European Commission

Facts and Figures

Urban Areas

Mobility and Transport

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).

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Version:	March 2024
Authors:	Maria Fleischer, Hatun Atasayar, Martin Donabauer, Aggelos Soteropoulos (KFV)
Internal Review:	Frits Bijleveld (SWOV)
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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

Contents

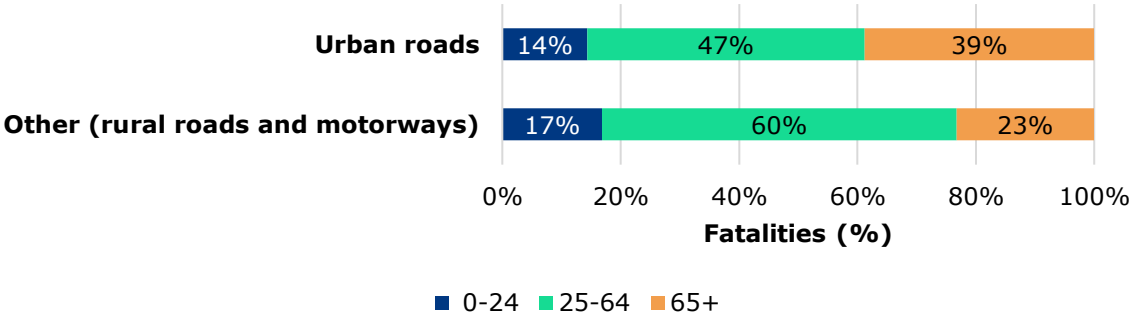
1. Key facts

This Facts and Figures report looks at fatalities on urban roads, which means public roads inside urban boundary signs. 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 rural roads has also been published.

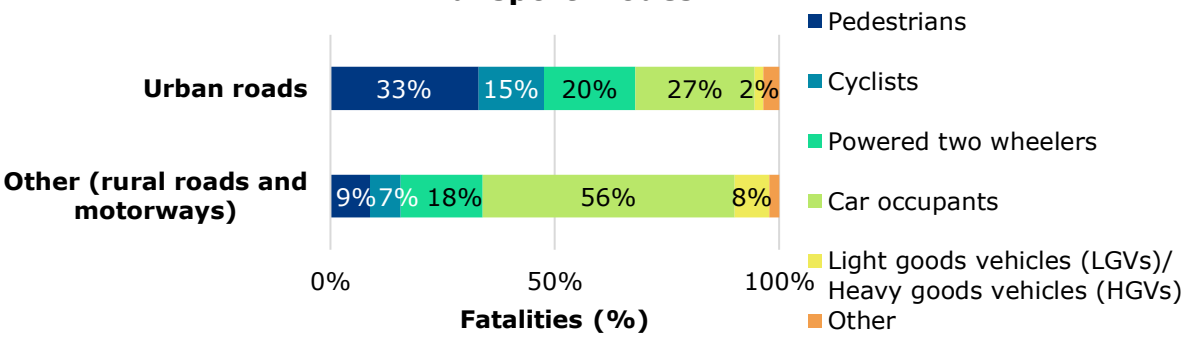
Fatalities on urban roads in the EU27, 2022

- 7,880 fatalities
- 38% of all road fatalities
- 22% decrease since 2012, compared to 21% decrease on other roads (rural roads and motorways)

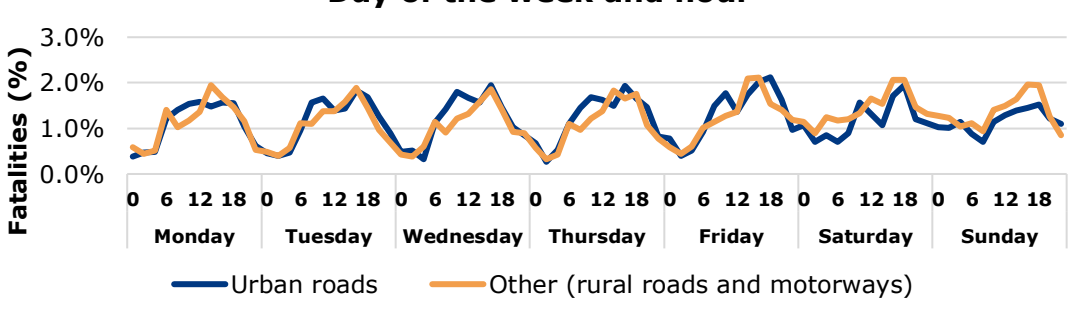
Age



Transport modes



Day of the week and hour



2. Summary

In 2022, 38% of all road fatalities in the EU27 occurred on urban roads. In the last decade between 2012 and 2022, **the number of fatalities on urban roads decreased by 22%, which is similar to the 21% decrease on other roads (rural roads and motorways).**

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

- The proportion **of 65+ year old fatalities on urban roads is higher** (39% of all fatalities) compared to fatalities on other roads (23%).
- **Vulnerable road users** (pedestrians, cyclists, mopeds, motorcycles) **make up 68% of fatalities on urban roads**, while this share is only 34% for other roads (rural roads and motorways). **Pedestrians make up 33% of all fatalities** on urban roads, which is the highest share of fatalities of a transport mode on urban roads. The share of car occupant fatalities makes up only 27%, which less than the half (57%) than on other roads (rural roads and motorways).
- The share of fatalities on urban roads is proportionally higher during the day of the working week and lower during the day at the weekend.

The highest mortality rates (number of road fatalities per million inhabitants) **on urban roads in 2022 were observed in Romania (53.0) and Croatia (37.5**) and **the lowest mortality rates were observed in Norway (4.8) and Sweden (5.8).** It is important to also look at the proportion of fatalities on urban roads within the total number of road fatalities of a country: **the proportion in 2022 was highest with a share of above 50% in Cyprus, Romania, Portugal and Croatia.**

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.

