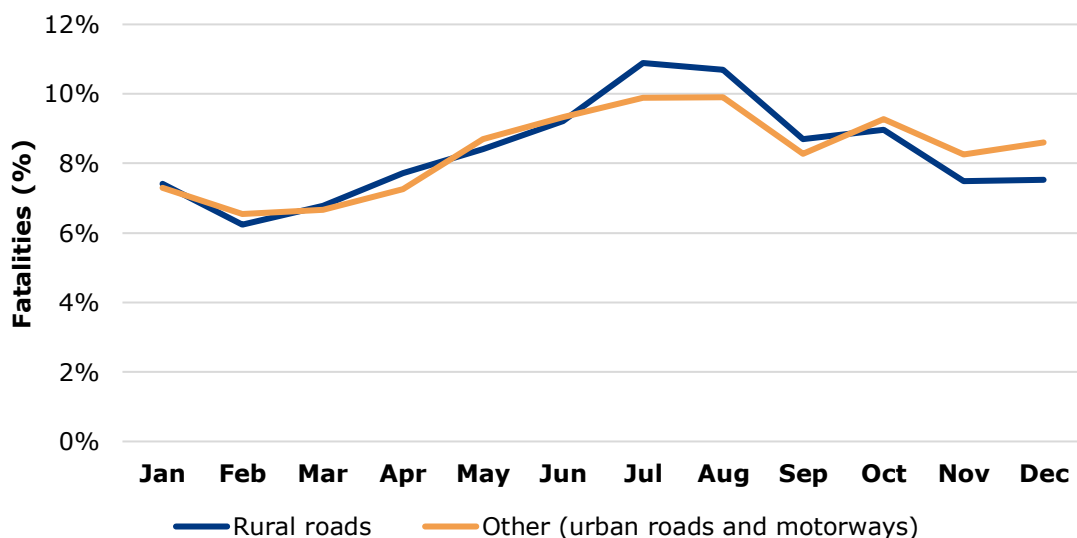
**Figure 16.** Distribution of fatalities on rural roads and other roads (urban roads and motorways) by day of the week and hour in the EU27 (2022). Source: CARE



### 5.3 Month

The **peak period** for fatalities on rural roads **were during the summer months in July and August (11%)**. During the autumn and winter months, October until February, the number of fatalities on urban roads and motorways were slightly higher than the number of fatalities on rural roads.

**Figure 17.** Monthly distribution of fatalities on rural roads and other roads (urban roads and motorways), in the EU27 (2022). Source: CARE

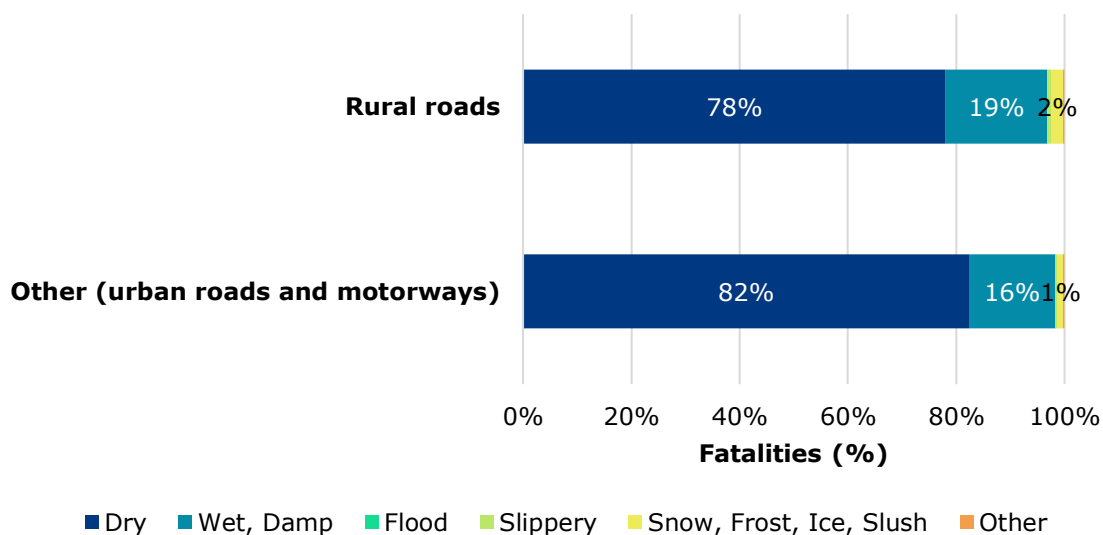


## 6. Location

### 6.1 Road surface

In 2022, surface conditions were dry in the case of 78% of fatalities on rural roads and wet for 19% of those fatalities. Only 2% of fatalities occurred in snowy, frosty, or icy surface conditions. The proportion of fatalities on rural roads during dry weather conditions is only slightly lower (78%) than the proportion of fatalities on other roads (urban roads and motorways), which is 82%.

