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Commission



Facts & Figures:  
**Cyclists**



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)).

Contract:	This document has been prepared in the framework of the EC Service Contract MOVE/C2/SER/2022-55/SI2.888215 with National Technical University of Athens (NTUA), SWOV Institute for Road Safety Research and Kuratorium für Verkehrssicherheit (KFV).
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Referencing:	Reproduction of this document is allowed with due acknowledgement. Please refer to the document as follows:  <i>European Commission (2024) Facts and Figures Cyclists. European Road Safety Observatory. Brussels, European Commission, Directorate General for Transport.</i>
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: May 2024

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# 1. Key facts

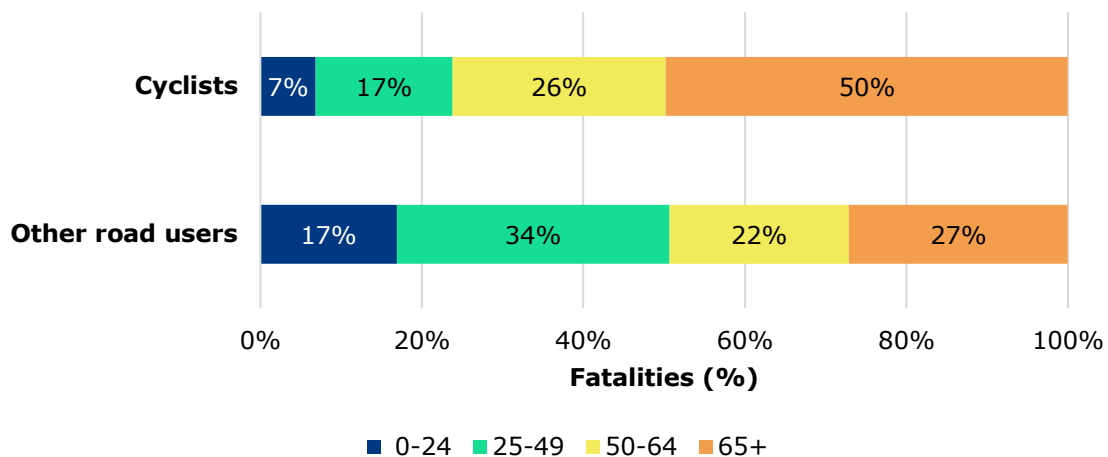
This Facts and Figures report looks at cyclist fatalities on EU roads. Cyclists are users of a bicycle, which is a vehicle with at least two wheels without an engine. However, in some cases electric power can be used. All observations reported were derived from the available data. The statistical significance of differences or relations between values has not been tested.

## Cyclist fatalities in the EU27, 2022

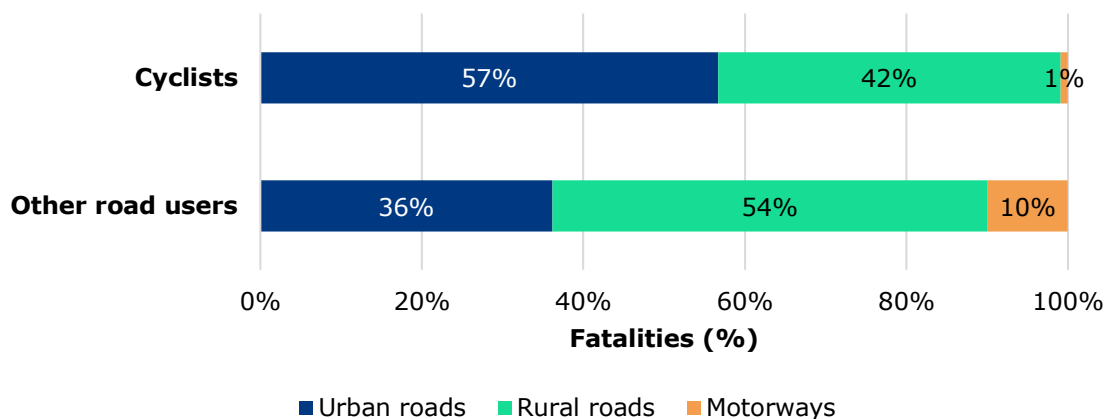


- 2,017 fatalities
- 10% of all road fatalities
- -3% decrease since 2012

### Age



### Road type



## 2. Summary

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In contrast to the number of fatalities in crashes with other modes of transport, **the number of cyclists killed on EU roads has remained at more or less the same level for the past decade**: since 2012 a decrease of -3%, since 2019 a decrease of -1%. The **highest share of cyclist fatalities** (i.e. number of cyclist fatalities within the total number of road fatalities) **was observed in the Netherlands, Belgium, Switzerland, and Germany**. Also, the cyclist mortality rate (i.e. the number of deaths per million inhabitants) was above EU average (4.5 cyclist fatalities per million inhabitants) in these countries. **In the Netherlands, the rate of cyclist fatalities per million inhabitants is almost three times higher (12.5) than the EU average**. And indeed, the real figure of cyclists killed in the Netherlands is even higher as not all crashes are reported to the police. With 8.8 cyclist fatalities per million inhabitants the rate in Belgium is almost twice as high as the EU average. The individual distribution of fatalities by transport mode is, however, largely dependent on the country's modal split, which should be considered when interpreting these numbers.

**In 2022, half of all cyclist fatalities (50%) were cyclists aged 65 years or older on average in the EU27**. For all other road users, this share is considerably lower with 27% on average. **The proportion of 65+ year olds among cyclist fatalities has increased from 45% in 2012 to 50% in 2022**. Conversely, the shares of young cyclist fatalities (up to 24 years) and middle-aged cyclist fatalities (25-49 years) have decreased in this period from 9% to 7% and from 21% to 17% respectively. **80% of all cyclist fatalities were male and 20% were female. Around one fifth (19%) of the fatally injured cyclist was riding a pedelec**; four fifths (81%) was riding a conventional, not electronically assisted bicycles (pedal cycle).

**More than half of cyclist fatalities in the EU in 2022 occurred in crashes on urban roads (57%), 42% on rural roads and 1% on motorways**. In 2022, 32% of cyclist fatalities occurred at junctions which is twice as high as for other road fatalities (16%).

**The share of single vehicle crashes, i.e. crashes with no crash opponent**, amounts to just over a fifth for cyclists (22% compared with 32% among other road users). However, in some countries such as the Netherlands the number of single vehicle crashes involving cyclists is under-reported in police statistics.

## 3. Main trends

### 3.1 Absolute number of cyclist fatalities

**Table 1** Cyclist 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	84	83	82	90	81	76	89	95	87	87	102	21%	7%
Bulgaria	32	31	29	29	35	22	21	27	19	17	25	-22%	-7%
Czechia	78	74	68	84	53	57	56	53	51	64	54	-31%	2%
Denmark	22	33	30	26	31	27	28	31	27	25	23	5%	-26%
Germany	406	354	396	383	393	382	445	445	426	372	474	17%	7%
Estonia	-	-	-	-	4	1	3	2	1	7	3	-	-
Ireland	8	5	13	10	10	14	9	8	10	-	-	-	-
Greece	21	15	19	11	18	11	12	22	12	14	13	-38%	-41%
Spain	74	70	75	58	67	78	58	80	71	63	81	10%	1%
France	164	147	159	149	162	173	175	187	178	227	245	49%	31%
Croatia	21	23	19	34	27	23	22	16	9	28	9	-57%	-44%
Italy	292	251	273	251	275	254	219	253	175	220	205	-30%	-19%
Cyprus	1	2	1	1	-	4	1	1	1	1	4	-	-
Latvia	18	13	16	9	7	11	9	9	17	-	-	-	-
Lithuania	-	18	19	22	12	13	8	10	12	11	5	-	-
Luxembourg	-	-	-	-	1	-	3	-	3	-	1	-	-
Hungary	84	68	98	83	73	81	68	63	40	53	42	-50%	-33%
Malta	-	-	-	-	1	-	1	-	-	-	-	-	-
Netherlands	145	112	133	125	131	138	160	148	158	145	220	52%	49%
Austria	52	52	45	39	48	32	41	33	40	50	44	-15%	33%
Poland	300	306	286	300	271	220	285	258	249	185	170	-43%	-34%
Portugal	32	29	35	25	33	25	26	27	19	34	31	-3%	15%
Romania	154	161	151	162	176	191	181	198	191	149	160	4%	-19%
Slovenia	12	16	13	14	12	11	8	9	8	10	12	0%	-
Slovakia	-	-	-	-	21	23	19	17	24	17	26	-	53%
Finland	19	20	27	31	26	23	21	23	31	24	18	-5%	-22%
Sweden	28	14	33	17	22	26	23	17	16	20	23	-18%	35%
EU	2,086	1,918	2,041	1,974	1,990	1,916	1,991	2,032	1,875	1,850	2,017	-3%	-1%
Iceland	-	-	-	1	-	2	-	-	-	1	-	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	12	10	12	5	12	9	7	6	3	4	6	-50%	-
Switzerland	36	21	34	39	33	37	39	27	44	39	42	17%	56%

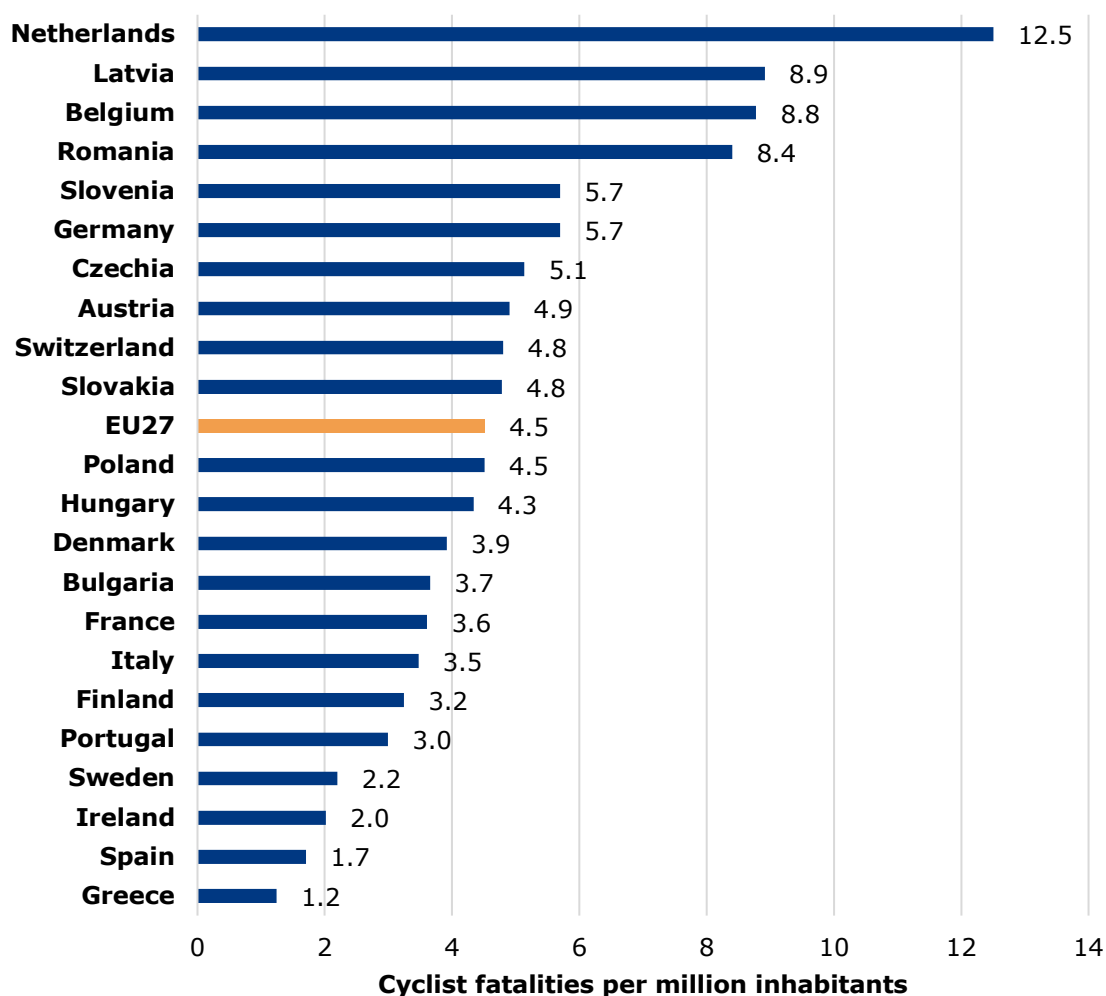
\*LT = Long term change of last available year over 2012.

