



European  
Commission



Facts and Figures

# Light Goods Vehicles



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).
Version:	March 2024
Authors:	Hatun Atasayar, Maria Fleischer, Martin Donabauer, Aggelos Soteropoulos (KFV)
Internal Review:	Frits Bijleveld (SWOV)
Referencing:	Reproduction of this document is allowed with due acknowledgement. Please refer to the document as follows:  <i>European Commission (2024) Facts and Figures Light Goods Vehicles. 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: 29 January 2024

### **Disclaimer**

Whilst every effort has been made to ensure that the matter presented in this document is relevant, accurate and up to date, the (sub)contractors cannot accept any liability for any errors or omission, or reliance on part or all of the content in another context.

Any information and views set out in this document are those of the author(s) and do not necessarily reflect the official opinion of the European Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use that may be made of the information contained therein.

© European Commission, 2024.

The EU does not own the copyright in relation to the following elements:

Cover page photos, © www.istockphoto.com

## Contents

1. Key facts .....	4
2. Summary.....	5
3. Main trends.....	7
3.1 Absolute number of road fatalities.....	7
3.2 Mortality rate: number of road fatalities per million inhabitants	8
3.3 Share of fatalities in LGV crashes in the total number of fatalities.....	10
3.4 Trend in the number of fatalities.....	11
3.5 Comparison with other transport modes.....	15
4. Road user .....	17
4.1 Gender .....	17
4.2 Age .....	19
4.3 Transport modes .....	21
5. Time .....	23
5.1 Period of the week .....	23
5.2 Day of the week and hour .....	23
5.3 Month .....	24
6. Location .....	25
6.1 Road type.....	25
6.2 Junction .....	26
6.3 Road surface.....	26
7. Notes.....	27
7.1 Definitions .....	27
7.2 Data source .....	29
7.3 Small cells.....	29
7.4 Missing data.....	29
7.5 Data cleaning.....	30

# 1. Key facts

This Facts and Figures report examines fatalities in light goods vehicles (LGVs), which are stated as “Lorries under 3.5 tonnes” within CARE, and this classification is used in all tables and figures in this report. The term “light trucks” has been used in previous reports. All differences reported were derived from the available data. The statistical significance of the differences between values has not been tested.

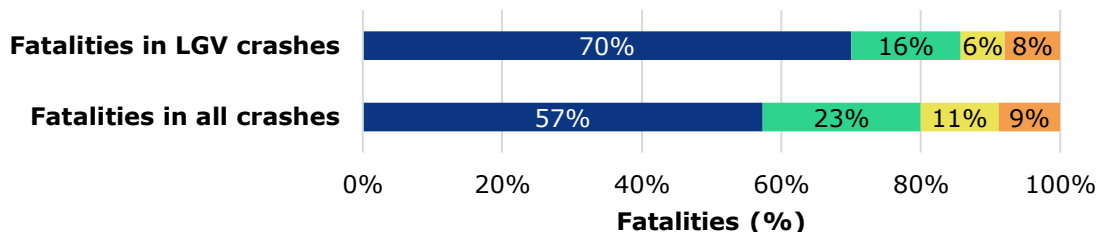
## Fatalities in light goods vehicle crashes in the EU27, 2022



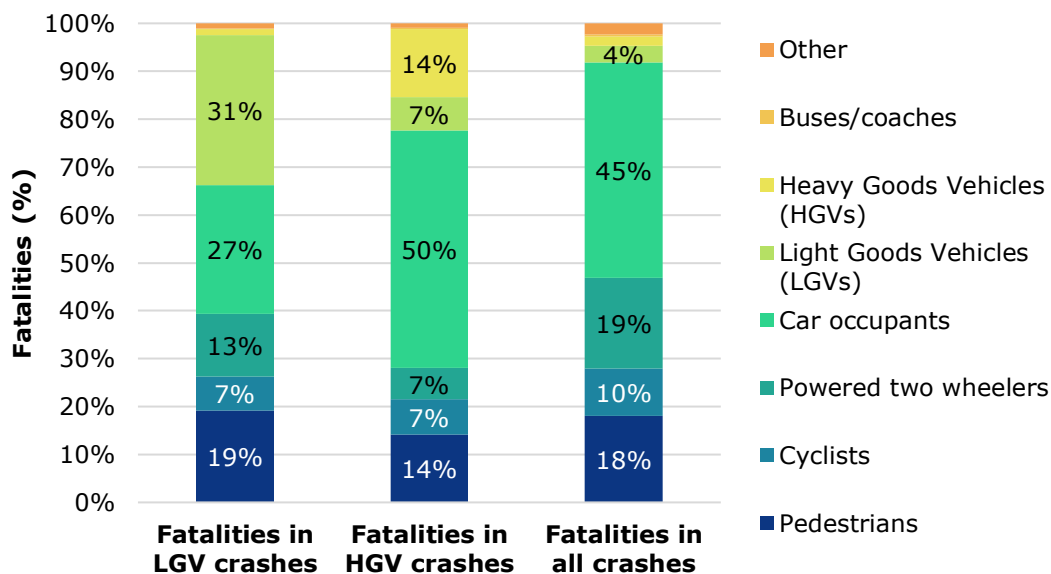
- 2,311 fatalities in crashes involving LGVs, annual average 2012-2022 (10 to 12% of all road fatalities)
- between 2012 and 2022, there was a 17% reduction of fatalities in LGV crashes, which is quite similar to the general trend of road fatalities (-22%)

### Period of the week

- Working week - daytime
- Weekend - daytime
- Weekend - night-time
- Working week - night-time



### Transport modes



## 2. Summary

---

Throughout the observation period (2012-2022), **the share of fatalities in crashes involving LGVs among all road fatalities ranged between 10% to 12%** and about 4% of all road fatalities were LGV occupants. Looking at the EU, the number of fatalities in crashes involving LGVs decreased by -5%, comparing 2019 and 2022.

**The development of the number of fatalities in LGV crashes throughout the years varies across European countries.**

In Romania about 22 fatalities out of all road fatalities per million inhabitants were related to crashes involving LGVs in 2022. Generally, **Northern and Central European countries** have a **somewhat lower share of fatalities in LGV crashes** in the total number of road fatalities **than countries in Southern and Southeastern Europe.**

The following special characteristics can be summarised for road fatalities in LGVs as a whole:

- The share of fatalities in LGV crashes does not differ in terms of gender distribution from the proportion of fatalities in all crashes.
- There are great differences among European countries concerning the age distribution in road fatalities in LGV crashes. Czechia, Latvia, Lithuania and Norway have no fatalities involving the age group 0 to 24 years (0%). When looking at senior citizens aged 65+, Switzerland (58%) and Norway (56%) have the highest share.
- **LGV crash fatalities** display a **different distribution during the week** compared to all road crash fatalities, but show some **similarities compared to HGV crash fatalities.**
- There are slightly less fatal LGV crashes in urban areas (33%) compared to all fatal crashes (38%), but slightly more when comparing motorways (LGV: 13%; all: 9%).

---

**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 in crashes involving LGVs 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	89	88	63	81	78	68	62	55	45	66	51	-43%	-7%
Bulgaria	-	-	-	-	-	3	2	3	-	-	-	-	-
Czechia	55	53	48	45	46	40	39	45	6	38	3	-95%	-93%
Denmark	20	35	33	28	15	26	38	29	27	31	20	0%	-31%
Germany	-	-	210	234	177	235	222	211	175	176	173	-	-18%
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	23	25	16	22	20	-	-	-	-	-	-	-	-
Greece	110	98	100	109	103	114	81	99	77	86	-	-22%	-13%
Spain	263	206	253	218	246	280	271	237	186	226	282	7%	19%
France	391	365	381	373	420	315	262	300	210	344	337	-14%	12%
Croatia	38	22	28	21	17	-	32	26	13	31	26	-32%	0%
Italy	461	378	409	423	233	253	508	300	290	337	299	-35%	0%
Cyprus	6	1	5	6	12	13	9	13	8	6	6	-	-54%
Latvia	13	12	18	9	9	14	8	15	9	-	-	-	-
Lithuania	-	7	5	6	11	12	9	10	10	13	10	-	-
Luxembourg	2	3	3	7	1	2	3	1	2	2	3	-	-
Hungary	106	87	109	91	90	105	90	95	67	84	66	-38%	-31%
Malta	-	-	-	3	2	4	-	-	2	-	-	-	-
Netherlands	68	58	41	46	82	70	71	72	60	64	81	19%	13%
Austria	53	48	47	38	33	28	39	36	34	42	33	-38%	-8%
Poland	-	-	-	-	-	-	261	283	268	253	195	-	-31%
Portugal	125	136	127	121	100	147	149	140	106	107	129	3%	-8%
Romania	352	362	365	355	420	400	375	379	366	411	415	18%	10%
Slovenia	20	16	3	1	-	2	1	7	6	18	13	-35%	-
Slovakia	-	-	-	-	42	35	43	30	25	18	30	-	0%
Finland	22	27	22	39	24	26	17	15	23	18	-	-18%	20%
Sweden	28	21	27	20	19	12	34	33	24	-	-	-	-
EU	2,768	2,564	2,619	2,599	2,461	2,490	2,626	2,434	2,039	2,406	2,311	-17%	-5%
Iceland	1	1	2	-	2	2	5	1	-	-	1	-	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	16	16	8	10	7	5	10	9	7	5	9	-44%	-
Switzerland	20	15	18	15	14	17	12	25	18	15	12	-40%	-52%

