



Youngsters (Aged 15-17)

The Elderly (Aged > 64)

Pedestrians

Cyclists

# Traffic Safety Basic Facts 2011

# Motorways

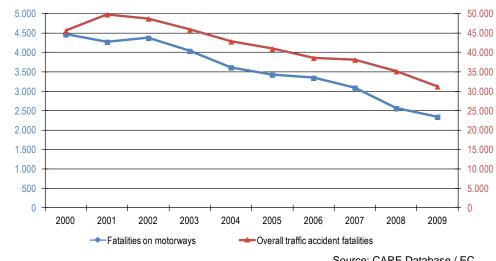
Approximately 30.000 people were killed in traffic accidents on motorways in 18<sup>1</sup> European Union countries between 2000 and 2009<sup>2</sup>. This number corresponds to 9% of all traffic accident fatalities in those countries.

There were 4.471 traffic accident fatalities on motorways in 2000, and the number fell by 48% by 2009<sup>2</sup> (2.346). The total number of traffic accident fatalities in the 16 European Union countries also fell significantly over the same decade, by 46%.

Although the overall number of road accident fatalities shows a rather steady decrease, the trend for motorway fatalities has more variable. The most significant reduction of the number of fatalities on motorways in the 18 countries occurred between 2003 - 2004 and between 2007 and 2009.

It is noted though that in three countries (Greece, Poland and United Kingdom) there is significant number of fatalities recorded on non-specified road network type (unknown whether they occurred on motorway or non-motorway network).





Source: CARE Database / EC Date of query: December 2011

The number of people killed in traffic accident on motorways fell by 48% in the decade from 2000 to 2009

<sup>&</sup>lt;sup>1</sup> See Table "Country abbreviations used and definition of EU-level" on page 20.

<sup>2</sup> Where a number is missing for an EU-18/20 country in a particular year, its contribution to the EU-18/20 total is estimated as the closer known value.

Junctions

Table 1 provides an overview of the changes in the number of fatalities on motorways split by country. The totals refer to the 18 countries with available data since 2000.

Table 1: Fatalities on motorways by country, 2000-2009

The reduction in motorway

fatalities between 2000 and 2009 was highest in Spain (60%)

|       | 2000  | 2001  | 2002  | 2003  | 2004   | 2005  | 2006  | 2007  | 2008   | 2009  |
|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|
| BE    | 238   | 196   | 172   | 140   | 125    | 161   | 164   | 153   | 139    | 150   |
| CZ    | 45    | 43    | 53    | 48    | 58     | 45    | 37    | 48    | 30     | 25    |
| DK    | 29    | 38    | 48    | 31    | 27     | 31    | 16    | 24    | 31     | 24    |
| DE    | 907   | 770   | 857   | 811   | 694    | 662   | 645   | 602   | 495    | 475   |
| EL    | 61    | 86    | 69    | 58    | 116    | 111   | 147   | 140   | 120    | 108   |
| ES    | 1.137 | 1.146 | 1.107 | 1.063 | 920    | 851   | 767   | 611   | 487    | 460   |
| FR    | 527   | 487   | 521   | 439   | 316    | 323   | 296   | 273   | 233    | 225   |
| IT    | 764   | 773   | 801   | 711   | 648    | 577   | 590   | 526   | 452    | 350   |
| LU    | 9     | 7     | 12    | 6     | 7      | 4     | 6     | 11    | 6      | 36    |
| NL    | 138   | 124   | 123   | 151   | ı      | ı     | ı     | 1     | ı      | 83    |
| AT    | 126   | 156   | 126   | 107   | 118    | 89    | 74    | 74    | 71     | 61    |
| PL    | -     | 57    | 41    | 37    | 42     | 33    | 55    | 53    | 35     | 43    |
| PT    | 128   | 112   | 115   | 127   | 116    | 98    | 84    | 128   | 96     | 89    |
| RO    | 19    | 10    | 27    | 20    | 19     | 37    | 50    | 41    | 21     | 25    |
| SI    | 57    | 24    | 35    | 34    | 37     | 20    | 33    | 37    | 13     | 30    |
| FI    | 13    | 11    | 16    | 7     | 17     | 10    | 17    | 14    | 9      | 12    |
| SE    | 25    | 30    | 27    | 34    | 42     | 24    | 28    | 25    | 18     | -     |
| UK    | 191   | 206   | 228   | 220   | 166    | 206   | 189   | 185   | 160    | 132   |
| EU-18 | 4.471 | 4.276 | 4.378 | 4.043 | 3.619  | 3.433 | 3.349 | 3.096 | 2.567  | 2.346 |
| %     | _     | -4,4% | 2,4%  | -7,7% | -10,5% | -5,1% | -2,4% | -7,6% | -17,1% | -8,6% |
| HU    | -     | -     | -     | 58    | 62     | 48    | 55    | 61    | 54     | 38    |
| SK    | -     | -     | -     | -     | -      | 21    | 15    | 19    | 14     | 9     |
| СН    | -     | -     | -     | -     | 51     | -     | -     | -     | 27     | 34    |

Source: CARE Database / EC Date of query: December 2011

Table 2 shows the rate of fatalities on motorways per million inhabitants between 2000 and 2009. The 2009 rate was higher in Belgium (13,0) and Slovenia (14,6) than in the other European countries and hence higher than the average rate (5,0) of the EU-20 countries.

gents

Table 2: Fatalities on motorways per million inhabitants in the EU-18/201, 2000-2009

