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Commission



Facts & Figures:
Pedestrians



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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1. Key facts

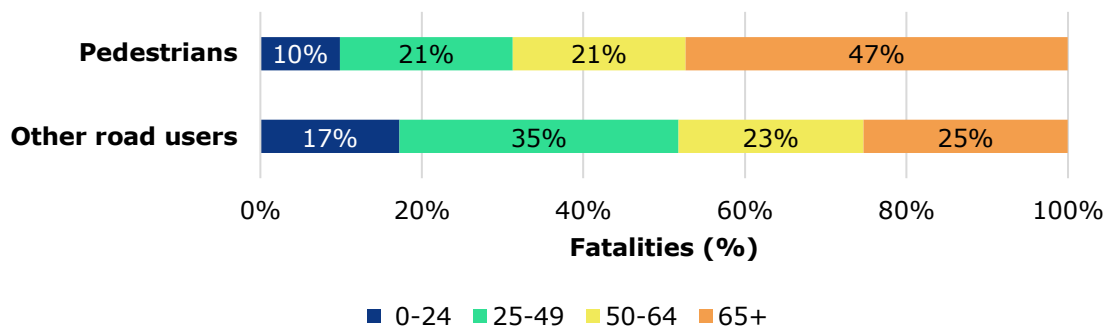
This Facts and Figures report looks at pedestrian fatalities on European roads. All observations reported were derived from the available data. The statistical significance of differences or relations between values has not been tested.

Pedestrian fatalities in the EU27, 2022

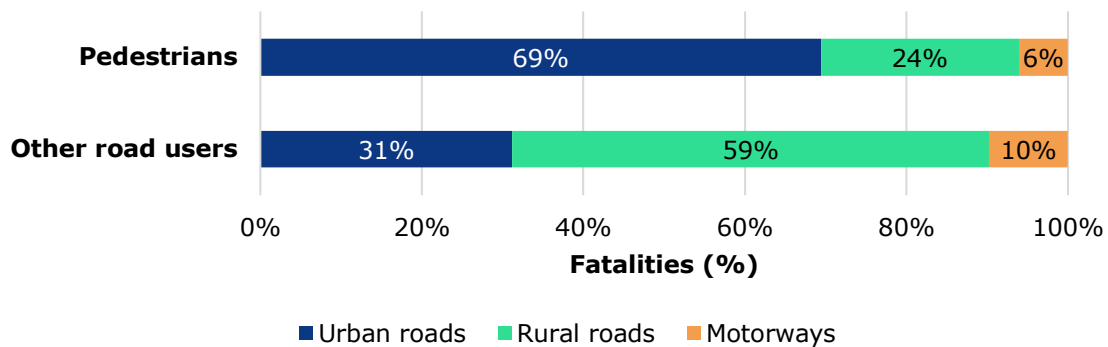


- 3,740 fatalities
- 31% decrease since 2012
- 18% of all road fatalities

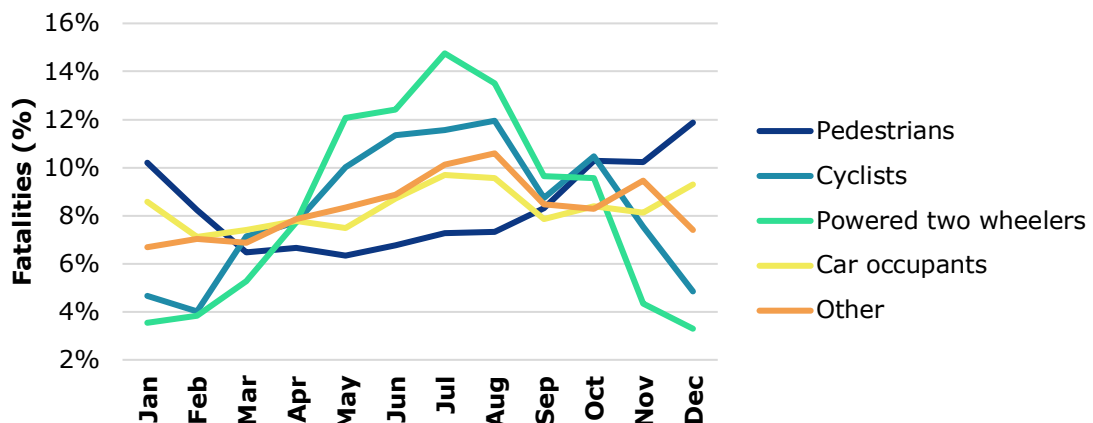
Age



Road type



Monthly distribution of fatalities by transport mode



2. Summary

Pedestrians are a very special transport mode. Walking is the most universal form of movement and the only mode of transport without a vehicle. Like bicycles, this mode of transport has no age limit, is often practiced by children and senior citizens (cf. Thematic Report on Pedestrians), and is beneficial for health and the environment. At the same time, **pedestrians are particularly vulnerable** since they do not wear protective clothing.

Both the share of pedestrian fatalities in the total number of road fatalities and pedestrian mortality were highest in the central and eastern EU Member States.

Almost one in five of all road fatalities across the EU were pedestrians. The absolute number of pedestrian fatalities fell from 5,410 to 3,740 fatalities between 2012 and 2022 (-31%), which is a greater decrease compared to the decrease for the total number of road fatalities (-22%). Consequently, the share of pedestrians in the total number of road fatalities fell slightly.

Around 1 in 2 pedestrian fatalities (47%) in 2022 were seniors aged 65 or older. This was much higher than the share of seniors within the total number of other road user fatalities (25%). As a consequence, **the mortality rate among senior pedestrians was very high:** more than twice that for 25-64 year olds and almost 5 times higher than for the under-25s. The share of women in pedestrian fatalities was 38%, which was higher than their share in the total number of other road user fatalities (19%).

Regarding the time and location of pedestrian fatalities, there was a more pronounced morning and evening peak than for other road user fatalities. Furthermore, the monthly distribution was very different from other road user types, with **up to two times more pedestrians getting killed on the road in the winter months** than during the months of March to July. Compared to other road user fatalities, many more pedestrians were killed on urban roads (69% versus 31% in 2022). However, motorways also accounted for 6% of pedestrians killed.

3. Main trends

3.1 Absolute number of road fatalities

Table 1. Pedestrian fatalities 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	117	109	107	94	81	95	74	92	65	75	83	-29%	-10%
Bulgaria	135	108	156	164	118	157	123	154	94	94	94	-30%	-39%
Czechia	163	162	130	150	130	129	142	111	95	104	86	-47%	-23%
Denmark	31	34	22	27	36	20	30	30	23	19	28	-10%	-7%
Germany	527	561	527	545	500	489	464	421	379	344	375	-29%	-11%
Estonia	29	23	26	24	22	10	12	11	14	13	11	-62%	0%
Ireland	29	31	41	31	35	31	40	27	33	-	-	-	-
Greece	170	151	125	128	149	118	146	145	76	95	112	-34%	-23%
Spain	370	371	336	367	389	351	386	381	260	301	348	-6%	-9%
France	489	465	495	466	553	480	468	476	388	401	482	-1%	1%
Croatia	72	69	73	61	67	56	65	61	38	37	43	-40%	-30%
Italy	576	551	578	602	570	600	612	534	409	471	485	-16%	-9%
Cyprus	10	8	10	16	14	15	8	13	13	6	6	-	-54%
Latvia	62	70	71	63	55	51	50	40	43	-	-	-	-
Lithuania	-	96	109	81	72	69	71	59	52	28	31	-	-48%
Luxembourg	6	5	3	7	8	4	3	2	4	5	3	-	-
Hungary	156	147	152	149	152	170	165	144	109	97	126	-19%	-13%
Malta	-	-	-	5	8	7	2	5	1	4	-	-	-
Netherlands	64	51	50	60	44	64	50	49	35	43	62	-3%	27%
Austria	81	82	71	84	73	73	47	69	51	37	49	-40%	-29%
Poland	1,157	1,140	1,116	915	868	873	803	793	631	527	460	-60%	-42%
Portugal	159	144	145	146	123	130	163	140	101	100	107	-33%	-24%
Romania	728	726	697	649	717	733	690	729	587	583	530	-27%	-27%
Slovenia	19	20	14	16	22	10	13	15	7	15	15	-21%	0%
Slovakia	-	-	-	-	80	55	72	80	49	60	70	-	-13%
Finland	29	34	36	32	29	27	25	15	22	24	27	-7%	80%
Sweden	50	42	52	28	42	37	34	27	25	26	27	-46%	0%
EU	5,410	5,285	5,227	4,990	4,957	4,854	4,758	4,623	3,604	3,585	3,740	-31%	-19%
Iceland	2	1	-	1	2	-	-	1	-	2	4	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	22	18	18	12	15	11	13	13	15	7	12	-46%	-8%
Switzerland	75	69	43	58	50	47	43	37	36	37	36	-52%	-3%

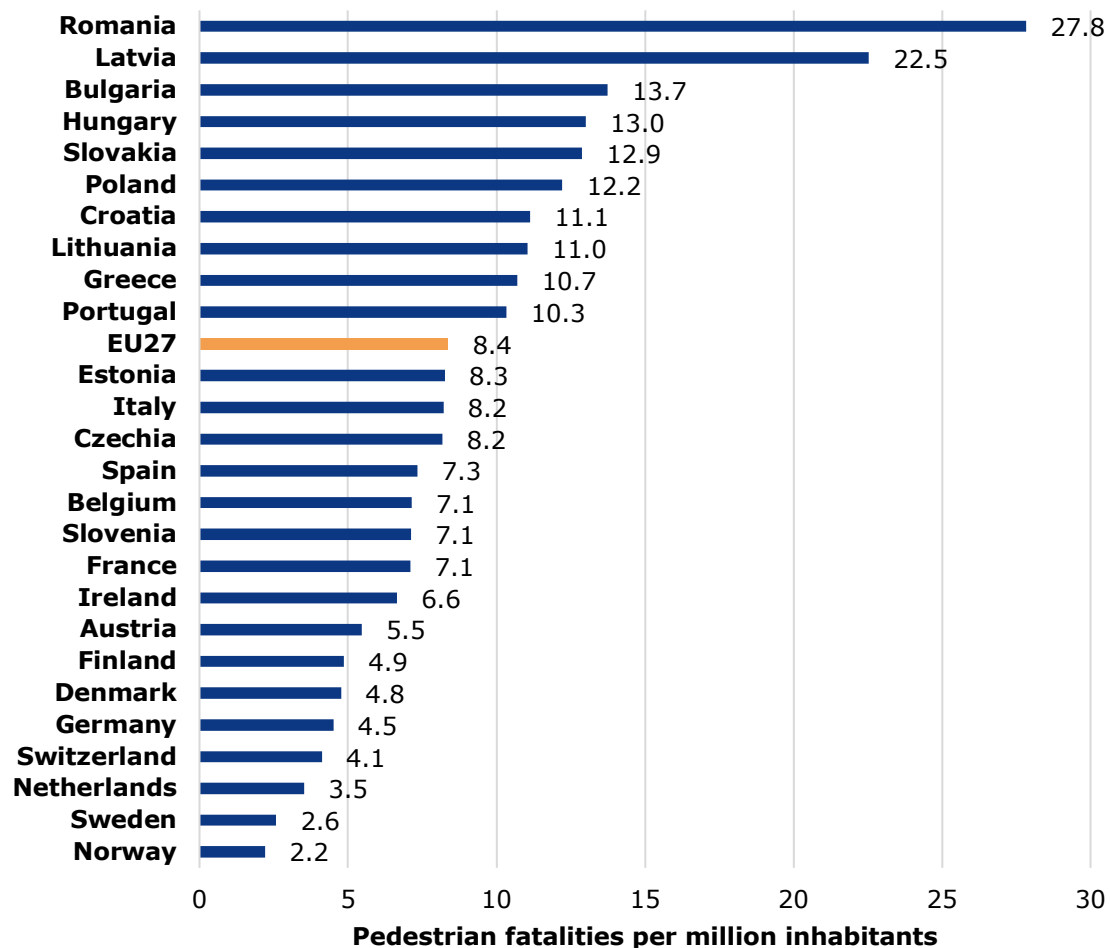
*LT = Long term change of last available year over 2012.