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

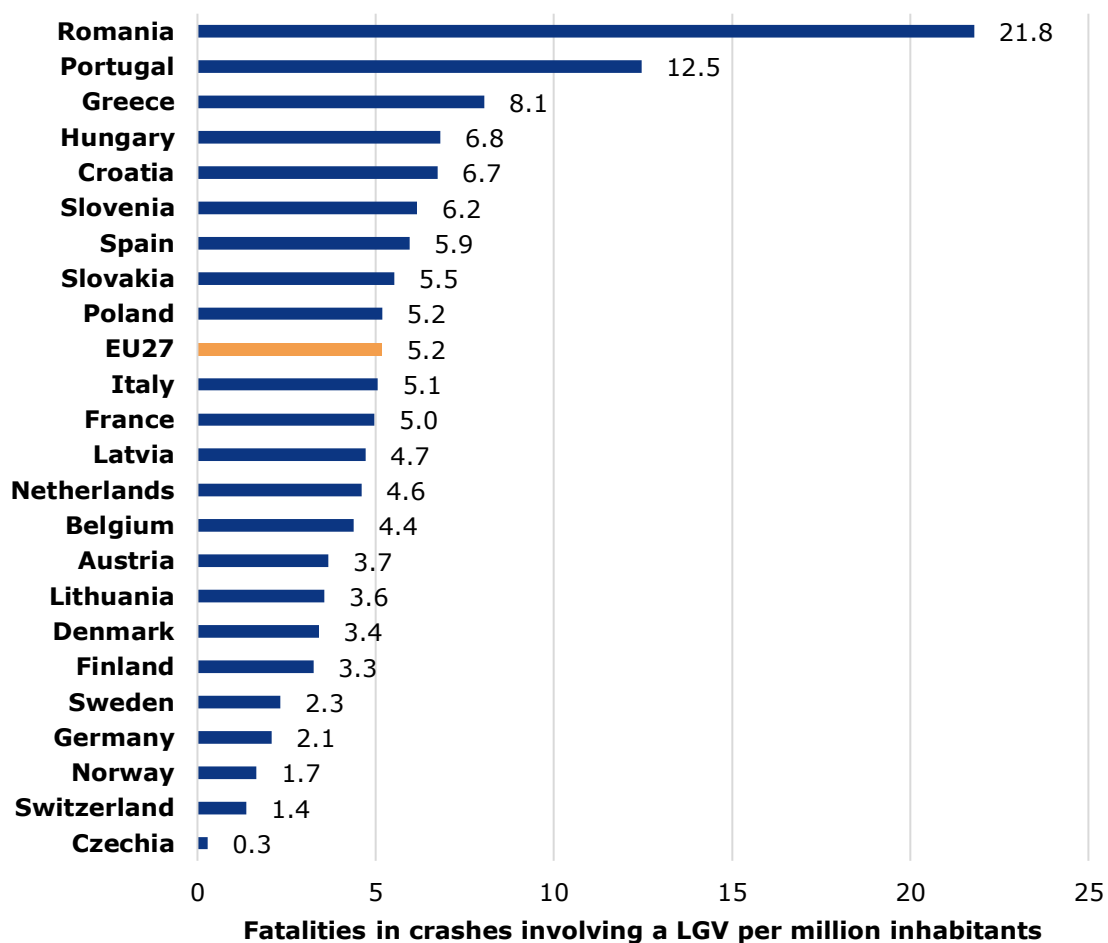
\*ST = Short term change of last available year over 2019.

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

Figure 1 shows the rate of fatalities per million inhabitants in each of the EU and EFTA countries as well as the EU average for 2022.

**Romania and Portugal show the highest rate of fatalities in crashes involving LGVs per million inhabitants, while Czechia has the lowest mortality rate.**

**Figure 1.** Fatalities in crashes involving LGVs per million inhabitants per country in the EU27 and EFTA (2022). Source: CARE, EUROSTAT



**Notes:**

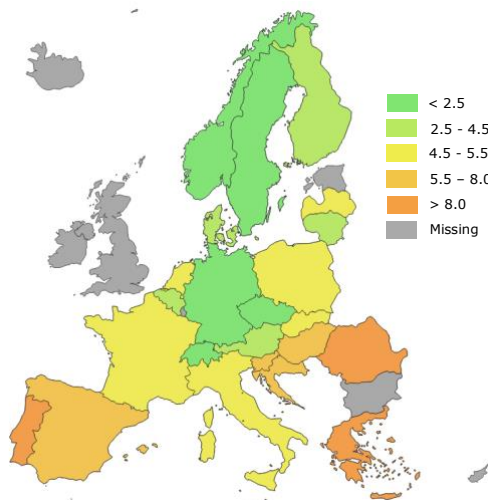
- Estonia, Ireland, Cyprus, Luxembourg, Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.

- Bulgaria is not included in the figure because there is no data on fatalities.

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



The geographical representation of fatality rates in the map below shows a tendency for lower fatality rates in Northern and Central Europe compared to South and Southeastern Europe.