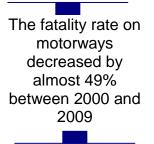
|       | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007      | 2008     | 2009 |
|-------|------|------|------|------|------|------|------|-----------|----------|------|
| BE    | 23,2 | 19,1 | 16,7 | 13,5 | 12,0 | 15,4 | 15,6 | 14,5      | 13,0     | 14,0 |
| CZ    | 4,4  | 4,2  | 5,2  | 4,7  | 5,7  | 4,4  | 3,6  | 4,7       | 2,9      | 2,4  |
| DK    | 5,4  | 7,1  | 8,9  | 5,8  | 5,0  | 5,7  | 2,9  | 4,4       | 5,7      | 4,3  |
| DE    | 11,0 | 9,4  | 10,4 | 9,8  | 8,4  | 8,0  | 7,8  | 7,3       | 6,0      | 5,8  |
| EL    | 5,6  | 7,9  | 6,3  | 5,3  | 10,5 | 10,0 | 13,2 | 12,5      | 10,7     | 9,6  |
| ES    | 28,4 | 28,3 | 27,0 | 25,5 | 21,7 | 19,8 | 17,5 | 13,7      | 10,8     | 10,0 |
| FR    | 8,7  | 8,0  | 8,5  | 7,1  | 5,1  | 5,2  | 4,7  | 4,3       | 3,7      | 3,5  |
| IT    | 13,4 | 13,6 | 14,1 | 12,4 | 11,2 | 9,9  | 10,0 | 8,9       | 7,6      | 5,8  |
| LU    | 20,8 | 15,9 | 27,0 | 13,4 | 15,4 | 8,7  | 12,8 | 23,1      | 12,4     | 73,2 |
| NL    | 8,7  | 7,8  | 7,6  | 9,3  | 9,3  | 9,3  | 9,2  | 9,2       | 9,2      | 5,0  |
| AT    | 15,7 | 19,4 | 15,6 | 13,2 | 14,5 | 10,8 | 9,0  | 8,9       | 8,5      | 7,3  |
| PL    | -    | 1,5  | 1,1  | 1,0  | 1,1  | 0,9  | 1,4  | 1,4       | 0,9      | 1,1  |
| PT    | 12,5 | 10,9 | 11,1 | 12,2 | 11,1 | 9,3  | 8,0  | 12,0      | 9,0      | 8,4  |
| RO    | 0,8  | 0,4  | 1,2  | 0,9  | 0,9  | 1,7  | 2,3  | 1,9       | 1,0      | 1,2  |
| SI    | 28,7 | 12,1 | 17,6 | 17,0 | 18,5 | 10,0 | 16,5 | 18,4      | 6,4      | 14,6 |
| FI    | 2,5  | 2,1  | 3,1  | 1,3  | 3,3  | 1,9  | 3,2  | 2,7       | 1,7      | 2,3  |
| SE    | 2,8  | 3,4  | 3,0  | 3,8  | 4,7  | 2,7  | 3,1  | 2,7       | 2,0      | -    |
| UK    | 3,2  | 3,5  | 3,9  | 3,7  | 2,8  | 3,4  | 3,1  | 3,0       | 2,6      | 2,1  |
| EU-18 | 10,0 | 9,5  | 9,8  | 9,0  | 8,0  | 7,5  | 7,3  | 6,7       | 5,6      | 5,1  |
| HU    | -    | -    | -    | 5,7  | 6,1  | 4,8  | 5,5  | 6,1       | 5,4      | 3,8  |
| SK    | -    | 1    | 1    | -    | -    | 3,9  | 2,8  | 3,5       | 2,6      | 1,7  |
| EU-20 | _    | -    | -    | -    | _    | 7,4  | 7,2  | 6,7       | 5,5      | 5,0  |
| СН    | _    | _    | _    | _    | _    | 6,8  | -    | -         | 3,5      | 4,4  |
|       |      |      |      |      |      |      | S    | ource: CA | RE Datab |      |

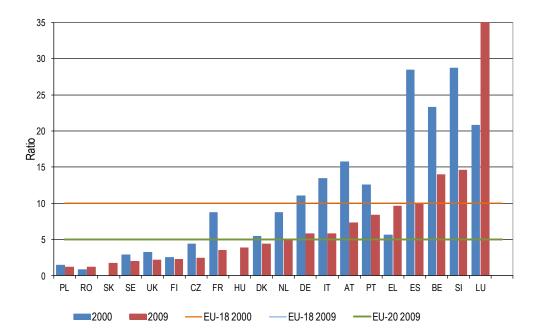
Source: CARE Database / EC Date of query: December 2011 Source of population data: Eurostat

Figure 2 shows that the fatality rate on motorways decreased by almost 49% between 2000 and 2009, from 10,0 per million inhabitants in 2000 to 5,1 in 2009.

Spain
experienced a
significant
reduction (65%) in
the fatality rate on
its motorway

Figure 2: Fatalities on motorways per million inhabitants, 2000 and 2009<sup>2</sup>





Source: CARE Database / EC Date of query: December 2011 Source of population data: Eurostat

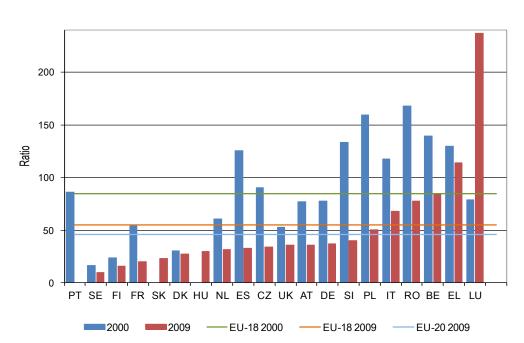
A fairer comparison of the level of safety on motorways involves the fatality rate per thousand kilometers of motorway. Using this exposure measure (motorway network length), Table 3 and Figure 3 show that the motorway fatality rate in Spain decreased by 65% between 2000 and 2009. Furthermore, the average rate for EU-16 fell 33% between 2000 (70) and 2009 (46,4).