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

3.2 Mortality rate: number of road fatalities per million inhabitants

The number of pedestrian fatalities per million inhabitants is highest in the central and eastern EU Member States. In Romania the mortality rate for pedestrians is more than 3 times higher and in Latvia more than twice higher than the EU average. Despite the fact that Poland shows one of the strongest decreases in the past decade, the country still has above-average pedestrian mortality. In the south of the EU, Portugal and Greece show above-average figures.

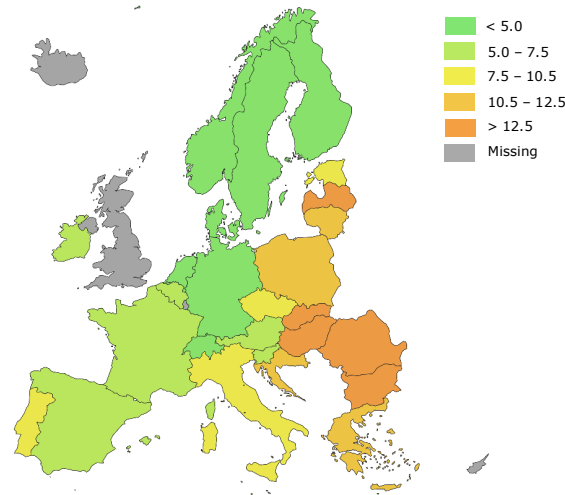
Figure 1. Pedestrian fatalities per million inhabitants per country in the EU27 and EFTA (2022). Source: CARE, EUROSTAT



Notes:

- Cyprus, Luxembourg, Iceland and Liechtenstein are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta is not included in the figure because there are less than 10 fatalities in the last available year (2021) before 2022.
- For Ireland and Latvia the missing value for 2022 was imputed with the last known value (2020) in the series.

The geographical representation of pedestrian fatality rates in the map below shows a **tendency of fatality rates to be lower in the north and west in comparison to the south and east.**



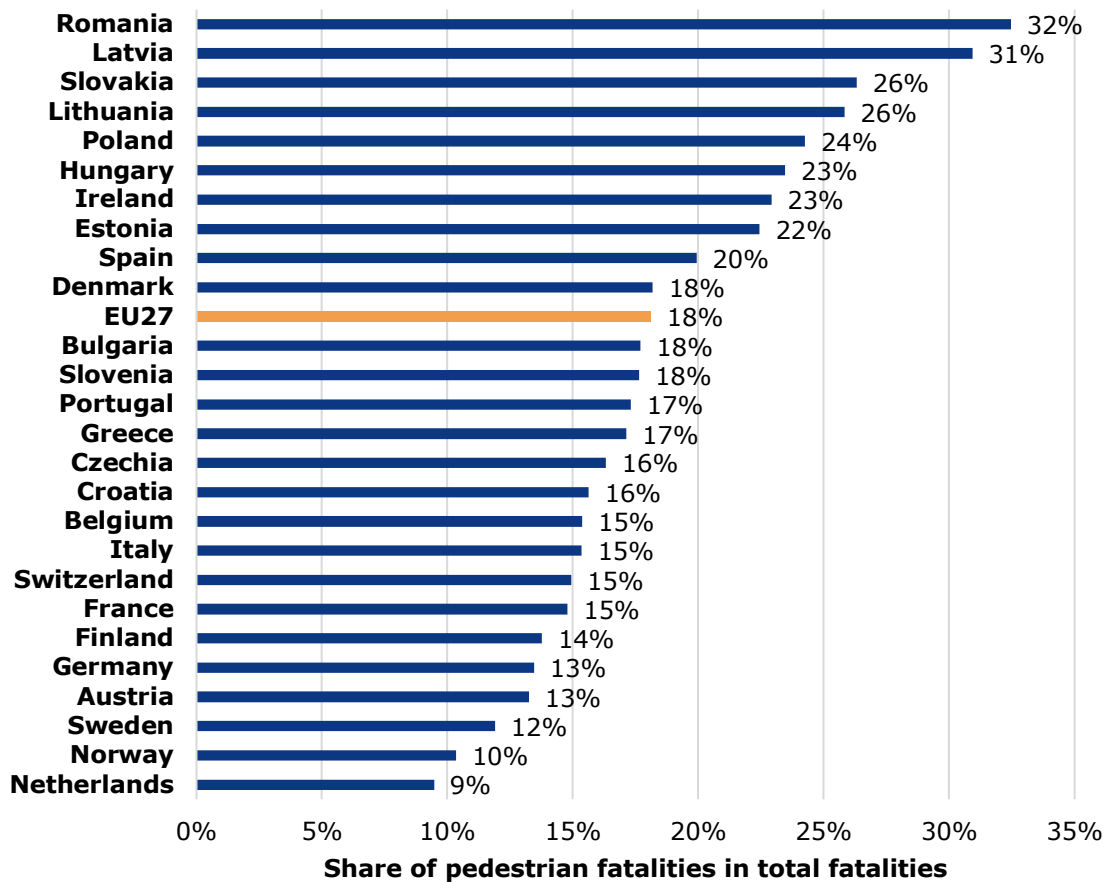
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3.3 Number of pedestrian fatalities as a share of total fatalities

Mortality is an important indicator but does not take into account differences in the general state of road safety in countries. In other words, it is possible that pedestrian mortality is high because the total mortality for all road users is high. Therefore, it is important to also look at the share of pedestrian fatalities within the total number of road fatalities.

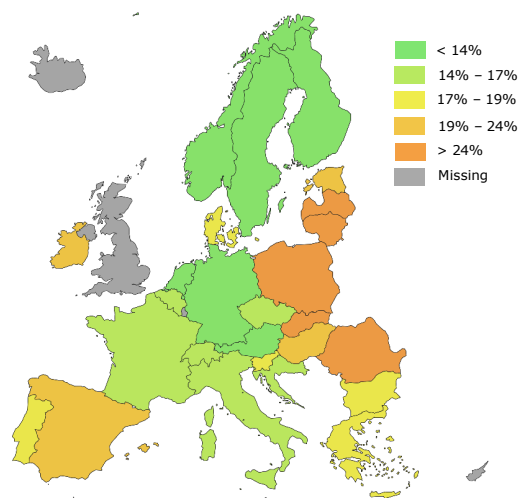
The Figure below is in line with the Figure on mortality. **Central and Eastern EU Member States, in particular, Romania, Latvia, Slovakia and Lithuania have the highest share of pedestrian fatalities.** The high position of some countries may be related to the amount of pedestrian mobility in these countries. Unfortunately, exposure data on pedestrians, such as the number of trips and the average distance traveled, are either missing or incomplete for most EU countries. On average, across the EU, 18 to 27% of all trips are made on foot (cf Thematic report Pedestrians).

Figure 2. Share of pedestrian fatalities in the total number of fatalities per country in the EU27 and EFTA (2022). Source: CARE



Notes:

- Cyprus, Luxembourg, Iceland and Liechtenstein are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta is not included in the figure because there are less than 10 fatalities in the last available year (2021) before 2022.
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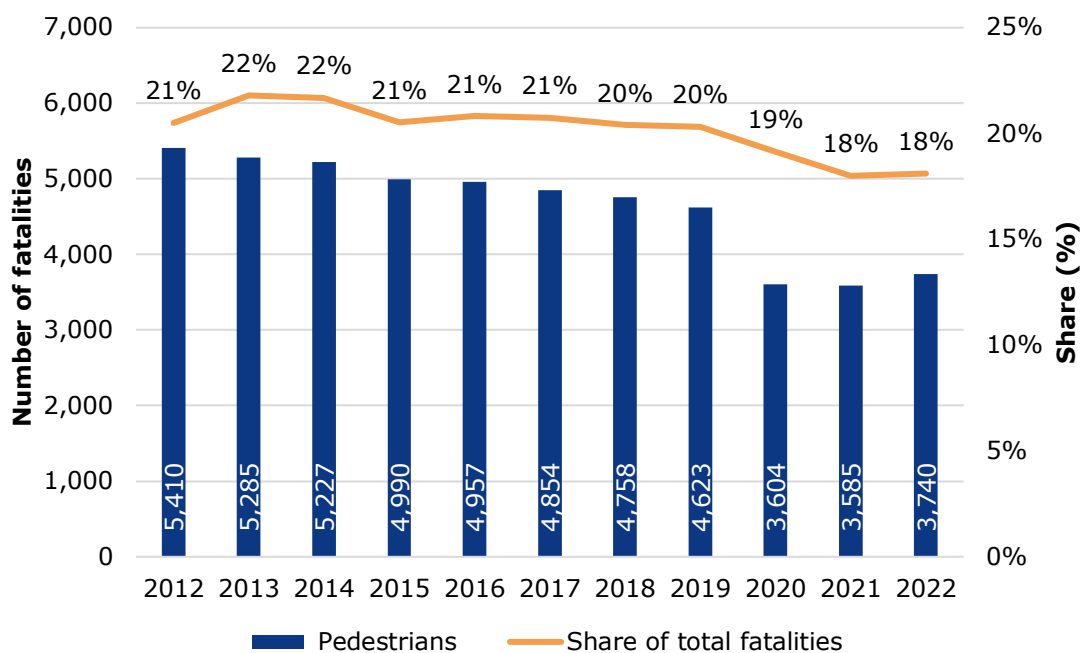