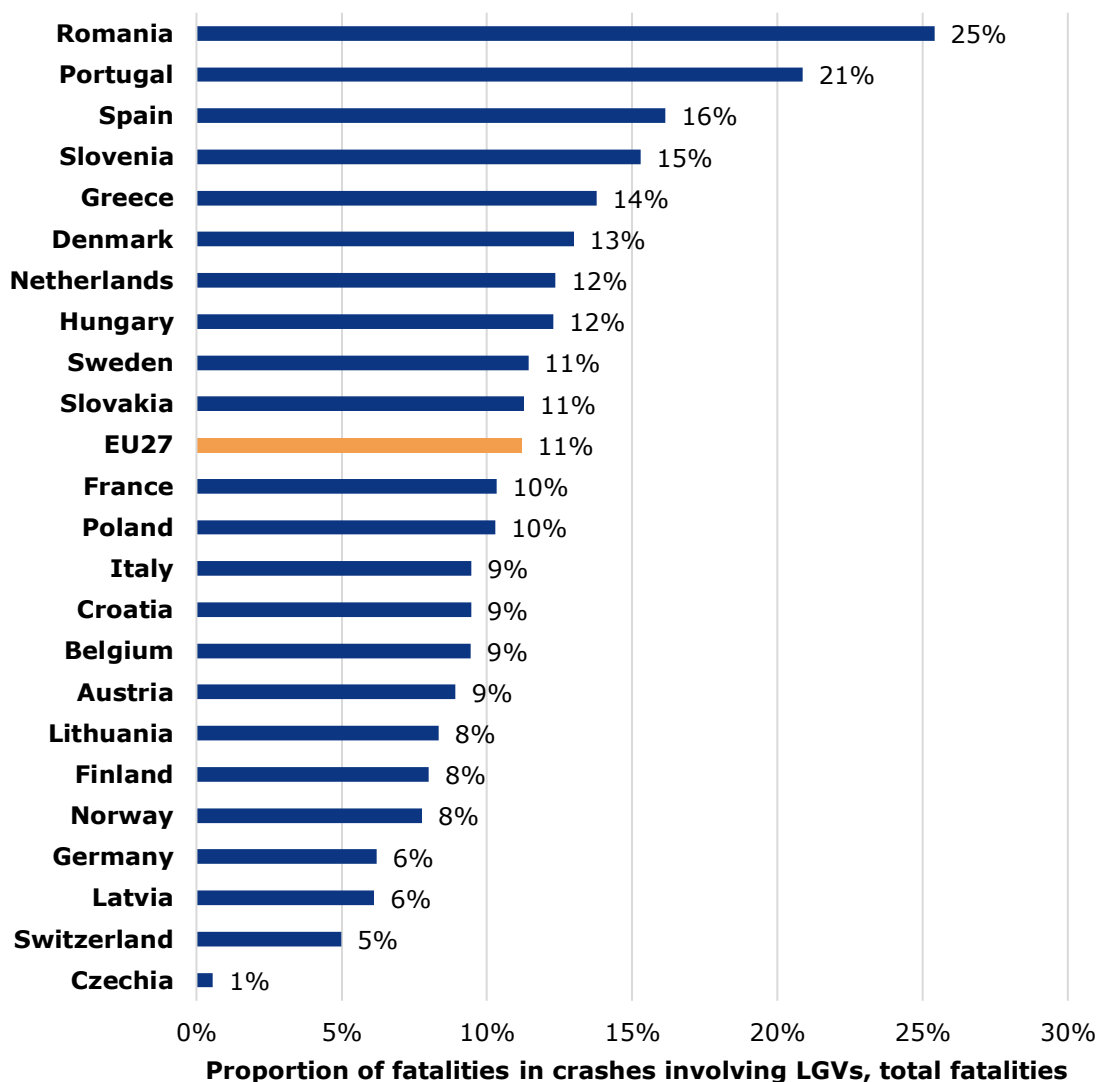


© Eurostat for the administrative boundaries

### 3.3 Share of fatalities in LGV crashes in the total number of fatalities

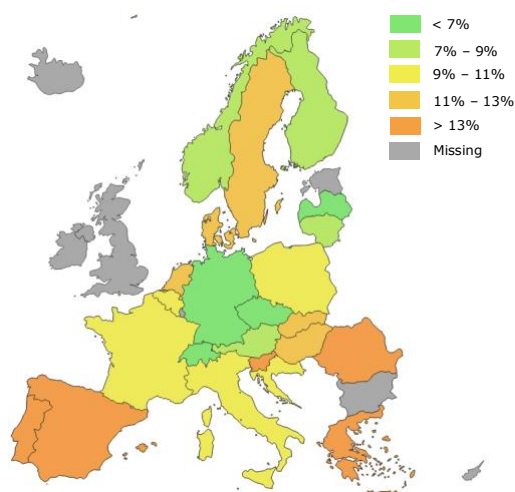
**Romania** (25%) and **Portugal** (21%) are amongst the EU Member States with the **highest proportion of fatalities in crashes involving LGVs in the total number of fatalities**, while the share is **lowest in Czechia (1%) and Lithuania (6%)**.

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



Notes:

- Estonia, Ireland, Cyprus, Luxembourg, Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- Bulgaria is not included in the figure because there is no data on fatalities.
- For Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.



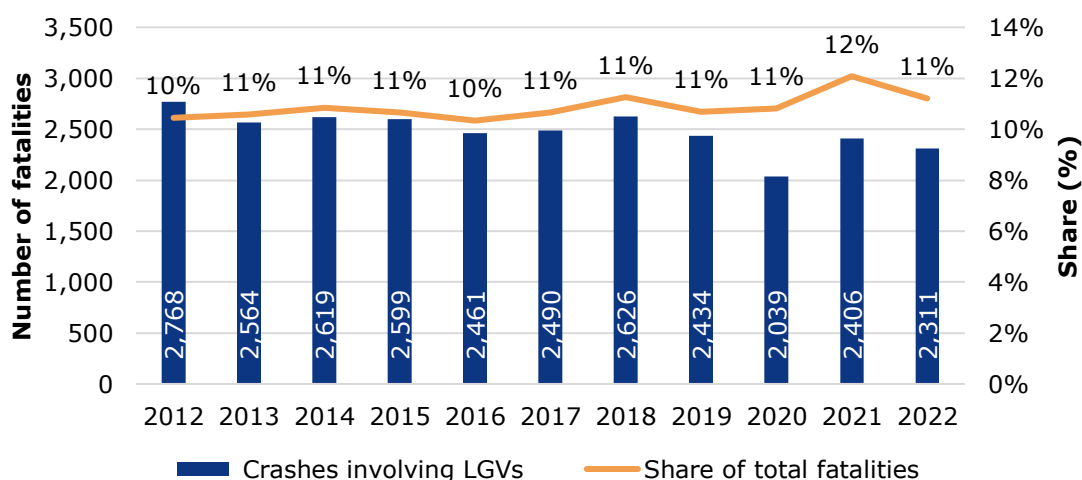
© Eurostat for the administrative boundaries

### 3.4 Trend in the number of fatalities

Between 2012 and 2022 the share of fatalities in crashes involving LGVs among all crashes ranged between 10% and 12% without any recognisable trend.

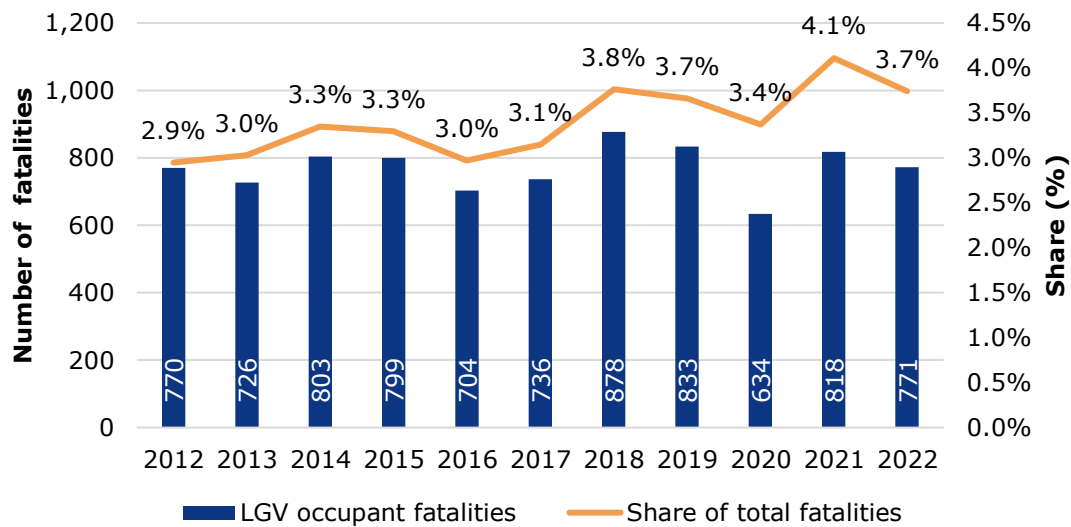
The previous finding also shows **that annual number of fatalities in crashes involving LGVs decreased roughly by about 17% from 2012 to 2022 and by 5% when comparing 2019-2022.**

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



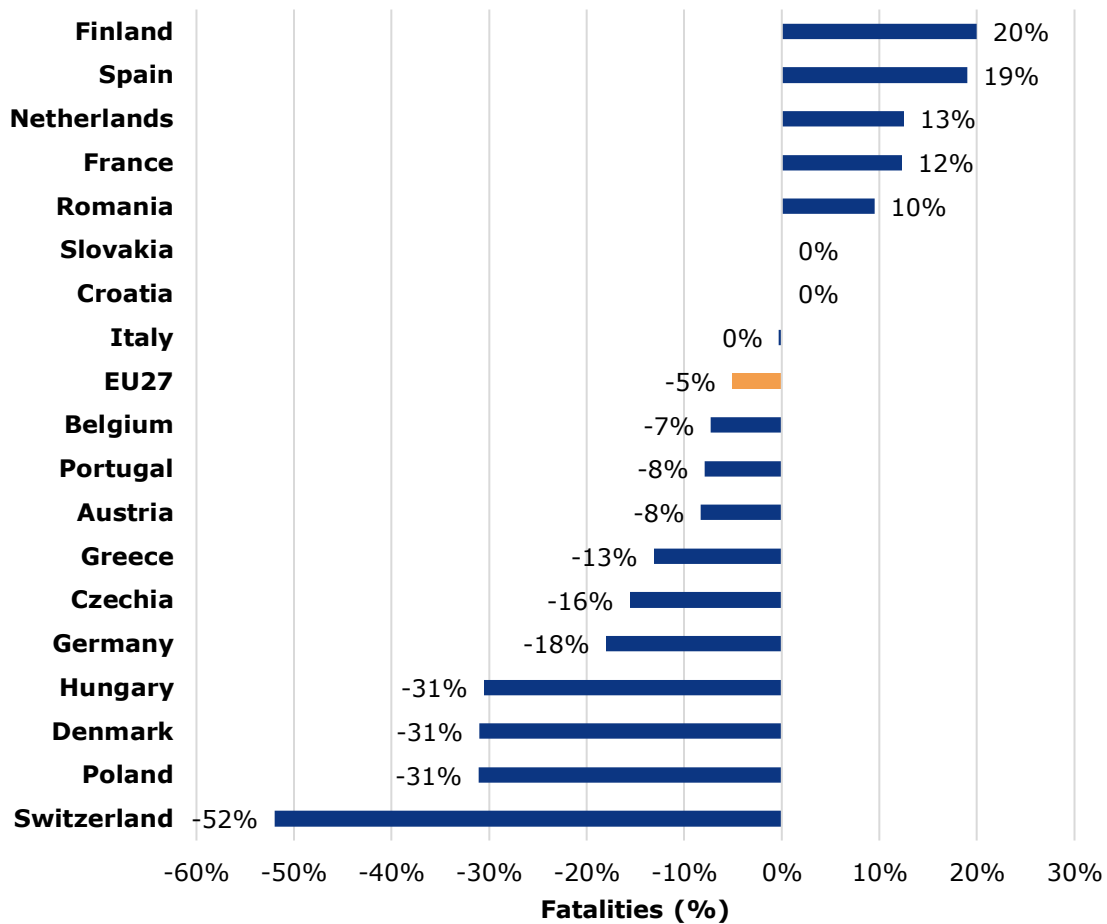
The number of LGV occupant fatalities is as volatile as the number of all fatalities in crashes involving LGVs. The share of LGV occupant fatalities (between 2.9% and 4.1%) in the total number of road fatalities remained relatively stable throughout the period 2012-2022.