3. Main trends

3.1 Absolute number of road fatalities

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

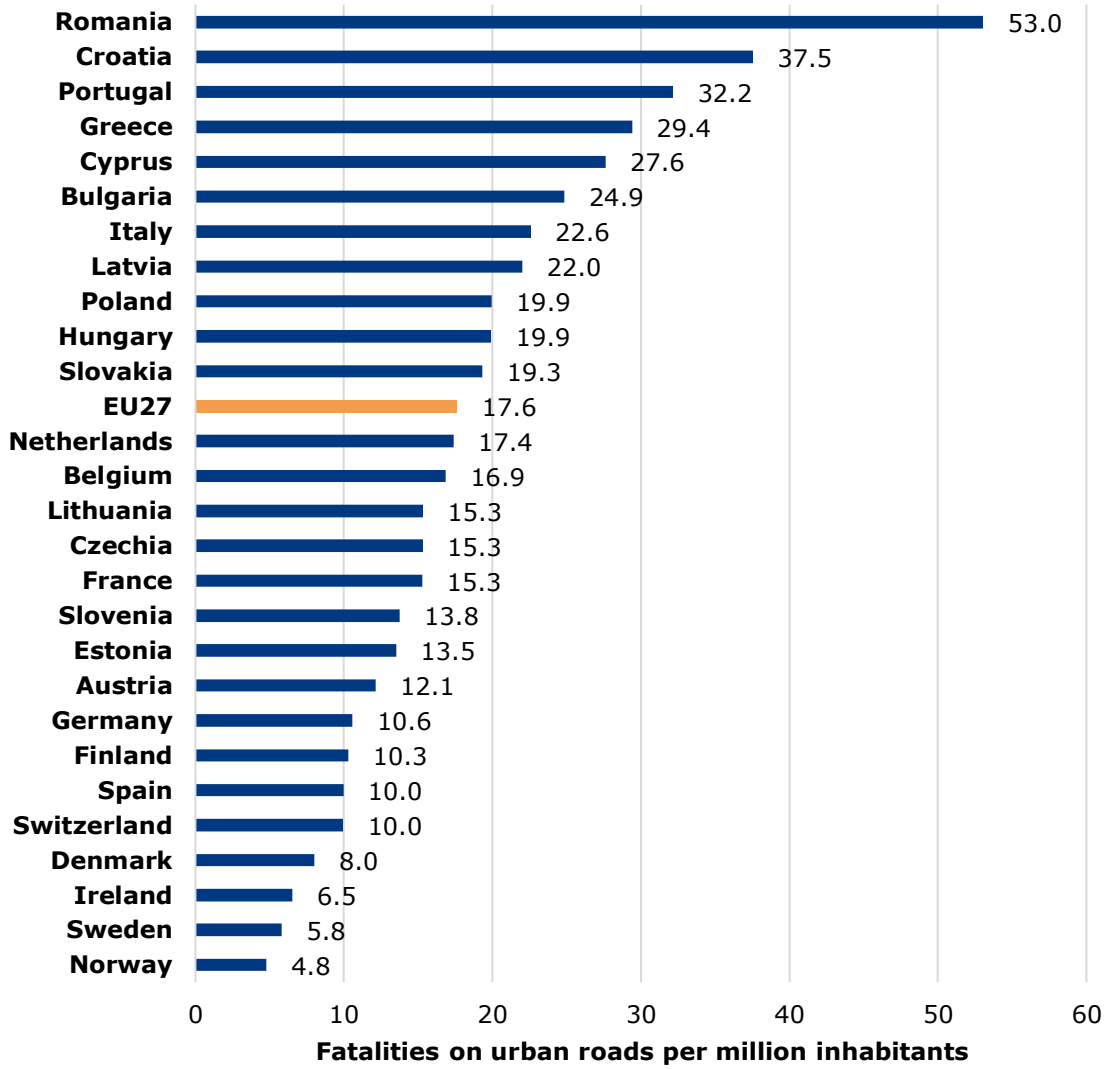
Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	LT*	ST*
Belgium	233	200	231	231	194	203	197	214	180	179	196	-16%	-8%
Bulgaria	233	227	251	269	238	200	213	232	144	164	170	-27%	-27%
Czechia	265	241	234	220	215	193	217	187	154	187	161	-39%	-14%
Denmark	59	59	46	62	66	53	49	64	52	45	47	-20%	-27%
Germany	1,062	977	983	1,048	960	976	984	932	810	746	881	-17%	-6%
Estonia	-	-	22	-	20	14	13	17	17	11	18	-	6%
Ireland	46	35	60	34	52	43	48	32	-	-	-	-	-
Greece	499	464	401	388	427	340	367	370	325	314	-	-37%	-15%
Spain	461	450	441	441	519	509	489	519	395	417	473	3%	-9%
France	1,027	932	989	987	1,016	1,007	963	1,034	845	956	1,037	1%	0%
Croatia	230	213	191	220	176	186	175	164	142	163	145	-37%	-12%
Italy	1,602	1,428	1,505	1,502	1,463	1,467	1,401	1,331	1,061	1,264	1,333	-17%	0%
Cyprus	31	30	34	37	35	38	26	32	29	27	25	-19%	-22%
Latvia	53	53	69	44	30	44	41	40	42	-	-	-	-
Lithuania	-	-	-	-	76	84	71	89	70	69	43	-	-52%
Luxembourg	7	15	9	5	8	6	1	3	5	5	10	-	-
Hungary	210	232	237	261	224	229	238	223	150	186	193	-8%	-14%
Malta	-	-	-	10	14	15	13	-	-	-	-	-	-
Netherlands	208	201	158	126	204	217	261	232	188	205	306	47%	32%
Austria	151	115	123	128	110	107	102	104	89	99	109	-28%	5%
Poland	1,652	1,581	1,466	1,248	1,275	1,238	1,251	1,177	1,084	872	751	-55%	-36%
Portugal	397	352	347	304	302	328	380	394	305	332	333	-16%	-16%
Romania	1,246	1,160	1,146	1,154	1,189	1,221	1,183	1,213	1,074	1,110	1,010	-19%	-17%
Slovenia	42	53	40	39	43	41	26	27	29	42	29	-31%	7%
Slovakia	-	-	-	-	108	102	91	94	95	97	105	-	12%
Finland	56	57	62	75	63	57	62	36	62	57	-	2%	58%
Sweden	87	55	67	58	74	64	77	49	60	-	-	-	-
EU	10,073	9,346	9,306	9,096	9,101	8,982	8,939	8,818	7,443	7,681	7,880	-22%	-11%
Iceland	2	4	-	3	5	7	2	-	1	4	5	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	31	30	22	27	21	27	18	23	15	26	-	44%
Switzerland	125	113	93	119	88	87	103	65	104	83	87	-30%	34%

*LT = Long term change of last available year over 2012.
*ST = Short term change of last available year over 2019.

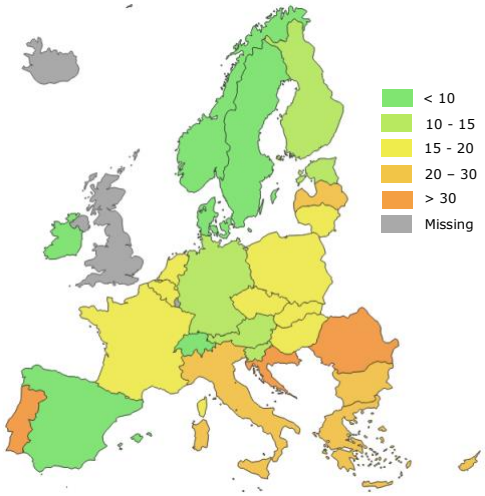
3.2 Mortality rate: number of road fatalities per million inhabitants

Romania has the highest mortality rate (53.0), while Norway has the lowest mortality rate (4.8). Among the countries with the highest number of fatalities on urban roads in 2022 -Italy, France, Romania, Germany and Poland - only France and Germany have a mortality rate below the European average.

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



Notes:
- Luxembourg, 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.

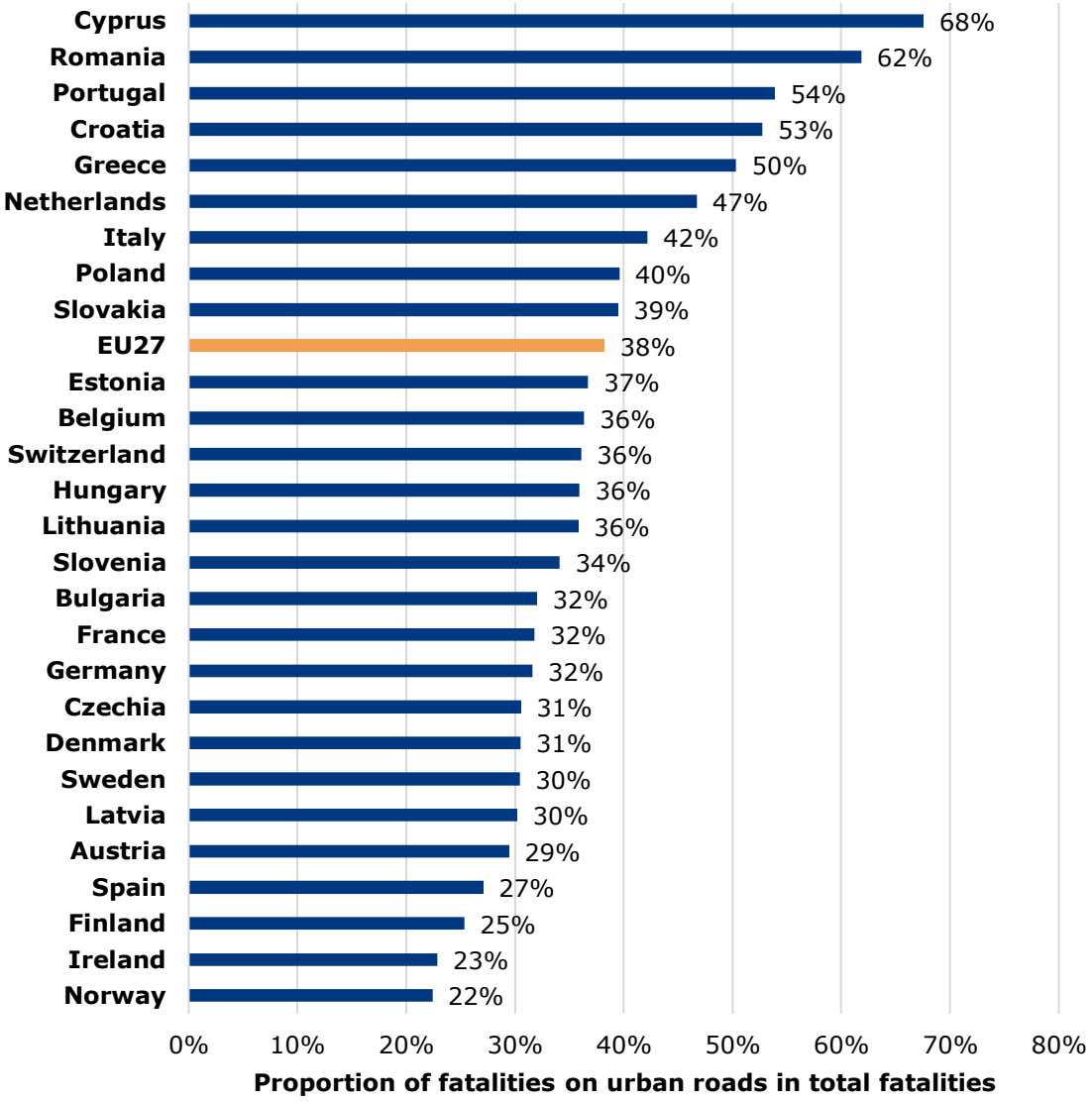


3.3 Share of fatalities on urban roads in the total number of road fatalities

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 urban roads in a specific country may be high, as the total mortality rate for all road users in that country is high. Therefore, it is important to have a look at the proportion or share of fatalities on urban roads within the total number of road fatalities of a country.