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3.4 Trend in number of fatalities

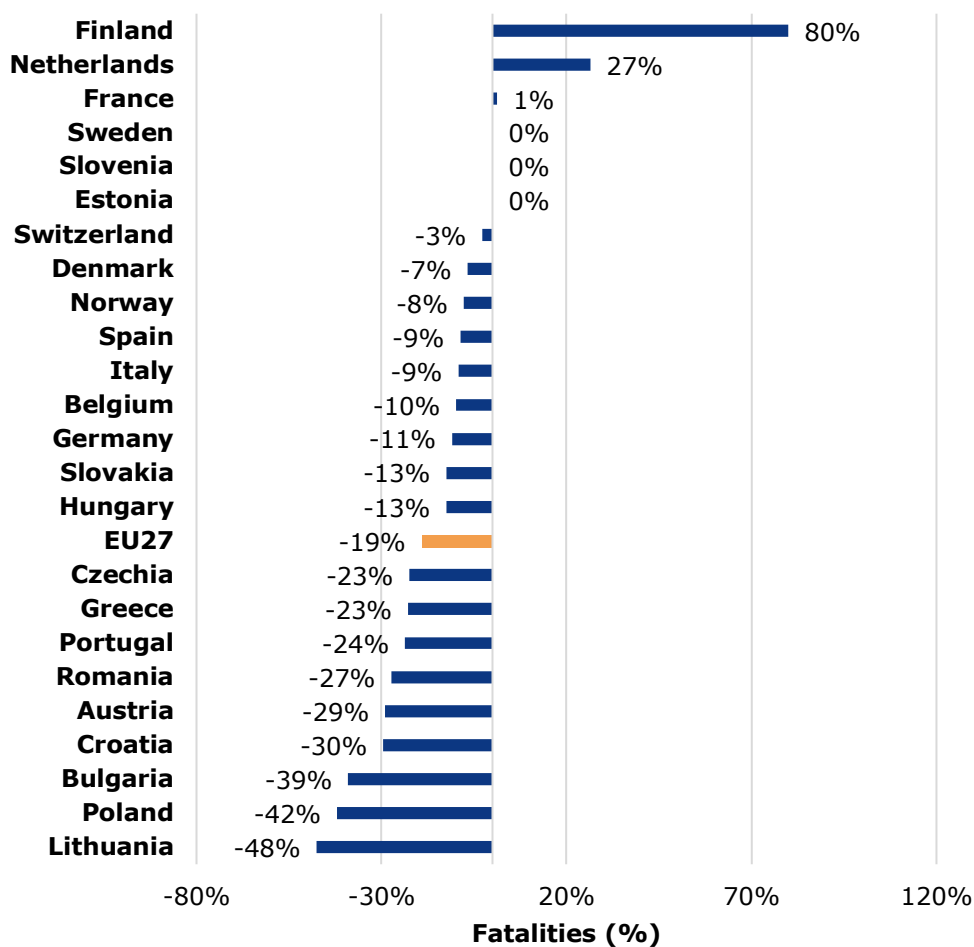
The number of pedestrian fatalities fell from 5,410 to 3,740 fatalities between 2012 and 2022. This is a **relative decrease of 31%, which is higher than the decrease in all road fatalities together in the same period (-22%)**. As a result, the share of pedestrians has decreased slightly in recent years: **almost 1 in 5 road fatalities in the EU (18%) are pedestrians**.

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



In almost all countries of the EU, the number of pedestrian fatalities has decreased between 2019 and 2022. This is not the case in Finland (+80% due partly to a low number in 2019) and the Netherlands (+27%). **Despite the strong decline in Poland (-42%), this country has the second highest number of pedestrian fatalities in 2022 (460), while Romania has the highest number of pedestrian fatalities in 2022 (530).**

Figure 4. Percentage change in the number of pedestrian fatalities per country in the EU27 and EFTA (2019-2022). Source: CARE



Notes:

- Cyprus, Luxembourg, Iceland and Liechtenstein are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta is not included in the figure because there are less than 10 fatalities in the last available year (2021) before 2022.
- For Ireland and Latvia the missing value for 2022 was imputed with the last known value (2020) in the series.

Table 2. Number and trend in pedestrian fatalities per country in the EU27 and EFTA (2012-2022). Source: CARE

	2012	2019	2020	2021	2022	ST*	Miniplot: trend since 2012
Belgium	117	92	65	75	83	-10%	
Bulgaria	135	154	94	94	94	-39%	
Czechia	163	111	95	104	86	-23%	
Denmark	31	30	23	19	28	-7%	
Germany	527	421	379	344	375	-11%	
Estonia	29	11	14	13	11	0%	
Ireland	29	27	33	-	-	-	
Greece	170	145	76	95	112	-23%	
Spain	370	381	260	301	348	-9%	
France	489	476	388	401	482	1%	
Croatia	72	61	38	37	43	-30%	
Italy	576	92	65	75	83	-10%	
Latvia	62	40	43	-	-	-	
Lithuania	-	59	52	28	31	-48%	
Hungary	156	144	109	97	126	-13%	
Netherlands	64	49	35	43	62	27%	
Austria	81	69	51	37	49	-29%	
Poland	1,157	793	631	527	460	-42%	
Portugal	159	140	101	100	107	-24%	
Romania	728	729	587	583	530	-27%	
Slovenia	19	15	7	15	15	0%	
Slovakia	-	80	49	60	70	-13%	
Finland	29	15	22	24	27	80%	
Sweden	50	27	25	26	27	0%	
EU27	5,410	4,623	3,604	3,585	3,740	-19%	
Norway	22	13	15	7	12	-8%	
Switzerland	75	37	36	37	36	-3%	

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

Notes:

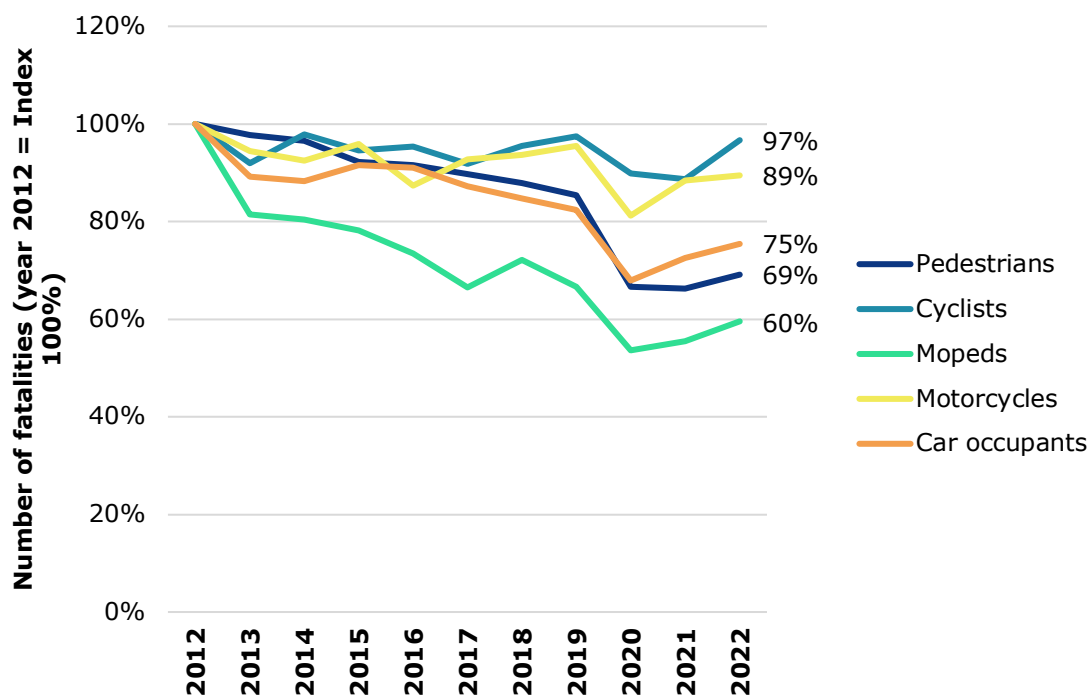
- Cyprus, Luxembourg, Iceland and Liechtenstein are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta is not included in the figure because there are less than 10 fatalities in the last available year (2021) before 2022.
- For Ireland and Latvia the missing value for 2022 was imputed with the last known value (2020) in the series.

3.5 Comparison of pedestrians with other transport modes

The figure below shows the trend of fatalities in road crashes involving particular modes of transport over the period 2012-2022.

Looking at the long-term changes between 2012 and 2022, there is a **decrease in fatalities in all transport modes. The decline is more distinct for mopeds (-40%) and pedestrians (-31%) than for motorcyclists (-11%) and cyclists (-3%).**

Figure 5. Trend of pedestrian fatalities in crashes involving different transport modes in the EU27 (2012-2022). Source: CARE