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

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

Figure 1 shows the rate of fatalities per million inhabitants in each of the EU and EFTA countries as well as the EU average of 4.5 cyclist fatalities per million inhabitants for 2022. The **Netherlands, Latvia and Belgium record the highest rate of cycle user deaths**, while **Greece and Spain have the lowest rate**.

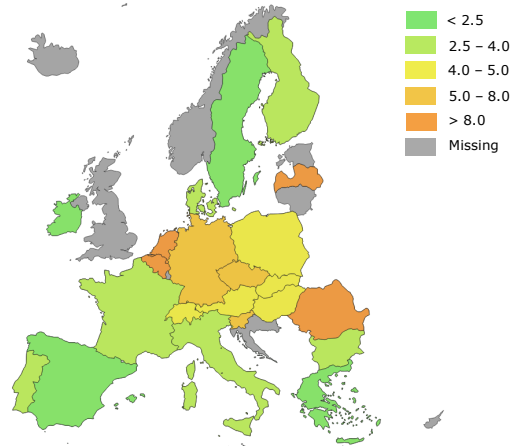
**Figure 1.** Cyclist fatalities per million inhabitants per country in the EU27 and EFTA (2022). Source: CARE, EUROSTAT



Notes:

- Estonia, Croatia, Cyprus, Lithuania, Luxembourg, and Norway are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta, Iceland, and Liechtenstein are not included in the figure because there are less than 10 fatalities in the last available year before 2022.

The geographical representation of the mortality rates in the map below shows a **tendency of mortality rates to be lower in the north, south and west, and higher in the EU Member States in-between.**



© Eurostat for the administrative boundaries

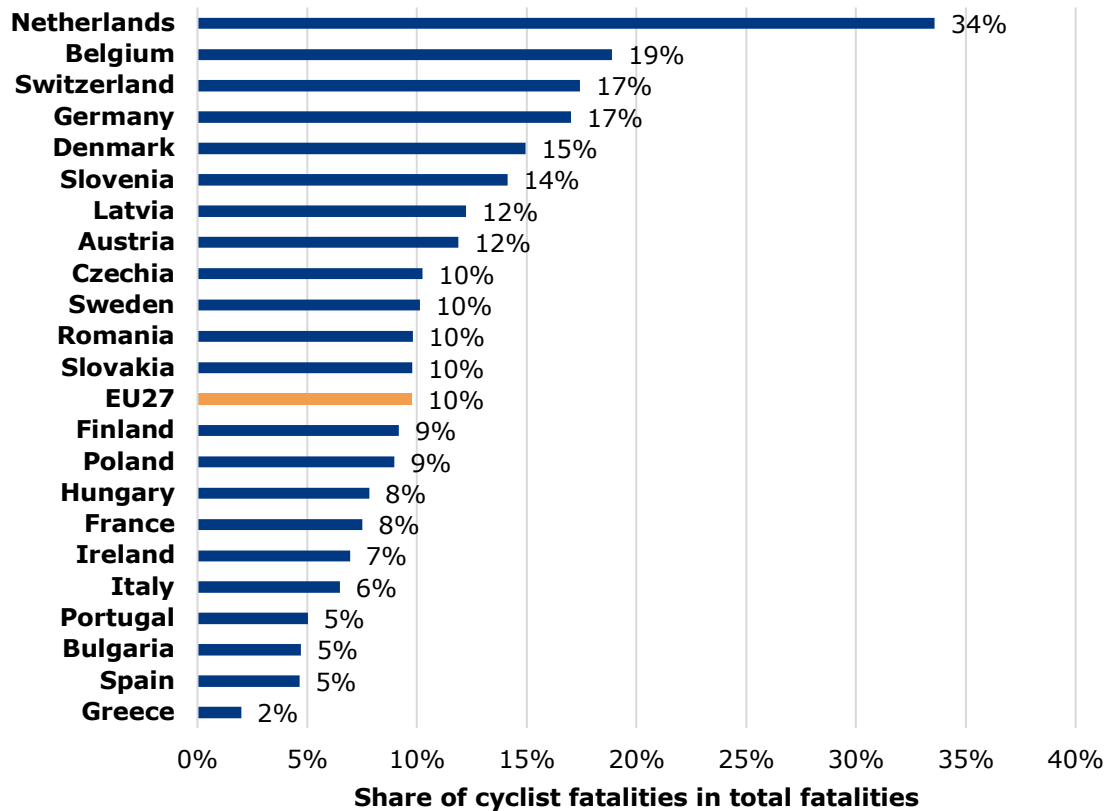
### 3.3 Share of cyclist fatalities in the total number of road fatalities

The mortality rate as a road safety indicator is important. However, it is also informative to look at the share of cyclist fatalities as measured by the total number of road fatalities (all transport modes).

The **share of cyclist fatalities among all road deaths is relatively high in north-western Europe** and is also high in parts of eastern Europe. The Netherlands has the highest share of cyclist fatalities (34%). It is the lowest in Greece with 2%. The individual distribution of fatalities by transport mode is, however, largely dependent on the country's modal split, which should be considered when interpreting these numbers.



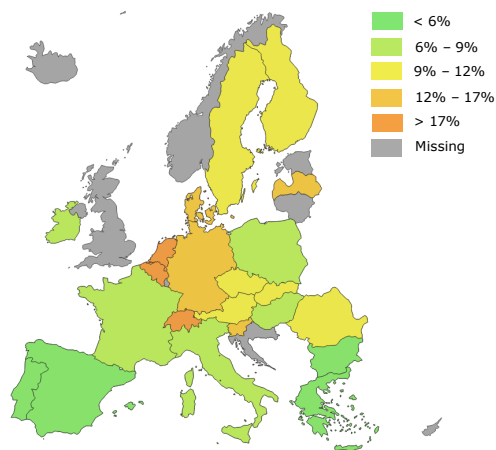
**Figure 2.** Share of cyclist fatalities in the total number of fatalities, per country in the EU27 and EFTA (2022). Source: CARE



Notes:

- Estonia, Croatia, Cyprus, Lithuania, Luxembourg, and Norway are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta, Iceland, and Liechtenstein are not included in the figure because there are less than 10 fatalities in the last available year before 2022.

The geographical representation of the cyclist fatality shares in the map below shows a **tendency of shares to be lower in the south, and partly in the east and higher in the EU Member States in the north-west and in-between.**

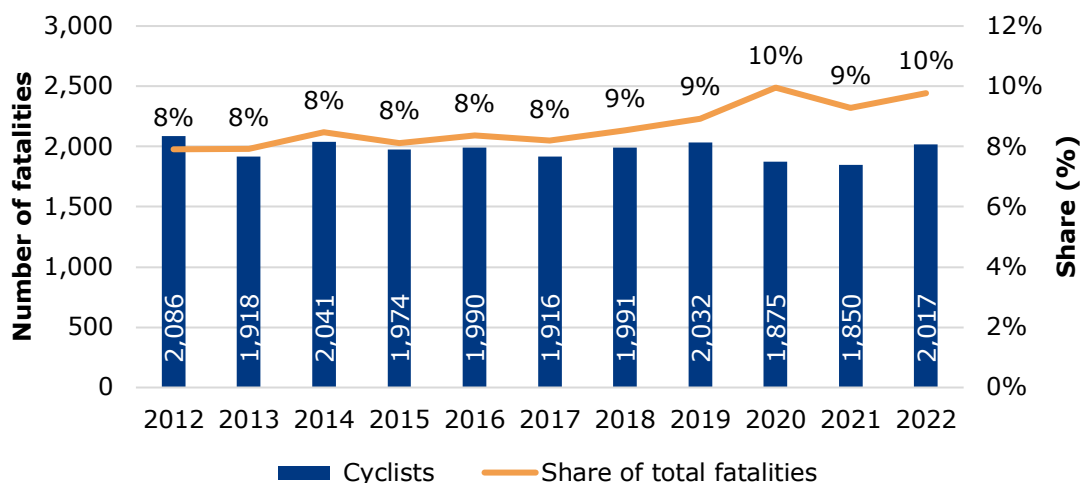


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### 3.4 Trend in the number of cyclist fatalities

10% of all road deaths in the EU27 in 2022 were cyclists. This share of cyclist fatalities has increased for the past decade. **The absolute number of cyclist fatalities decreased by -3% in the last decade (see Table 1), while the total number of all road fatalities decreased by -22% over the same time period.**

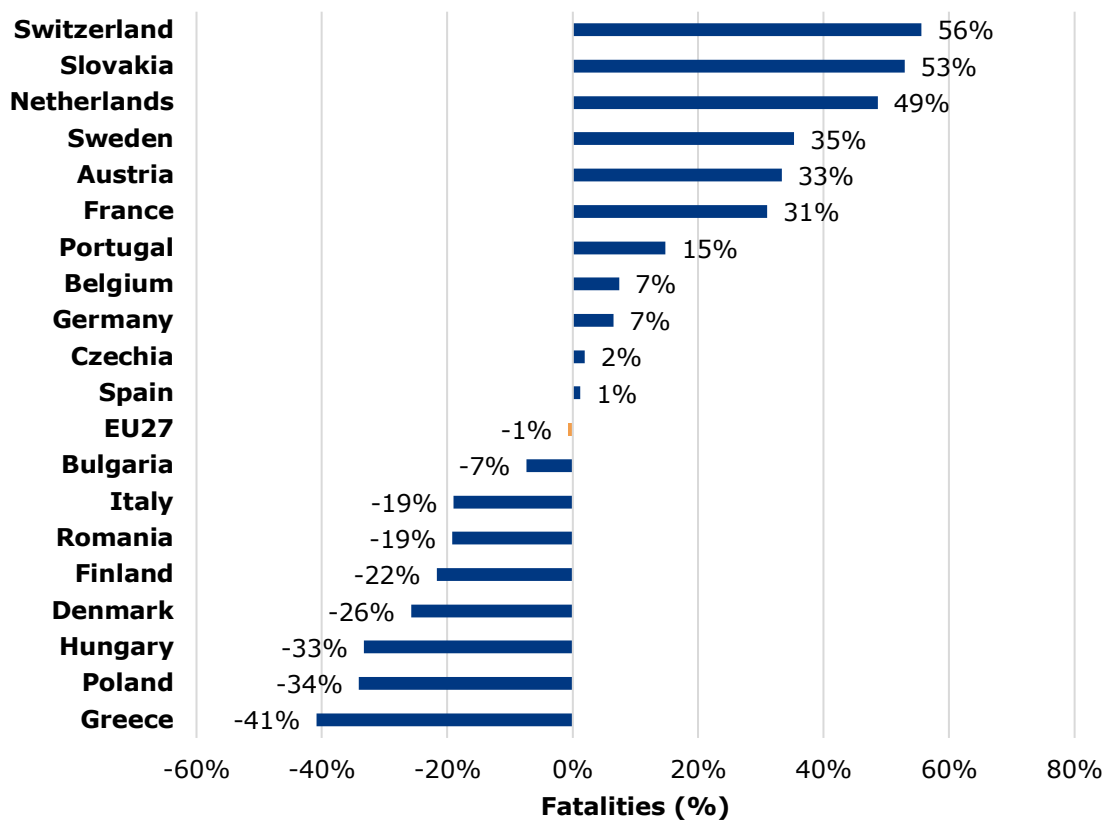
**Figure 3.** Annual number of cyclist fatalities, and their share in the total number of fatalities in the EU27 (2012-2022). Source: CARE



In about half of the EU Member States the number of cyclist fatalities has decreased, while in the other half the number has risen. When looking at the short-term change (2022 over 2019) **Switzerland records a 56% increase** although the figure in 2019 was comparatively lower than other years. **The strongest decrease is observed in Greece (-41%)** though the figure in 2019 was comparatively higher than other years.

The EU Member States with the highest absolute number of cyclist fatalities in 2022 are Germany, France, the Netherlands, and Italy (see Table 2). Looking at the short-term change (2022 over 2019), in the Netherlands the number of cyclist fatalities has increased by 49% and in France by 31%. The number of cyclist fatalities in Germany has increased by 7%. Only in Italy the number of cyclist fatalities decreased by -19%.

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



Notes:

- Estonia, Croatia, Cyprus, Lithuania, Luxembourg, and Norway are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta, Iceland, and Liechtenstein are not included in the figure because there are less than 10 fatalities in the last available year before 2022.