The proportion of fatalities on urban roads in the total number of road fatalities tends to be higher in Southeastern and Southern Europe - mainly in Cyprus, Romania, Portugal, Croatia and Greece. Norway has the lowest proportion of road fatalities on urban roads, while Cyprus has the highest. These differences between countries in the proportion of fatalities on urban roads can partly be explained by the degree of urbanisation, the structure of the road network and the relative volume of traffic on urban and rural roads and motorways in each country.

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



Notes:
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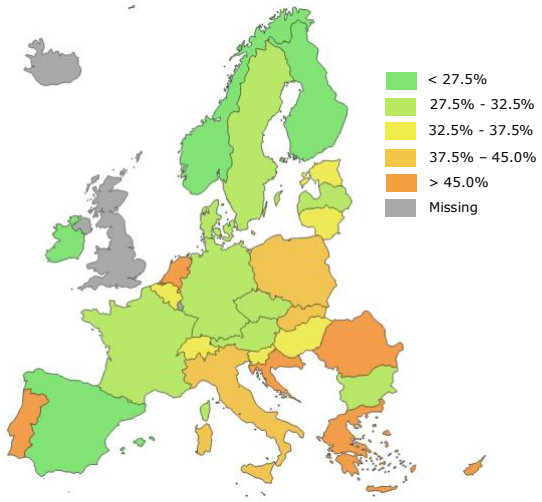
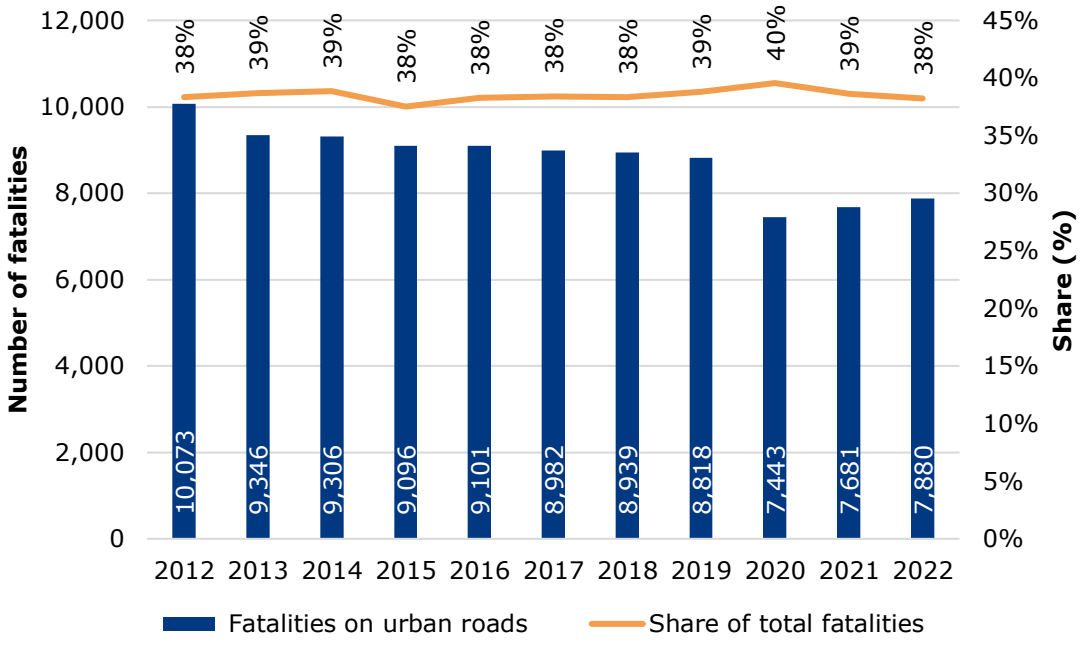


3.4 Trend in the number of fatalities

In 2022, 38% of all road fatalities in the EU27 occurred on urban roads. The relative proportion of fatalities on these roads was stable in the time period 2012-2022. **The number of fatalities on urban roads decreased by 22% between 2012 and 2022,** while the number of fatalities on other roads, i.e., rural roads and motorways combined, decreased by 21% over the same time period.

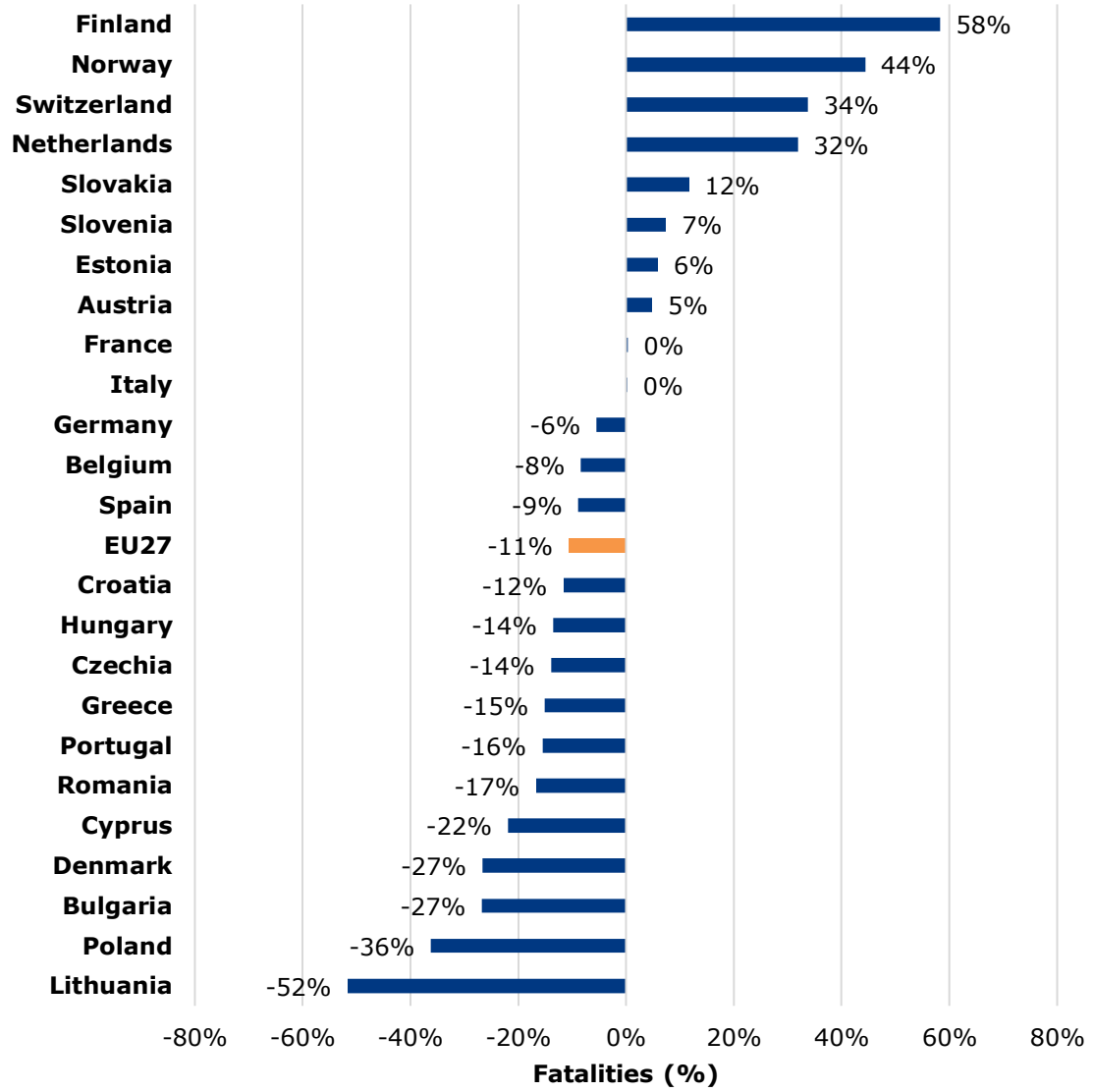
Figure 3. Annual number of fatalities on urban roads and their share in the total number of fatalities in the EU27 (2012-2022). Source: CARE



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

The number of fatalities on urban roads decreased in many EU Member States in the period 2019-2022, but there were also increases above 30%, with the highest increase in Finland (58%). There was a notable decrease in the number of fatalities on urban roads in Lithuania (52%) and Poland (36%). Among the EU Member States with the highest number of fatalities inside urban areas (Italy, Romania, France, Germany, and Poland), Poland and Romania show a more pronounced decline compared to the EU average, while the decline in Germany is lower than the EU average.