**Figure 4.** Annual number of LGV occupant fatalities, and their share in the total number of fatalities in the EU27 (2012-2022). Source: CARE



**The short-term changes in the number of LGV crash fatalities** across European countries, comparing 2019 with 2022, range from a **decline of -52% in Switzerland** up to an **increase of +20% in Finland**. The number of LGV fatalities in Finland, Spain, the Netherlands and France increased by more than 10% (12% to 20 %) between 2019 and 2022, while there were notable decreases (between -31 % and -52%) in Hungary, Denmark, Poland, Switzerland.

**Figure 5.** Percentage short-term change in the number of LGV crash fatalities per country in the EU27 and EFTA (2019-2022). Source: CARE



Notes:

- Estonia, Ireland, Cyprus, Luxembourg, Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- Latvia and Sweden are not included in the figure because there is no data on fatalities in the years 2021 and 2022.
- Bulgaria is not included in the figure because there is no data on fatalities.
- For Greece and Finland the missing value for 2022 was imputed with the last known value in the series.
- For Czechia 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 in crashes involving LGVs, per country in the EU27 and EFTA (2012-2022). Source: CARE

	2012	2019	2020	2021	2022	ST*	Miniplot: trend since 2012
Belgium	89	55	45	66	51	-7%	
Czechia	45	6	38	3	45	-93%	
Denmark	29	27	31	20	29	-31%	
Germany	211	175	176	173	211	-18%	
Greece	110	99	77	86	-	-13%	
Spain	263	237	186	226	282	19%	
France	391	300	210	344	337	12%	
Croatia	38	26	13	31	26	0%	
Italy	461	300	290	337	299	0%	
Latvia	13	15	9	-	-	-	
Lithuania	13	10	10	13	10	-	
Hungary	106	95	67	84	66	-31%	
Netherlands	68	72	60	64	81	13%	
Austria	53	36	34	42	33	-8%	
Poland	-	283	268	253	195	-31%	
Portugal	125	140	106	107	129	-8%	
Romania	352	379	366	411	415	10%	
Slovenia	20	7	6	18	13	-	
Slovakia	-	30	25	18	30	0%	
Finland	22	15	23	18	-	20%	
Sweden	28	33	24	-	-	-	
EU27	2,768	2,434	2,039	2,406	2,311	-5%	
Norway	16	9	7	5	9	-	
Switzerland	20	25	18	15	12	-52%	

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

Notes:

- Estonia, Ireland, Cyprus, Luxembourg, Malta, Iceland and Liechtenstein are not included in the table because there are fewer than 10 fatalities in the year 2022.
- Bulgaria is not included in the table because there is no data on fatalities.

### 3.5 Comparison with other transport modes

The figure below shows the number of road crash fatalities involving various modes of transport over the period 2012-2022.

There was a **modest increase in fatalities involving LGVs (+2%) in 2022 compared to 2012**, which is consistent with fluctuations over the last decade and **in line with the fluctuations in fatalities involving HGVs and buses/coaches**. The number of bus occupant fatalities appears to fluctuate more than the number of fatalities involving other road user groups, which may be dominated by a small number of severe events.

**Figure 6.** Trend in the number of occupant fatalities by transport mode in the EU27 (2012-2022). Source: CARE

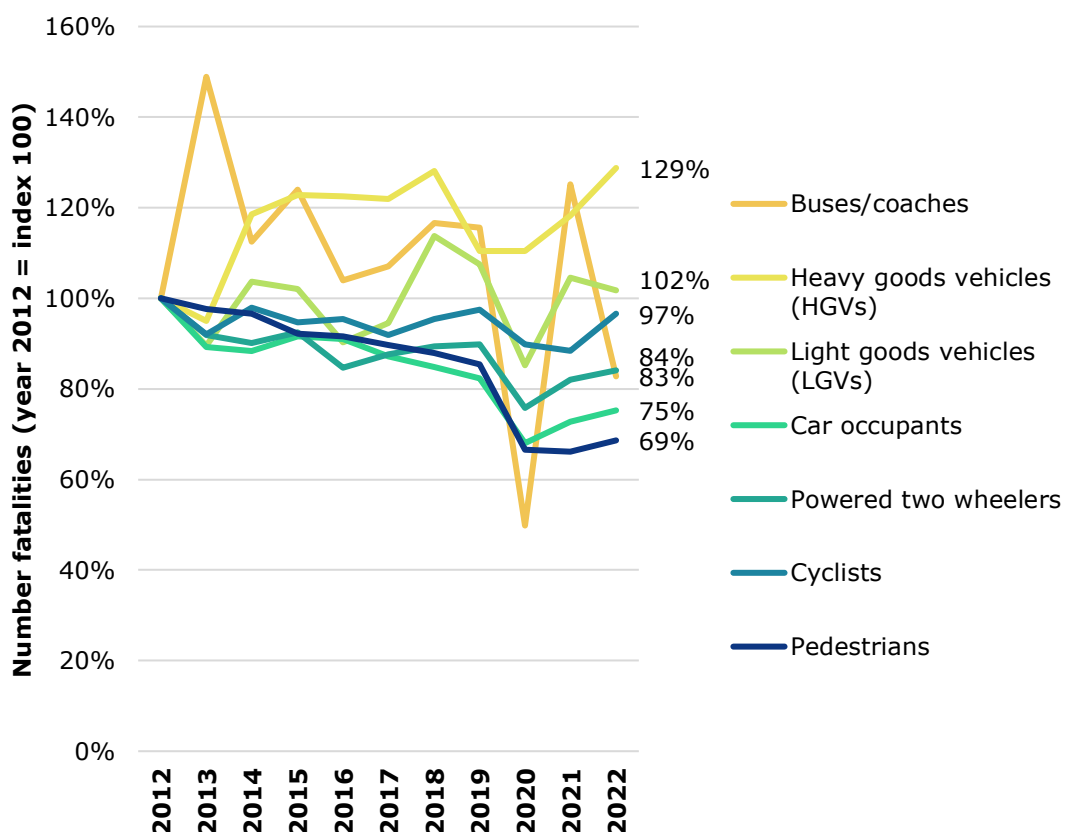
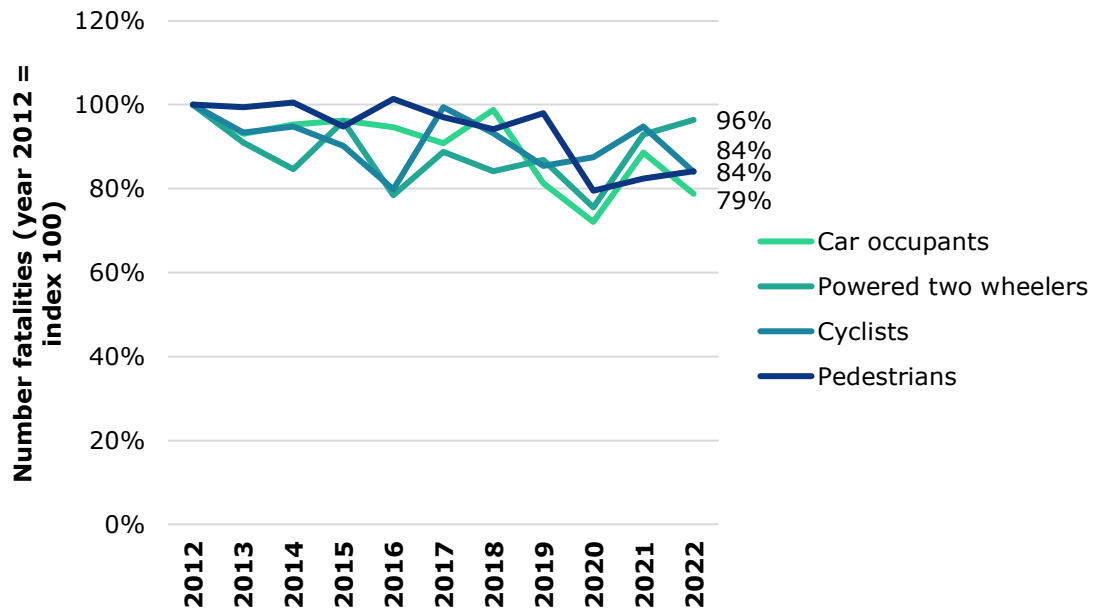


