Causation

Traffic Safety Basic Facts 2012

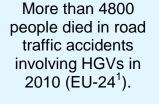
Heavy Goods Vehicles and Buses

Heavy Goods Vehicles (HGVs) are defined as goods vehicles of over 3,5 tons maximum permissible gross vehicle weight. Road traffic accidents involving HGVs tend to be more severe than other accidents because of the great size and mass of these vehicles. Buses and coaches are included in this Basic Fact Sheet because they too are normally relatively large, although minibuses and are categorized as buses in some countries. Note that buses, minibuses, coaches and trolleys are grouped together in the CARE database for Portugal since 2010.

Table 1: Fatalities in accidents involving Heavy Goods Vehicles in EU-19<sup>12</sup>, 2001-2010

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BE	193	178	136	143	161	133	156	122	117	111
CZ	222	234	241	257	240	215	220	169	163	175
DK	78	80	69	65	79	49	66	62	35	36
DE	824	836	815	738	684	719	687	625	536	534
IE	70	42	54	55	51	57	40	44	22	13
EL	220	219	217	181	158	167	141	138	113	127
ES	803	860	834	766	714	659	528	452	353	333
FR	1.057	988	758	727	726	683	658	596	502	552
IT	1.412	1.438	1.312	1.244	1.174	1.140	1.017	977	785	835
LU	6	12	9	6	4	7	7	2	2	9
NL	169	129	158	137	103	129	123	107	95	-
AT	122	143	140	144	126	120	89	107	81	97
PL	1.443	1.474	1.462	1.487	1.425	1.374	1.246	1.155	952	947
PT	197	214	213	187	163	130	145	112	120	95
RO	193	191	224	207	297	263	271	292	252	191
SI	15	19	11	21	21	4	20	7	12	7
FI	118	105	97	107	92	82	97	106	70	92
SE	118	135	92	59	61	83	92	72	45	-
UK	607	561	548	478	510	434	449	380	287	282
EU-19 <sup>2</sup>	7.867	7.858	7.390	7.009	6.789	6.448	6.052	5.525	4.542	4.576
Yearly reduction		0,1%	6,0%	5,2%	3,1%	5,0%	6,1%	8,7%	17,8%	-0,7%
EE	-	-	-	-	50	37	35	32	21	-
LV	-	-	-	85	81	81	97	46	38	41
HU	-	-	115	264	251	239	218	173	118	144
MT	1	-	-	-	0	1	0	1	0	1
SK	-	-	-	-	134	122	144	141	69	106
CH	-	-	-	56	-	-	-	39	45	29
IS	-	3	2	4	3	2	4	4	3	1
NO	-	-	-	-	-	-	-	-	- PE Databa	71

Source: CARE Database / EC Date of query: September 2012



In the last two years, the fatalities involving HGVs in Romania have decreased by 35%.

<sup>&</sup>lt;sup>1</sup> See Table "Definition of EU-level and used Country abbreviations" on Page 19

<sup>&</sup>lt;sup>2</sup> Where a number is missing for an EU-19/24 country in a particular year, its contribution to the EU-19/24 total is estimated as the most recent known value

Children (Aged < 15)

Youngsters (Aged 15-17)

The Elderly Young Pec (Aged > 64) Aged 18-2

Pedestrians (

Mopeds Bicy

occupants

ways Veh

s Junctions

irban areas urba

s venicie idents Sea

er acc

sation G

Table 1 presents the number of people killed in accidents involving HGVs in each of the EU-24 countries and Switzerland, Iceland and Norway for each year for which the data are available over the last ten years.

The total number killed in these accidents in EU-19<sup>2</sup> fell from 7.867 in 2001 to 4.576 in 2010, a fall of 42%.

Table 2 presents the number of people killed in each of the EU-24 countries and Switzerland, Iceland and Norway over the last ten years in accidents involving buses and coaches. The number of people killed in these accidents in EU-19<sup>2</sup> fell from 1.382 in 2001 to 744 in 2010, a fall of 46%. The totals from this and the previous table are presented in Figure 1. They have fallen in parallel, with approximately five times as many people killed per year in accidents involving HGVs as in accidents involving buses or coaches.

Table 2: Fatalities in accidents involving buses or coaches in EU-2012, 2001-2010