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



Notes:
- Luxembourg, 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 urban roads per country in the EU27 and EFTA (2012-2022). Source: CARE

	2012	2019	2020	2021	2022	ST*	Miniplot: trend since 2012
Belgium	233	214	180	179	196	-8%	
Bulgaria	233	232	144	164	170	-27%	
Czechia	265	187	154	187	161	-14%	
Denmark	59	64	52	45	47	-27%	
Germany	1,062	932	810	746	881	-6%	
Estonia	-	17	17	11	18	6%	
Ireland	46	32	-	-	-	-	
Greece	499	370	325	314	-	-15%	
Spain	461	519	395	417	473	-9%	
France	1,027	1,034	845	956	1,037	0%	
Croatia	230	164	142	163	145	-12%	
Italy	1,602	1,331	1,061	1,264	1,333	0%	
Cyprus	31	32	29	27	25	-22%	
Latvia	53	40	42	-	-	-	
Lithuania	-	89	70	69	43	-52%	
Hungary	210	223	150	186	193	-14%	
Netherlands	208	232	188	205	306	32%	
Austria	151	104	89	99	109	5%	
Poland	1,652	1,177	1,084	872	751	-36%	
Portugal	397	394	305	332	333	-16%	
Romania	1,246	1,213	1,074	1,110	1,010	-17%	
Slovenia	42	27	29	42	29	7%	
Slovakia	-	94	95	97	105	12%	
Finland	56	36	62	57	-	58%	
Sweden	87	49	60	-	-	-	
EU27	10,073	8,818	7,443	7,681	7,880	-11%	
Norway	-	18	23	15	26	44%	
Switzerland	125	65	104	83	87	34%	

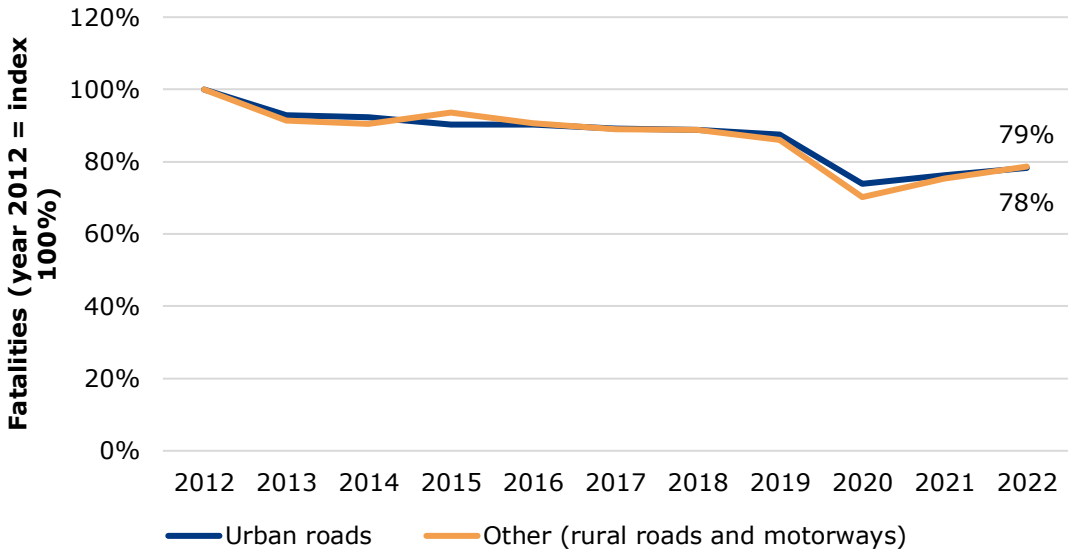
*ST = Short term change of last available year over 2019.

Notes:
- Luxembourg, 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 number of fatalities on urban roads decreased by -22% in the time period 2012-2022, while it decreased by -21% on other roads (rural roads and motorways). As shown in the figure below, the development of the trend of fatalities on urban roads and other roads (rural roads and motorways) was similar in the last decade.

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



4. Road user

4.1 Gender

74% of fatalities on urban roads in 2022 are male, compared to 79% of fatalities on other roads (rural roads and motorways). **Large differences can be observed between EU Member States and EFTA countries**. The proportion of female fatalities on urban roads varies between the countries from 12% to 49%.

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

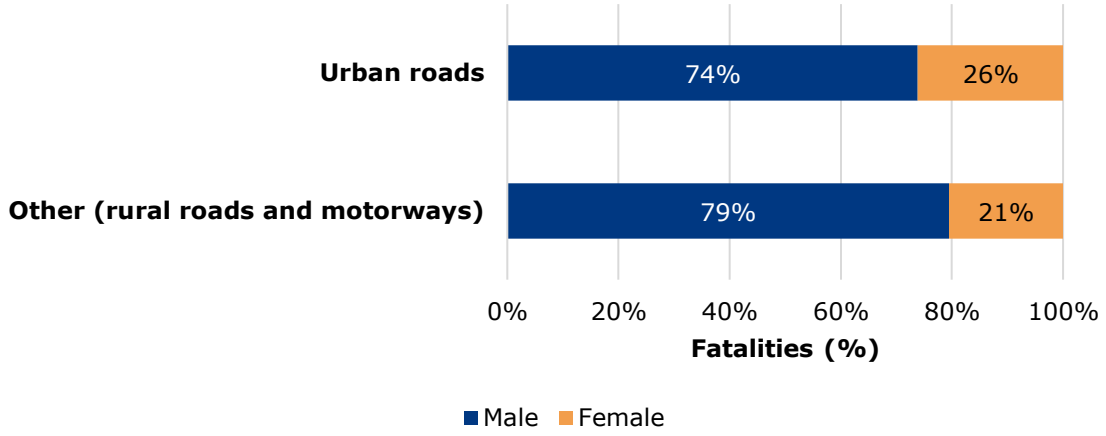
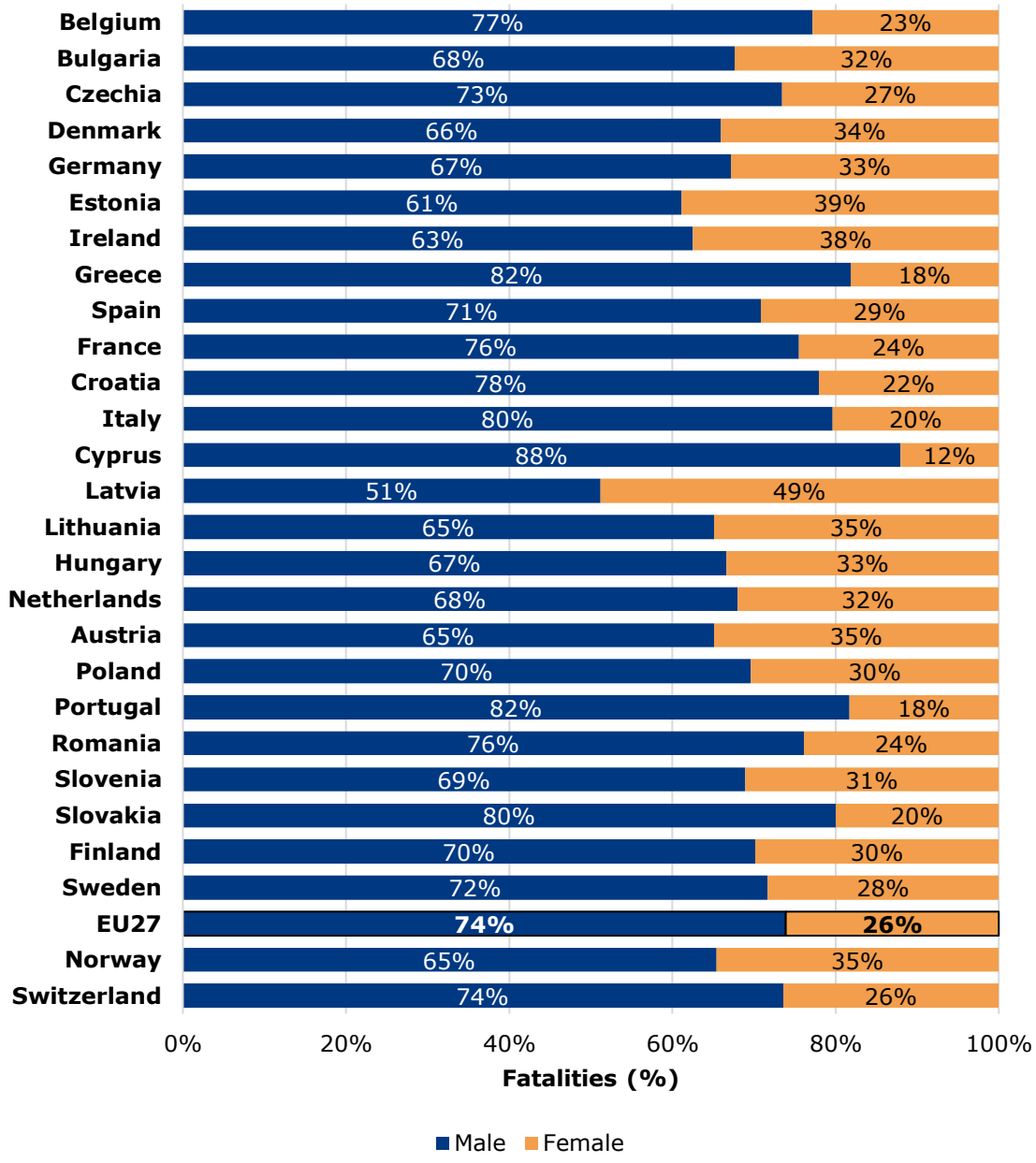
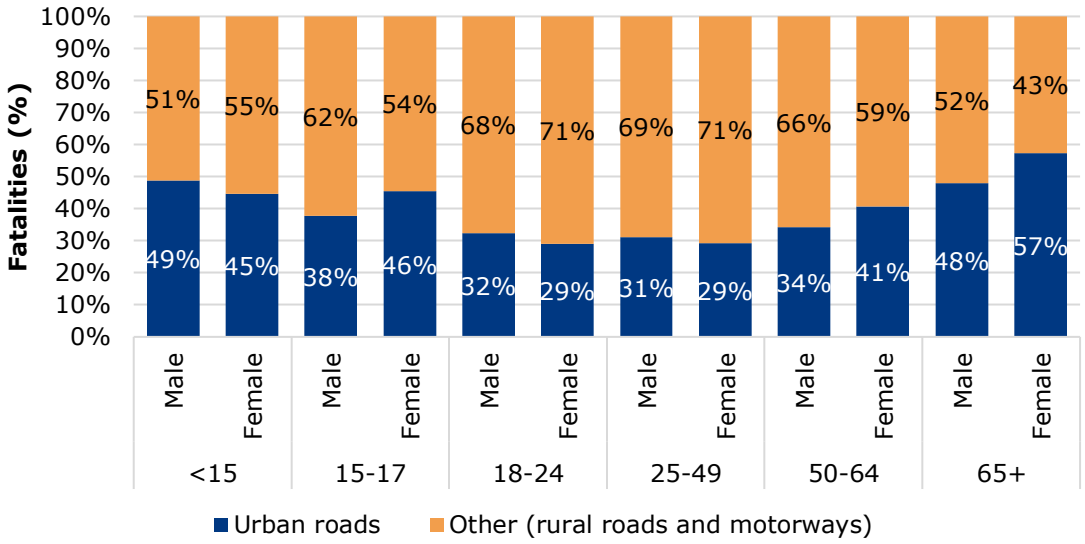