Figure 7 shows the number of road crash fatalities involving LGVs in the period 2012-2022. The relative proportion of fatal crashes involving LGVs decreased for all modes of transport during this period. **The number of car occupant fatalities declined the most, out of all modes of transport, by 21%.**

**Figure 7.** Trend in the number of fatalities in crashes involving a LGV by transport mode in the EU27 (2012-2022). Source: CARE



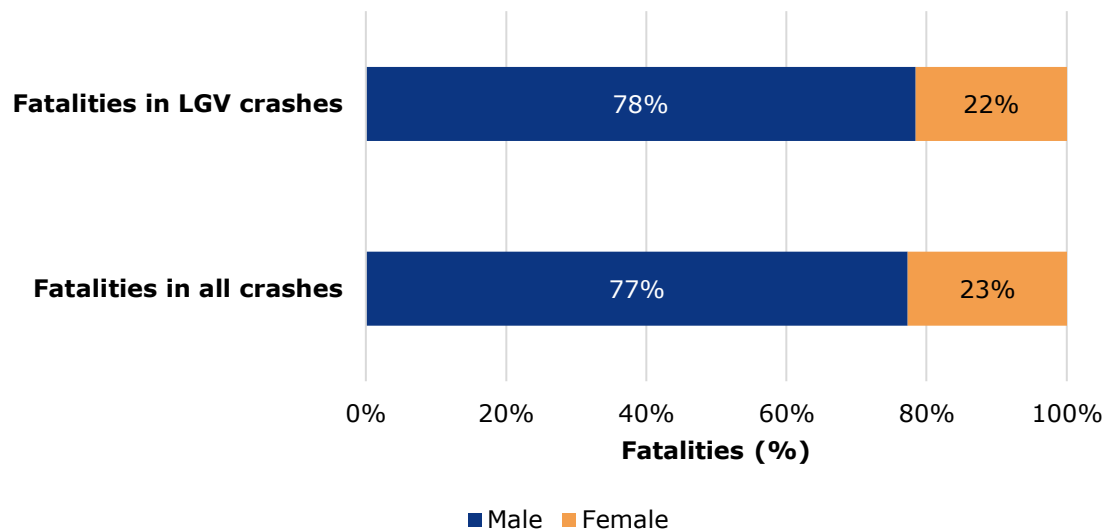


## 4. Road user

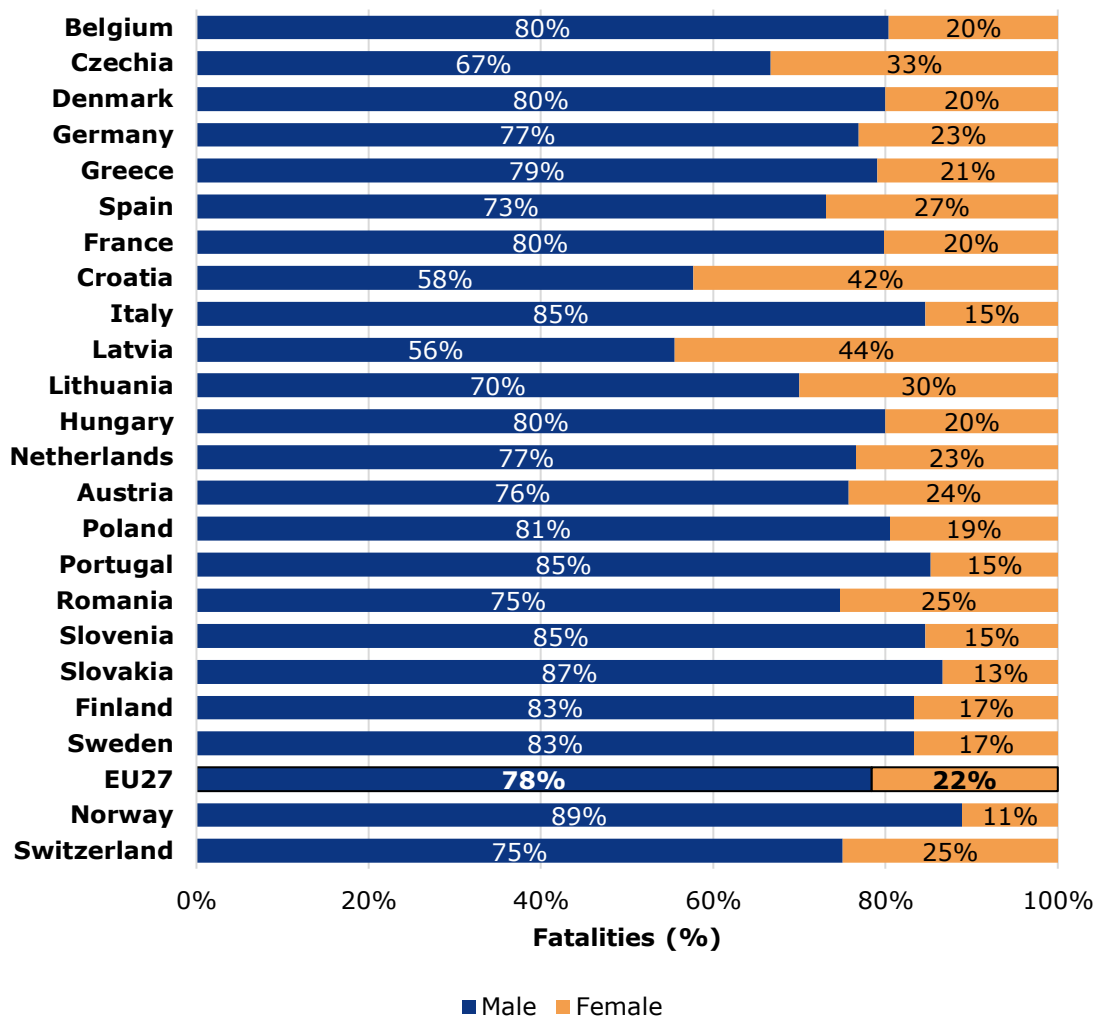
### 4.1 Gender

**78% of fatalities in LGV crashes are men**, which is similar for fatalities in all crashes in terms of gender distribution. The gender distribution of LGVs therefore does not differ from the overall distribution of fatalities. There are differences between the EU Member States, as the **proportion of female fatalities in crashes involving LGVs lies between 11% (Norway) and 44% (Latvia)**.

**Figure 8.** Distribution of fatalities in crashes involving a LGV and all road user fatalities by gender in the EU27 (2022). Source: CARE



**Figure 9.** Distribution of fatalities in crashes involving a LGV by gender per country in the EU27 and EFTA (2022). Source: CARE



Notes:

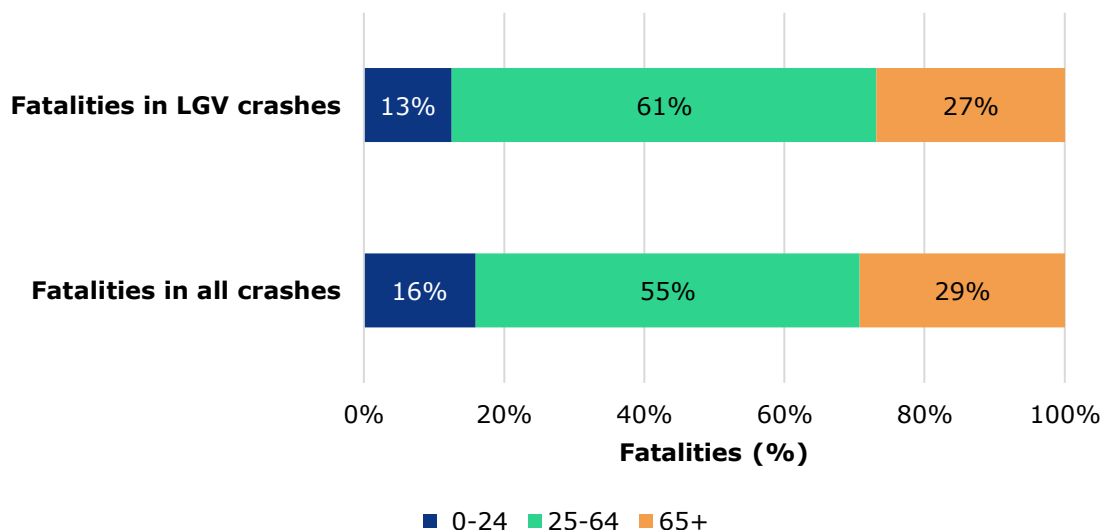
- Estonia, Ireland, Cyprus, Luxembourg, Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- Bulgaria is not included in the figure because there is no data on fatalities.
- For Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.