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

	2012	2019	2020	2021	2022	ST*	Miniplot: trend since 2012
Belgium	84	95	87	87	102	7%	
Bulgaria	32	27	19	17	25	-7%	
Czechia	78	53	51	64	54	2%	
Denmark	22	31	27	25	23	-26%	
Germany	406	445	426	372	474	7%	
Ireland	8	8	10	-	-	n/a	
Greece	21	22	12	14	13	-41%	
Spain	74	80	71	63	81	1%	
France	164	187	178	227	245	31%	
Italy	292	253	175	220	205	-19%	
Latvia	18	9	17	-	-	n/a	
Hungary	84	63	40	53	42	-33%	
Netherlands	145	148	158	145	220	49%	
Austria	52	33	40	50	44	33%	
Poland	300	258	249	185	170	-34%	
Portugal	32	27	19	34	31	15%	
Romania	154	198	191	149	160	-19%	
Slovenia	12	9	8	10	12	n/a	
Slovakia	-	17	24	17	26	53%	
Finland	19	23	31	24	18	-22%	
Sweden	28	17	16	20	23	35%	
EU27	2,086	2,032	1,875	1,850	2,017	-1%	
Switzerland	36	27	44	39	42	56%	

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

Notes:

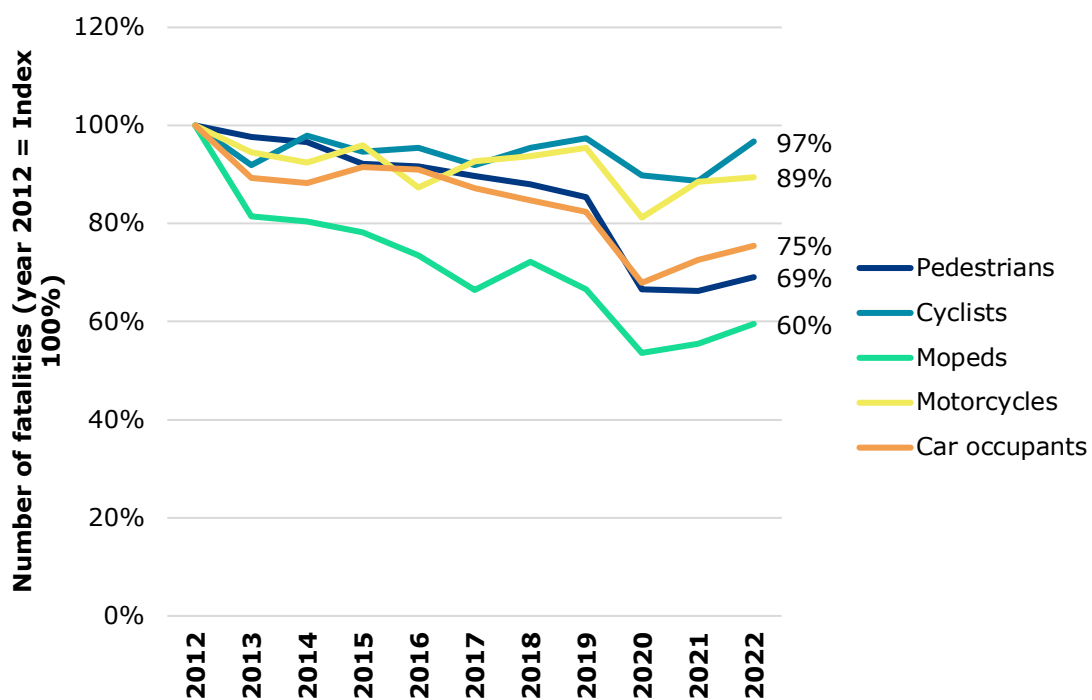
- Estonia, Croatia, Cyprus, Lithuania, Luxembourg, and Norway are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta, Iceland, and Liechtenstein are not included in the figure because there are less than 10 fatalities in the last available year before 2022.

### 3.5 Comparison with other transport modes

Figure 5 below shows the number of fatalities involving various 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 number of fatalities in cyclist crashes remains constantly high, in contrast to the number of fatalities in crashes with other modes of transport.**

**Figure 5.** Trend in the number of cyclist fatalities and fatalities of other transport modes in the EU27 (2012-2022). Source: CARE

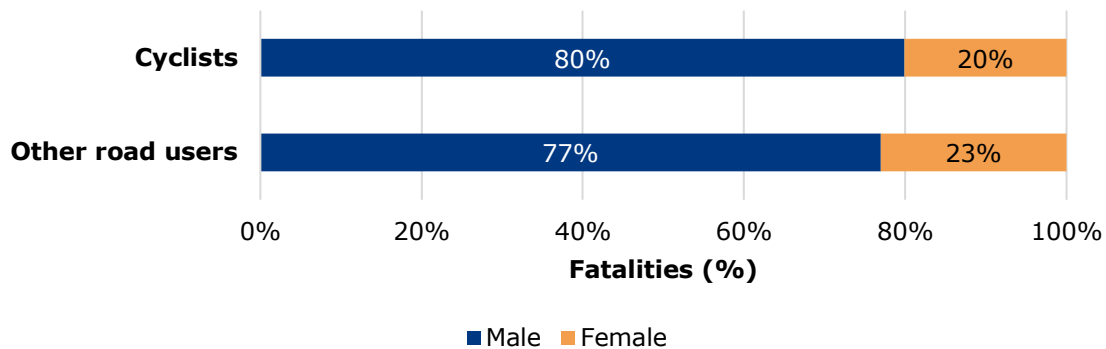


## 4. Road user

### 4.1 Gender

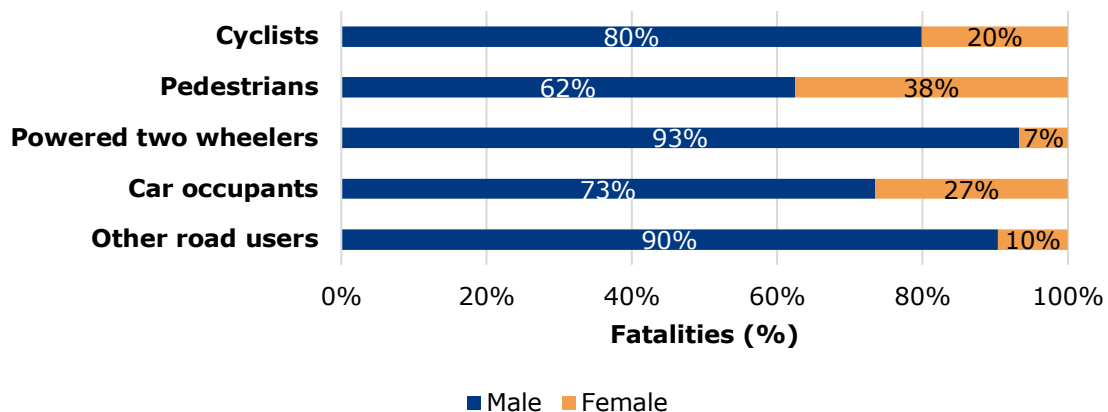
In 2022 **80% of all cyclist fatalities were male on average in the EU27**. For all other modes of transport, this share is slightly lower with 77% on average.

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



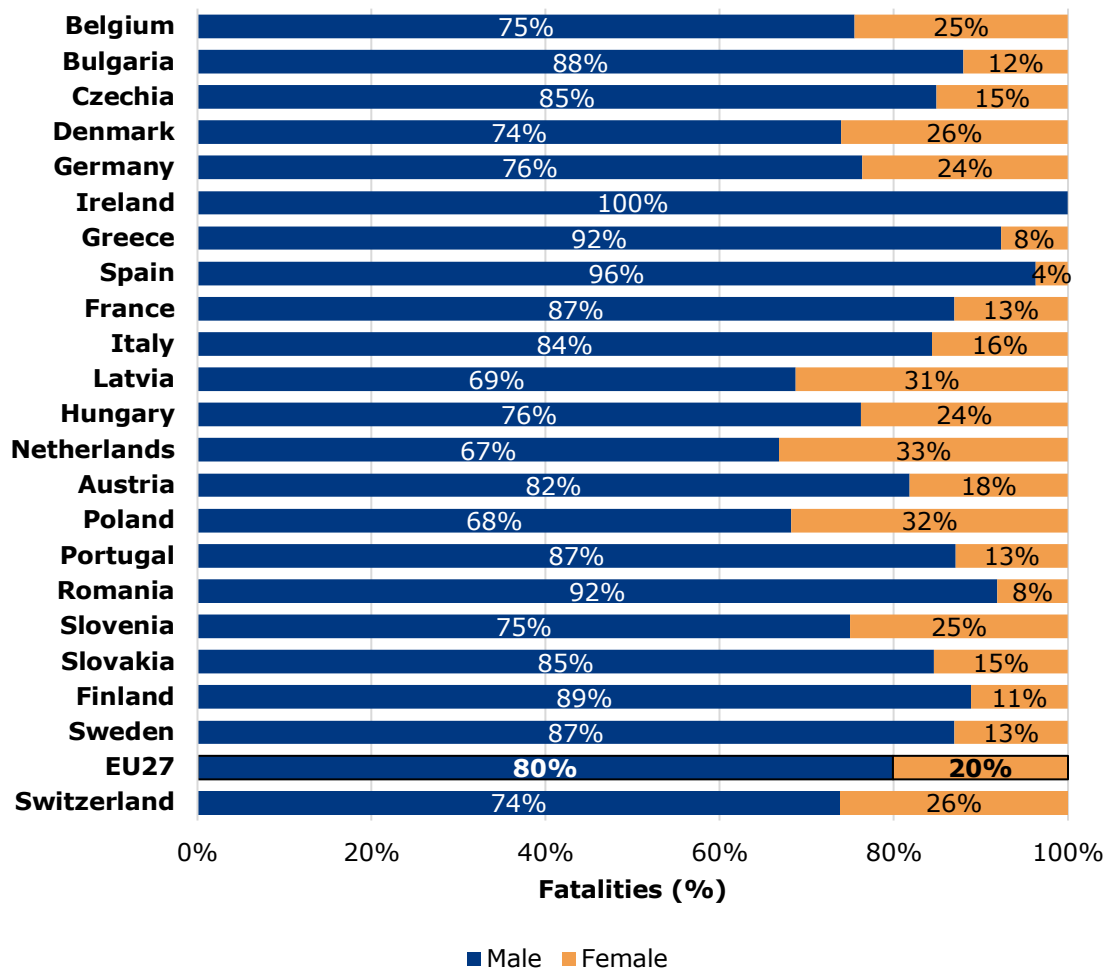
Compared to the group of pedestrians with a share of killed men of 62%, with 80% the share of men killed in cyclist crashes is considerably higher. Only the share of killed men using other vehicles (90%) and on powered two wheelers is higher (93%).

**Figure 7.** Distribution of road fatalities by transport mode and gender in the EU27 (2022). Source: CARE



**Considerable differences are apparent between EU Member States.** The lowest proportion of fatally injured male cyclists can be found in the Netherlands (67%), Poland (68%) and Latvia (69%).