Table 3: Fatalities on motorways per 1.000 km of motorways, 2000-2009<sup>2</sup>

|       | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2007  | 2008  | 2009  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BE    | 139,8 | 113,5 | 99,5  | 81,0  | 71,6  | 92,2  | 93,0  | 86,8  | 78,8  | 85,1  |
| CZ    | 90,1  | 83,1  | 102,4 | 92,7  | 106,2 | 79,8  | 58,5  | 73,1  | 43,4  | 34,3  |
| DK    | 30,4  | 39,1  | 47,5  | 1     | ı     | 1     | 14,9  | 21,6  | 27,5  | 27,5  |
| DE    | 77,4  | 65,3  | 71,2  | 67,3  | 57,0  | 53,5  | 51,5  | 47,8  | 39,1  | 37,1  |
| EL    | 129,8 | 183,0 | 146,8 | 65,9  | 131,8 | 126,1 | 169,4 | 161,3 | 126,6 | 113,9 |
| ES    | 125,7 | 119,8 | 113,7 | 103,2 | 85,7  | 74,5  | 63,6  | 47,0  | 36,0  | 32,8  |
| FR    | 54,0  | 48,4  | 51,0  | 42,3  | 30,1  | 29,9  | 27,3  | 24,9  | 21,1  | 20,2  |
| IT    | 117,9 | 119,3 | 123,5 | 109,6 | 99,2  | 88,2  | 90,0  | 79,8  | 68,2  | 68,2  |
| LU    | 78,9  | 60,9  | 95,2  | 40,8  | 47,9  | 27,2  | 40,8  | 74,8  | 40,8  | 236,8 |
| NL    | 60,9  | 49,6  | 48,9  | 59,4  | 58,4  | 58,1  | 58,0  | 58,5  | 57,3  | 31,5  |
| AT    | 77,2  | 94,8  | 76,6  | 64,1  | 70,4  | 53,1  | 44,1  | 43,6  | 41,9  | 36,0  |
| PL    | 159,2 | 143,2 | 101,2 | 91,4  | 76,1  | 59,8  | 83,0  | 79,9  | 45,8  | 50,6  |
| PT    | 86,2  | 67,3  | 62,7  | -     | -     | -     | 1     | -     | -     | -     |
| RO    | 168,1 | 88,5  | 238,9 | 177,0 | 83,3  | 162,3 | 219,3 | 145,9 | 74,7  | 77,9  |
| SI    | 133,5 | 55,2  | 76,8  | 71,3  | 76,6  | 35,1  | 57,0  | 63,9  | 18,7  | 40,2  |
| FI    | 23,7  | 18,6  | 26,5  | 10,7  | 26,0  | 14,4  | 24,3  | 20,0  | 12,2  | 15,7  |
| SE    | 16,7  | 19,9  | 17,5  | 21,4  | 24,9  | 14,3  | 16,1  | 13,8  | 9,7   | 9,7   |
| UK    | 53,1  | 57,1  | 63,1  | 60,9  | 45,4  | 56,8  | 51,6  | 50,4  | 43,6  | 35,9  |
| EU-18 | 84,7  | 78,8  | 79,3  | 71,5  | 62,6  | 58,0  | 55,4  | 50,1  | 40,7  | 55,1  |
| HU    | -     | -     | -     | 107,0 | 109,0 | 75,5  | 70,1  | 71,1  | 42,4  | 29,9  |
| SK    | -     | -     | -     | -     | -     | 64,1  | 45,8  | 52,1  | 36,5  | 23,0  |
| EU-20 | _     | _     | _     | _     | _     | 47,8  | 47,1  | 43,5  | 34,9  | 45,7  |
| СН    | _     | _     | _     | -     | 37,7  | -     | 38,0  | 38,0  | 38,0  | 38,0  |

Source: CARE Database / EC Date of query: December 2011 Source of road length data: Eurostat





Source: CARE Database / EC Date of query: December 2011 Source of road length data: Eurostat

The fatality rate in the Spanish motorways decreased by 74% between 2000 and 2009

> between 2000 (84,7) and 2009 (55,1)

The average fatality rate per

thousand kilometers of motorways for EU-18 fell 35% Greece and Belgium are the countries (with data up to 2009) with the highest number of fatalities on motorways per thousand kilometres of motorway network in 2009. Conversely, the fatality rate in Spain in 2008 (8,0) is significantly lower than the average rate for EU-20 countries (45,7).

Table 4 shows the proportion of road accident fatalities that occurred on motorways by country. Slovenia had the largest proportion in 2009 in the EU-20 countries (17,5%), followed by Spain (17%). By contrast, the lowest proportion of fatalities occurring on motorways was in Romania (0,9%).

Table 4: Proportion of road accident fatality total that occurred on motorways, 2000-2009<sup>2</sup>

|       | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|-------|------|------|------|------|------|------|------|------|------|------|
| BE    | 16%  | 13%  | 13%  | 12%  | 11%  | 15%  | 15%  | 14%  | 15%  | 16%  |
| CZ    | 3%   | 3%   | 4%   | 3%   | 4%   | 4%   | 4%   | 4%   | 3%   | 3%   |
| DK    | 6%   | 9%   | 10%  | 7%   | 7%   | 9%   | 5%   | 6%   | 8%   | 8%   |
| DE    | 12%  | 11%  | 13%  | 12%  | 12%  | 12%  | 13%  | 12%  | 11%  | 11%  |
| EL    | 3%   | 5%   | 4%   | 4%   | 7%   | 7%   | 9%   | 9%   | 8%   | 7%   |
| ES    | 20%  | 21%  | 21%  | 20%  | 19%  | 19%  | 19%  | 16%  | 16%  | 17%  |
| FR    | 7%   | 6%   | 7%   | 7%   | 6%   | 6%   | 6%   | 6%   | 6%   | 5%   |
| IT    | 11%  | 11%  | 12%  | 11%  | 11%  | 10%  | 10%  | 10%  | 10%  | 8%   |
| LU    | 12%  | 10%  | 19%  | 11%  | 14%  | 9%   | 14%  | 24%  | 17%  | 75%  |
| NL    | 13%  | 13%  | 13%  | 15%  | 19%  | 20%  | 21%  | 21%  | 22%  | 13%  |
| AT    | 13%  | 16%  | 13%  | 12%  | 13%  | 12%  | 10%  | 11%  | 11%  | 10%  |
| PL    | -    | 1%   | 1%   | 1%   | 1%   | 1%   | 1%   | 1%   | 1%   | 1%   |
| PT    | 7%   | 7%   | 7%   | 8%   | 9%   | 8%   | 9%   | 13%  | 11%  | 11%  |
| RO    | 1%   | 0%   | 1%   | 1%   | 1%   | 1%   | 2%   | 2%   | 1%   | 1%   |
| SI    | 18%  | 9%   | 13%  | 14%  | 14%  | 8%   | 13%  | 13%  | 6%   | 18%  |
| FI    | 3%   | 3%   | 4%   | 2%   | 5%   | 3%   | 5%   | 4%   | 3%   | 4%   |
| SE    | 4%   | 5%   | 5%   | 6%   | 9%   | 6%   | 6%   | 5%   | 5%   | -    |
| UK    | 5%   | 6%   | 6%   | 6%   | 5%   | 6%   | 6%   | 6%   | 6%   | 6%   |
| EU-18 | 9,8% | 8,6% | 9,0% | 8,8% | 8,5% | 8,4% | 8,7% | 8,1% | 7,3% | 7,5% |
| HU    | -    | -    | -    | 4%   | 5%   | 4%   | 4%   | 5%   | 5%   | 5%   |
| SK    | -    | -    | -    | -    | -    | 4%   | 2%   | 3%   | 2%   | 2%   |
| EU-20 | -    | -    | -    | -    | -    | 8,2% | 8,5% | 8,0% | 7,2% | 7,4% |
| СН    | _    | -    | _    | _    | 10%  | _    | _    | _    | 8%   | 10%  |