## 4.2 Age

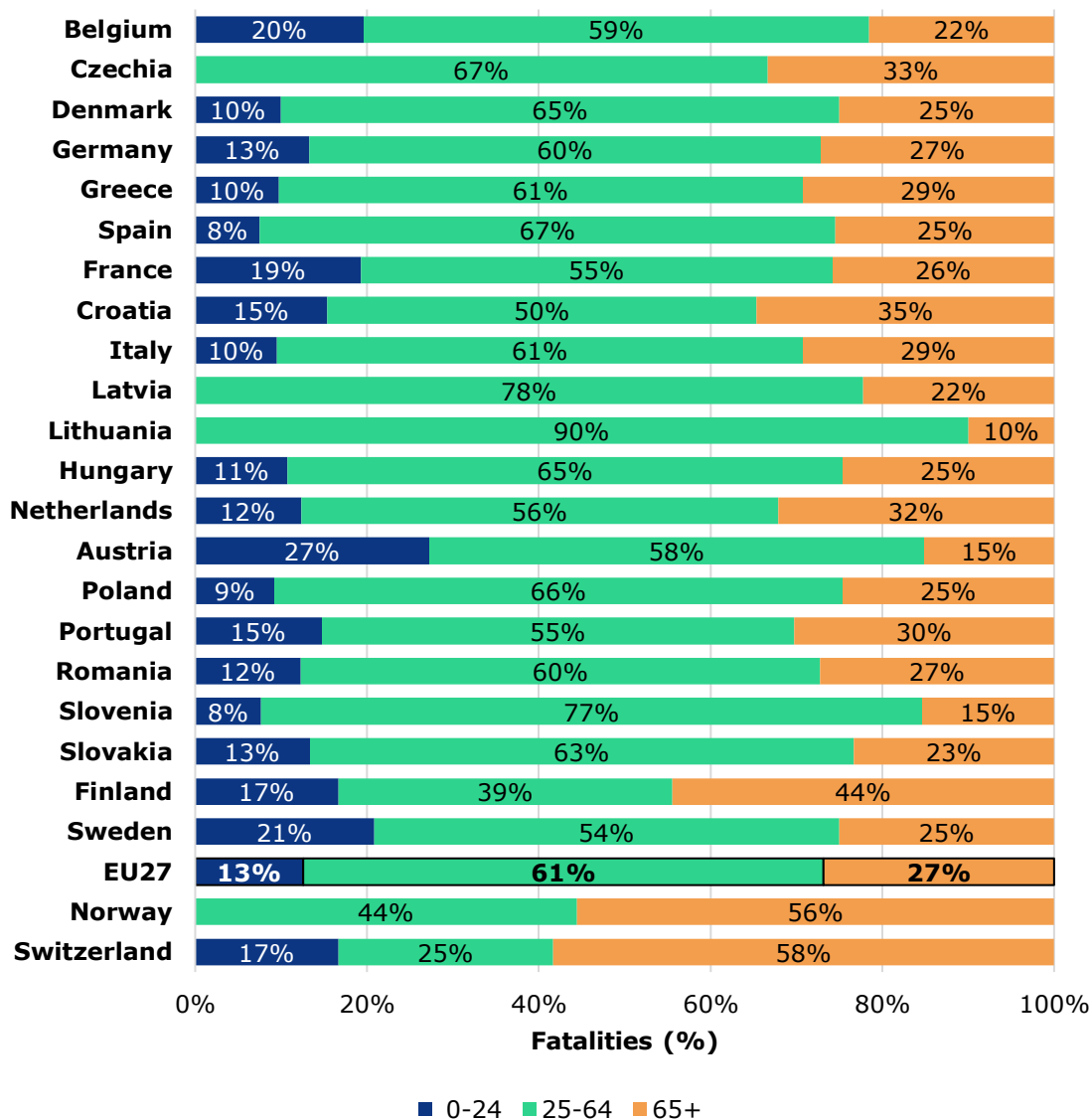
The **age distribution of fatalities in crashes involving LGVs is almost identical to the overall distribution**, with a slightly lower share of people aged 0-24 years and a slightly higher proportion of people aged 25-64.

There are also some differences when comparing the EU countries. **In all European countries, the 25-64 age group is the most strongly represented and, in most countries, also accounts for the highest number of fatalities in crashes involving LGVs.** Except for Finland, where 44% of the fatalities in crashes involving LGVs were in the age group 65+ compared to 39% in the 25-64 age group and 17% for the people aged 0-24 years. Looking closely at the two EFTA countries, the age distribution of fatalities in crashes involving LGVs shows a higher proportion of fatalities aged 65+ years (56% in Norway and 58% in Switzerland).

**Figure 10.** Distribution of fatalities in crashes involving a LGV and all road user fatalities by age group in the EU27 (2022). Source: CARE



**Figure 11.** Distribution of fatalities in crashes involving LGVs by age group per country in the EU27 and EFTA (2022). Source: CARE

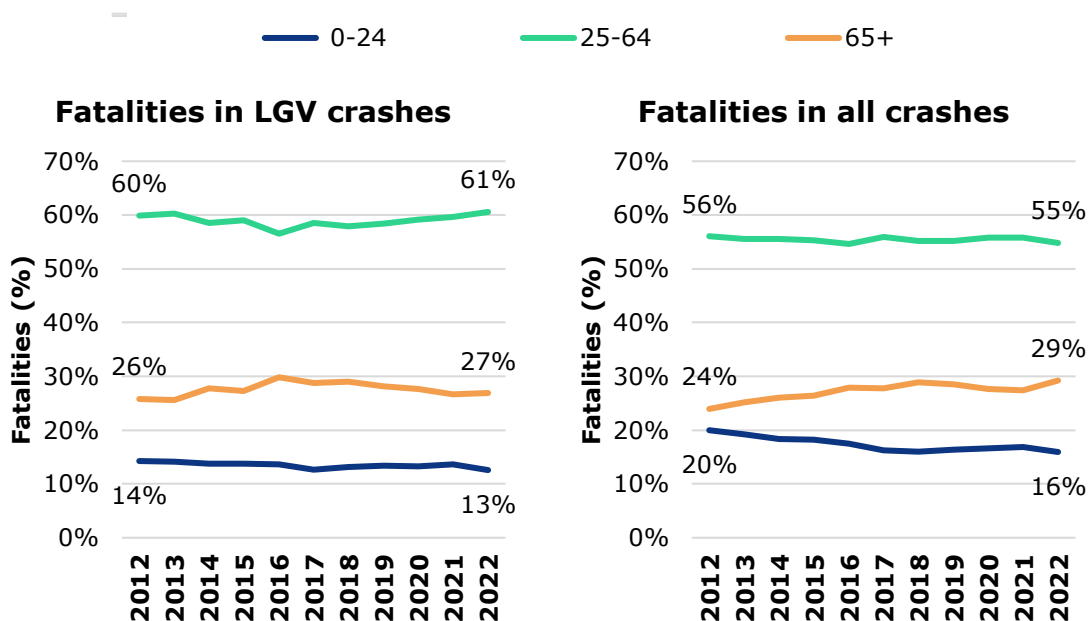


Notes:

- Estonia, Ireland, Cyprus, Luxembourg, Malta, Iceland and Liechtenstein are not included in the figure because there are fewer than 10 fatalities in the year 2022.
- Bulgaria is not included in the figure because there is no data on fatalities.
- For Greece, Latvia, Finland and Sweden the missing value for 2022 was imputed with the last known value in the series.

The age distribution of fatalities in LGV crashes in the EU differs slightly from the age distribution of fatalities in all crashes. **The share of 25-64 year old fatalities is higher in LGV crashes compared to fatalities in all crashes.** In 2022, 61% of fatalities in LGV crashes were between 25-64 years old, compared to 55% of fatalities in all crashes. In 2022, the share of people aged 65+ among fatalities in LGV crashes was lower (27%) compared to fatalities in all crashes (29%).