**Figure 8.** Distribution of cyclist fatalities by gender per country in EU27 and EFTA (last available year). Source: CARE



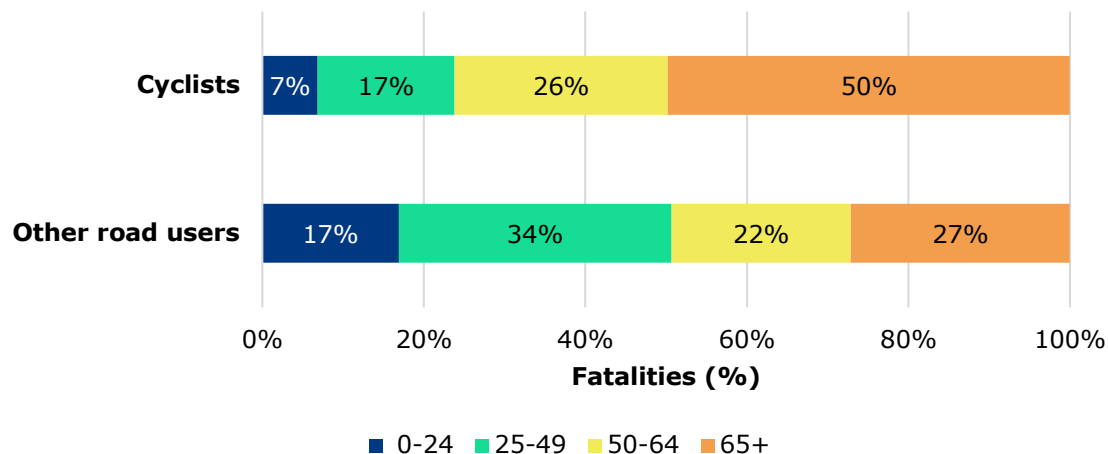
Notes:

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## 4.2 Age

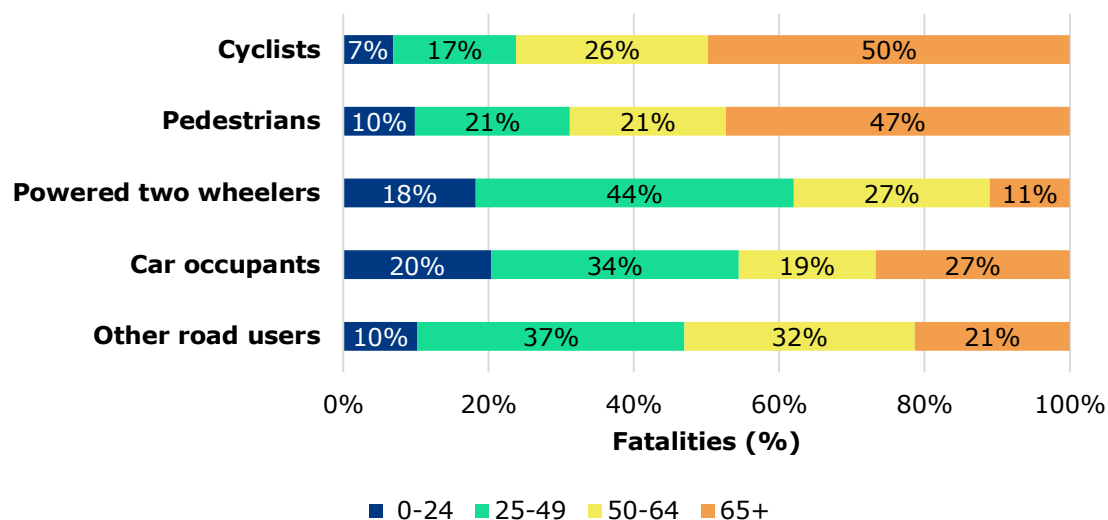
**In 2022, half of all cyclist fatalities (50%) were 65 years old or older on average in the EU27.** For all other road users, this share is considerably lower with 27% on average.

**Figure 9.** Cyclist and other road user fatalities by age group in the EU27 (2022). Source: CARE



Compared to other transport modes there are similarities between the distribution of pedestrian and cyclist fatalities by age. Fatalities among cyclists aged 0-24 and 25-49 are the lowest with 24% in total (pedestrians 31% in total). The share of killed pedestrians aged 65 years old or older is with 47% similar to the share of killed cyclists in this age group (50%).

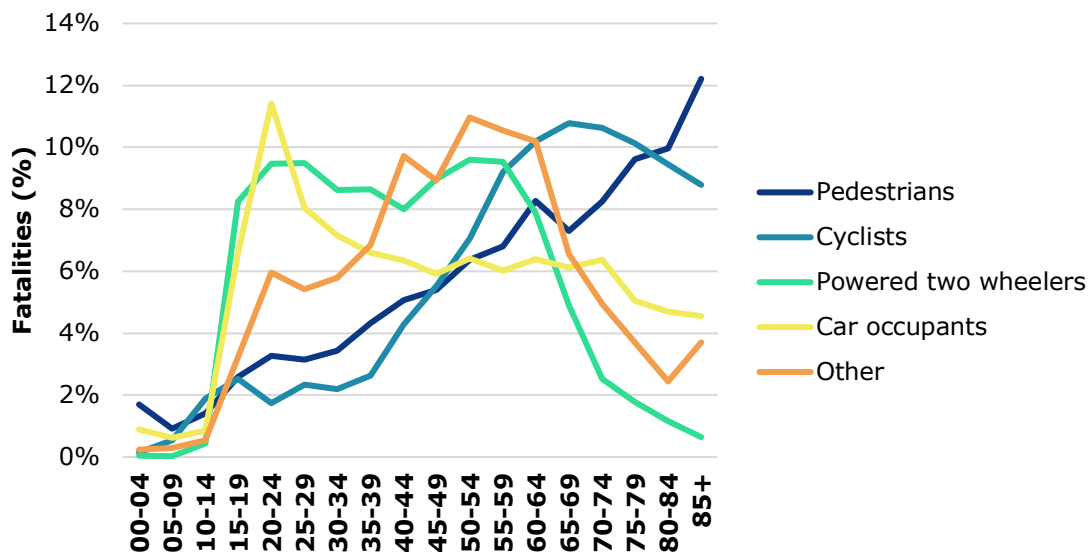
**Figure 10.** Distribution of road fatalities by transport mode and age in the EU27 (2022). Source: CARE





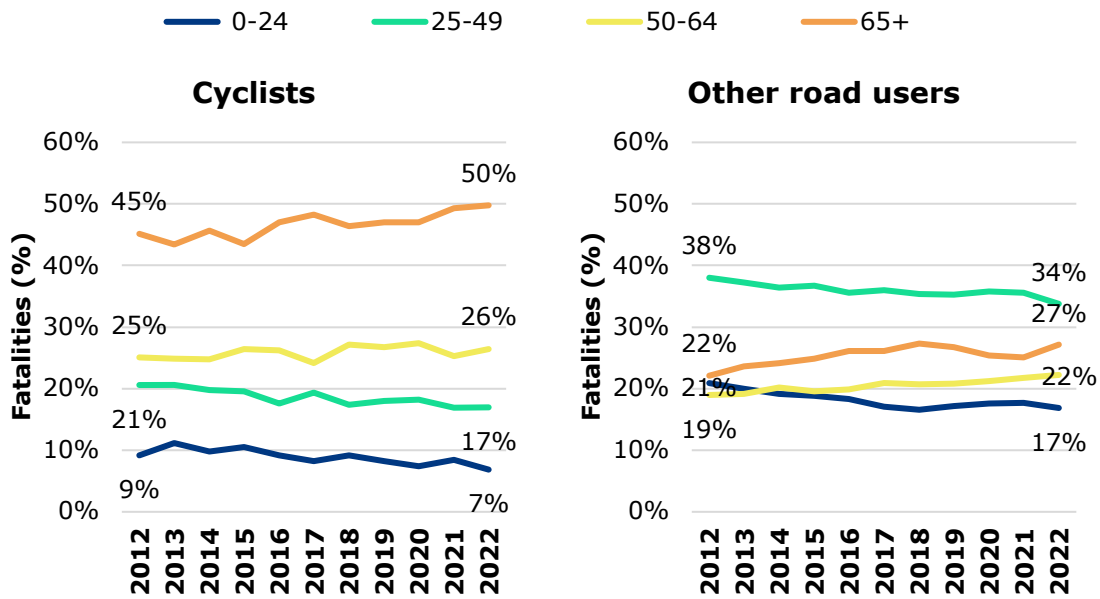
The Figure below provides a more detailed overview of the share of cyclist fatalities by age. Between the age category 35-39 years and the age category 65-69 years, the number of cyclist fatalities continues to increase steadily without interruption. We see a similar distribution for pedestrians; pedestrian fatalities are increasing steadily almost without interruption between the age category 5-9 and the age category 85+. 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 cyclist fatalities and fatalities among other transport modes over 5-year age categories in the EU27 (2012-2022). Source: CARE



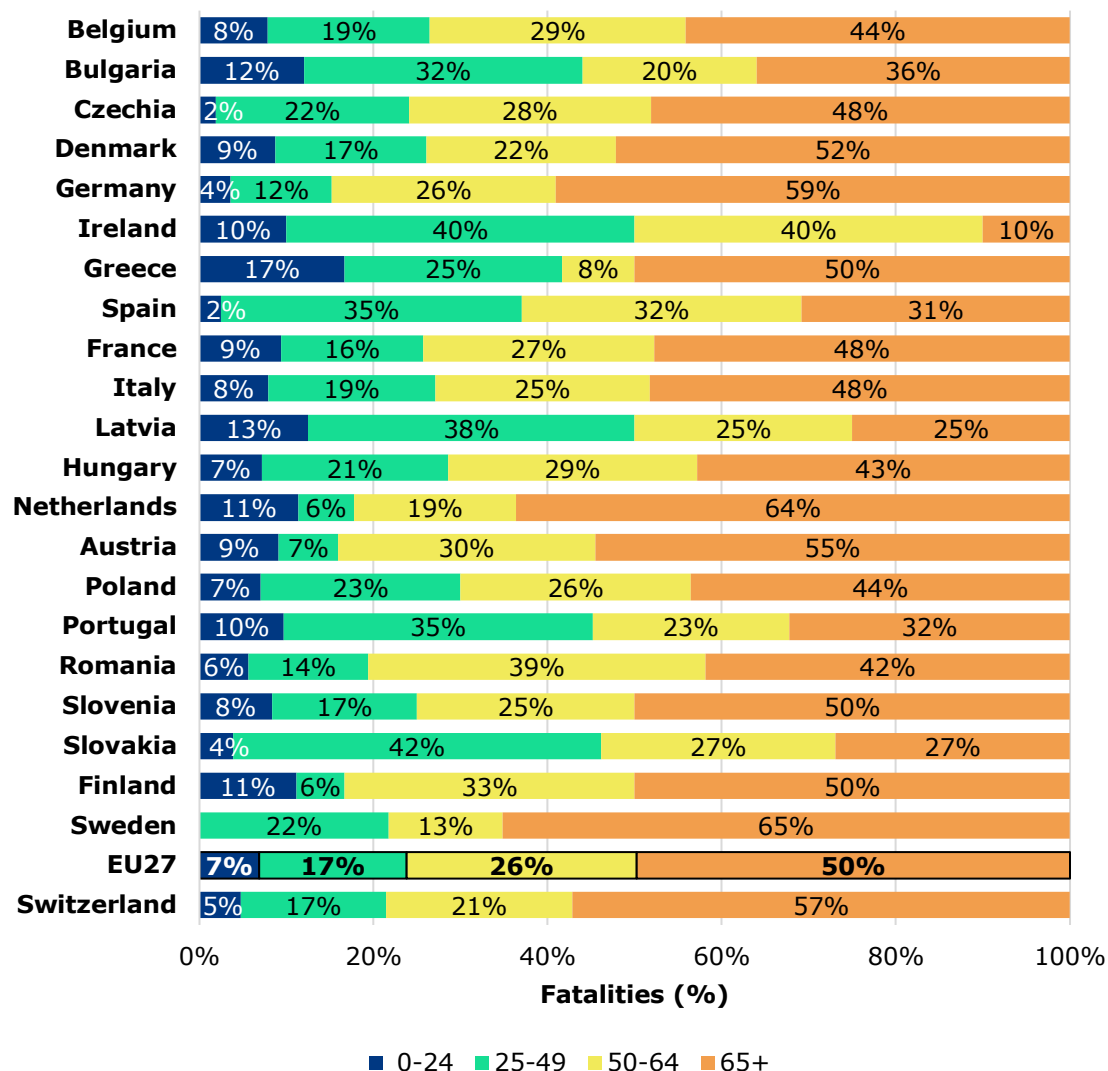
**Among cyclist fatalities the share of 65+ year olds has increased from 45% in 2012 to 50% in 2022**, whereas in this period the share of young cyclist fatalities (up to 24 years) and middle-aged cyclist fatalities (25-49 years) has decreased from 9% to 7% and from 21% to 17%, respectively.

**Figure 12.** Trend of cyclist and other road user fatalities by age group in the EU27 (2012-2022). Source: CARE



The age distribution in cyclist fatalities varies partly between Member States. **In most of the countries the age group 65 plus is predominant.** In Sweden and the Netherlands, more than 60% of the cyclist fatalities is aged 65 or more. In Switzerland, Germany, Austria, and Denmark still over 50% of all cyclist fatalities is 65+. With 10% Ireland has the lowest share in this age category. When looking at the age group 0-24, Greece shows the highest share with 17%, followed by Latvia (13%) and Bulgaria (12%) while Sweden recorded no cyclist fatalities in 2022 in this age-group.