Figure 7. Distribution of fatalities on urban roads by gender per country in the EU27 and EFTA (2022). Source: CARE



Notes:
- Luxembourg, 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.

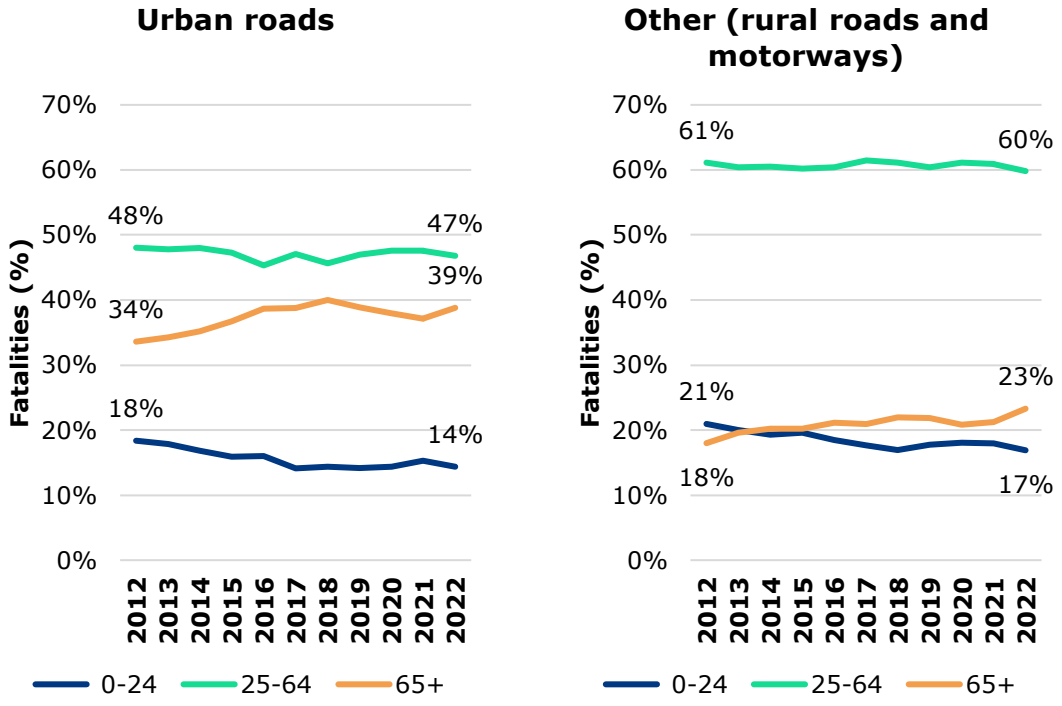
Figure 8. Distribution of fatalities on urban roads and other roads by age, gender and road type in the EU27 (2022). Source: CARE



4.2 Age

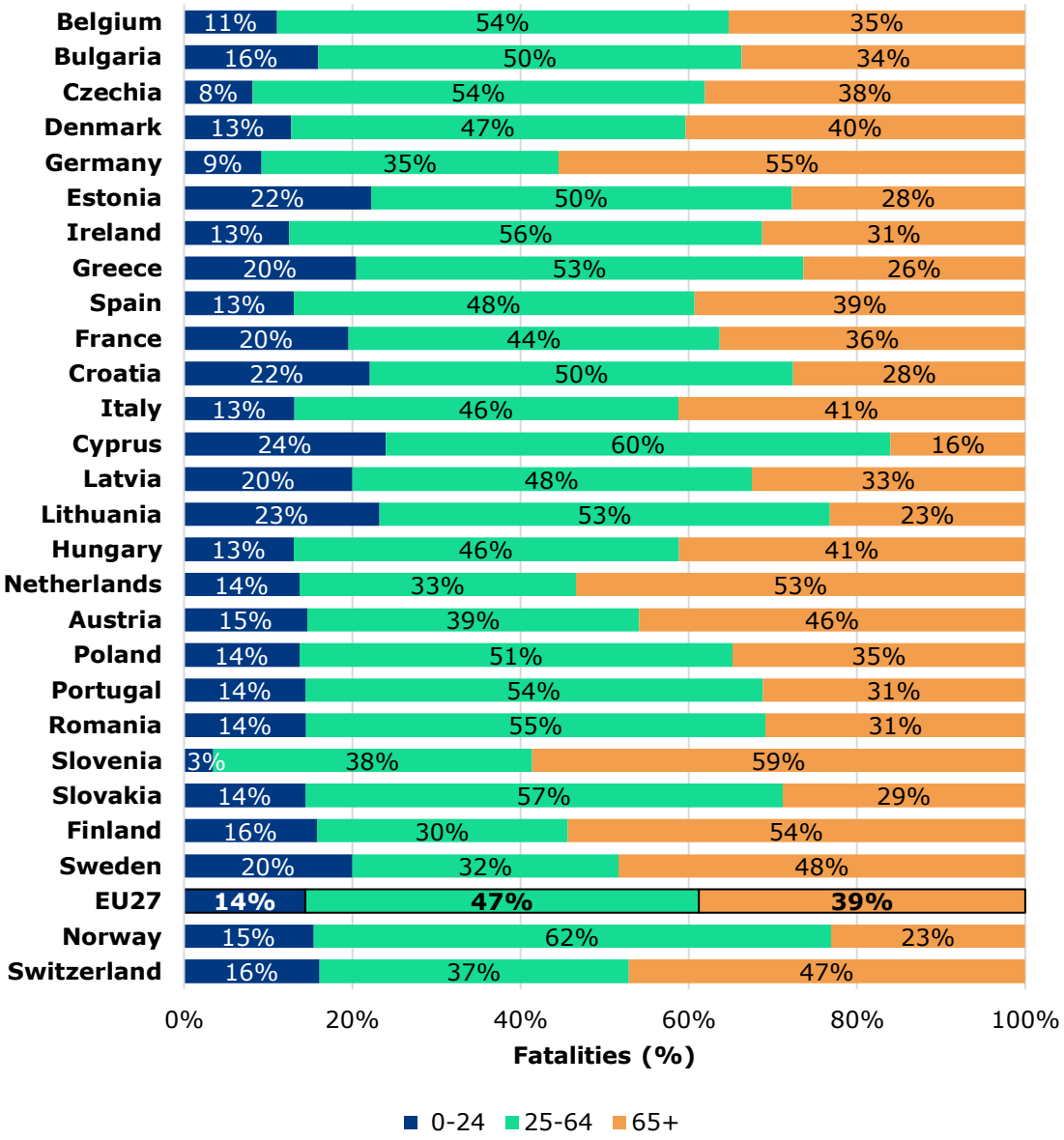
The age distribution of fatalities on urban roads differs from the age distribution of road fatalities on other roads (rural roads and motorways). **The proportion of fatalities aged 65+ is higher on urban roads compared to other roads.** In 2022, 39% of fatalities on urban roads were 65+ years old, compared to 23% of fatalities of the same age group on other roads. The **proportion of fatalities aged 25-64 years in 2022 was 47% on urban roads**, compared to 60% on other roads (rural roads and motorways).