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BE	29	31	29	31	19	31	30	23	22	17
CZ	44	42	68	49	31	34	35	27	28	20
DK	14	22	26	15	11	14	20	10	9	13
DE	137	117	110	105	108	86	94	75	66	91
ΙE	9	8	2	17	11	11	7	10	7	7
EL	59	60	94	48	53	36	35	33	33	31
ES	135	109	126	80	108	102	73	81	69	51
FR	117	109	97	99	91	76	110	80	66	60
IT	122	107	131	136	108	116	91	102	71	79
LU	6	4	1	2	2	0	0	1	2	1
NL	27	21	21	15	18	14	15	14	14	-
AT	33	17	20	24	10	19	17	8	15	17
PL	251	216	246	247	252	174	148	142	128	119
PT	66	51	26	41	23	13	33	21	15	21
RO	52	113	86	102	120	117	132	100	123	89
SI	6	4	12	12	8	2	2	4	8	3
FI	28	17	13	29	13	19	13	13	8	9
SE	32	29	33	16	13	36	15	13	17	-
UK	215	165	160	154	140	164	151	121	102	85
EU-19 <sup>2</sup>	1.382	1.242	1.301	1.222	1.139	1.064	1.021	878	803	744
Yearly reduction		10,1%	-4,8%	6,1%	6,8%	6,6%	4,0%	14,0%	8,5%	7,3%
EE	-	-	-	-	7	13	7	4	4	-
LV	-	-	-	30	27	16	16	10	8	11
HU	-	-	71	58	62	64	48	33	39	41
MT	-	-	-	-	1	0	1	3	0	1
SK	-	-	-	-	35	35	39	15	35	18
CH	-	-	-	10	-	-	-	11	3	4
IS	-	4	0		1	1	1	0	0	0
NO	-	-	-	-	-	-	-	-	- DE Datab	7

Source: CARE Database / EC Date of query: September 2012

More than 800 people died in road traffic accidents involving buses or coaches in 2010.

(EU-24)

#### **Traffic Safety Basic Facts 2012**

Main Figures

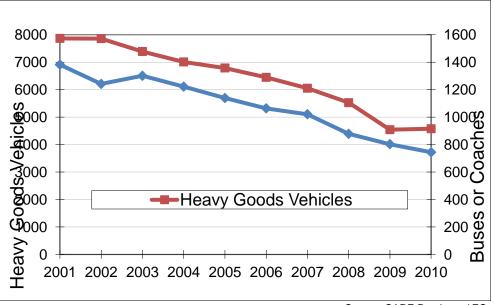
Pedestrians

The annual number of people killed in road traffic accidents involving HGVs, buses or coaches fell by more than 40% between 2001 and 2010 in EU-19.

The risk of being killed in a road traffic accident involving an HGV is eight times

higher in Poland than in Ireland.

Figure 1: The number of fatalities in accidents involving Heavy Goods Vehicles and buses or coaches, EU-19<sup>2</sup>, 2001-2010



Source: CARE Database / EC Date of query: September 2012

The risk of being killed in such an accident can be compared for each Member State using the rate of deaths per million population. These rates are shown in Table 3 and Figure 2.

Table 3: The fatality rates per million population in accidents involving HGVs and buses or coaches, EU-24\*, 2010

coacnes, EU-	24°, 2010	
	HGVs accidents	Bus or Coach accidents
BE	10,3	1,6
CZ	16,7	1,9
DK	6,5	2,4
DE	6,5	1,1
EE	16,2	3,1
E	3,0	1,6
EL	11,2	2,7
ES	7,3	1,1
FR	8,6	0,9
IT	13,9	1,3
LV	17,8	4,8
LU	18,0	2,0
HU	14,4	4,1
MT	2,5	2,5
NL	5,8	0,8
AT	11,5	2,0
PL	24,9	3,1
PT	9,0	2,0
RO	8,9	4,1
SI	3,5	1,5
SK	19,6	3,3
FI	17,5	1,7
SE	4,9	1,8
UK	4,6	1,4
EU-24	10,0	1,7
СН	3,8	0,5
IS	3,3	0,0
NO	14,5	1,4

Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC



Pedestrians

Car occupants

Motorways

Junctions

Source of population data: EUROSTAT

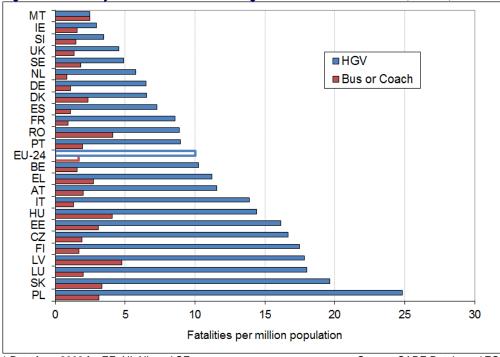


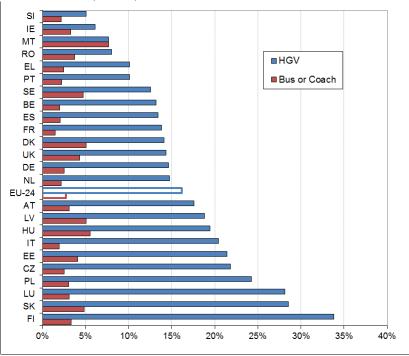
Figure 2: The fatality Prates in vacci sentente by Alfrid HGVs and buses or coaches, EU-24\*, 2010

\* Data from 2009 for EE, NI, NL and SE Source of population data: EUROSTAT

Source: CARE Database / EC Date of query: September 2012

The EU-24 average fatality rate in accidents involving HGVs is 10,0 per million population, and ranges from 3,0 in Ireland to 24,9 in Poland. Due to small numbers, Malta has not been taken into account in the interpretation of the data. For accidents involving buses or coaches, the EU-24 average fatality rate is 1,7 per million, and ranges from 0,8 in the Netherlands to 4,8 in Latvia. Figure 3 shows that one sixth of fatalities in 2010 died in accidents that involved HGVs.