Source: CARE Database / EC Date of query: December 2011

proportion of fatalities occurred on motorways is observed in Romania (0,9%)

The lowest

Slovenia has the largest proportion of road accident fatalities on motorways (18%) for 2009 followed by Spain (17%)

# **Mode of transport**

Table 5 shows the number of fatalities on motorways in 2009 by mode of transport. More than 60% of fatalities on motorways across the European countries were car or taxi occupants and about 11% of fatalities were users of two-wheelers.

Table 5: Percentage of fatalities on motorways by mode of transport, 2009<sup>2</sup>

|                        | 0 11 :     |         | -                | <b>D</b> I ( ) | 041    | <b>T</b> ( ) |
|------------------------|------------|---------|------------------|----------------|--------|--------------|
|                        | Car / taxi | Lorries | Two-<br>wheelers | Pedestrian     | Others | Total        |
| BE                     | 61%        | 14%     | 9%               | 9%             | 6%     | 150          |
| CZ                     | 48%        | 24%     | 8%               | 20%            | 0%     | 25           |
| DK                     | 71%        | 4%      | 4%               | 17%            | 4%     | 24           |
| DE                     | 65%        | 18%     | 9%               | 4%             | 3%     | 475          |
| EL                     | 60%        | 4%      | 17%              | 17%            | 3%     | 108          |
| ES                     | 52%        | 18%     | 14%              | 13%            | 3%     | 460          |
| FR                     | 64%        | 6%      | 13%              | 10%            | 6%     | 225          |
| IT                     | 62%        | 1%      | 15%              | 7%             | 15%    | 350          |
| LU                     | 69%        | 0%      | 17%              | 8%             | 6%     | 36           |
| HU                     | 68%        | 16%     | 5%               | 8%             | 3%     | 38           |
| NL                     | 78%        | 7%      | 8%               | 6%             | 0%     | 83           |
| AT                     | 84%        | 10%     | 2%               | 2%             | 3%     | 61           |
| PL                     | 70%        | 7%      | 7%               | 16%            | 0%     | 43           |
| PT                     | 45%        | 20%     | 10%              | 8%             | 17%    | 89           |
| RO                     | 52%        | 12%     | 4%               | 28%            | 4%     | 25           |
| SI                     | 50%        | 3%      | 7%               | 7%             | 33%    | 30           |
| SK                     | 78%        | 0%      | 0%               | 22%            | 0%     | 9            |
| FI                     | 83%        | 0%      | 17%              | 0%             | 0%     | 12           |
| SE                     | 47%        | 21%     | 16%              | 16%            | 0%     | 18           |
| UK                     | 63%        | 14%     | 9%               | 14%            | 1%     | 132          |
| EU-20                  | 1.280      | 223     | 221              | 171            | 128    | 2.394        |
| % by mode of transport | 61,4%      | 12,0%   | 11,5%            | 9,5%           | 5,7%   | 100%         |
| CH                     | 65%        | 6%      | 18%              | 12%            | 0%     | 34           |

12% of fatalities on motorways across the European countries were motorcycle riders

More than 60% of fatalities on motorways across the European countries were car or taxi occupants



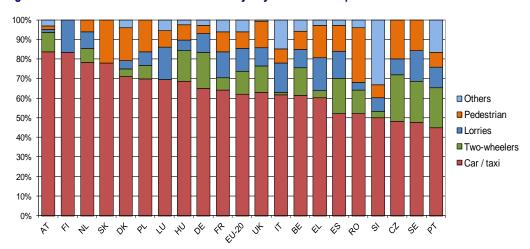
Source: CARE Database / EC

Date of query: December 2011

Gender

Figure 4 shows that in 2009, 28% of fatalities on motorways in Romania were pedestrians, the highest proportion among the 20 countries. Furthermore, the second highest proportion of pedestrian fatalities on motorways is 22% in Slovakia.

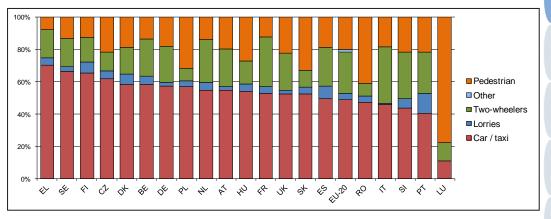
Figure 4: Distribution of fatalities on motorways by mode of transport in the EU-201, 20092



Source: CARE Database / EC Date of query: December 2011 Source of population data: Eurostat

It is worth noticing that only 11% of the fatalities occurring on motorways in the 20 countries were users of two wheeled vehicles (motorcycle, moped or pedal cycle users); Czech Republic (24%) and Spain (23%) had the largest percentage. By comparison, Figure 5 shows that 25% of fatalities on non-motorway roads were users of two wheeled vehicles. As far as fatalities on non-motorway roads are concerned, the largest percentage of two wheeled vehicles users' fatalities was in Italy, about 35%.