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



The **25-64 age group mainly represents the highest proportion** of fatalities on urban roads in all countries, ranging from **30% to 62%.** With an exception in Germany, the Netherlands, Finland, Sweden and Slovenia, where the age group 65+ has the highest proportion. The **proportion of 65+ year old fatalities on urban roads ranges between 16% in Cyprus up to 59% in Slovenia**, despite the relatively low fatality rate on urban roads in these countries. In **Estonia, Greece, France, Croatia, Cyprus, Latvia, Lithuania and Sweden the proportion of 0–24-year-olds among road fatalities on urban roads is 20% or more**.

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

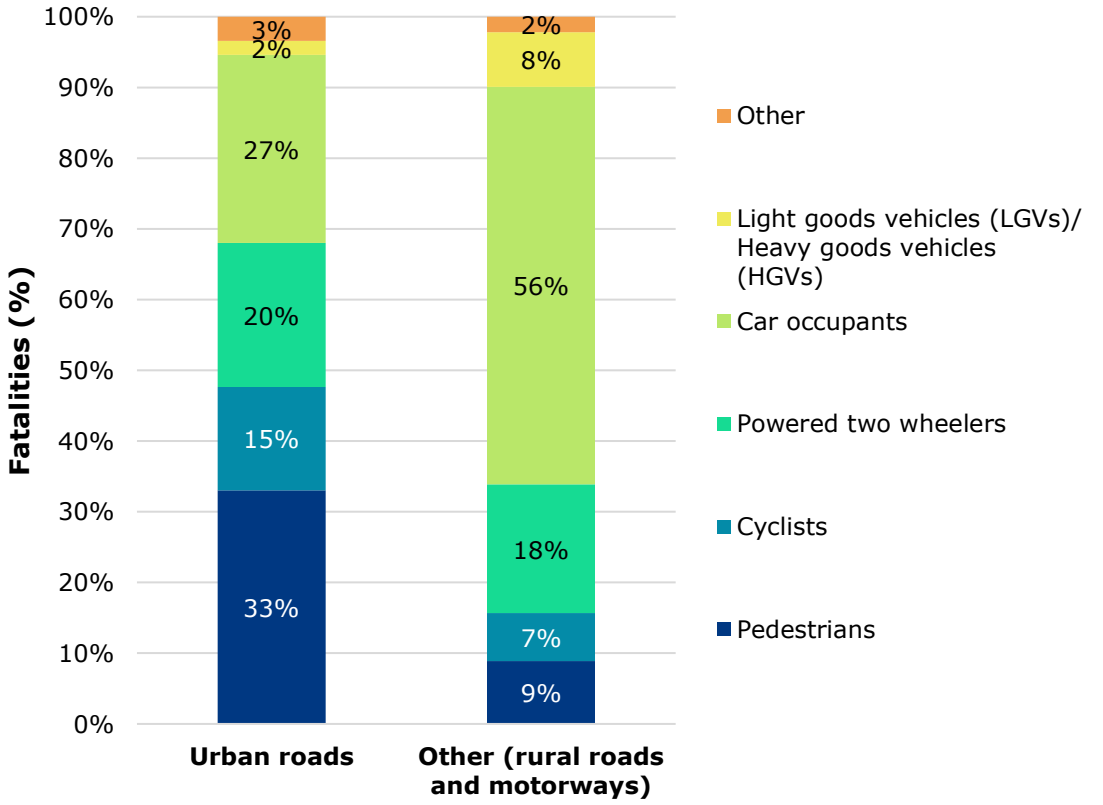


Notes:
- Luxembourg, Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- For Ireland, Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.

4.3 Transport modes

Vulnerable road users (pedestrians, cyclists, powered two wheelers (mopeds and motorcycles)) **make up 68% of all fatalities on urban roads.** Pedestrians represent 33% of all fatalities on these roads. The proportion of car occupants among fatalities was lower on urban roads, compared to other roads (rural roads and motorways).

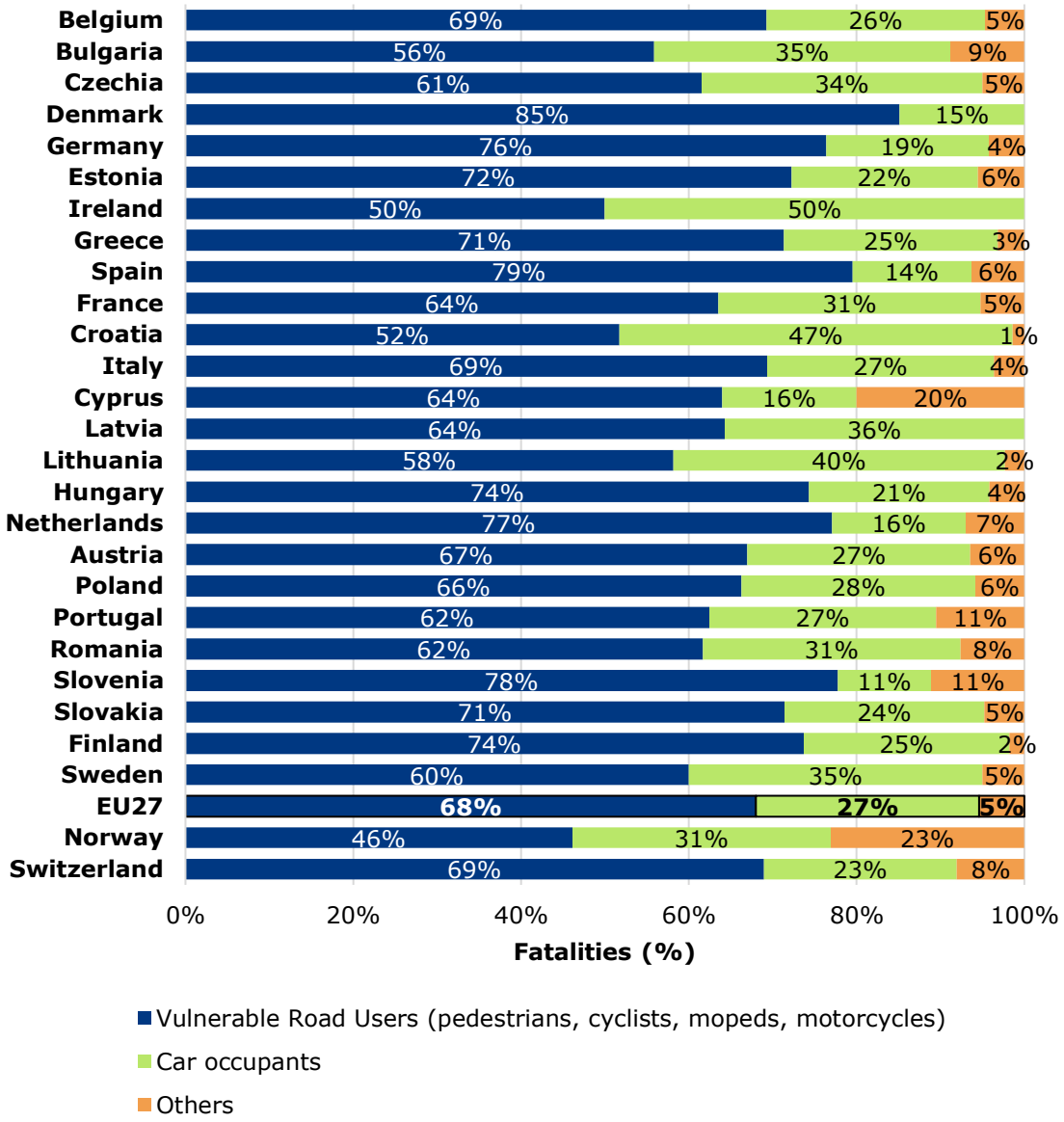
Figure 11. Distribution of fatalities by transport mode and type of road in the EU27 (2022). Source: CARE



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 urban roads ranges from 46% to 85%**. This proportion is influenced by numerous factors, including appropriate infrastructure, but also by the extent to which bicycles, mopeds or motorcycles are used (exposure). The **highest proportion** is found in **Denmark, Spain, Slovenia and the Netherlands**. Countries with the **lowest** proportion of vulnerable road users among fatalities on urban roads were **Norway, Ireland and Croatia.**