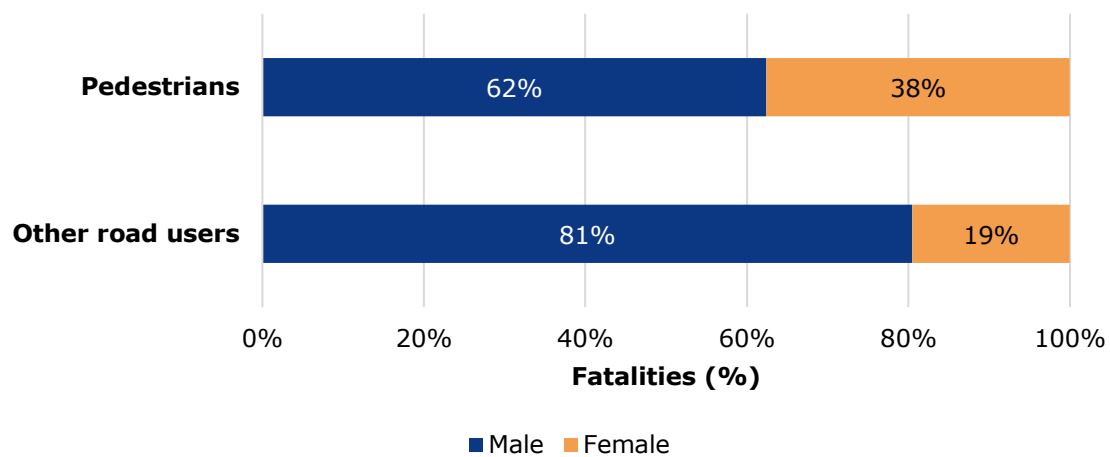


4. Road user

4.1 Gender

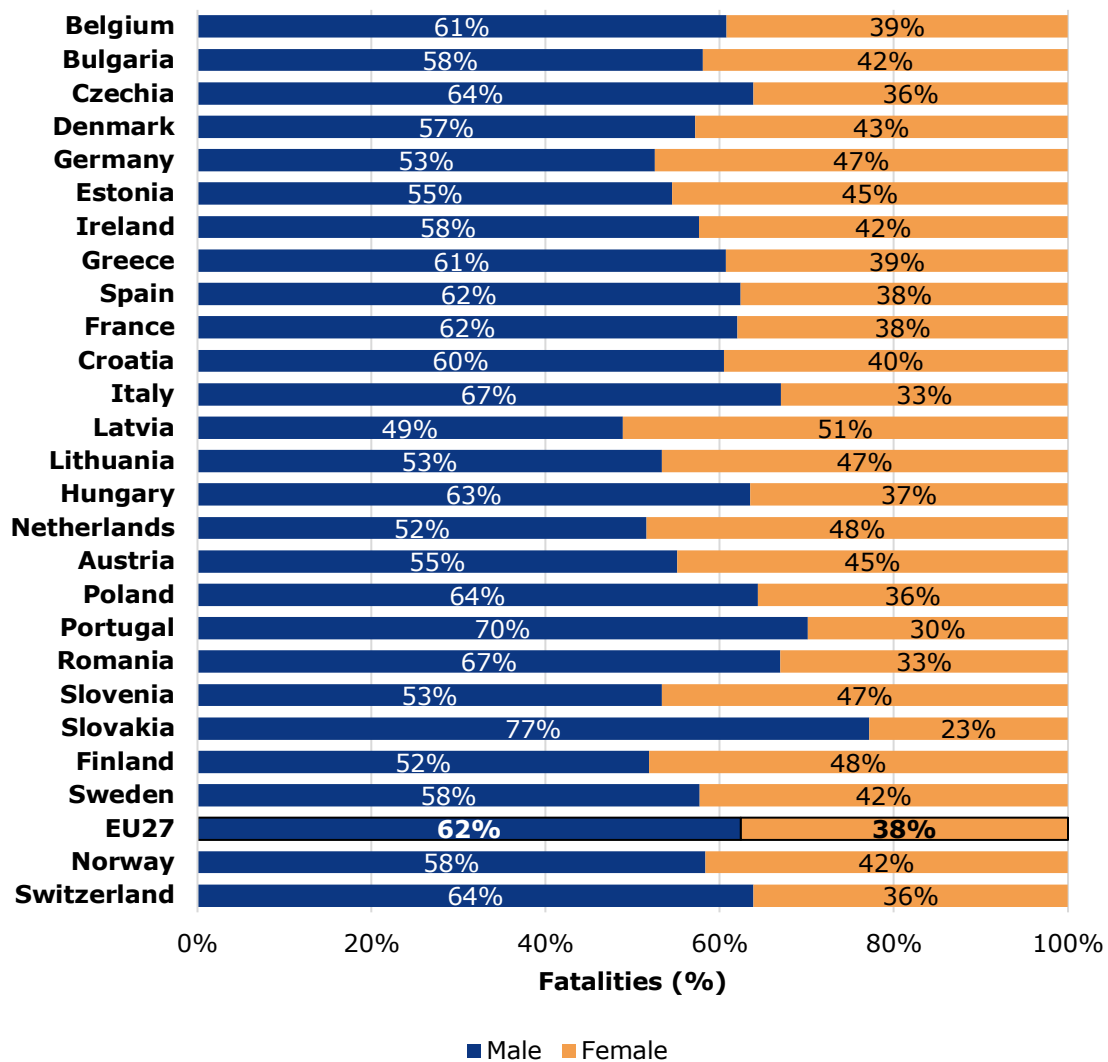
81% of other road user fatalities in the EU are male. At 62%, the share of men among pedestrian fatalities is lower. Hence, pedestrian fatalities concern relatively often women: 38% of pedestrian fatalities are women compared to 19% of other road user fatalities.

Figure 6. Share of pedestrian fatalities and other road user fatalities by gender in the EU27 (2022). Source: CARE



The figure below shows the share of pedestrian fatalities by gender per country. Latvia is the only country with above 50% female pedestrian fatalities.

Figure 7. Share of pedestrian fatalities by gender per country in EU27 and EFTA (2022). Source: CARE



Notes:

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4.2 Age

The figure below shows that almost half of all pedestrian fatalities in 2022 were senior citizens (65+ year olds), almost twice as many as for other road user groups.

People under 24 years have a lower share in the number of pedestrian fatalities (10% in 2022) than in the number of other road user fatalities (17% in 2022). **Taking into account their share in the population, seniors are substantially over-represented in pedestrian fatalities while 25 to 49 year olds are substantially under-represented.**

Figure 8. Pedestrians and other road user fatalities by age group in the EU27 (2022). Source: CARE

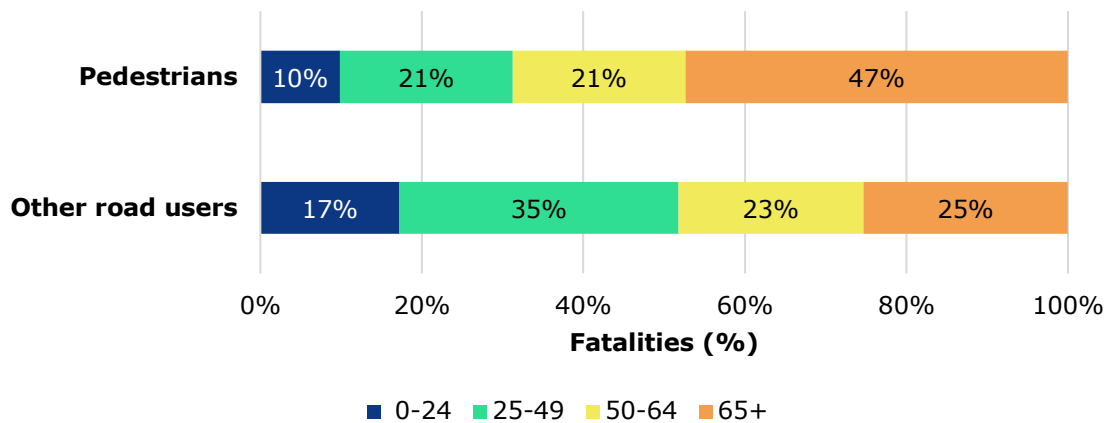
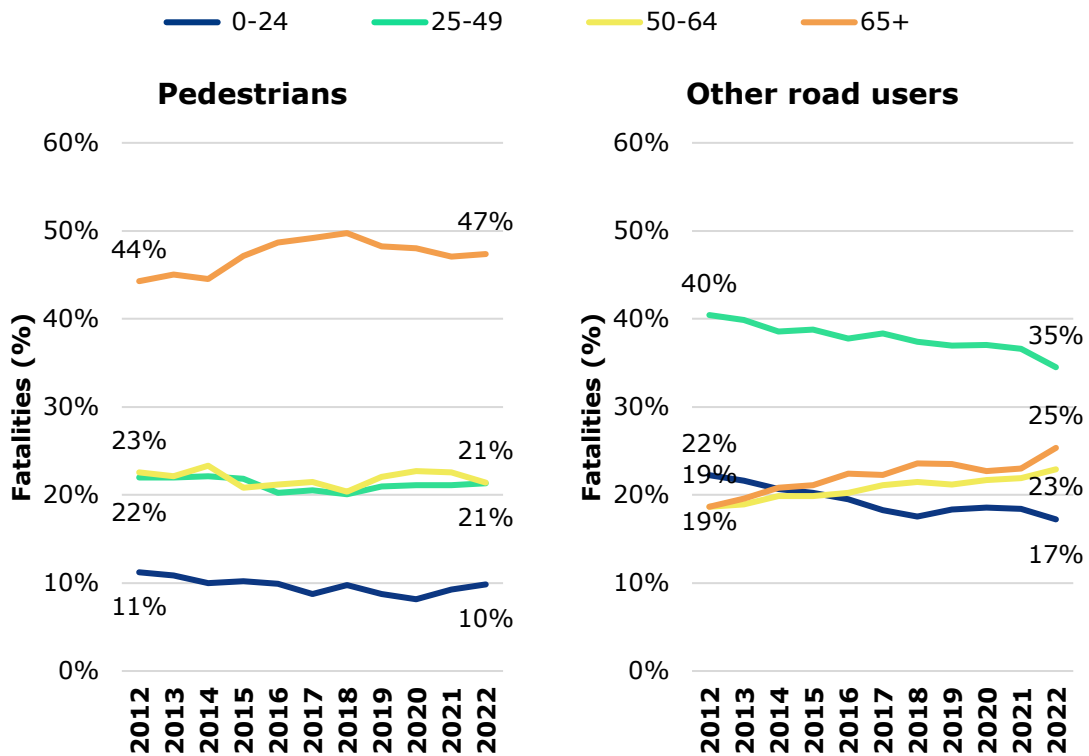
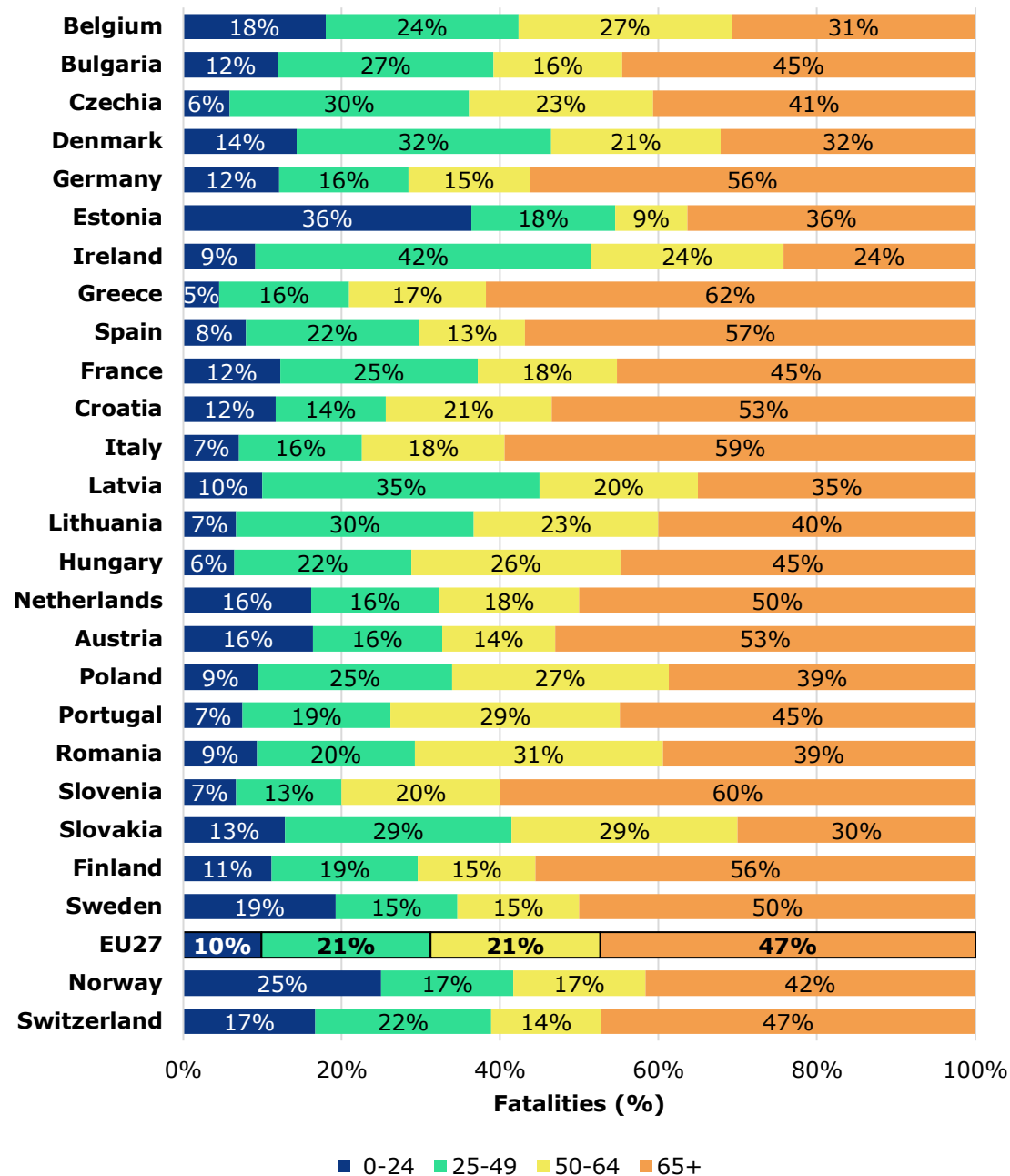