Figure 3: The proportion of fatalities in accidents involving HGVs and in accidents involving buses or coaches, EU-24\*, 2010



\* Data from 2009 for EE, NI, NL and SE Source of population data: EUROSTAT

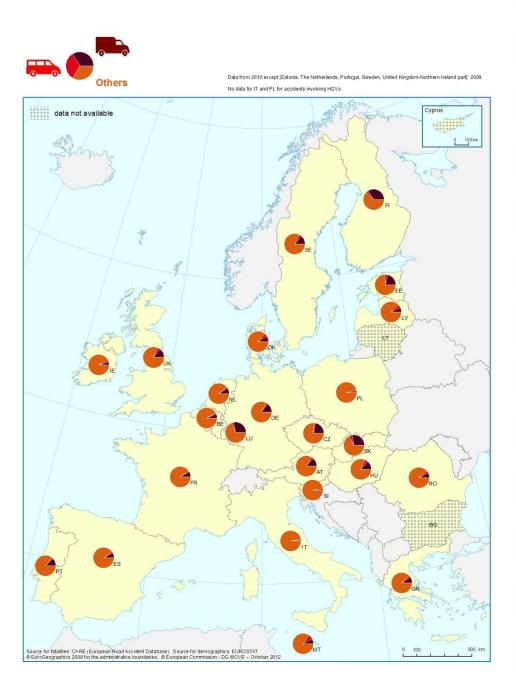
**Mobility & Transport** 

Source: CARE Database / EC Date of query: September 2012

One sixth of people who died in road traffic accidents in 2010 died in accidents that involved HGVs.



Map 1: The proportion of fatalities in accidents involving HGVs and in accidents involving buses or coaches, 2010



**Mobility & Transport** 

Main Figures

Youngsters (Aged 15-17)

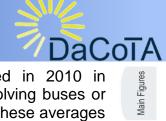
The Elderly (Aged > 64)

Pedestrians

Car occupants

Seasonality

## **Traffic Safety Basic Facts 2012**



Youngsters (Aged 15-17)

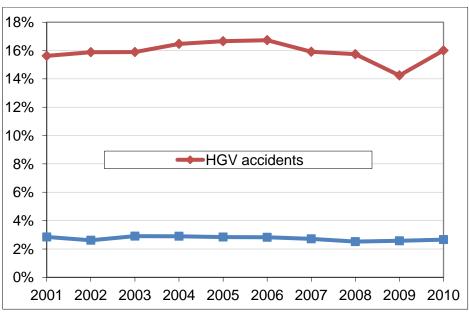
The Elderly (Aged > 64)

Pedestrians

In the EU-24 countries, 16,2% of deaths occurred in 2010 in accidents involving HGVs, and 2,7% in accidents involving buses or coaches. Map 1 shows considerable variation around these averages in individual countries.

Figure 1 shows that the number of deaths in accidents involving HGVs and in accidents involving buses or coaches fell between 2001 and 2010, but the EU-192 total number of deaths also fell over this period. Figure 4 shows the proportion of fatalities in accidents involving HGVs and buses or coaches.

Figure 4: The proportion of fatalities in accidents involving Heavy Goods Vehicles and buses or coaches, EU-192, 2001-2010



Source: CARE Database / EC Date of query: September 2012

The decreasing trend of fatalities involving HGVs during the last years has been inverted in 2010.



**Mobility & Transport** 

Half of those who

died in 2010 in road

traffic accidents that involved HGVs were travelling by car.

# Type of casualties

These accidents injured those outside the vehicles as well as their occupants. Across the EU-24, 15% of those killed in HGV accidents in 2010 were occupants of HGVs, and 15% of those killed in bus or coach accidents were occupants of buses or coaches. Table 4 lists those killed in these accidents by road user type. The distributions are illustrated in Figure 5.

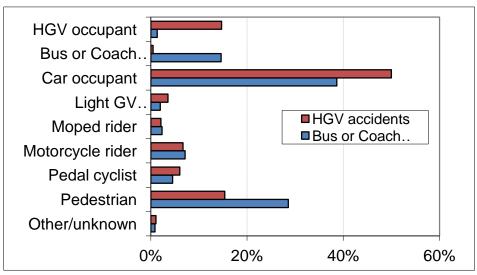
Table 4: Fatalities in accidents involving HGVs and in accidents involving buses or coaches, by road user type, EU-24\*, 2010

		Accidents	involving	
	HG	Vs	Buses or	Coaches
	fatalities	%	fatalities	%
HGV occupant	722	15%	11	1%
Bus or Coach occupant	23	0%	119	15%
Car occupant	2.453	50%	315	39%
Light GV occupant	175	4%	16	2%
Moped rider	104	2%	19	2%
Motorcycle rider	328	7%	58	7%
Pedal cyclist	296	6%	37	5%
Pedestrian	754	15%	233	29%
Other/unknown	52	1%	7	1%
All	4.907	100%	815	100%

<sup>\*</sup> Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

Figure 5: Distribution of fatalities in accidents involving HGVs and in accidents involving buses or coaches, by road user type, EU-24\*, 2010



<sup>\*</sup> Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

Almost 30% of those who died in 2010 in road traffic accidents that involved buses or coaches were pedestrians.