Figure 5: Distribution of fatalities on non-motorway road network by mode of transport in the EU-20<sup>1</sup>, 2009<sup>2</sup>



Source: CARE Database / EC Date of query: December 2011 Source of population data: Eurostat

countries

28% of fatalities

on motorways in

Romania were

pedestrians, the highest proportion

in any of the 20

Czech Republic (24%) and Spain (23%) had the largest percentage of the fatalities occurring on motorways

# **Manoeuvre Type**

Table 6 shows that the vehicle manoeuvre most frequently associated with fatalities on motorways in all EU-20 countries is driving 'straight ahead'. About 25% of fatalities were occupants of vehicles which were driving straight ahead and making no other manoeuvre. However, the corresponding percentage for this manoeuvre on non-motorway network is lower (23%), as shown in Table 7, maybe due to the large number of "not defined" manoeuvres. More specifically, in 9 countries (Czech Republic, Germany, Italy, Luxembourg, Austria, Romania, Slovakia, Finland and Sweden) over 90% of the manoeuvres on motorways and on non motorways are "not defined".

Table 6: Fatalities on motorways by manoeuvre type, 2009<sup>2</sup>

|       | changing |            | stopped  | straight |         | u    |       | not     |        |
|-------|----------|------------|----------|----------|---------|------|-------|---------|--------|
|       | lane     | overtaking | stopping | ahead    | turning | turn | other | defined | Total  |
| BE    | 0        | 8          | 5        | 37       | 2       | 0    | 79    | 19      | 150    |
| CZ    | 0        | 0          | 0        | 0        | 0       | 0    | 0     | 25      | 25     |
| DK    | 0        | 0          | 4        | 16       | 0       | 0    | 0     | 4       | 24     |
| DE    | 0        | 0          | 0        | 0        | 0       | 0    | 0     | 475     | 475    |
| EL    | 7        | 0          | 2        | 31       | 6       | 0    | 24    | 38      | 108    |
| ES    | 0        | 25         | 21       | 323      | 7       | 0    | 27    | 57      | 460    |
| FR    | 6        | 10         | 8        | 104      | 34      | 0    | 20    | 43      | 225    |
| IT    | 0        | 0          | 0        | 0        | 0       | 0    | 1     | 349     | 350    |
| LU    | 0        | 0          | 0        | 0        | 0       | 0    | 0     | 36      | 36     |
| HU    | 2        | 0          | 4        | 25       | 0       | 0    | 4     | 3       | 38     |
| NL    | 4        | 0          | 3        | 68       | 0       | 0    | 1     | 7       | 83     |
| AT    | 1        | 0          | 1        | 0        | 0       | 0    | 15    | 44      | 61     |
| PL    | 0        | 0          | 1        | 0        | 0       | 0    | 35    | 7       | 43     |
| PT    | 6        | 3          | 1        | 59       | 0       | 0    | 2     | 17      | 89     |
| RO    | 0        | 0          | 0        | 0        | 0       | 0    | 0     | 25      | 25     |
| SI    | 7        | 0          | 0        | 0        | 0       | 0    | 12    | 11      | 30     |
| SK    | 0        | 0          | 0        | 0        | 0       | 0    | 0     | 9       | 9      |
| FI    | 0        | 0          | 0        | 0        | 0       | 0    | 0     | 12      | 12     |
| SE    | 0        | 0          | 0        | 0        | 0       | 0    | 0     | 18      | 18     |
| UK    | 6        | 0          | 5        | 95       | 0       | 0    | 8     | 18      | 132    |
| EU-20 | 39       | 46         | 55       | 758      | 49      | 0    | 228   | 1219    | 2.394  |
| %     | 1,6%     | 1,9%       | 2,3%     | 31,7%    | 2,0%    | 0,0% | 9,5%  | 50,9%   | 100,0% |
| CH    | 0        | 0          | 0        | 0        | 0       | 0    | 0     | 34      | 34     |

Source: CARE Database / EC Date of query: December 2011

The vehicle manoeuvre most frequently associated with fatalities on motorways in EU-20 countries is driving 'straight ahead'

Source: CARE Database / EC Date of query: December 2011

ender

Table 7: Fatalities on non-motorway road network by manoeuvre type, 2009<sup>2</sup>

|       | changin | over-  | stopped  | straight |         | u    |       | not     |        |
|-------|---------|--------|----------|----------|---------|------|-------|---------|--------|
|       | g lane  | taking | stopping | ahead    | turning | turn | other | defined | Total  |
| BE    | 0       | 67     | 1        | 205      | 36      | 4    | 311   | 170     | 794    |
| CZ    | 0       | 0      | 0        | 0        | 0       | 0    | 0     | 876     | 876    |
| DK    | 1       | 0      | 3        | 207      | 18      | 0    | 0     | 50      | 279    |
| DE    | 0       | 0      | 0        | 0        | 0       | 0    | 0     | 3.677   | 3.677  |
| GR    | 7       | 0      | 1        | 44       | 6       | 0    | 95    | 87      | 240    |
| ES    | 0       | 67     | 222      | 1.185    | 43      | 5    | 173   | 559     | 2.254  |
| FR    | 8       | 173    | 19       | 2.015    | 1.020   | 11   | 131   | 663     | 4.040  |
| IT    | 0       | 9      | 0        | 32       | 16      | 0    | 11    | 3.819   | 3.887  |
| LU    | 0       | 0      | 0        | 0        | 0       | 0    | 0     | 10      | 10     |
| HU    | 37      | 0      | 3        | 486      | 0       | 0    | 75    | 183     | 784    |
| NL    | 8       | 0      | 7        | 421      | 41      | 1    | 12    | 59      | 549    |
| AT    | 3       | 0      | 10       | 1        | 16      | 1    | 82    | 459     | 572    |
| PL    | 0       | 0      | 6        | 0        | 43      | 0    | 2.539 | 1.052   | 3.640  |
| PT    | 66      | 33     | 0        | 400      | 23      | 2    | 42    | 185     | 751    |
| RO    | 0       | 0      | 0        | 0        | 0       | 0    | 0     | 2.771   | 2.771  |
| SI    | 34      | 0      | 0        | 0        | 0       | 0    | 68    | 39      | 141    |
| SK    | 0       | 0      | 0        | 0        | 0       | 0    | 0     | 373     | 373    |
| FI    | 0       | 0      | 0        | 0        | 0       | 0    | 0     | 267     | 267    |
| SE    | 0       | 0      | 0        | 0        | 0       | 0    | 0     | 377     | 377    |
| UK    | 15      | 0      | 20       | 1.246    | 76      | 3    | 129   | 403     | 1.892  |
| EU-20 | 179     | 349    | 292      | 6242     | 1338    | 27   | 3668  | 16079   | 27.902 |
| %     | 0,6%    | 1,2%   | 1,0%     | 22,2%    | 4,7%    | 0,1% | 13,0% | 57,1%   | 100%   |
| СН    | 0       | 0      | 0        | 0        | 0       | 0    | 0     | 315     | 315    |