Figure 9. Trend of pedestrian fatalities and other road user fatalities by age group in the EU27 (2012-2022). Source: CARE



In some European countries, a relatively high share of seniors among pedestrian fatalities (between 56 and 62%) is observed, such as in Greece, Slovenia, Italy, Spain, Germany and Finland.

Figure 10. Share of pedestrian fatalities by age groups per country in the EU27 and EFTA (2022). Source: CARE

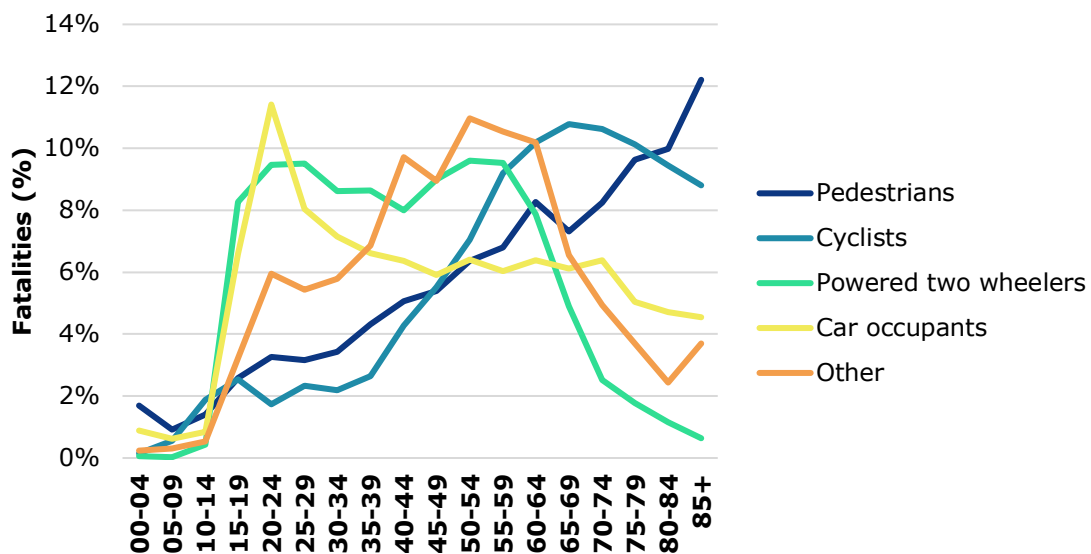


Notes:

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The Figure below provides a more detailed overview of the share of pedestrian fatalities by age. Between the age category 5-9 years and the age category 85+ years, the number of pedestrian fatalities continues to increase steadily almost without interruption. We see a very similar distribution for cyclists up to 70 years. For car passengers we see a very different spread with a clear peak at the youngest age category at which a car can be used.

Figure 11. Share of pedestrian fatalities and of fatalities of other transport modes over 5-year age categories in the EU27 (2022). Source: CARE

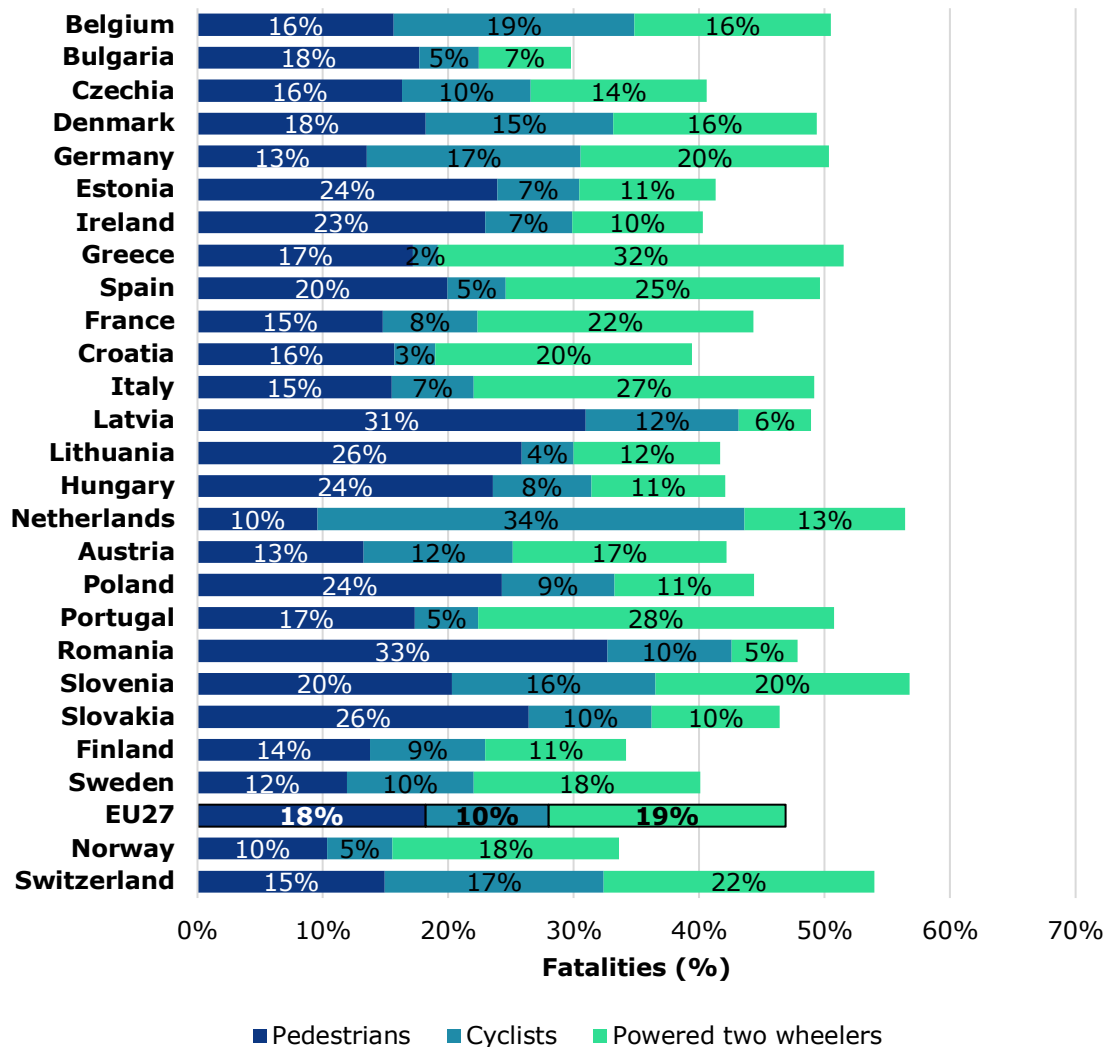


4.3 Transport modes

Vulnerable road users (pedestrians, cyclists, powered two wheelers) make up for a large share of all road fatalities, with a share of 47% in the EU27 countries in 2022. Those shares vary considerably between the Member States, with differences partly resulting from different modal splits and safety levels for different road user groups. High shares of vulnerable road users' (VRUs) fatalities are found in Slovenia, the Netherlands, Switzerland and Greece (>52%).

Looking at the distribution of fatalities of VRUs in 2022, **high shares (>30%) in pedestrian fatalities can be found in Romania and Latvia.** The Netherlands records a high share in cyclist fatalities (34%), while Greece records a high share in powered two wheelers fatalities (32%).