**Figure 13.** Distribution of cyclist fatalities by age groups per country in the EU27 and EFTA (2022). Source: CARE



Notes:

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

**Table 3.** Total number and distribution of road fatalities by age group per country in the EU27 and EFTA (2022). Source: CARE

	0-24	25-49	50-64	65+	Total
Belgium	8%	19%	29%	44%	102
Bulgaria	12%	32%	20%	36%	25
Czechia	2%	22%	28%	48%	54
Denmark	9%	17%	22%	52%	23
Germany	4%	12%	26%	59%	474
Ireland	10%	40%	40%	10%	10
Greece	17%	25%	8%	50%	13
Spain	2%	35%	32%	31%	81
France	9%	16%	27%	48%	245
Italy	8%	19%	25%	48%	205
Latvia	13%	38%	25%	25%	17
Hungary	7%	21%	29%	43%	42
Netherlands	11%	6%	19%	64%	220
Austria	9%	7%	30%	55%	44
Poland	7%	23%	26%	44%	170
Portugal	10%	35%	23%	32%	31
Romania	6%	14%	39%	42%	160
Slovenia	8%	17%	25%	50%	12
Slovakia	4%	42%	27%	27%	26
Finland	11%	6%	33%	50%	18
Sweden	0%	22%	13%	65%	23
EU27	7%	17%	26%	50%	2,017
Switzerland	5%	17%	21%	57%	42

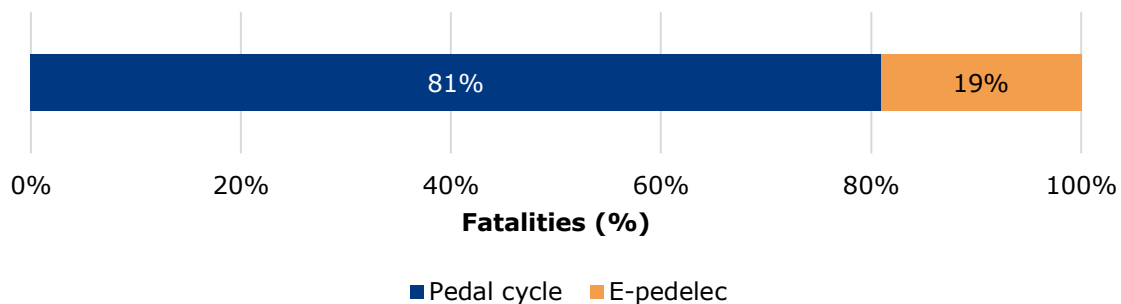
## Notes:

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

### 4.3 Type of bicycle

**In 2022 the share of conventional, not electronically assisted bicycles (pedal cycles) among cyclist fatalities is 81% on average in the EU27. The share of killed cyclists on pedelecs is 19%** though this figure is likely to be under-estimated as several Member States do not make a distinction.

**Figure 14.** Distribution of pedal cycle and pedelec fatalities among all cyclist fatalities in the EU27 (2022). Source: CARE

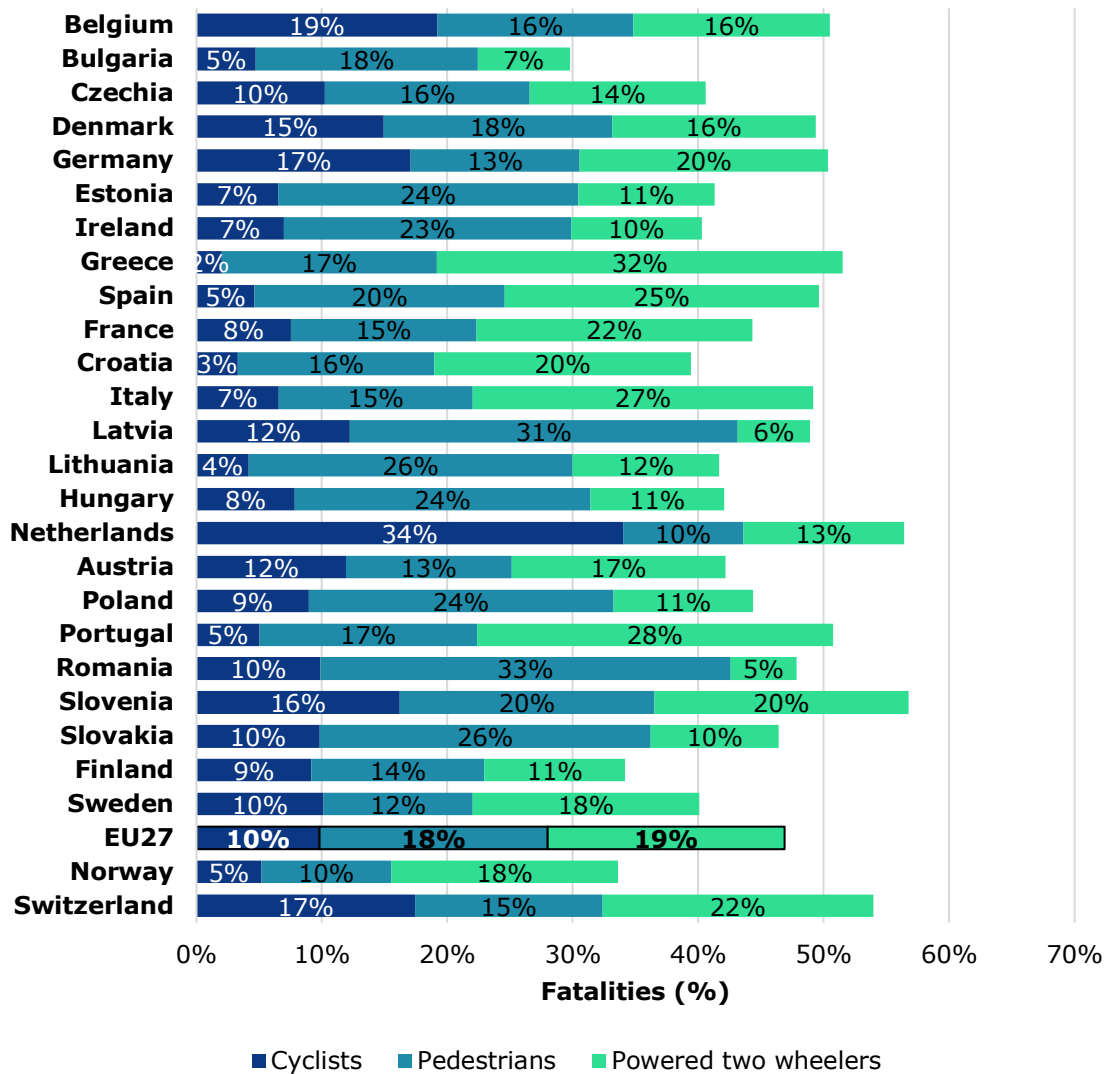


### 4.4 Transport modes

**Vulnerable road users (pedestrians, cyclists, moped riders and motorcyclists) 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.

Looking at the distribution of fatalities of VRUs in 2022, **the Netherlands records the highest share in cyclist fatalities with 34%.** Similar high shares in pedestrian fatalities can be found in Romania (33%) and Latvia (31%).

**Figure 15.** Share of fatalities of vulnerable road users per country in the EU27 and EFTA (2022). Source: CARE



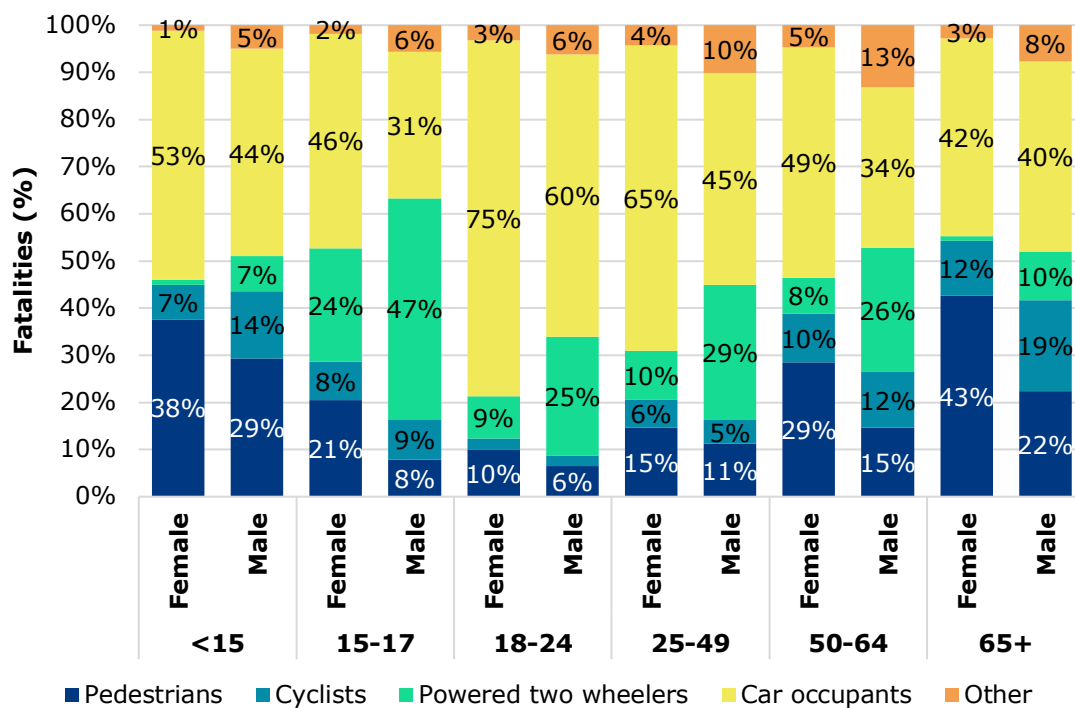
Notes:

- 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.
- For Ireland and Latvia the missing value for 2022 was imputed with the last known value (2020) in the series.

## 4.5 Gender, Age and Transport modes

**Error! Reference source not found.** Figure 16 shows the distribution of fatalities by transport mode of six age groups by gender in the EU27 in 2022. The lowest share of cyclist fatalities is in the age categories 18-24 and 25-49. For **the age group under 15 years the share of males (14%) is more than twice as high than the share of females (6%)**. For the age group 65 plus, also relatively more male cyclists (19%) than female cyclists (12%) are fatally injured. In the other age groups the gender differences for cyclist fatalities are less pronounced.

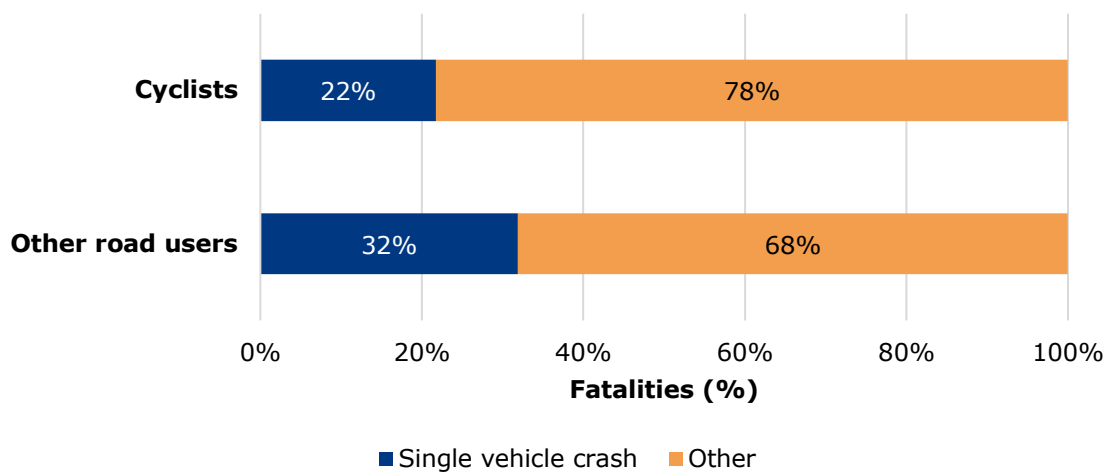
**Figure 16.** Distribution of road fatalities by age, gender and transport mode in the EU27 (2022). Source: CARE



## 4.6 Single vehicle crashes

The share of single vehicle crashes is just over a fifth for cyclists (22%). However, **cyclist fatalities occurred less frequently in single vehicle crashes with no crash opponent** than fatalities of other road users (32%). However, in some countries such as the Netherlands the number of single vehicle crashes involving cyclists is under-reported in police statistics.