The CARE data show whether accidents occurred on motorways and, for non-motorway accidents, whether on urban or rural roads. Table 5 shows the distribution of fatalities in accidents involving HGVs. The results for these 24 EU countries are illustrated in Figure 6 for HGV accidents and for Bus or Coach accidents.

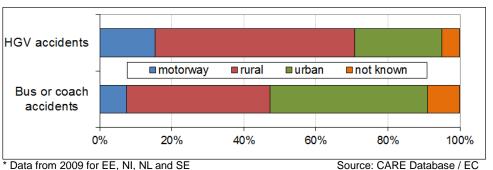
Table 5: Distribution of fatalities in accidents involving HGVs by road type, EU-24\*, 2010

	Meterway	Non-mo	otorway	Not known	Total
	Motorway	Rural	Urban	Not known	Total
BE	31%	47%	23%	0%	111
CZ	7%	62%	30%	0%	175
DK	14%	50%	36%	0%	36
DE	35%	46%	19%	0%	534
EE	0%	0%	0%	100%	21
IE	8%	0%	0%	92%	13
EL	14%	20%	0%	66%	127
ES	25%	69%	5%	0%	333
FR	17%	62%	21%	0%	552
IT	19%	54%	28%	0%	835
LV	0%	78%	22%	0%	41
LU	44%	44%	11%	0%	9
HU	14%	67%	19%	0%	144
MT	0%	0%	100%	0%	1
NL	19%	49%	31%	1%	95
AT	21%	45%	34%	0%	97
PL	1%	58%	30%	11%	947
PT	19%	44%	37%	0%	95
RO	1%	56%	43%	0%	191
SI	29%	29%	43%	0%	7
SK	8%	56%	36%	0%	106
FI	3%	86%	11%	0%	92
SE	9%	76%	11%	4%	45
UK	16%	52%	24%	8%	282
EU-24	15%	55%	24%	5%	4.889
СН	14%	66%	21%	0%	29
IS	0%	100%	0%	0%	1
NO	0%	0%	0%	100%	71

<sup>\*</sup> Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

Figure 6: Distribution of fatalities in accidents involving HGVs and in accidents involving buses or coaches by road type, EU-24\*, 2010



Date of query: September 2012

55% of fatalities in HGV accidents in 2010 occurred in rural areas. In Finland, Latvia, Sweden and Spain this percentage is higher than 68%.

Almost 45% of fatalities in Bus or Coach accidents occurred in urban areas.

# **Mobility & Transport**

Seasonality



#### Time of day

The distribution of fatalities by time of day was examined by dividing the day into six 4-hour periods. This is shown for HGV accidents in Table 6. The hourly rates are relatively high between 0800 and 2000 in all countries.

Table 6: Distribution of fatalities by in accidents involving HGVs, by time of day, EU-23\*3, 2010

	0000- 0400	0400- 0800	0800- 1200	1200- 1600	1600- 2000	2000- 0000	Total
BE	7%	23%	18%	25%	15%	12%	111
CZ	7%	18%	38%	22%	9%	6%	175
DK	0%	11%	36%	36%	6%	11%	36
EE	5%	5%	38%	14%	29%	10%	21
IE	8%	8%	38%	23%	23%	0%	13
EL	4%	21%	20%	20%	23%	12%	127
ES	5%	12%	20%	26%	27%	10%	330
FR	7%	16%	25%	26%	20%	6%	552
IT	7%	13%	26%	23%	23%	9%	830
LV	5%	10%	20%	20%	27%	20%	41
LU	22%	0%	44%	0%	22%	11%	9
HU	17%	22%	23%	15%	15%	8%	144
MT	0%	0%	100%	0%	0%	0%	1
NL	3%	15%	28%	37%	12%	5%	95
AT	3%	14%	29%	32%	12%	9%	97
PL	12%	21%	20%	18%	18%	12%	947
PT	6%	23%	20%	31%	14%	6%	95
RO	5%	10%	19%	15%	34%	17%	191
SI	0%	29%	14%	29%	29%	0%	7
SK	4%	24%	24%	26%	14%	8%	106
FI	10%	9%	27%	26%	22%	7%	92
SE	2%	20%	38%	20%	13%	7%	45
UK	9%	19%	26%	22%	15%	9%	282
EU-23	8%	17%	24%	23%	20%	10%	4.347
СН	0%	24%	41%	14%	21%	0%	29
IS	0%	0%	0%	0%	100%	0%	1
NO	0%	11%	15%	35%	30%	8%	71

<sup>\*</sup> Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

**Mobility & Transport** 

**DaCoTA** | Project co-financed by the European Commission, Directorate-General for Mobility & Transport

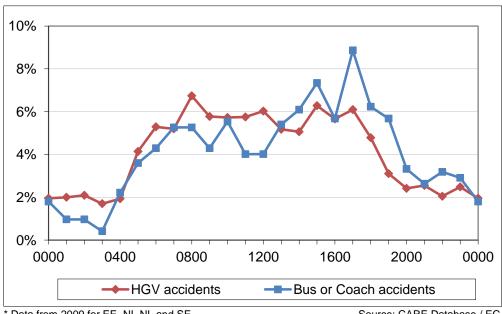
Main Figures

The hourly fatality rate in road traffic accidents involving HGVs in 2010 is higher between 8am and 8pm.