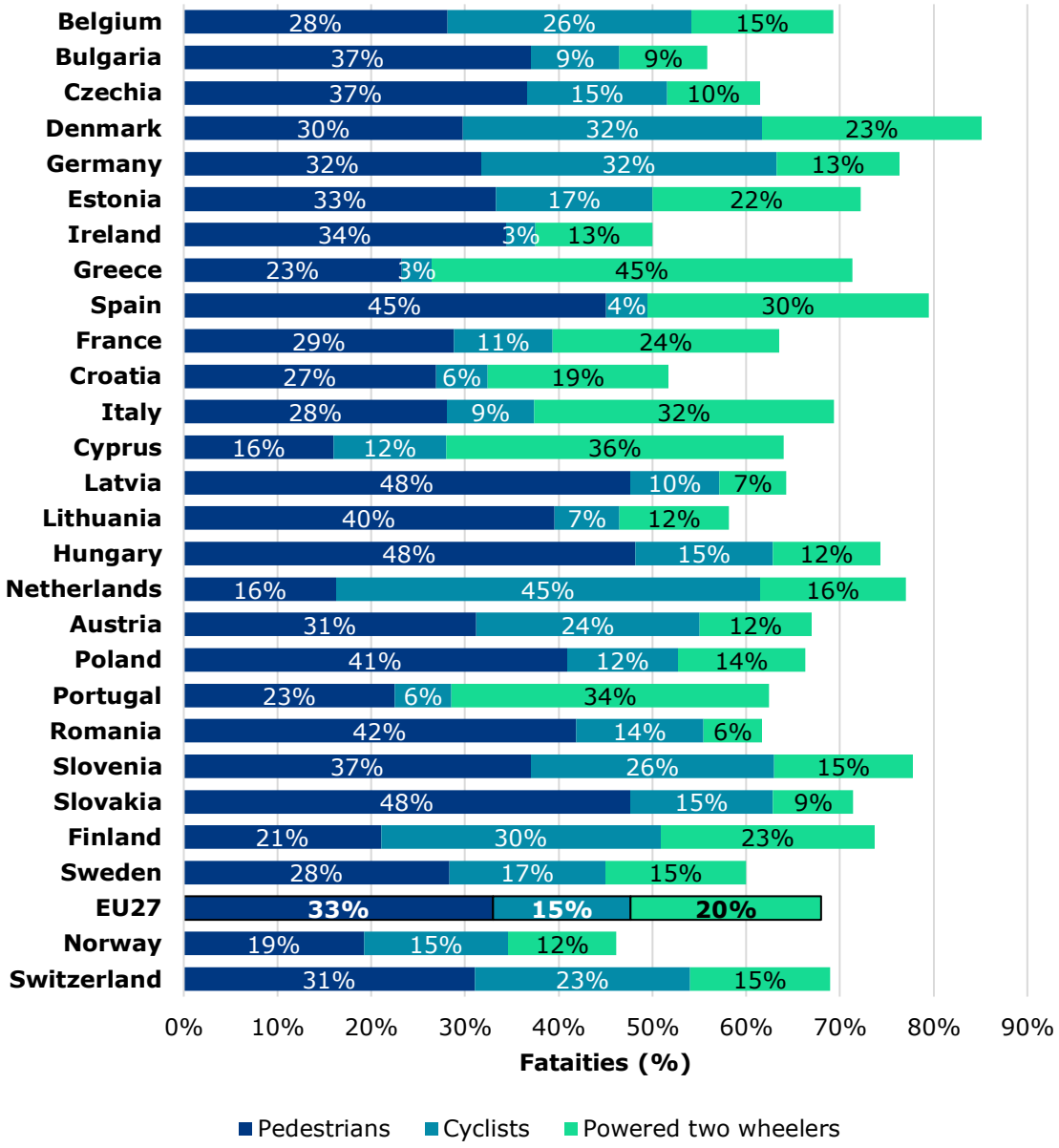
Figure 12. Distribution of fatalities on urban roads by transport mode per country in the EU27 and EFTA (2022). Source: CARE



Notes:
- Luxembourg, 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.

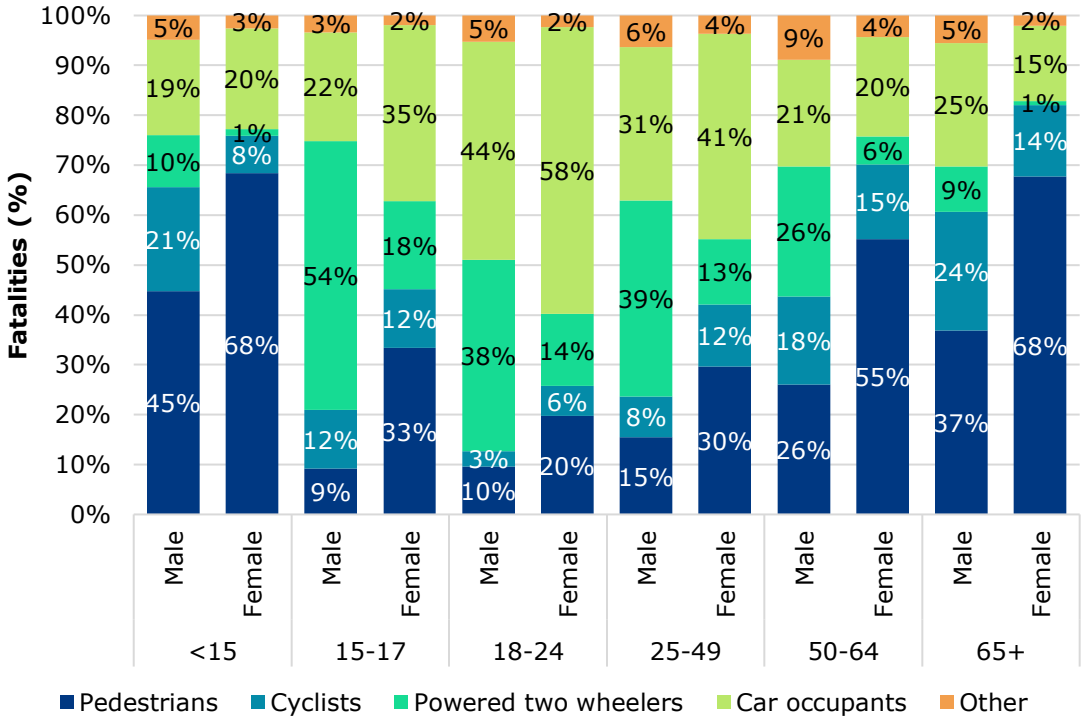
Looking at vulnerable road users in detail, the **highest proportion of pedestrians** among road fatalities on urban roads is found for **Slovakia, Hungary and Latvia** (48%). The **highest proportion of cyclists** among road fatalities on urban roads is observable for the **Netherlands** (45%), while **Greece** has the **highest proportion of powered two wheelers** among road fatalities on urban roads (45%).

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



Notes:
- Luxembourg, 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

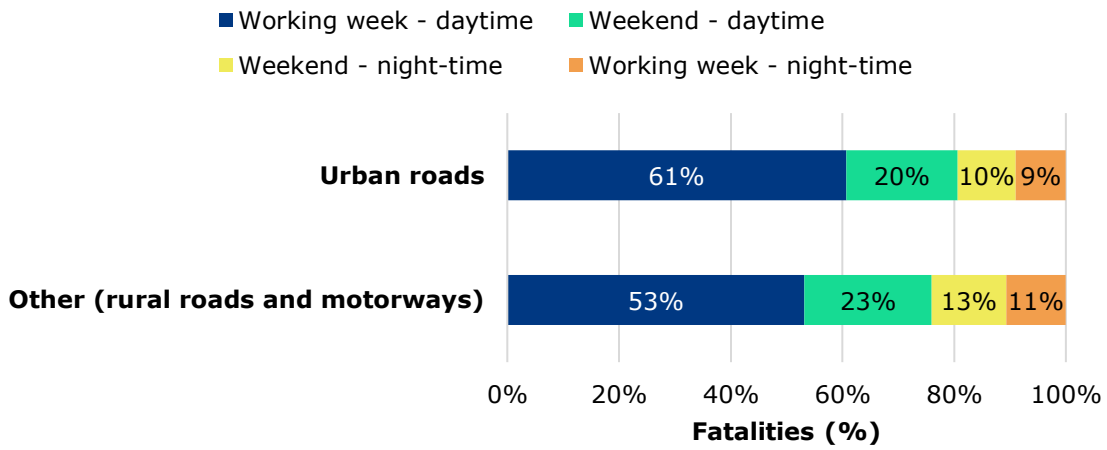


5. Time

5.1 Period of the week

The share of fatalities on urban roads according to the period of the week **is proportionally higher during daytime in the working week and lower at daytime on weekends** compared to on other roads (rural roads and motorways).