**Figure 17.** Distribution of cyclist and other road user fatalities by type of collision in the EU27 (2022). Source: CARE



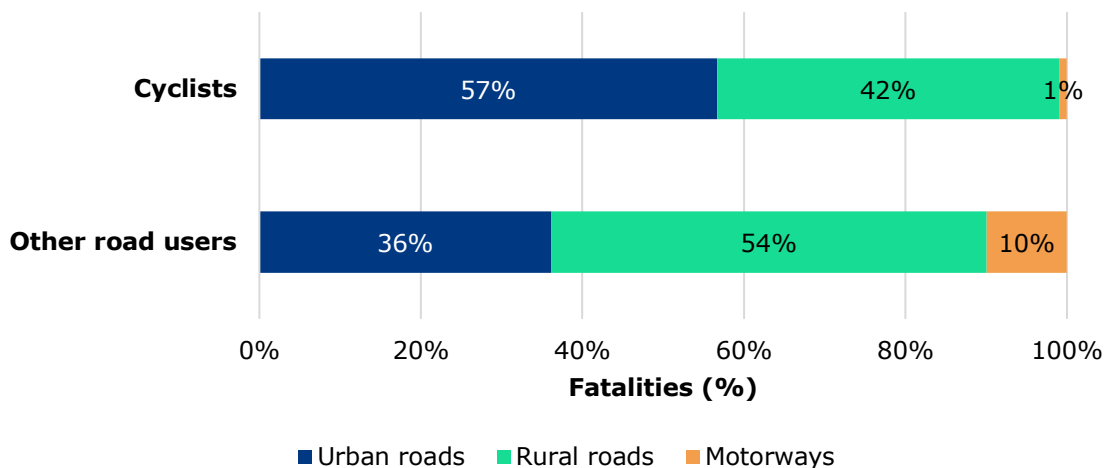


## 5. Location

### 5.1 Road type

The figure below shows the share of fatalities by road type. **More than half of cyclist fatalities in the EU in 2022 occurred in crashes on urban roads (57%) and 42% on rural roads.** Although cyclists are in general not allowed on motorways, the share of cyclist fatalities on motorways is 1%. This is because some countries like Spain do allow cycling on specific roads like express roads, a kind of substandard motorway (dual carriage ways, not toll roads), which in the database are classified as motorways.

**Figure 18.** Distribution of cyclist and other road user fatalities by road type in the EU27 (2022). Source: CARE



Compared to other transport modes cyclist fatalities occur second most frequently after pedestrians on urban roads. **The share of killed cyclists on rural roads is almost twice as high as the share of pedestrian fatalities on rural roads.**

**Figure 19.** Distribution of road fatalities by transport mode and road type in the EU27 (2022). Source: CARE

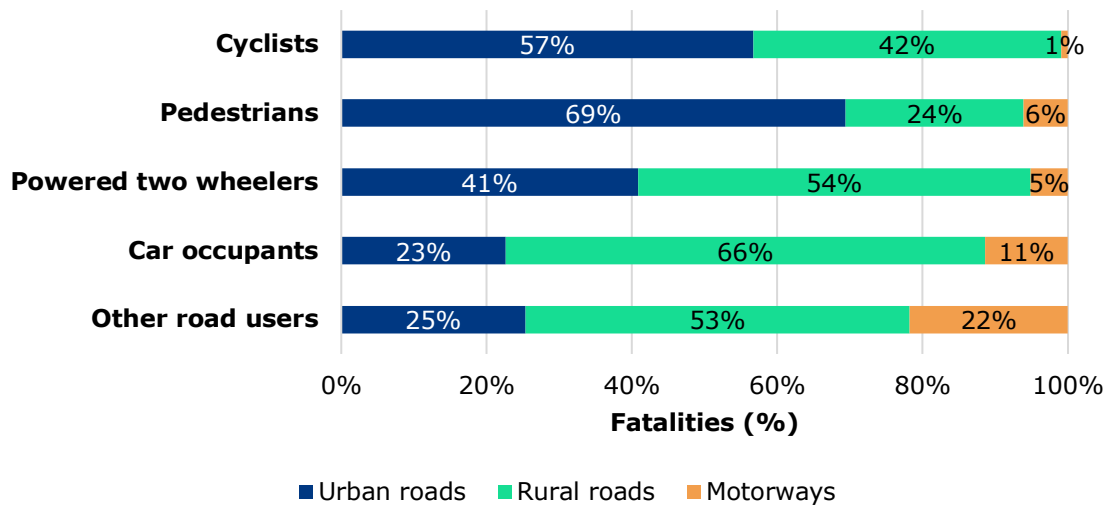
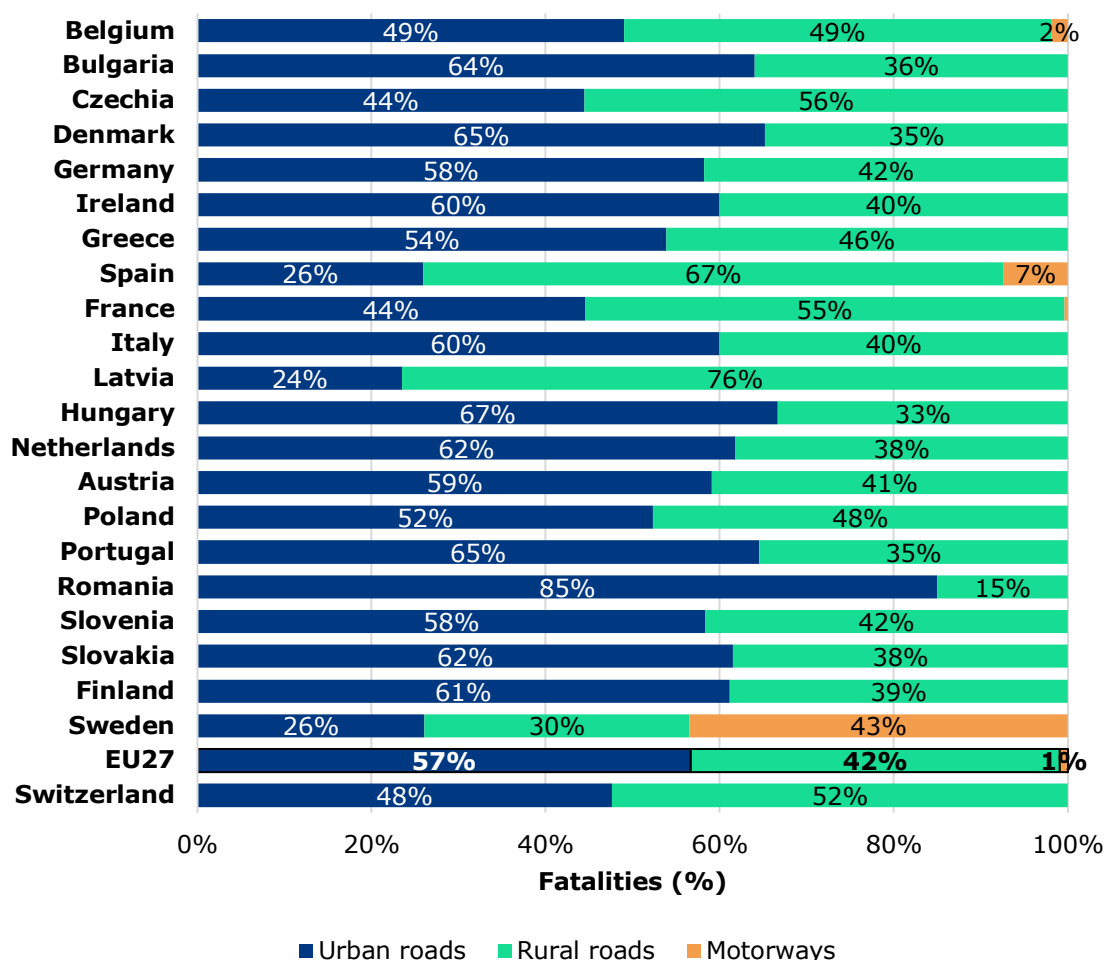


Figure 20 shows the distribution of cyclist fatalities by road type and country. **Compared to the EU average in some countries the share of fatalities occurring on rural roads exceeds the one on urban roads.** This can be observed in Latvia (76%), Spain (67%), Czechia (56%), France (55%), and Switzerland (52%). Since Spain classifies some roads where cycling is allowed as motorways there is a share of 7% of cyclist fatalities on motorways in Spain. The high share of 43% of cyclist fatalities on motorways in Sweden seems to be a bug in the database since cyclists are not allowed to ride on motorways in Sweden<sup>1</sup>. This high share probably affects the EU average of 1% on motorways which otherwise would be lower.

**Figure 20.** Distribution of cyclist fatalities by road type per country in the EU27 and EFTA (2022). Source: CARE



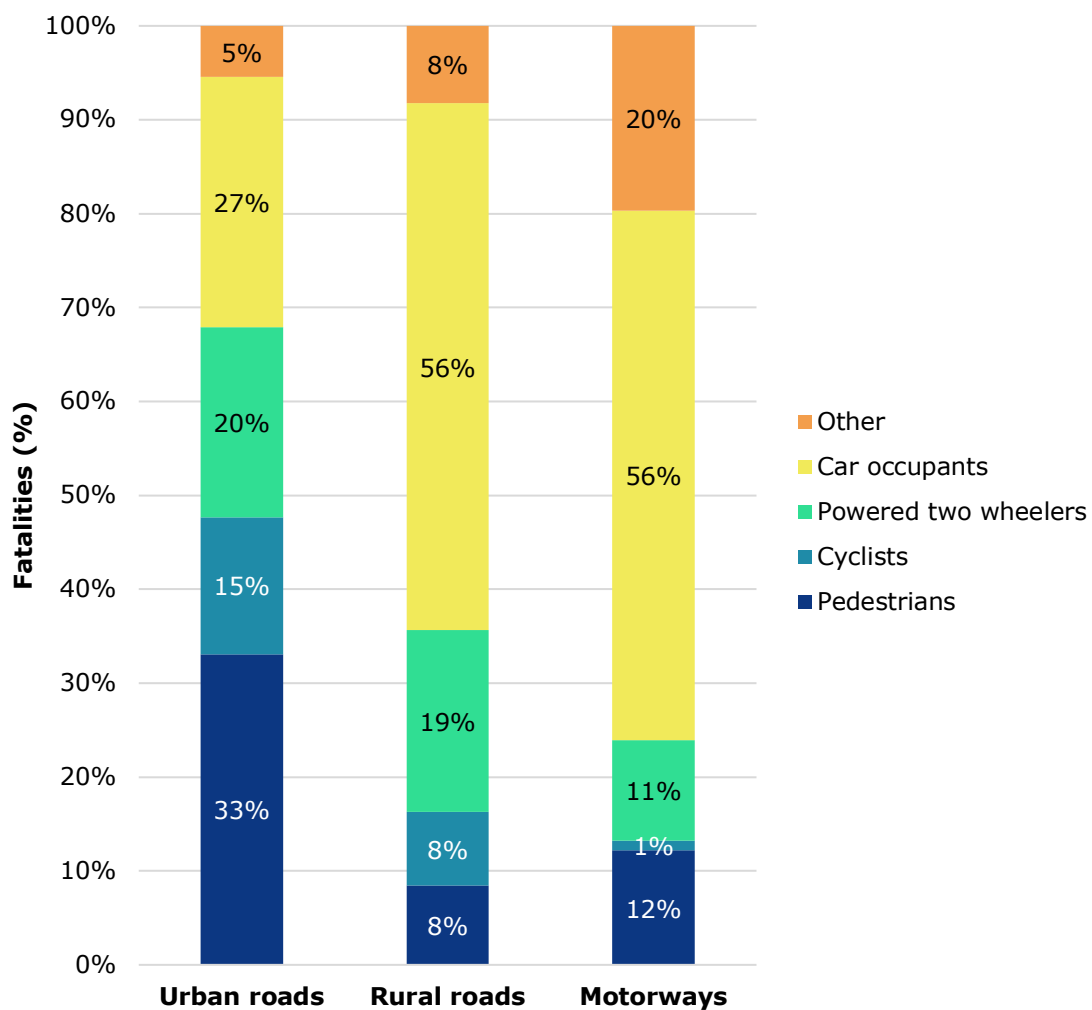
Notes:

- Estonia, Croatia, Cyprus, Lithuania, Luxembourg, and Norway are not included in the figure because there are less than 10 fatalities in the year 2022.
- Malta, Iceland, and Liechtenstein are not included in the figure because there are less than 10 fatalities in the last available year before 2022.