 $<sup>^{\</sup>rm 3}$  Due to the high number of "unknown" cases, Germany has not been taken into account in this analysis.

The hourly fatality rate in road traffic accidents involving HGVs in 2010 peaked at 8am. The rate of accidents involving buses or coaches peaked between 3 and 5pm. Figure 7 illustrates the EU-23 distribution for HGV accidents and for bus or coach accidents by hour of day.

Figure 7: Distribution of fatalities in accidents involving HGVs and in accidents involving buses or coaches by time of day, EU-23<sup>\*3</sup>, 2010



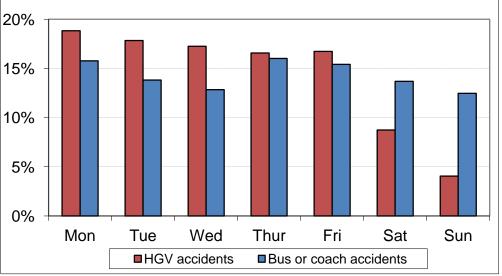
Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

## Day of week

Figure 8 illustrates the EU-24 distribution for HGV accidents and bus or coach accidents, and shows the high proportion of fatalities in the accidents that occurred on Mondays.

Figure 8: Distribution of fatalities in accidents involving HGVs and in accidents involving buses or coaches by day of week, EU-24\*, 2010



Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

The fatality rate in road traffic accidents involving HGVs in 2010 was much lower at the weekend than on weekdays.

# **Traffic Safety Basic Facts 2012**



Main Figures

Table 7 shows the distribution of HGV accidents by day of week. The rates are generally much higher on weekdays than at the weekend.

Table 7: Distribution of fatalities in accidents involving HGVs, by day of week, EU-24\*, 2010

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
BE	16%	16%	23%	14%	20%	9%	3%	111
CZ	18%	19%	19%	19%	13%	9%	3%	175
DK	31%	14%	19%	14%	22%	0%	0%	36
DE	20%	19%	19%	17%	16%	6%	2%	534
EE	19%	5%	10%	24%	14%	24%	5%	21
IE	23%	15%	0%	23%	31%	8%	0%	13
EL	22%	17%	13%	14%	13%	8%	13%	127
ES	23%	17%	15%	18%	19%	5%	4%	332
FR	16%	19%	17%	21%	19%	7%	2%	552
IT	19%	16%	16%	15%	18%	11%	5%	835
LV	12%	24%	20%	15%	17%	10%	2%	41
LU	11%	11%	0%	11%	44%	22%	0%	9
HU	28%	15%	15%	17%	16%	8%	1%	144
MT	0%	0%	0%	0%	0%	100%	0%	1
NL	18%	19%	19%	19%	20%	4%	1%	95
AT	19%	18%	23%	14%	15%	4%	7%	97
PL	20%	18%	19%	15%	13%	10%	5%	947
PT	23%	27%	13%	17%	16%	3%	1%	95
RO	10%	17%	16%	18%	20%	9%	8%	191
SI	29%	14%	0%	0%	57%	0%	0%	7
SK	14%	16%	15%	16%	20%	18%	1%	106
FI	20%	20%	13%	12%	11%	20%	5%	92
SE	22%	20%	18%	16%	13%	4%	7%	45
UK	14%	17%	18%	16%	19%	9%	7%	282
EU-24	19%	18%	17%	17%	17%	9%	4%	4.888
СН	21%	28%	31%	14%	7%	0%	0%	29
IS	100%	0%	0%	0%	0%	0%	0%	1
NO	14%	10%	24%	15%	28%	6%	3%	71

<sup>\*</sup> Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

Linctions

urban areas

Roads outside urban areas

e vernicie Seas

Sender

Causa



# **Seasonality**

Table 8 shows the distribution of fatalities in accidents involving HGVs through the year, using pairs of months. The peak period varies between countries, and for the EU-24 is July-October.