Figure 12. Share of fatalities of vulnerable road users per country in the EU27 and EFTA (2022). Source: CARE



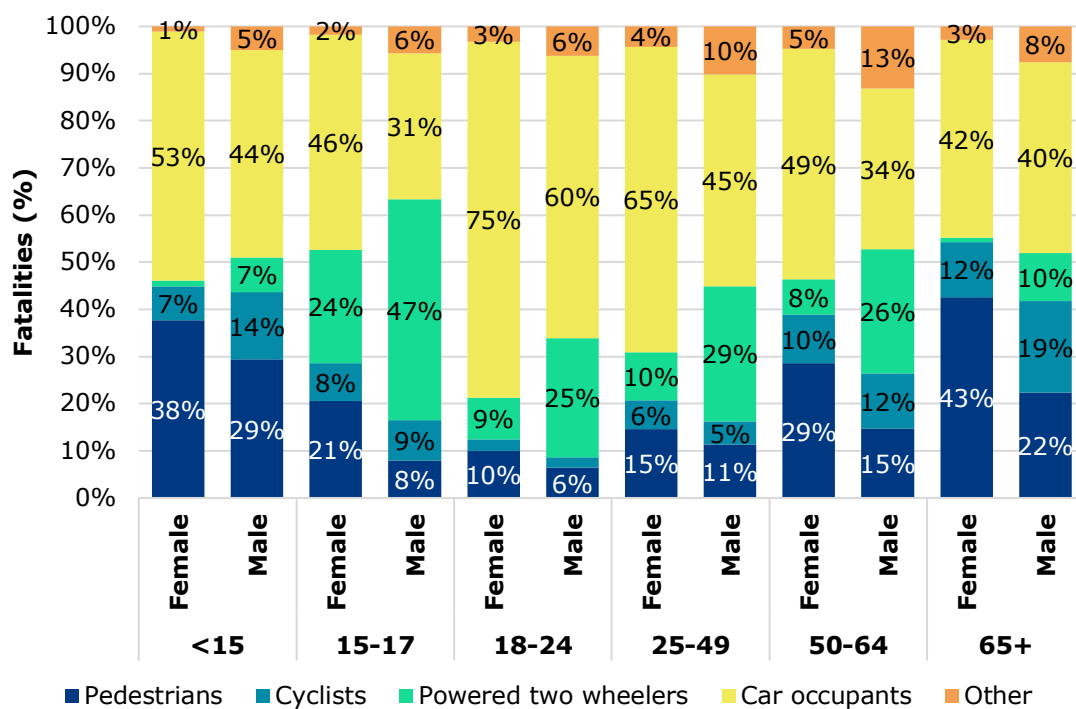
Notes:

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4.4 Gender, Age and Transport modes

Figure 13 shows the distribution of fatalities by transport mode of six age groups by gender in the EU27 in 2022. **Through all age groups, there are relatively more female than male pedestrian fatalities, the difference is most pronounced for 65+ years old pedestrian road users.** The highest share of pedestrian fatalities is in under 15 and 65+ age groups.

Figure 13. Distribution of road fatalities by age, gender and transport mode in the EU27 (2022). Source: CARE



5. Location

5.1 Road type

The figure below shows the share of fatalities by road type. Overall, 31% of other road user fatalities in 2022 occurred in crashes on urban roads, 59% on rural roads and 10% on motorways. **Looking at pedestrian fatalities, 69% of them occurred on urban roads and 24% on rural roads.** In some European and EFTA countries, however, the share of fatalities occurring on rural roads exceeds the one on urban roads. This can be observed in Norway, Latvia and Sweden (see Figure 15). Although pedestrians are not allowed on motorways, the share of pedestrian fatalities is 6%. This is due to the fact that pedestrians who die on motorways also include vehicle occupants who have left their vehicles on the motorway.

Figure 14. Share of pedestrian fatalities and other road user fatalities by road type in the EU27 (2022). Source: CARE

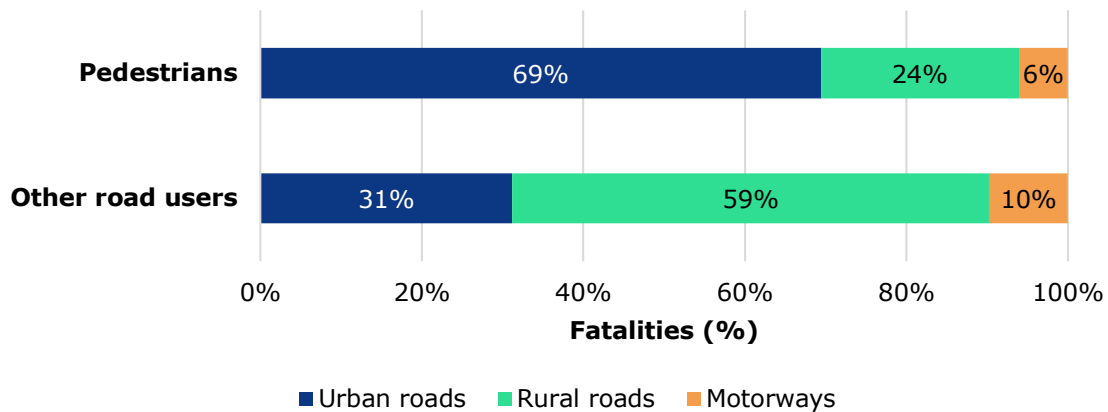
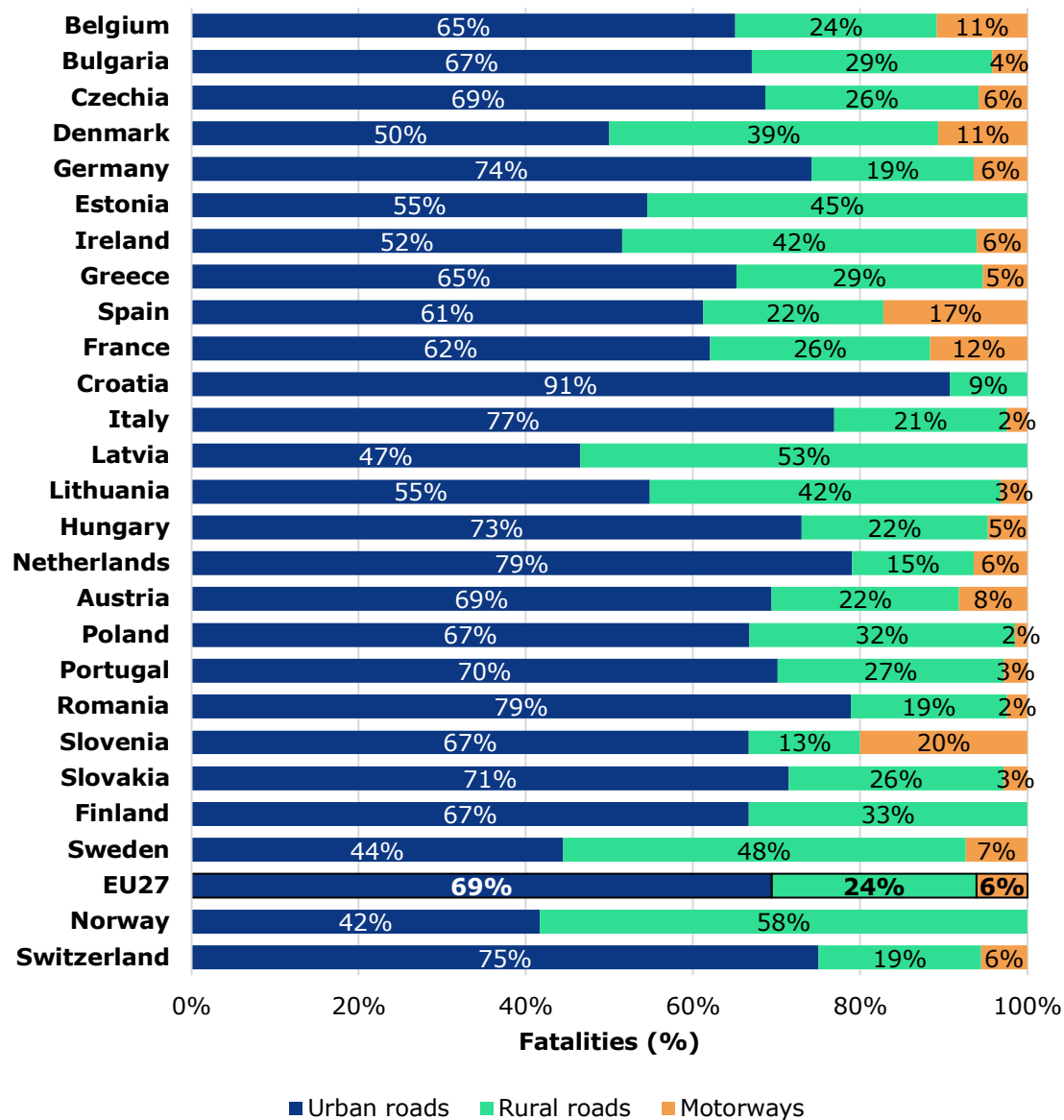


Figure 15. Share of pedestrian fatalities by road type per country in the EU27 and EFTA (2022). Source: CARE

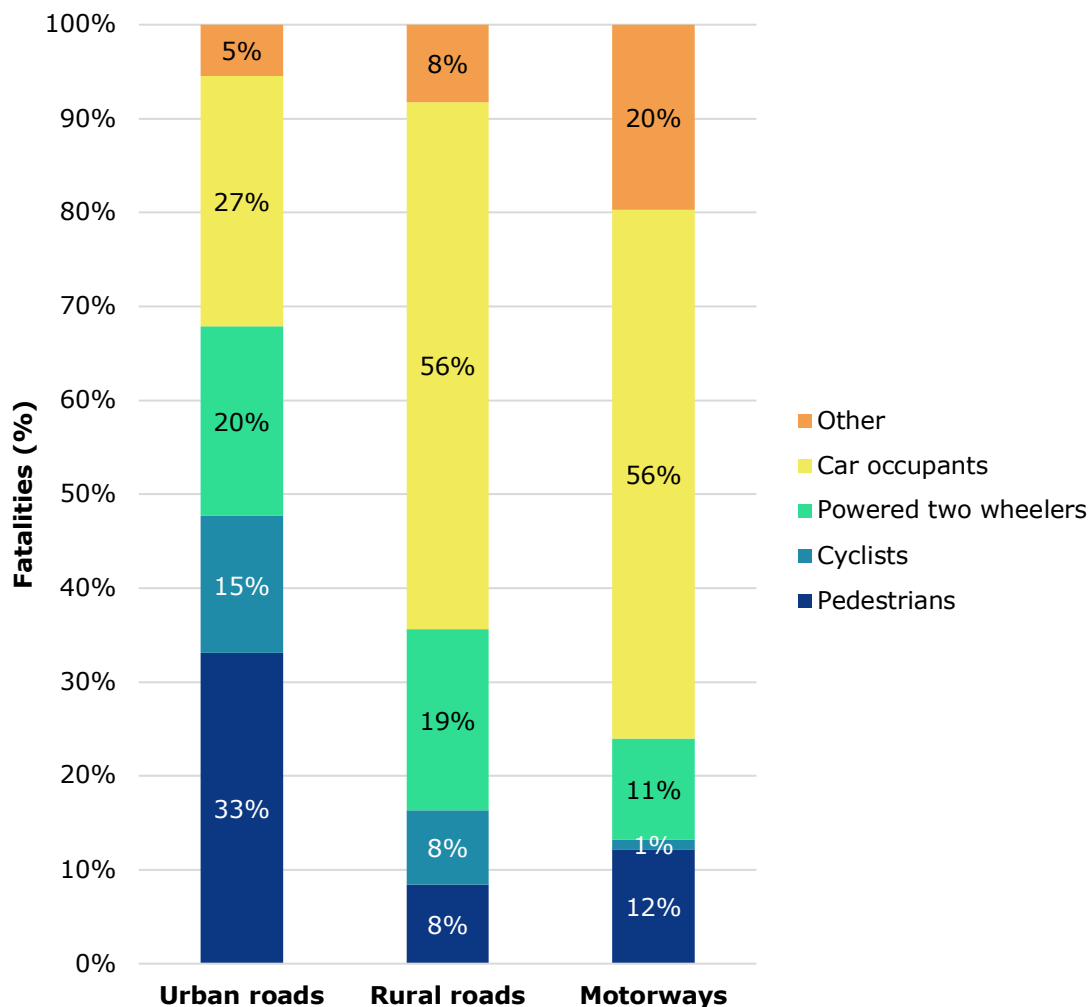


Notes:

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On urban roads, where all modes of transport are represented, the share of killed pedestrians is highest with 33%. Together with cyclists (15%), they make up for almost half of the fatalities on urban roads. The relatively high share of pedestrians killed on motorways (12%) results from including vehicle occupants who have left their vehicles on the motorway in this group.