Almost the same percentage of fatalities is associated with overtaking vehicle maneuver both on motorways and non-motorways

# **Age and Person class**

Table 8 shows the number of fatalities on motorways in 2009 by person class and age in the EU-20 countries, while Table 9 shows the number on non-motorways. Table 8 shows that, of the age groups studied, the highest percentage of fatalities on motorways for drivers, passengers and pedestrians occurred in the 25-49 age group.

Table 9 shows that in the EU-20 countries, the highest percentage of driver fatalities on non-motorway roads was also in the 25-49 age group. As far as pedestrian fatalities on non-motorway roads are concerned, the highest percentage of fatalities (44%) was among the elderly, i.e. people over 64 years old.

Gender

Table 8: Percentage of fatalities on motorways by person class and age, 2009<sup>2</sup>

|       |        | Person Class | 3          |     | Ą     | ge group |       |     |       |
|-------|--------|--------------|------------|-----|-------|----------|-------|-----|-------|
|       | Driver | Passenger    | Pedestrian | <18 | 18-24 | 25-49    | 50-64 | >64 | Total |
| BE    | 79%    | 10%          | 11%        | 2%  | 21%   | 48%      | 22%   | 8%  | 130   |
| CZ    | 48%    | 32%          | 20%        | 0%  | 4%    | 84%      | 8%    | 4%  | 25    |
| DK    | 54%    | 29%          | 17%        | 13% | 17%   | 58%      | 8%    | 4%  | 24    |
| DE    | 66%    | 30%          | 4%         | 3%  | 17%   | 47%      | 20%   | 12% | 475   |
| EL    | 56%    | 29%          | 15%        | 7%  | 14%   | 47%      | 16%   | 16% | 106   |
| ES    | 58%    | 29%          | 13%        | 3%  | 10%   | 58%      | 17%   | 11% | 460   |
| FR    | 57%    | 32%          | 10%        | 6%  | 18%   | 43%      | 17%   | 16% | 225   |
| IT    | 63%    | 30%          | 7%         | 3%  | 14%   | 51%      | 18%   | 13% | 344   |
| LU    | 67%    | 25%          | 8%         | 11% | 28%   | 31%      | 19%   | 11% | 36    |
| HU    | 58%    | 34%          | 8%         | 5%  | 11%   | 68%      | 13%   | 3%  | 38    |
| NL    | 71%    | 23%          | 6%         | 1%  | 27%   | 40%      | 20%   | 12% | 83    |
| AT    | 62%    | 36%          | 2%         | 3%  | 8%    | 49%      | 26%   | 13% | 61    |
| PL    | 42%    | 42%          | 16%        | 12% | 9%    | 49%      | 19%   | 12% | 43    |
| PT    | 56%    | 36%          | 8%         | 1%  | 12%   | 58%      | 19%   | 10% | 89    |
| RO    | 28%    | 44%          | 28%        | 8%  | 16%   | 40%      | 24%   | 12% | 25    |
| SI    | 50%    | 43%          | 7%         | 7%  | 23%   | 30%      | 23%   | 17% | 30    |
| SK    | 44%    | 33%          | 22%        | 0%  | 22%   | 56%      | 22%   | 0%  | 9     |
| FI    | 58%    | 42%          | 0%         | 8%  | 0%    | 67%      | 17%   | 8%  | 12    |
| SE    | 56%    | 28%          | 17%        | 0%  | 11%   | 44%      | 22%   | 22% | 18    |
| UK    | 55%    | 31%          | 14%        | 4%  | 17%   | 51%      | 20%   | 8%  | 132   |
| EU-20 | 62%    | 30%          | 8%         | 4%  | 16%   | 49%      | 19%   | 12% | 2.394 |
| СН    | 71%    | 18%          | 12%        | 3%  | 29%   | 32%      | 21%   | 15% | 34    |

motorway network Source: CARE Database / EC Database / EC

Table 9: Percentage of fatalities on non-motorways by person class and age, 2009<sup>2</sup>