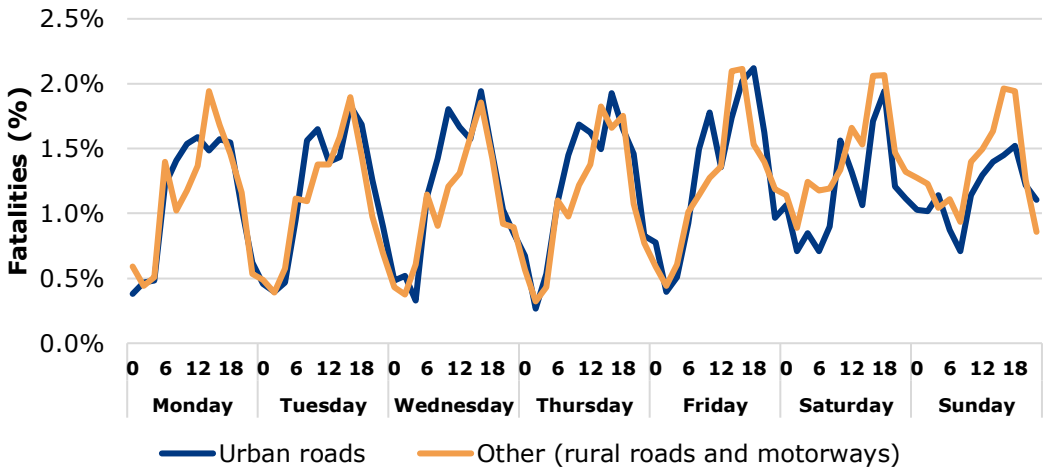
Figure 15. Distribution of fatalities according to period of the week and road type in the EU27 (2022). Source: CARE



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

The figure below on fatalities on urban roads confirms the above finding that **proportionately more fatalities occur on urban roads during daytime in the working week.** Fatalities on urban roads occur more often during the morning hours on weekdays compared to fatalities on other roads (rural roads and motorways). Relatively high shares of fatalities on urban roads are observable in the evening on weekdays, particularly Fridays.

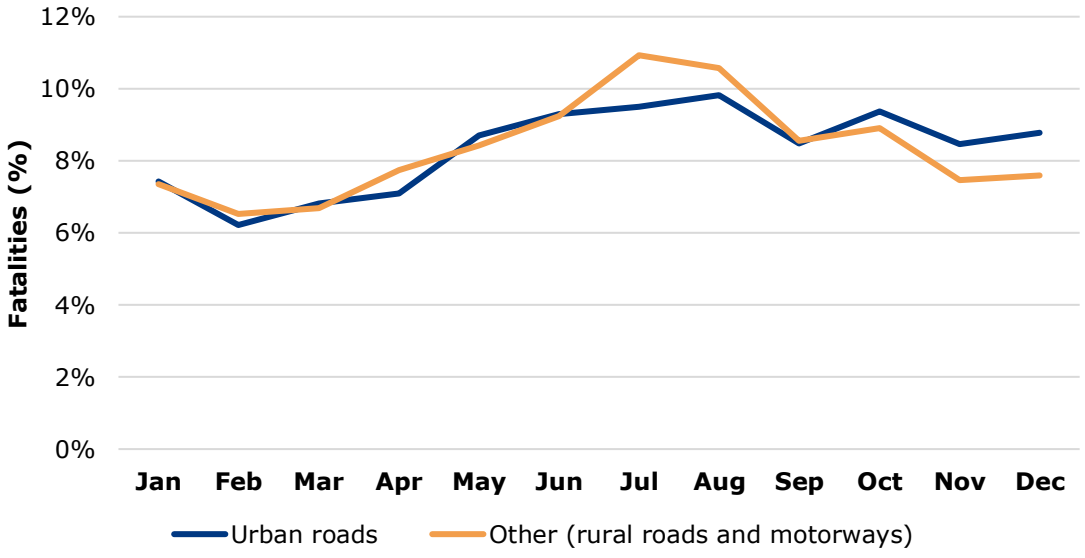
Figure 16. Distribution of fatalities on urban roads and other roads (rural roads and motorways) by day of the week and hour in the EU27 (2022). Source: CARE



5.3 Month

The **proportion of fatalities on urban roads** is highest in August, but lower than the proportion of fatalities on other roads (rural roads and motorways) between July and September.

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

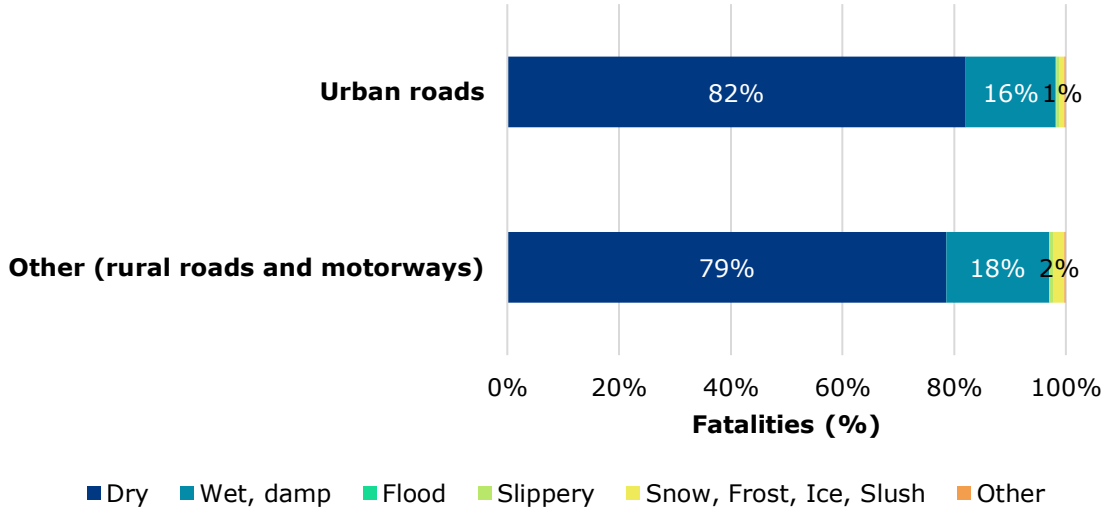


6. Location

6.1 Road Surface

In 2022, surface conditions were dry for 82% of fatalities on urban roads and wet for 16% of those fatalities. For only 1% of fatalities the surface conditions were slippery or snowy, frosty, or icy. The proportion of fatalities on urban roads during dry weather conditions is only slightly higher than the proportion of fatalities on other roads (rural roads and motorways).

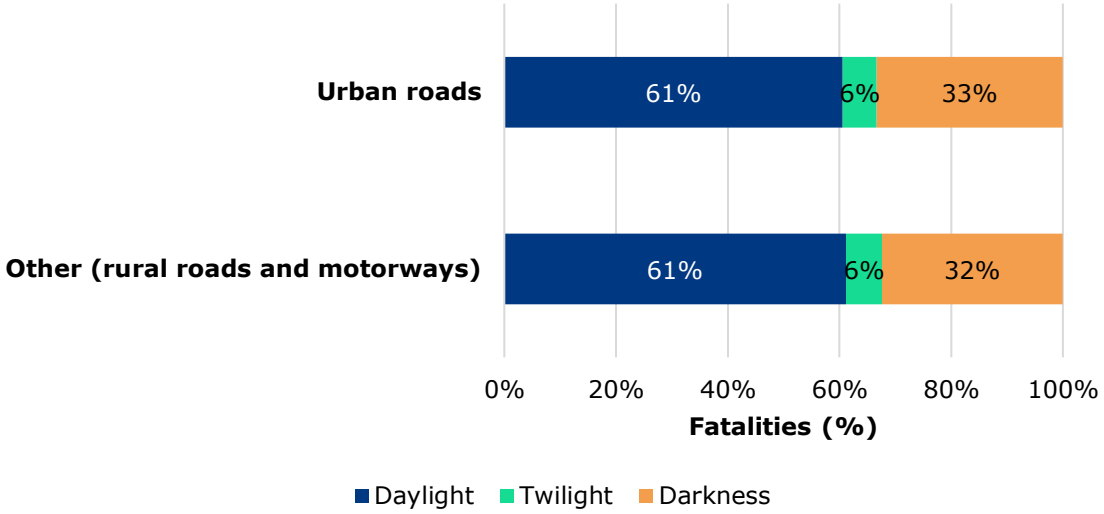
Figure 18. Distribution of fatalities on urban roads and other roads (rural roads and motorways) by surface conditions in the EU27 (2022). Source: CARE



6.2 Light conditions

61% of fatalities occur during daylight both on urban roads as well as on other roads (rural roads and motorways). The proportion of fatalities on urban roads during darkness (33%) is only slightly higher (+1%) than the proportion of fatalities on other roads (rural roads and motorways).

Figure 19. Distribution of fatalities on urban roads and other roads (rural roads and motorways) by light conditions in the EU27 (2022). 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/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 sign posted. 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 January 2024.

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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