Table 8: Distribution of fatalities in accidents involving HGVs by month, EU-24\*, 2010

	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec	Total
BE	8%	24%	9%	22%	16%	21%	111
CZ	13%	14%	17%	17%	21%	19%	175
DK	14%	17%	31%	8%	14%	17%	36
DE	13%	17%	16%	18%	19%	16%	534
EE	19%	14%	10%	0%	29%	29%	21
IE	23%	15%	15%	15%	23%	8%	13
EL	16%	17%	14%	12%	27%	14%	127
ES	13%	14%	19%	20%	19%	16%	333
FR	14%	14%	11%	24%	20%	17%	552
IT	13%	16%	19%	20%	15%	17%	835
LV	15%	15%	2%	32%	20%	17%	41
LU	11%	0%	11%	11%	11%	56%	9
HU	13%	8%	18%	17%	26%	17%	144
MT	0%	0%	0%	100%	0%	0%	1
NL	15%	16%	15%	19%	24%	12%	95
AT	15%	13%	25%	16%	16%	13%	97
PL	12%	14%	14%	20%	23%	16%	947
PT	13%	20%	12%	23%	17%	16%	95
RO	10%	13%	15%	19%	21%	22%	191
SI	14%	0%	14%	29%	14%	29%	7
SK	16%	8%	13%	25%	16%	22%	106
FI	10%	16%	12%	26%	12%	24%	92
SE	13%	11%	13%	24%	27%	11%	45
UK	16%	15%	13%	22%	15%	18%	282
EU-24	13%	15%	15%	20%	19%	17%	4.889
СН	14%	17%	21%	14%	24%	10%	29
IS	0%	0%	0%	0%	0%	100%	1
NO	15%	8%	17%	15%	27%	17%	71

<sup>\*</sup> Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

There was little variation through the year in the fatality

rate in road traffic

accidents involving HGVs in 2010.

**Mobility & Transport** 

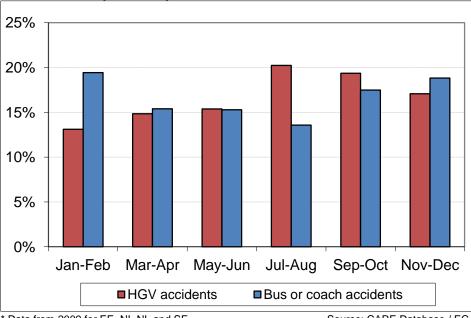
Main Figures

Junctions

The rate for accidents involving buses or coaches in 2010 peaked in January-February and November December periods.

Figure 9 illustrates the EU-24 distribution. It includes the distribution for accidents involving buses or coaches, which peaks in January-February.

Figure 9: Distribution of fatalities in accidents involving HGVs and in accidents involving buses or coaches by seasonality, EU-24\*, 2010



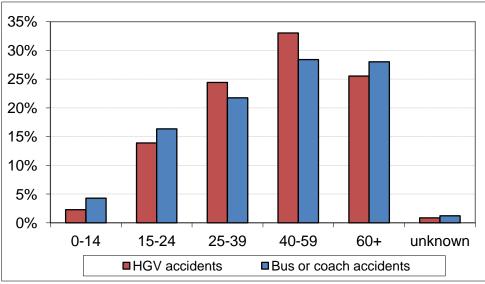
Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

## Age

Figure 10 illustrates the EU-24 age distribution, and also includes the distribution for accidents involving buses or coaches.

Figure 10: Distribution of fatalities in accidents involving HGVs and in accidents involving buses or coaches by age, EU-24\*, 2010



Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

Main Figures

Motorways

Junctions

**Mobility & Transport** 

Relatively few children died in road traffic accidents involving HGVs in

2010, and one third of fatalities were aged 40-59.

# **Traffic Safety Basic Facts 2012**



Table 9 provides details of the age of fatalities in accidents involving HGVs.

Table 9: Distribution of fatalities in accidents involving HGVs by age, EU-24\*, 2010

	0-14	15-24	25-39	40-59	60+	Unknown	Total
BE	4%	21%	28%	21%	26%	1%	111
CZ	3%	13%	25%	35%	23%	0%	175
DK	0%	22%	8%	36%	33%	0%	36
DE	1%	14%	21%	37%	26%	0%	534
EE	0%	24%	14%	38%	24%	0%	21
IE	15%	8%	23%	31%	23%	0%	13
EL	4%	10%	29%	28%	26%	2%	127
ES	2%	8%	30%	34%	25%	0%	333
FR	4%	17%	24%	27%	28%	0%	552
IT	2%	12%	23%	34%	28%	1%	835
LV	5%	5%	17%	44%	22%	7%	41
LU	0%	11%	22%	44%	22%	0%	9
HU	3%	10%	33%	39%	16%	0%	144
MT	0%	0%	0%	100%	0%	0%	1
NL	5%	16%	31%	20%	28%	0%	95
AT	2%	11%	18%	33%	36%	0%	97
PL	2%	16%	26%	33%	21%	1%	947
PT	1%	8%	23%	38%	29%	0%	95
RO	1%	10%	23%	42%	24%	0%	191
SI	0%	0%	29%	43%	29%	0%	7
SK	5%	12%	27%	29%	14%	12%	106
FI	2%	25%	13%	32%	28%	0%	92
SE	0%	20%	16%	29%	36%	0%	45
UK	2%	13%	24%	31%	29%	0%	282
EU-24	2%	14%	24%	33%	26%	1%	4.889
СН	7%	7%	17%	45%	24%	0%	29
IS	0%	0%	100%	0%	0%	0%	1
NO	0%	21%	18%	35%	25%	0%	71

<sup>\*</sup> Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

Children (Aged < 15)

Main Figures

ungsters ( ed 15-17) (A

Young People Aged 18-24) (A

(Aged > 64)

cles Pedestrians

& Mopeds

Car occupants

> reavy Goods Vehicles

Motorways

in areas Junctions

Koads outside urban areas u

nicle Seasonalit

Single vehicle

Gender



#### Gender

Table 10 provides gender details of fatalities in accidents involving HGVs. Figure 11 illustrates the EU-24 distribution, and also includes the distribution for accidents involving buses or coaches. The percentage of female fatalities in the latter accidents is higher than in the HGVs ones.