<sup>1</sup> <https://trafiko.se/en/faktabank/motorvag-motortrafikled> [13.06.2024]

On **urban roads**, where all modes of transport are represented, **the share of killed cyclists is the highest with 15%**. Together with pedestrians (33%), they make up for almost half of the fatalities on urban roads. The share of killed cyclists and pedestrians is the same on rural roads, amounting to 8%.

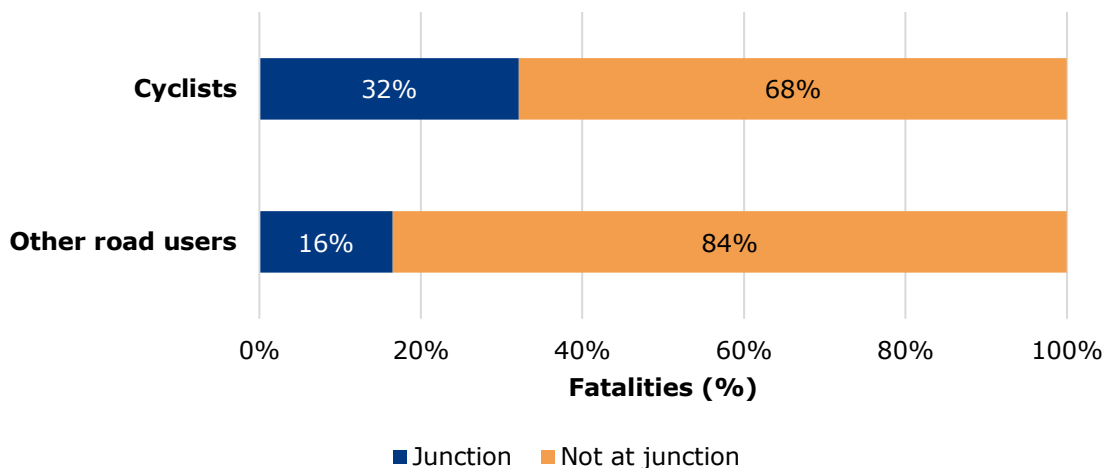
**Figure 21.** Share of road fatalities by transport mode and road type in the EU27 (2022). Source: CARE



## 5.2 Junction

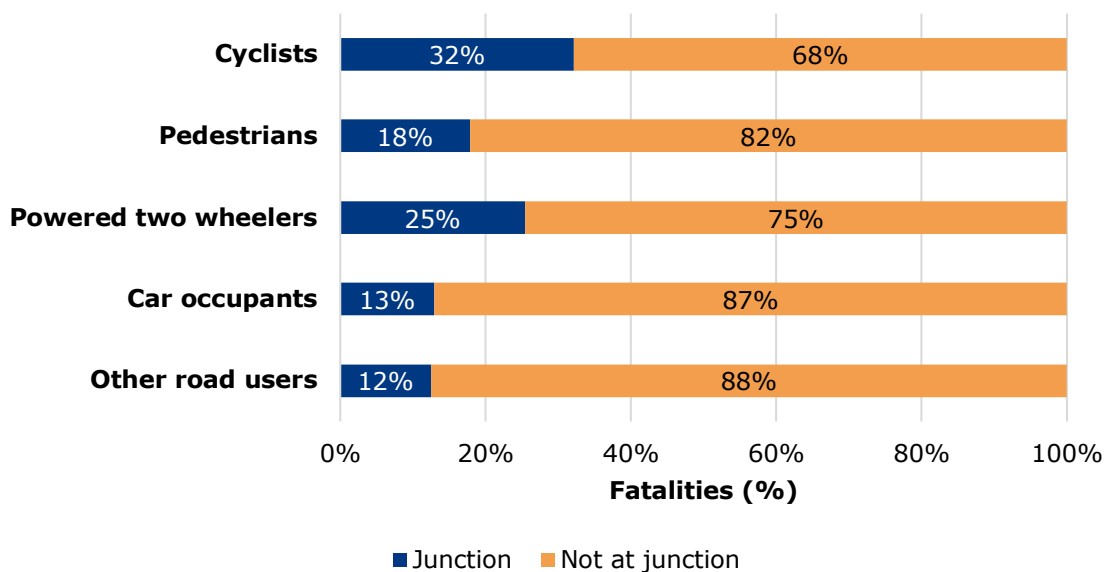
**In 2022, 32% of cyclist fatalities occurred at junctions.** Compared with other road users, the proportion of cyclist fatalities at junctions is twice as high.

**Figure 22.** Distribution of cyclist and other road user fatalities by junction in the EU27 (2022). Source: CARE



The high share of cyclist fatalities at junctions is followed by fatalities of powered two wheelers with 25%. At 18%, pedestrian fatalities occur less frequently at junctions.

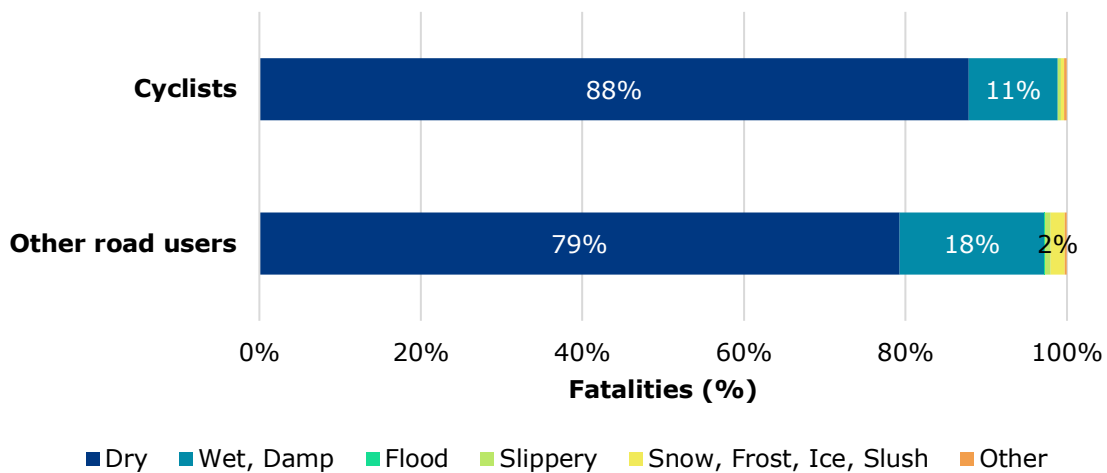
**Figure 23.** Distribution of road fatalities by transport mode and junction in the EU27 (2022). Source: CARE



### 5.3 Road surface

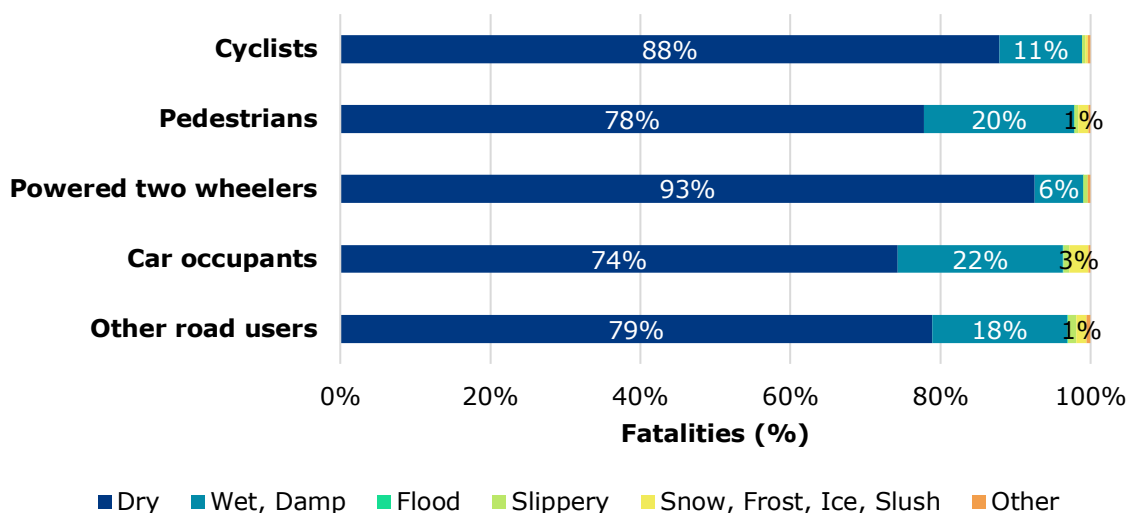
The surface conditions were dry for 88% of cyclist fatalities. For 11% of cyclist fatalities the surface was wet or damp. For 1% of the fatalities other surface conditions were reported. Compared to the fatalities of other road users more cyclist fatalities happen on dry roads than on wet or damp road surfaces.

**Figure 24.** Share of cyclist and other road user fatalities by road surface in the EU27 (2022). Source: CARE



Compared to other transport modes cyclist fatalities occur second most frequently after powered two wheelers on dry road surfaces. The share of killed pedestrians on wet or damp roads is almost twice as high as the share of cyclist fatalities on these surfaces.

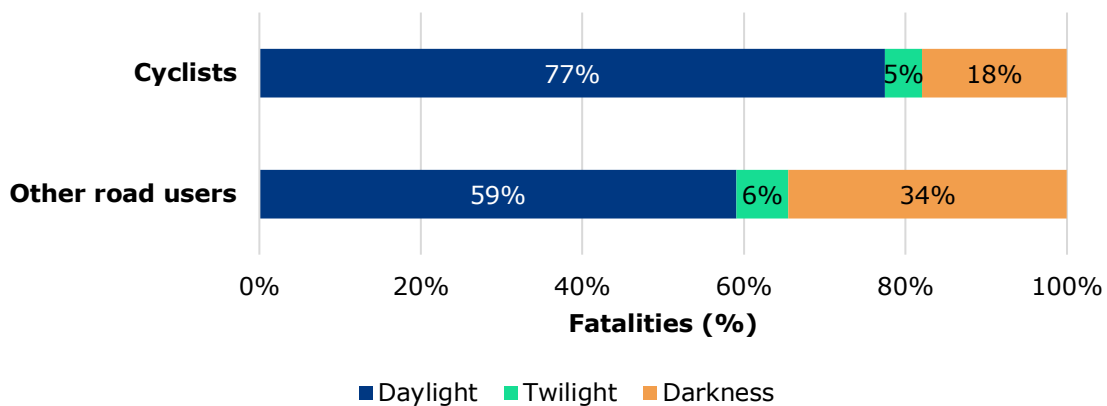
**Figure 25** Share of road fatalities by transport mode and road surface in the EU27 (2022). Source: CARE



## 5.4 Light conditions

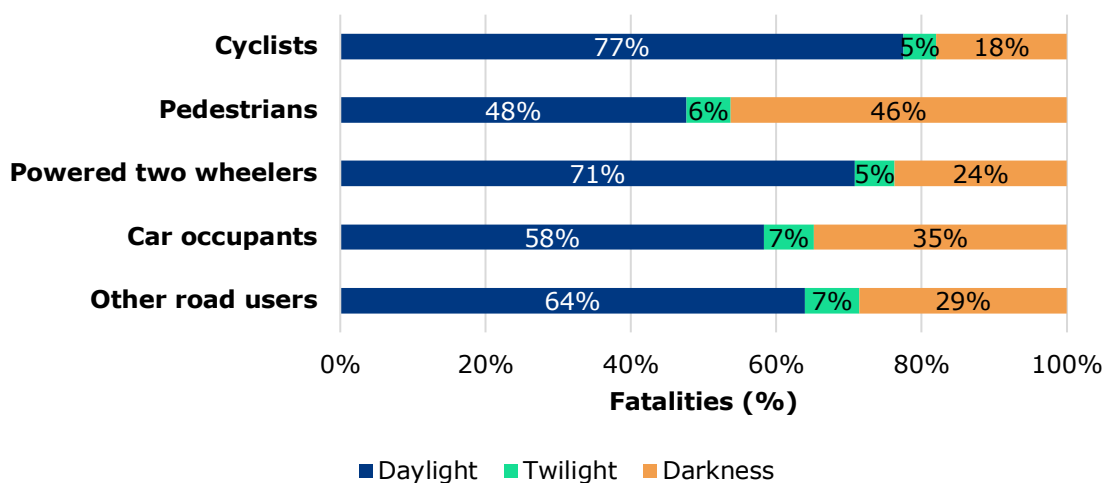
The figure below shows that the light conditions of cyclist fatalities differ from those of other road user fatalities. Cyclist fatalities occur relatively more often during daylight (77% versus 59% in 2022) and less often during darkness (18% versus 34% in 2022). The share of fatalities during twilight is comparable for cyclists and other road users.