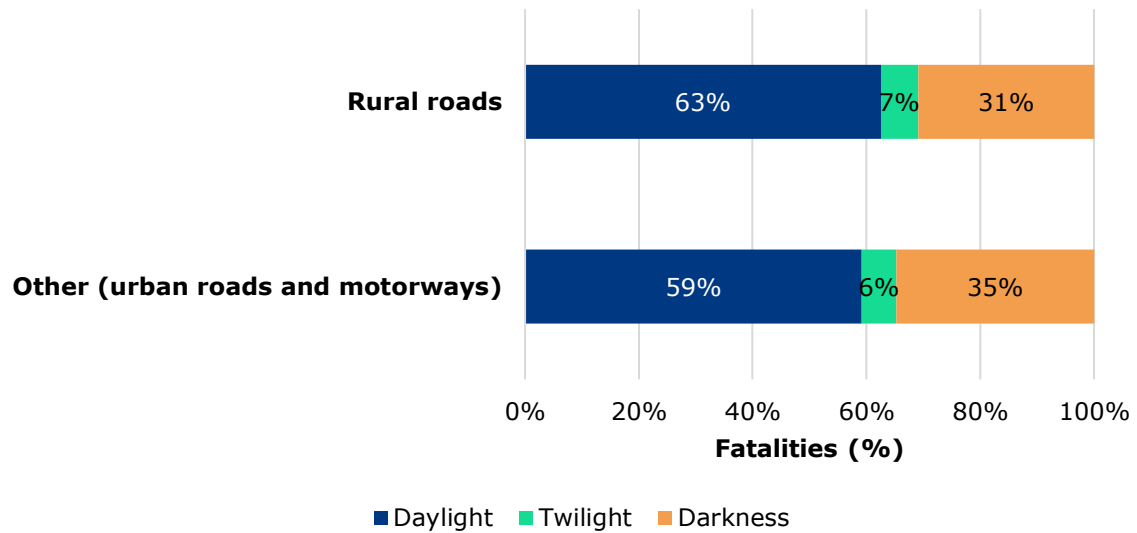
**Figure 18.** Distribution of fatalities on rural roads and other roads (urban roads and motorways) by surface conditions in the EU27 (2022). Source: CARE



### 6.2 Light conditions

63% of fatalities on urban roads occur during daylight, which is slightly higher compared to fatalities on other roads (urban roads and motorways) with 59%. The proportion of fatalities on rural roads during darkness (31%) is slightly lower than the proportion of fatalities on other roads (urban roads and motorways) during darkness (35%).

**Figure 19.** Distribution of fatalities on rural roads and other roads (urban roads and motorways) by light conditions in the EU27 (2022).  
Source: CARE



## 7. Notes

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### 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/2023-09/CADaS%20Glossary\\_v%203\\_8\\_1.pdf](https://road-safety.transport.ec.europa.eu/system/files/2023-09/CADaS%20Glossary_v%203_8_1.pdf)

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

#### **Accident / crash**

An 'injury' road crash 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 and is open to interpretation by the police thus affecting the reliability of cross-country comparisons.

#### **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.

#### **Motorway**

Public road with dual carriageways, and at least two lanes each way. Entrance and exit signposted. Road with grade separated interchanges. Road with a central barrier or central reservation. No crossing permitted. No stopping permitted unless in an emergency. Entry prohibited for pedestrians, animals, bicycles, mopeds, agricultural vehicles.

#### **Rural roads (roads outside urban areas)**

Public roads outside urban boundary signs, excluding motorways.

**Urban roads (roads inside urban areas)**

Public roads inside urban boundary signs.

**Victims**

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

**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.

**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.

## 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 the four EFTA countries Switzerland, Norway, Iceland, and Liechtenstein. The data in the report were extracted in August 2023.

## 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.

Figures that only contain information on the relative distribution of fatalities have not been obtained through imputation. The report always mentions in footnotes when imputation was used. If this is not mentioned in the footnotes, no imputation was used.

## 7.5 Data cleaning

### Area / Road type

- Malta 2020 area: 'rural' recoded to 'unknown'

### Transport mode: HGVs

- Poland < 2018 and Germany < 2014: HGV recoded to artificial code 'Lorries + HGVs' because obviously not separated in the data.

### Junctions

- Several data issues due to different coding, inconsistent use of categories and different breaks in time series
- General grouping:
  - 'not at junction'
  - 'unknown'
  - all other codes combined to 'junction'
- Data cleaning and recoding was done in the following countries: Bulgaria, Estonia, Finland, Germany, Greece, Ireland, Lithuania, Malta, Slovenia, Switzerland