Pedestrians killed on nonmotorways are more than twice the respective

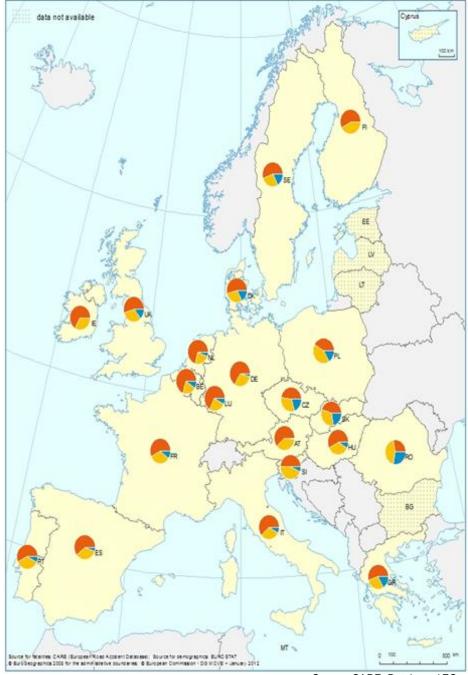
number on

|       |        | Person Clas | S          |     | A     | ge grou | р     |     |        |
|-------|--------|-------------|------------|-----|-------|---------|-------|-----|--------|
|       | Driver | Passenger   | Pedestrian | <18 | 18-24 | 25-49   | 50-64 | >64 | Total  |
| BE    | 83%    | 5%          | 12%        | 5%  | 17%   | 41%     | 17%   | 21% | 720    |
| CZ    | 61%    | 20%         | 20%        | 3%  | 15%   | 44%     | 19%   | 19% | 875    |
| DK    | 66%    | 16%         | 17%        | 9%  | 18%   | 38%     | 14%   | 22% | 279    |
| DE    | 71%    | 13%         | 16%        | 6%  | 19%   | 31%     | 16%   | 28% | 3.677  |
| EL    | 63%    | 29%         | 8%         | 5%  | 13%   | 51%     | 18%   | 13% | 237    |
| ES    | 63%    | 19%         | 18%        | 5%  | 14%   | 45%     | 15%   | 20% | 2.254  |
| FR    | 72%    | 16%         | 12%        | 7%  | 21%   | 38%     | 14%   | 19% | 4.040  |
| IT    | 71%    | 13%         | 16%        | 5%  | 14%   | 37%     | 16%   | 28% | 3.803  |
| LU    | 30%    | 0%          | 70%        | 20% | 0%    | 10%     | 30%   | 40% | 10     |
| HU    | 60%    | 17%         | 23%        | 5%  | 10%   | 42%     | 23%   | 21% | 784    |
| NL    | 77%    | 13%         | 10%        | 9%  | 19%   | 28%     | 13%   | 31% | 548    |
| AT    | 67%    | 16%         | 17%        | 7%  | 16%   | 35%     | 15%   | 26% | 572    |
| PL    | 49%    | 23%         | 28%        | 5%  | 19%   | 38%     | 22%   | 16% | 3.609  |
| PT    | 62%    | 20%         | 19%        | 5%  | 13%   | 37%     | 18%   | 26% | 749    |
| RO    | 38%    | 26%         | 36%        | 7%  | 15%   | 36%     | 21%   | 21% | 2.764  |
| SI    | 68%    | 16%         | 16%        | 3%  | 16%   | 37%     | 20%   | 24% | 140    |
| SK    | 46%    | 24%         | 30%        | 5%  | 16%   | 38%     | 25%   | 17% | 309    |
| FI    | 66%    | 23%         | 11%        | 10% | 19%   | 28%     | 16%   | 25% | 267    |
| SE    | 74%    | 15%         | 11%        | 5%  | 16%   | 36%     | 18%   | 26% | 373    |
| UK    | 61%    | 18%         | 21%        | 8%  | 20%   | 39%     | 14%   | 19% | 1.892  |
| EU-20 | 63%    | 18%         | 20%        | 6%  | 17%   | 38%     | 17%   | 22% | 27.902 |
| CH    | 70%    | 12%         | 18%        | 8%  | 18%   | 27%     | 19%   | 27% | 315    |

Source: CARE Database / EC Date of query: December 2011

Figure 6: Percentage of fatalities on motorways by person class, 2009



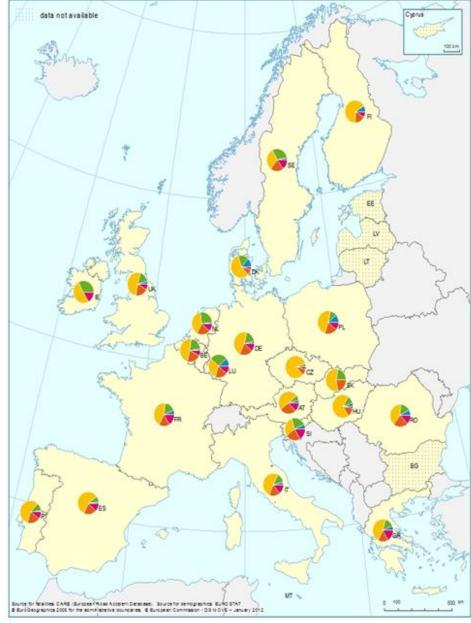


Source: CARE Database / EC

Junctions

Figure 7: Percentage of fatalities on motorways by age group, 2009



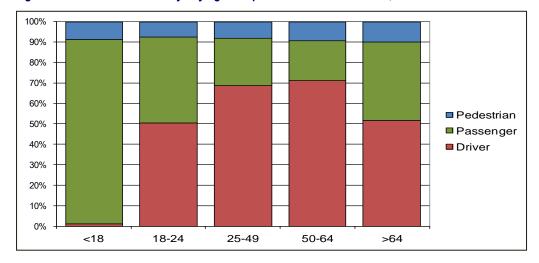


Source: CARE Database / EC

Sender

Figure 8 shows the distribution of fatalities on motorways by age and person class in the EU-20 in 2009. Only a small percentage of fatalities were pedestrians (9% - 10%, depending on age group). The proportion of driver fatalities on motorways is higher for the 50-64 age group (70%) than for the other age groups

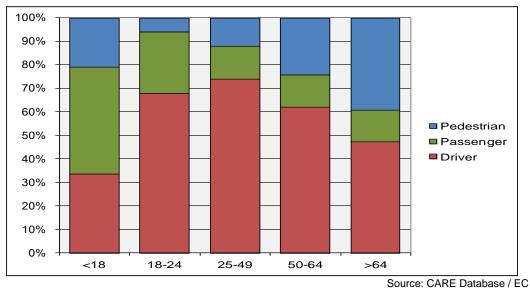
Figure 8: Fatalities on motorways by age and person class in the EU-201, 20092



Source: CARE Database / EC
Date of query: December 2011

Figure 9 shows the distribution for non-motorway roads that corresponds to the motorway distribution of Figure 8. On these roads, the proportion of drivers' fatalities is highest in the 25 – 49 age group (74%). Children (up to 18 years old) were mostly killed as passengers on non-motorway roads (45 fatalities). Figure 8 also shows that on non-motorway roads 21% of child fatalities and almost 40% of elderly fatalities (more than 64 years old) were pedestrians.