**Figure 26.** Share of cyclist and other road user fatalities by light conditions in the EU27 (2022). Source: CARE



Compared to other transport modes cyclist fatalities occur most frequently during daylight. The share of killed cyclists during darkness is the lowest. More than twice as many pedestrians are killed during darkness.

**Figure 27.** Share of road fatalities by transport mode and light conditions in the EU27 (2022). Source: CARE

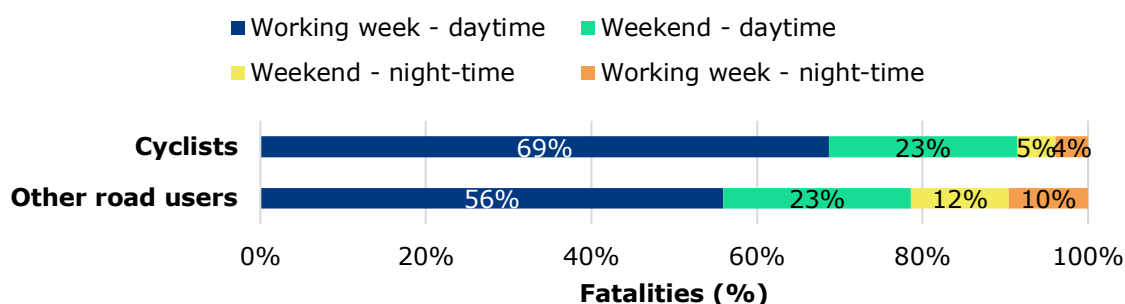


## 6. Time

### 6.1 Period of the week

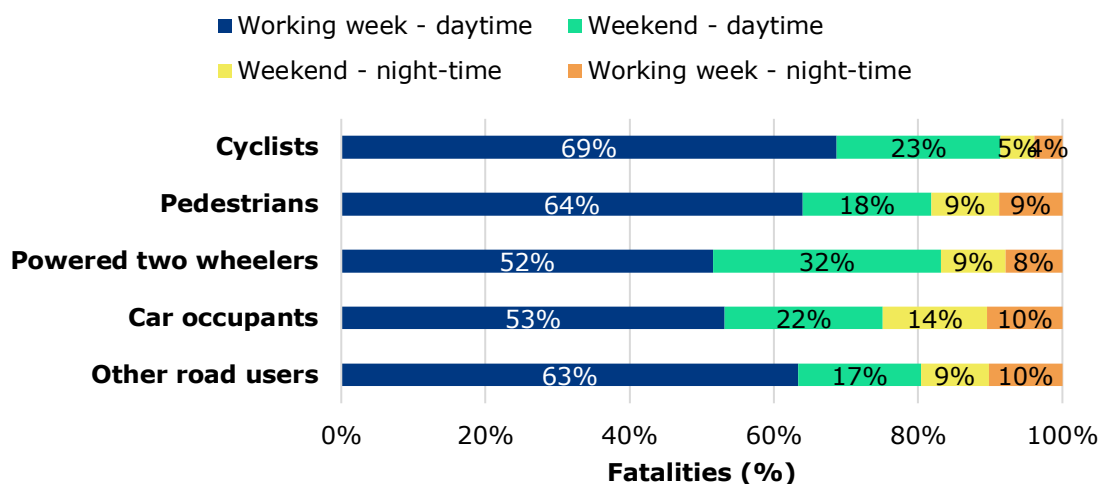
Cyclist fatalities are differently distributed over the course of a week in comparison to fatalities of other road users. The share of cyclist fatalities at daytime during weekends is the same as for other road users. **The share of cyclist fatalities is higher in daytime during the working week and lower at night-time (from 10 p.m. to 5.59 a.m.) during the working week and during weekends.**

**Figure 28.** Distribution of cyclist and other road user fatalities according to period of the week in the EU27 (2022). Source: CARE



Compared to other transport modes cyclist fatalities occur most frequently in daytime during the working week. The share of killed cyclists during night-time is the lowest. Cyclist fatalities in daytime during weekends occur second most frequently after powered two wheelers.

**Figure 29.** Distribution of road fatalities by transport mode and according to period of the week in the EU27 (2022). Source: CARE

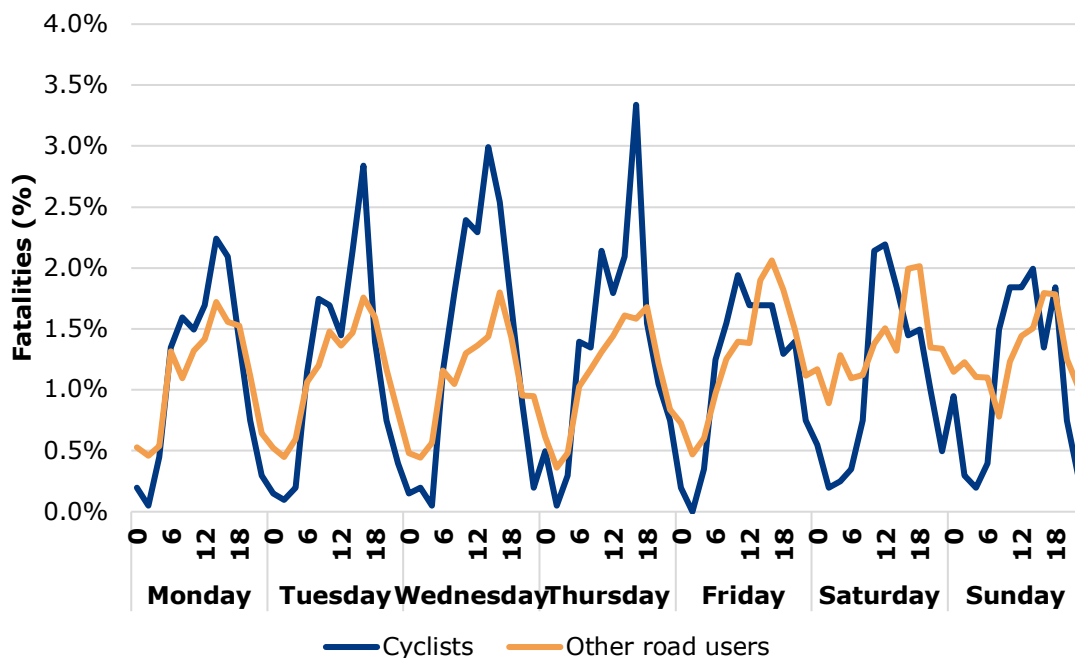




## 6.2 Day of the week, time of the day and hour

The Figure below provides more details regarding the occurrence of cyclist fatalities' distribution over the single days of the week and the time of the day. Relatively many **cyclists are involved in a fatal crash on Mondays to Thursdays in the afternoon**. During the weekend, cyclist fatalities occur more frequently around midday. Compared to other road user fatalities, the share of cyclist fatalities over the hours of the week shows stronger peaks and troughs especially from Monday to Friday.

**Figure 30.** Distribution of cyclist and other road user fatalities by day of the week and hour in the EU27 (2022). Source: CARE

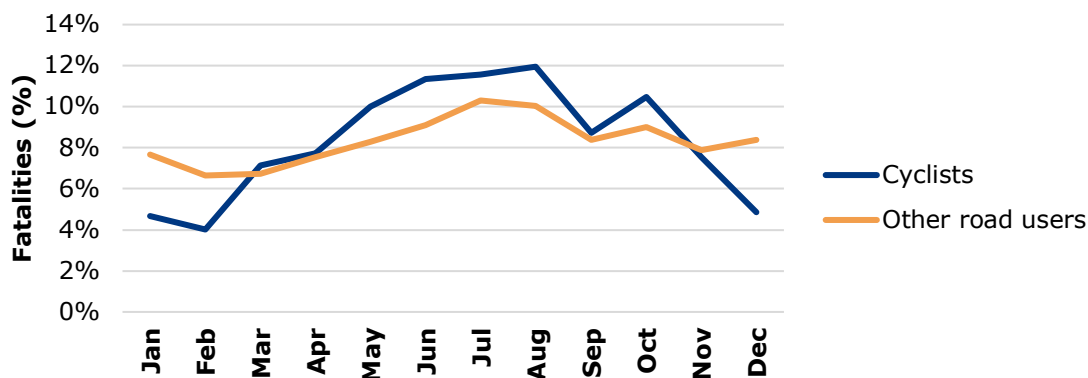


## 6.3 Month

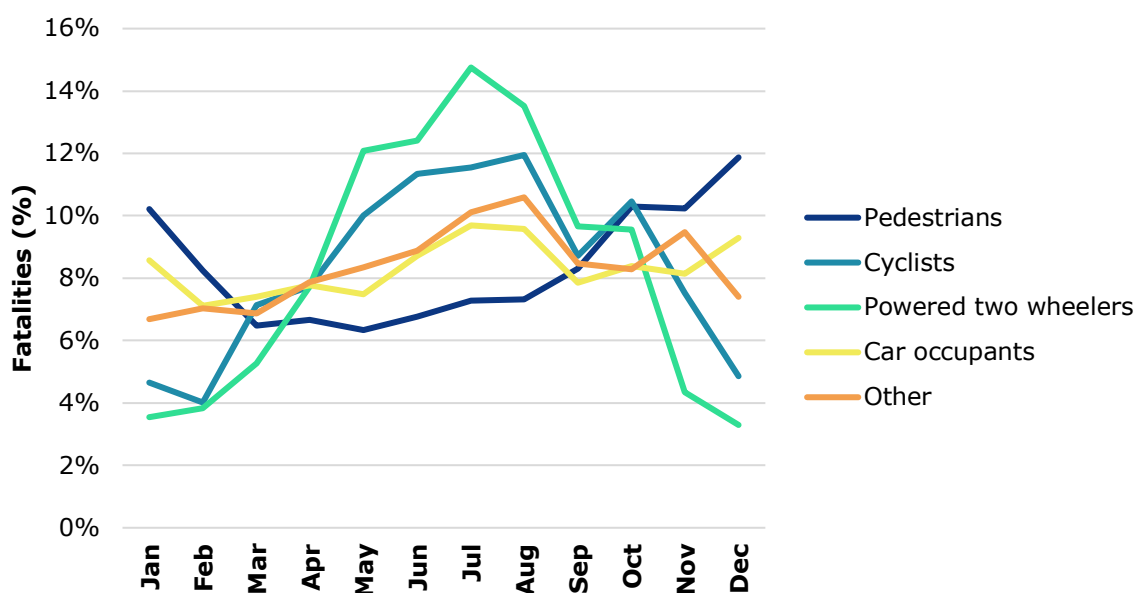
The figures below illustrate the share of fatalities by month and road user group, which shows that certain modes have a seasonal effect in the occurrence of fatalities over the course of one year.

**Cyclist fatalities peak in summer from June to August. The same applies to powered two-wheelers, while pedestrian fatalities peak in December and January.**

**Figure 31.** Monthly distribution of cyclist and other road user fatalities in the EU27 (2022). Source: CARE



**Figure 32.** Monthly distribution of fatalities by transport mode in the EU27 (2022). Source: CARE



## 7. Notes

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### 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](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.

#### **Bicycle/Cyclists**

A road vehicle which has two or more wheels and generally propelled by the muscular energy of the persons on that vehicle, in particular by means of a pedal system, lever or handle (e.g. bicycles, tricycles, quadricycles and invalid carriages). Included are cycles with supportive power unit (e.g. E-bikes, pedelecs)

#### **Car / passenger car**

Motor vehicle with 3 or 4 wheels, mainly used to transport people, seating for no more than 8 occupants. Motor vehicles with these characteristics used as taxis as well as motor caravans are also included.

#### **Pedelec**

Vehicle with at least two wheels with pedal assistance which is equipped with an auxiliary electric motor having a maximum continuous rated power of 0.25 kW, of which the output is progressively reduced and finally cut off as the vehicle reaches a speed of 25 km/h, or sooner, if the cyclist stops pedalling. Speed pedelecs are not included as they are deemed to be equivalent to mopeds.

**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.

**Pedal cycle**

Vehicle with at least 2 wheels, without engine.

**Pedestrian**

Person on foot; person pushing or holding bicycle, Person who uses a wheelchair, a pram or a pushchair, leading or herding an animal, riding a toy cycle on the footway, person on roller skates, skateboard or skis. Does not include persons in the act of boarding or alighting from a vehicle.

**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 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'

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 detailed data. Each sheet in the Excel file corresponds to a Figure/Table in the report.