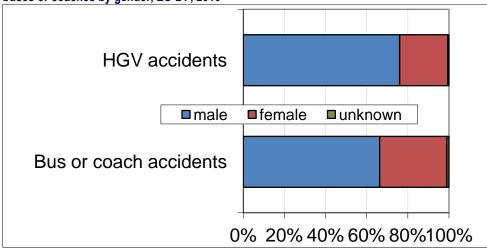
Table 10: Distribution of fatalities in accidents involving HGVs by gender, EU-24\*, 2010

	Male	Female	Unknown	Total
BE	69%	30%	1%	111
CZ	73%	24%	3%	175
DK	61%	39%	0%	36
DE	73%	27%	0%	534
EE	71%	29%	0%	21
IE	54%	46%	0%	13
EL	73%	27%	0%	127
ES	82%	17%	1%	333
FR	74%	26%	0%	552
IT	81%	19%	0%	835
LV	49%	17%	34%	41
LU	67%	33%	0%	9
HU	76%	24%	0%	144
MT	100%	0%	0%	1
NL	63%	37%	0%	95
AT	70%	30%	0%	97
PL	77%	22%	1%	947
PT	78%	22%	0%	95
RO	82%	18%	0%	191
SI	57%	43%	0%	7
SK	82%	18%	0%	106
FI	75%	25%	0%	92
SE	82%	18%	0%	45
UK	72%	28%	0%	282
EU-24	76%	23%	1%	4.889
СН	76%	24%	0%	29
IS	100%	0%	0%	1
NO	76%	24%	0%	71

Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

Figure 11: Distribution of fatalities in accidents involving HGVs and in accidents involving buses or coaches by gender, EU-24\*, 2010



Data from 2009 for EE, NI, NL and SE

Source: CARE Database / EC Date of query: September 2012

Three quarters of the fatalities in accidents involving HGVs are

male.

**Mobility & Transport** 



The Elderly (Aged > 64)

Pedestrians

Junctions

Seasonality

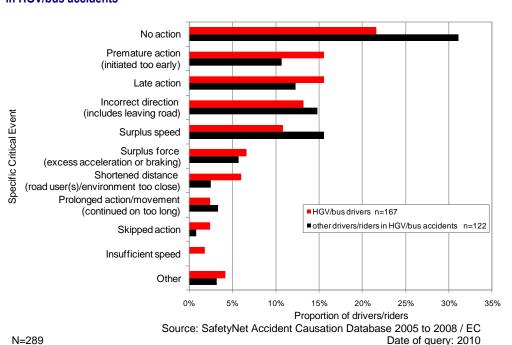
Gender

#### **Accident Causation**

During the EC SafetyNet project, in-depth data were collected using a common methodology for samples of accidents that occurred in Germany, Italy, The Netherlands, Finland, Sweden and the UK<sup>4</sup> <sup>5</sup>. The SafetyNet Accident Causation Database was formed between 2005 and 2008, and contains details of 1.006 accidents covering all injury severities. A detailed process for recording causation (SafetyNet Accident Causation System – SNACS) attributes one specific critical event to each driver, rider or pedestrian. Links then form chains between the critical event and the causes that led to it. For example, the critical event of late action could be linked to the cause observation missed, which was a consequence of fatigue, itself a consequence of an extensive driving spell.

In the database, 16% (158) of the accidents involve HGV or bus drivers. Minibuses are included in the bus category in the database. HGV drivers account for 79% of this group and bus drivers 21%, with 94% being male. Figure 12 compares the distributions of specific critical events for HGV or bus drivers and other drivers or riders in HGV/bus accidents.

Figure 12: Distribution of specific critical events - HGV or bus drivers and other drivers/riders in HGV/bus accidents



Of the specific critical events under the general category of 'timing', premature action and late action are both more frequent for HGV and bus drivers, with no action higher for the other drivers/riders. A premature action is one undertaken before a signal has been given or the required conditions are established, for example entering a junction before it is clear of other traffic.

<sup>5</sup> SafetyNet D5.8, In-Depth Accident Causation Database and Analysis Report

Specific critical events relating to 'timing' are recorded for 52% of HGV or bus drivers in the sample.