Figure 16. Share of road fatalities by transport mode and road type in the EU27 (2022). Source: CARE



5.2 Junction

In relation to the share of fatalities that occur at junctions as compared to non-junctions **almost one in five pedestrian fatalities (18%) occurred at junctions in 2022**. Cyclist and powered two wheelers fatalities (32% and 25%) were more frequent at junctions than pedestrian fatalities; car occupant fatalities (13%) less frequent.

In Sweden, Austria, Bulgaria, the Netherlands and Finland the share of pedestrian fatalities at junctions was equal to or higher than 30% in 2022.

Figure 17. Share of road fatalities by junction or non-junction in the EU27 (2022). Source: CARE

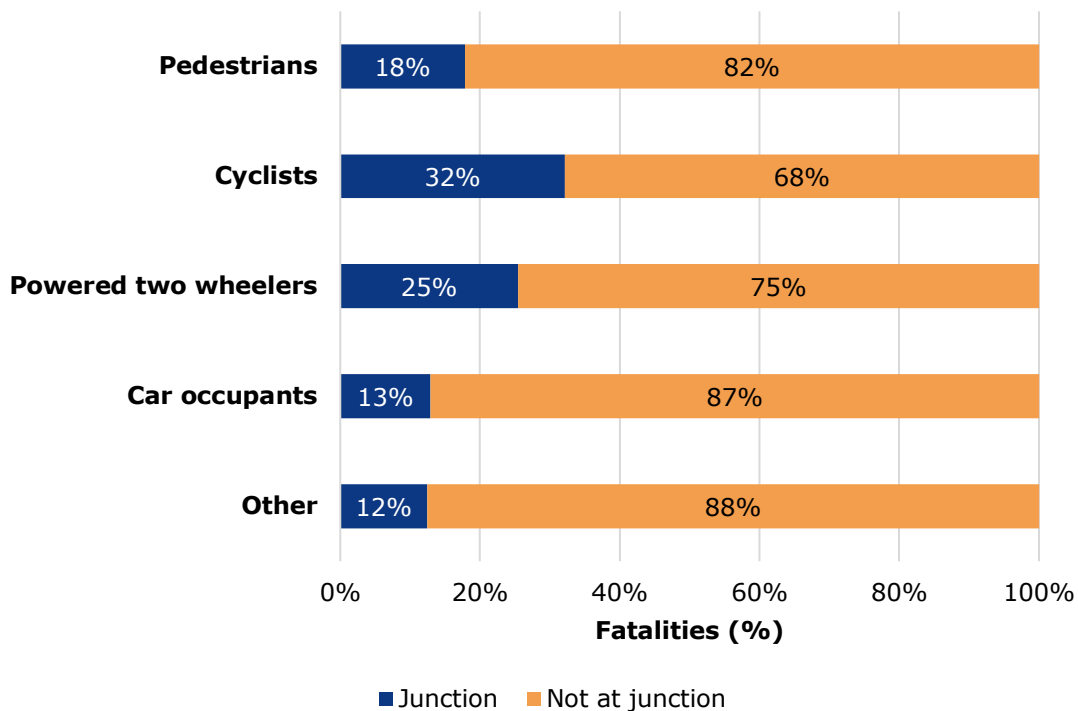
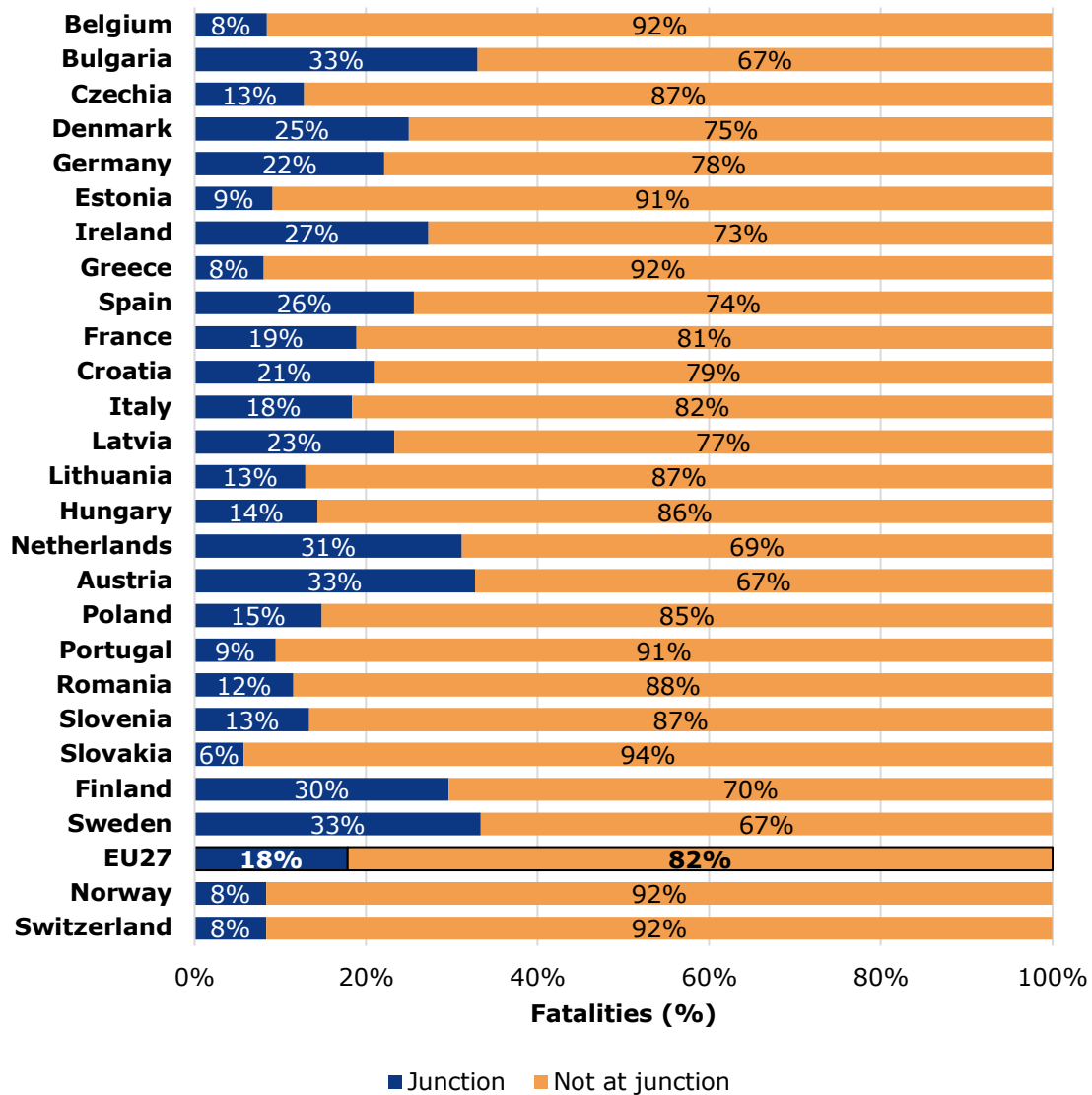


Figure 18. Share of pedestrian fatalities by junction or non-junction per country in the EU27 and EFTA (2022). Source: CARE



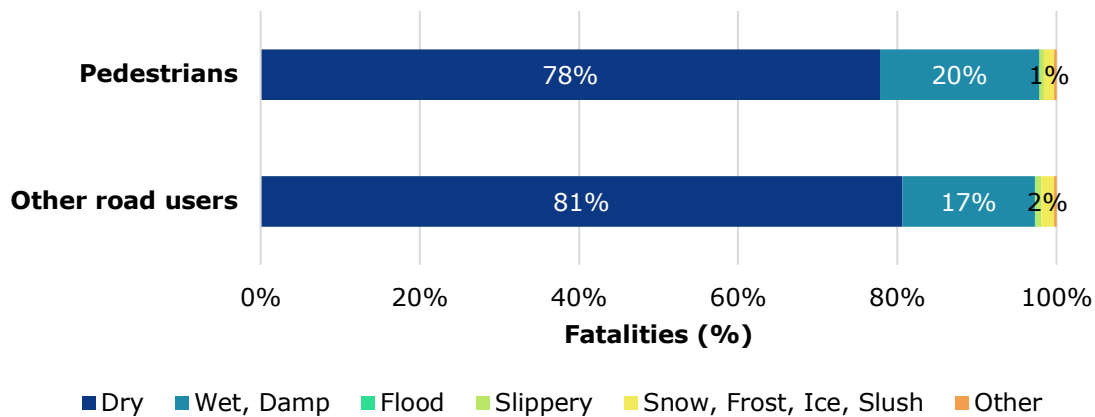
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- Cyprus, Luxembourg, Iceland and Liechtenstein are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta is not included in the figure because there are less than 10 fatalities in the last available year (2021) before 2022.
- For Ireland and Latvia the missing value for 2022 was imputed with the last known value (2020) in the series.

5.3 Road surface

The surface conditions were dry for three quarters (78%) of pedestrian fatalities. For 20% of the pedestrian fatalities the surface was wet or damp; and for 1% of the fatalities were snow, frost, and ice reported.