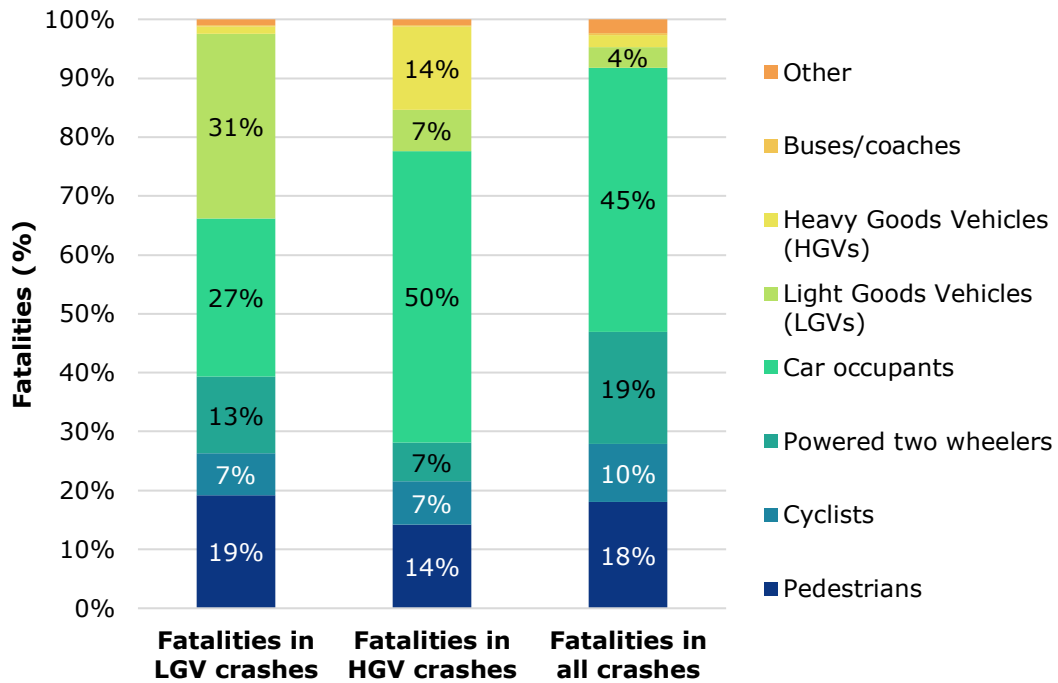
**Figure 12.** Trend of fatalities in crashes involving LGVs and all road user fatalities by age group in the EU27 (2012-2022). Source: CARE & EUROSTAT



### 4.3 Transport modes

Figure 13 compares the distribution of fatalities by transport mode in crashes involving LGVs, HGVs and all road users. **While about one third of the victims in crashes involving LGVs were LGV occupants, the respective share for HGVs is just 14%.** Car occupants make up 27% of fatalities involving LGVs crashes, 45% of fatalities in all crashes and 50% of fatalities involving HGV crashes. The share of LGV occupant fatalities in all crashes is 4%.

**Figure 13.** Distribution of fatalities by transport mode in crashes involving LGV, HGV and all road user fatalities in the EU27 (2022). Source: CARE

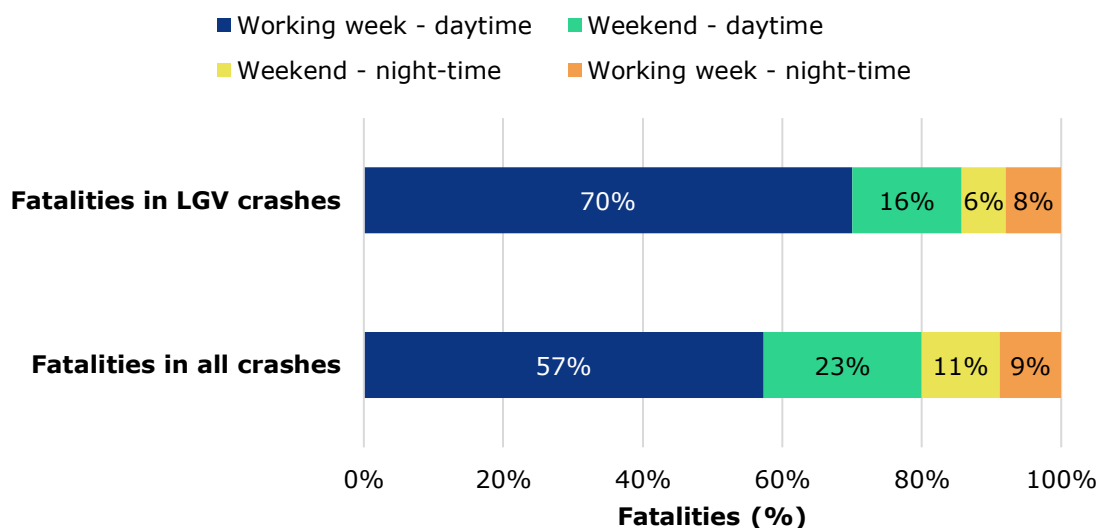


## 5. Time

### 5.1 Period of the week

In 2022, 70% of all fatalities involving a LGV occurred during daytime on working weekdays. The share of fatalities involving LGVs is proportionally lower during night-time both in the working week and at the weekend, compared to fatalities in all crashes.

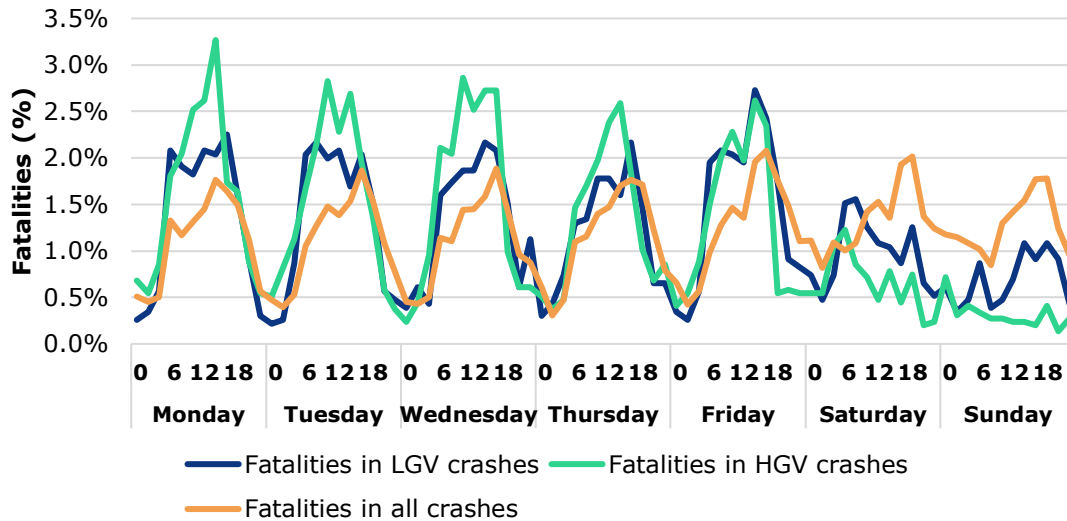
**Figure 14.** Distribution of fatalities in crashes involving a LGV and all road user fatalities according to period of the week in the EU27 (2022). Source: CARE



### 5.2 Day of the week and hour

Figure 15 shows the distribution of fatalities in crashes involving LGVs, HGVs, and all road users by day of the week and time of the day in the EU in 2022. The figure illustrates the above finding **that relatively fewer fatal crashes involving LGVs occur at weekends and night compared to weekdays and daytime, with the exception of Friday afternoon/evening**. Generally, the share of fatalities in crashes involving LGVs appears to be extended throughout the day during the working week (around 2%).