**DaCoTA** | Project co-financed by the European Commission, Directorate-General for Mobility & Transport

<sup>&</sup>lt;sup>4</sup> SafetyNet D5.5, Glossary of Data Variables for Fatal and Accident Causation Databases



Youngsters (Aged 15-17)

The Elderly (Aged > 64)

Pedestrians

22% of the links between causes are observed to be between 'faulty diagnosis' and 'information failure'. The next two specific critical events of incorrect direction and surplus speed are both higher for the other drivers/riders, although only slightly more for incorrect direction. Incorrect direction refers to a manoeuvre being carried out in the wrong direction (for example, turning left instead of right) or leaving the road (not following the intended direction of the road). Surplus speed describes speed that is too high for the conditions or manoeuvre being carried out, travelling above the speed limit and also if the driver is travelling at a speed unexpected by other road users.

Table 11 gives the most frequent links between causes for HGV or bus drivers/riders. For this group there are 195 such links in total. Like the car driver group (Traffic Safety Basic Facts: Car occupants), faulty diagnosis and observation missed are the two dominant causes. Faulty diagnosis is an incorrect or incomplete understanding of road conditions or another road user's actions. It is linked to both information failure (for example, a driver thinking another vehicle was moving when it was in fact stopped and colliding with it) and communication failure (for example, pulling out in the continuing path of a driver who has indicated for a turn too early). Unlike the car driver group, the most frequent cause leading to observation missed is permanent sight obstruction. This refers to vehicle blind spots on these larger vehicles, where drivers cannot see part of the road infrastructure or other road users. Also observed for these larger vehicles are causes leading to equipment failure, both unpredictable system functions/characteristics (covering problems with vehicle load) and poor maintenance.

Table 11: Ten most frequent links between causes – HGV or bus drivers

Links between causes	Freq
Faulty diagnosis -	Печ
•	43
Information failure (between driver and traffic	
environment or driver and vehicle)	
Observation missed -	23
Permanent sight obstruction	
Observation missed -	13
Distraction	
Equipment failure -	10
Unpredictable system functions/characteristics	10
Observation missed -	8
Faulty diagnosis	0
Observation missed -	7
Permanent obstruction to view	,
Observation missed -	6
Inadequate plan	0
Equipment failure -	6
Maintance failure – condition of vehicle	0
Observation missed -	5
Inattention	5
Observation missed -	5
Temporary obstruction to view	5
Others	69
Total	195
Source: SafetyNet Accident Causation Database 20	

Source: SafetyNet Accident Causation Database 2005 to 2008 / EC Date of query: 2010





#### **Disclaimer**

The information in this document is provided as it is and no guarantee or warranty is given that the information is fit for any particular purpose. Therefore, the reader uses the information at their own risk and liability.

#### For more information

Further statistical information about fatalities is available from the CARE database at the Directorate General for Energy and Transport of the European Commission, 28 Rue de Mot, B -1040 Brussels.

Traffic Safety Basic Fact Sheets available from the European Commission concern:

- Main Figures
- Children (Aged <15)
- Youngsters (Aged 15-17)
- Young People (Aged 18-24)
- The Elderly (Aged >64)
- **Pedestrians**
- Cyclists •
- Motorcycles and Mopeds
- Car occupants
- Heavy Goods Vehicles and Buses
- Motorways
- **Junctions**
- Urban areas
- Roads outside urban areas
- Seasonality
- Single vehicle accidents
- Gender
- Accident causation



Main Figures

Youngsters (Aged 15-17)

The Elderly (Aged > 64)

Pedestrians





Motorways

Junctions

# Country abbreviations used and definition of EU-level

	EU-19
BE	Belgium
CZ	Czech Republic
DK	Denmark
DE	Germany
ΙE	Ireland
EL	Greece
ES	Spain
FR	France
IT	Italy
LU	Luxembourg
NL	Netherlands
ΑT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
FI	Finland
SE	Sweden
UK	United Kingdom (GB+NI)

EU-24 = EU-19 +	
EE	Estonia
LV	Latvia
HU	Hungary
MT	Malta
SK	Slovakia

Detailed data on traffic accidents are published annually by the European Commission in the Annual Statistical Report. This includes a glossary of definitions on all variables used.

More information on the DaCoTA Project, co-financed by the European Commission, Directorate-General for Mobility and Transport is available at the DaCoTA website: <a href="http://www.dacota-project.eu/index.html">http://www.dacota-project.eu/index.html</a>.

Please refer to this report as follows:

Pace J. F., et al. (2012) Basic Fact Sheet "Heavy Good Vehicle and Buses", Deliverable D3.9 of the EC FP7 project DaCoTA.

#### **Authors**

Jean-François Pace, María Teresa Tormo, INTRAS-UVEG, Spain Jaime Sanmartín

Pete Thomas, Alan Kirk, Laurie Brown

Loughborough University, UK

George Yannis, Petros Evgenikos,

NTUA, Greece

Panagiotis Papantoniou

Jeremy Broughton TRL, UK

Christian Brandstaetter KfV, Austria

Nimmi Candappa, Michiel Christoph, Kirsten van SWOV, The Netherlands

Duijvenvoorde, Martijn Vis

Mohamed Mouloud Haddak, Léa Pascal, Marie Lefèvre, IFSTTAR, France Emmanuelle Amoros