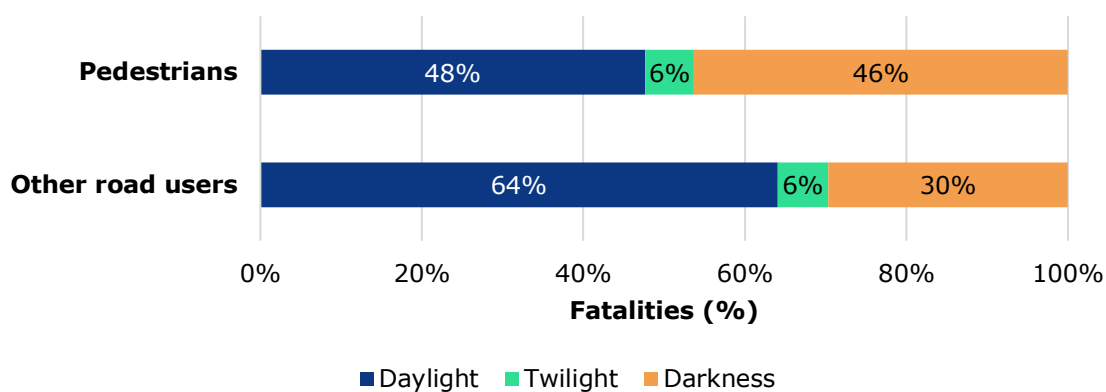
Figure 19. Share of pedestrian fatalities and other road user fatalities by road surface in the EU27 (2022). Source: CARE



5.4 Light Conditions

The figure below shows that pedestrian fatalities differ from the number of other road user fatalities in 2022 regarding light conditions. **Pedestrian fatalities occur relatively frequently during darkness:** In 2022, 46% of pedestrian fatalities occurred during darkness, compared to 30% of other road user fatalities.

Figure 20. Share of pedestrian fatalities and other road user fatalities by light conditions in the EU27 (2022). Source: CARE

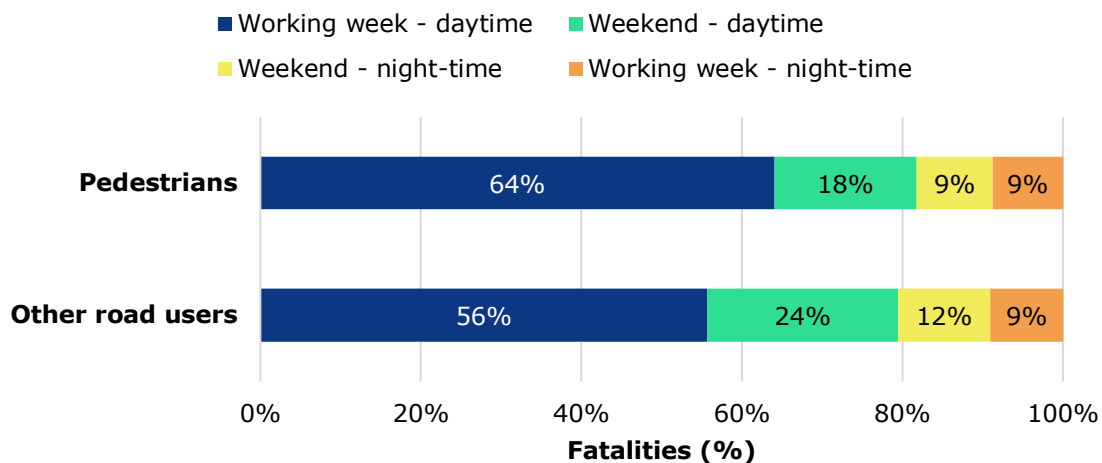


6. Time

6.1 Period of the week

Compared to other road user fatalities, **pedestrian fatalities occur more often at daytime during the working week but less often at daytime during the weekend**. The share of pedestrian fatalities during night-time (from 10 p.m. to 5.59 a.m.) both during the week and at the weekend is 9%, which is similar to the share of other road user fatalities being 12% at the weekend and 9% during the week.

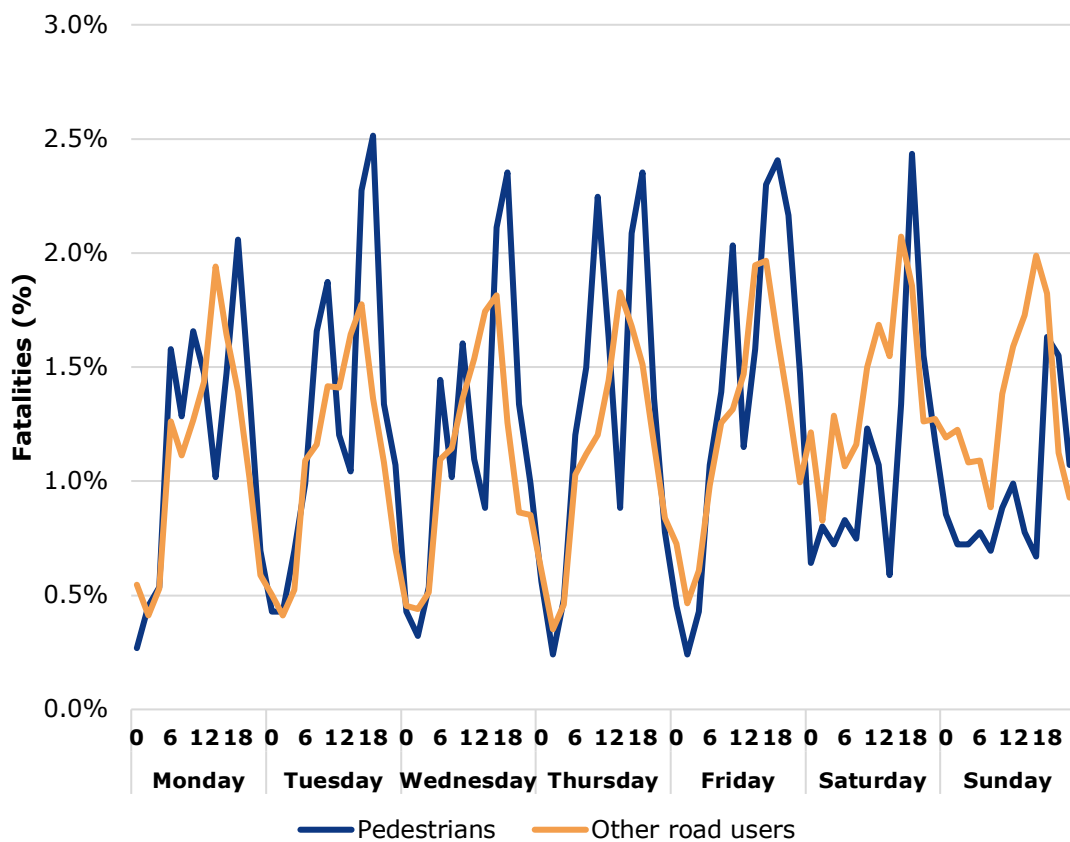
Figure 21. Share of pedestrian fatalities and other road user fatalities according to period of the week in the EU27 (2022). Source: CARE



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

Compared to other road user fatalities, the share of pedestrian fatalities over the hours of the week shows stronger peaks and troughs. During the working week, a stronger morning and evening peak is observed than for other road user fatalities. This is probably related to the commute to work/school on foot. In the weekends, there are fewer pedestrian fatalities in the morning.

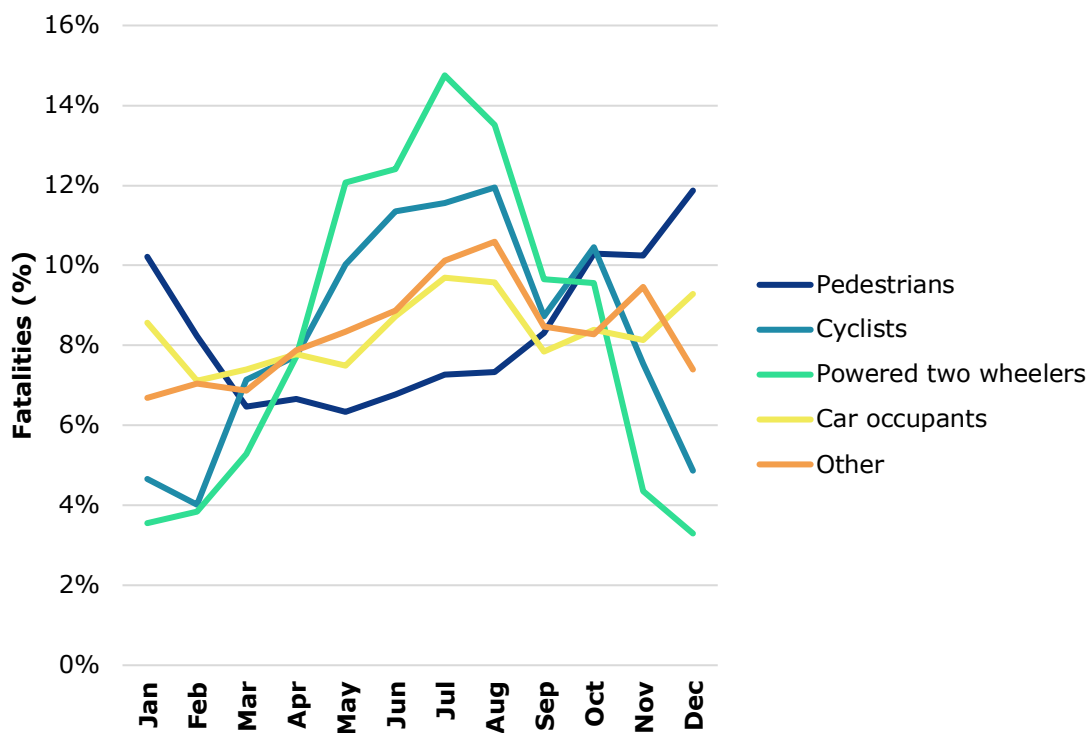
Figure 22. Share of pedestrian fatalities and other road user fatalities by day of the week and hour in the EU27 (2022). Source: CARE



6.3 Month

The figure below illustrates the share of fatalities by month and road user groups. It shows that certain modes have a seasonal effect in the occurrence of fatalities over the course of one year. **Pedestrian fatalities peak in December and January, therefore indicating more fatalities during winter months.** Meanwhile the peak for powered two wheelers is especially pronounced in the summer months (June, July and August). In general, the higher shares of fatalities occur during the second half of the year.

Figure 23. Monthly distribution of fatalities by transport mode in the EU27 (2022). Source: CARE



7. Notes

7.1 Definitions

The definitions below are taken from the CADAS Glossary as well as 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

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

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.

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 May 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.

Serious injuries

- Data from France and the Netherlands omitted due to problems in the time series.

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

7.6 COVID-19 pandemic

It is clear that the global COVID-19 pandemic had an impact on the CARE data for 2020 and 2021 and, to a lesser extent, also 2022 for some countries. 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.

7.7 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.