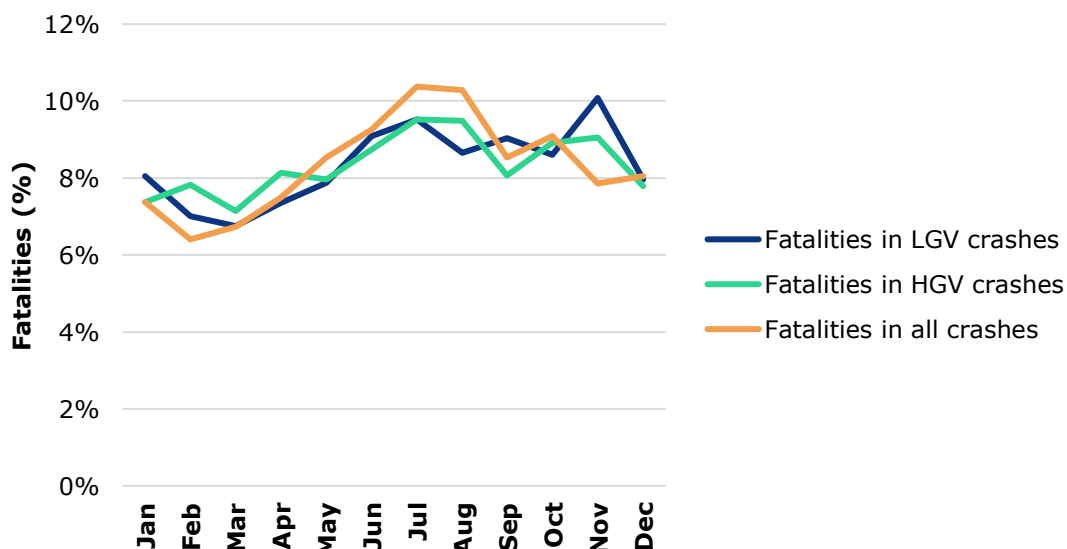
**Figure 15.** Distribution of fatalities in crashes involving LGV, HGV and all road user fatalities by day of the week and time of the day in the EU27 (2022). Source: CARE



### 5.3 Month

The share of **fatalities involving LGVs is highest between June and November, ranging from 8.7% to 10.1%**, with its peak in November. There is no significant difference between fatalities in LGV crashes and HGV crashes but a slightly higher share of fatalities in all crashes between June and August.

**Figure 16.** Distribution of fatalities in crashes involving LGV, HGV and all road user fatalities by month in the EU27 (2022). Source: CARE





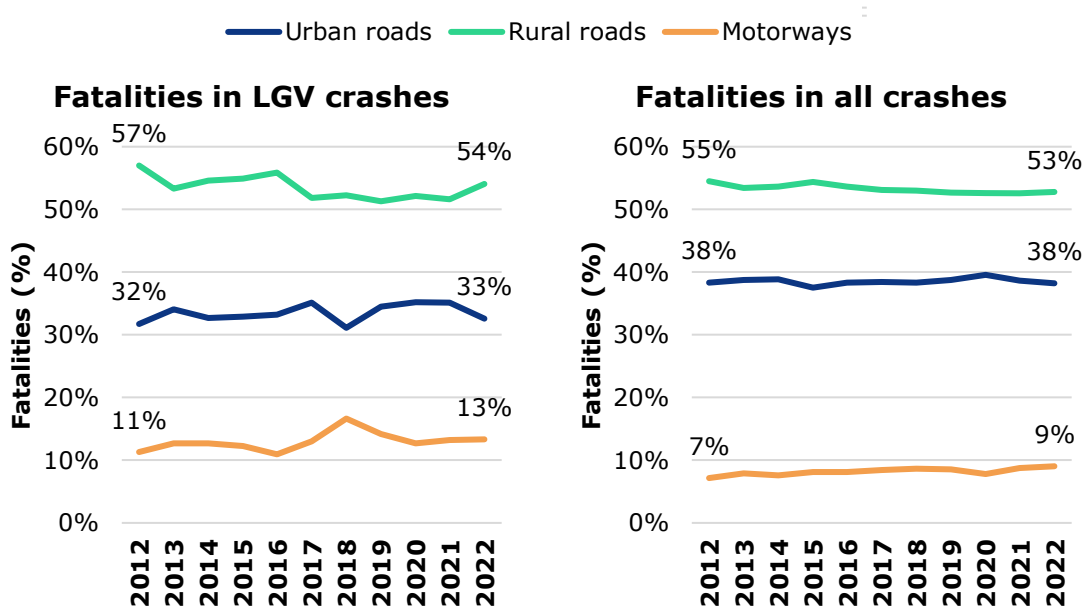
## 6. Location

### 6.1 Road type

**The distribution of crashes involving LGVs on various road types displays no distinct trend and remains the same over the years.**

The changes observed in 2017 and 2018 appear to be exceptions when considering the overall period.

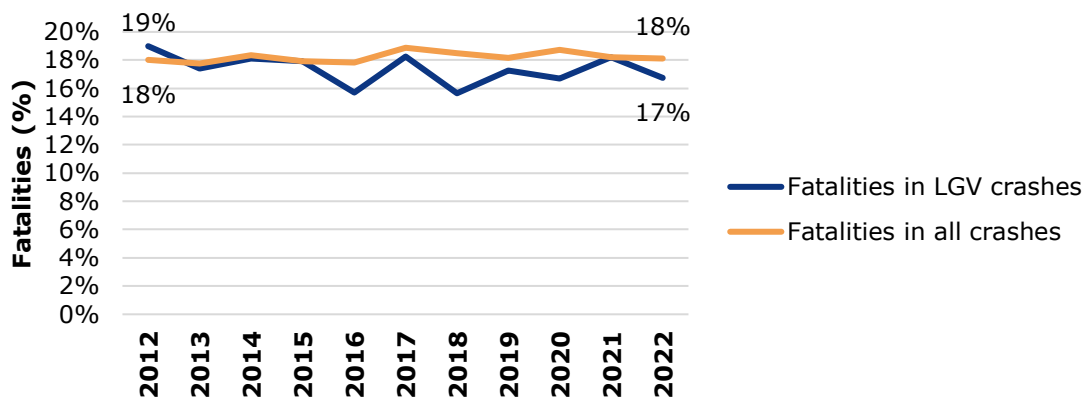
**Figure 17.** Trend of fatalities in crashes involving LGV and all road user fatalities by road type in the EU27 (2012-2022). Source: CARE



## 6.2 Junction

There is no notable difference between the trend in fatalities involving LGV crashes at junctions and fatalities in all crashes at junctions.

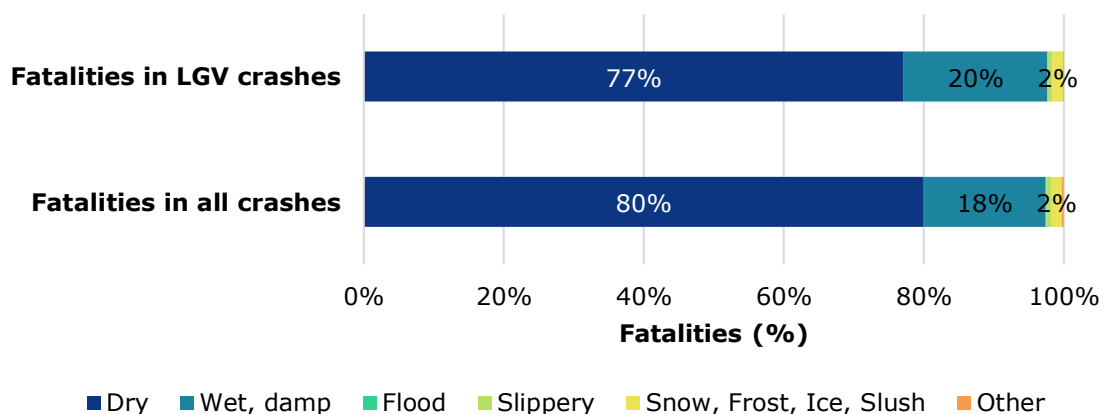
**Figure 18.** Trend of fatalities in crashes involving a LGV and all road user fatalities by occurrence at junctions in the EU27 (2012-2022). Source: CARE



## 6.3 Road surface

**The distribution of road conditions that predominate in crashes involving LGVs is not substantially different from the overall distribution. Fatal LGV crashes (77%) and all fatal crashes (80%) predominantly occur in dry road surface conditions.**

**Figure 19.** Distribution of fatalities in crashes involving LGV and all road user fatalities by surface 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](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.

#### **Fatalities in LGV crashes**

All fatalities in a crash in which an LGV was involved, including pedestrians and cyclists as well as the occupants (drivers and passengers) of all vehicles in such collisions including the LGV itself.

#### **Heavy goods vehicles (HGVs)**

Motor vehicles designed and constructed primarily for the carriage of goods with a maximum allowed mass (MAM) or gross combination mass (GCM) of over 3.5 tonnes.

#### **Junction**

Location, where two or more roads meet and traffic can change between different routes, directions, or sometimes modes of travel.

#### **LGV occupant fatalities**

Fatalities among the occupants of an LGV.

**Light goods vehicles (LGVs)**

Motor vehicles designed and constructed primarily for the carriage of goods with a maximum mass not exceeding 3.5 tonnes.

**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