Figure 9: Fatalities on non-motorway road network by age and person class in the EU-201, 20092



Date of query: December 2011

drivers is highest for the 50-64 age group, whereas on the remaining road network it is highest for the 25-49 age group

On motorways,

the proportion of

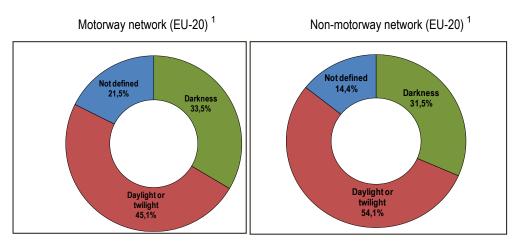
fatalities who are

Gender

### **Lighting Conditions**

Figure 10 shows that, in 2009, 49% (1.171 persons) of the fatalities on motorways in the 20 European countries are killed in accidents during daylight or twilight. The respective percentage for the remaining road network in the 20 EU countries appears to be slightly higher, almost 55% (corresponding to 15.490 people), as also indicated in Figure 10. Note that the high percentage of fatalities for which the lighting condition is "not defined" means that the actual percentages are rather higher.

Figure 10: Fatalities on motorways and non-motorway network by lighting conditions - 2009<sup>2</sup>



Furthermore, 34% of the fatalities on motorways occurred in darkness, whereas on non-motorway network, the respective percentage is slightly smaller (32%). The percentage of "not defined" fatalities by lighting conditions is lower on non-motorway network (17%) than on motorways (22%).

#### Day of week

Table 10 shows that in the EU-20 countries in 2009, the percentage of fatalities on motorways per fatalities on the remaining road network is highest on Sundays (10%) and lowest on Fridays (7%).

49% of the

fatalities on

motorways in the 20 European

countries were

killed in accidents in the daylight or twilight

Gend

Table 10: Number of fatalities on motorways as a percentage of fatalities on non motorways by day of week, 2009<sup>2</sup>

|       | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|-------|--------|---------|-----------|----------|--------|----------|--------|
| BE    | 17%    | 14%     | 19%       | 33%      | 16%    | 22%      | 15%    |
| CZ    | 3%     | 4%      | 5%        | 2%       | 3%     | 1%       | 4%     |
| DK    | 8%     | 5%      | 14%       | 3%       | 15%    | 6%       | 9%     |
| DE    | 13%    | 12%     | 11%       | 13%      | 13%    | 13%      | 17%    |
| EL    | 46%    | 33%     | 48%       | 65%      | 23%    | 42%      | 63%    |
| ES    | 27%    | 21%     | 20%       | 14%      | 22%    | 16%      | 14%    |
| FR    | 6%     | 6%      | 6%        | 5%       | 5%     | 6%       | 5%     |
| IT    | 11%    | 9%      | 10%       | 9%       | 7%     | 8%       | 9%     |
| LU    | 0%     | 500%    | 100%      | -        | 200%   | 1.100%   | 333%   |
| HU    | 2%     | 5%      | 2%        | 8%       | 7%     | 3%       | 5%     |
| NL    | 15%    | 14%     | 19%       | 9%       | 12%    | 24%      | 15%    |
| AT    | 16%    | 6%      | 12%       | 13%      | 6%     | 10%      | 12%    |
| PL    | 2%     | 1%      | 0%        | 2%       | 1%     | 1%       | 1%     |
| PT    | 15%    | 13%     | 10%       | 8%       | 13%    | 9%       | 16%    |
| RO    | 0%     | 1%      | 1%        | 1%       | 0%     | 1%       | 1%     |
| SI    | 11%    | 8%      | 35%       | 35%      | 33%    | 25%      | 12%    |
| SK    | 2%     | 5%      | 0%        | 2%       | 0%     | 4%       | 4%     |
| FI    | 0%     | 0%      | 5%        | 0%       | 10%    | 7%       | 6%     |
| SE    | 4%     | 8%      | 6%        | 4%       | 0%     | 6%       | 6%     |
| UK    | 6%     | 8%      | 7%        | 7%       | 5%     | 8%       | 7%     |
| EU-20 | 9%     | 8%      | 8%        | 8%       | 7%     | 8%       | 10%    |
| СН    | 11%    | 0%      | 25%       | 5%       | 9%     | 17%      | 8%     |

Source: CARE Database / EC Date of query: December 2011

# Seasonality

In the EU-20 the highest percentage of fatalities on motorways per fatalities on the remaining road network (8%) is noticed on Mondays and Sundays

Table 11 shows that in the EU-20 countries, the peak period for fatalities on motorways is May/Junet (19%). However, the peak periods differ among countries, as the peak of motorway fatalities is in January/February in Slovenia (27%) and in March/April in Slovenia and Denmark. Additionally, the peak value occurs in more than one pair of months in countries such as Belgium and Czech Republic.

Table 11: Percentage of fatalities on motorways by pair of months, 20092

|       | January/ | March/ | May/ | July/  | September/ | November/ |
|-------|----------|--------|------|--------|------------|-----------|
|       | February | April  | June | August | October    | December  |
| BE    | 15%      | 12%    | 20%  | 20%    | 18%        | 15%       |
| CZ    | 20%      | 4%     | 32%  | 0%     | 32%        | 12%       |
| DK    | 17%      | 29%    | 8%   | 17%    | 17%        | 13%       |
| DE    | 15%      | 16%    | 22%  | 16%    | 18%        | 13%       |
| EL    | 19%      | 11%    | 21%  | 14%    | 25%        | 10%       |
| ES    | 14%      | 19%    | 18%  | 18%    | 16%        | 15%       |
| FR    | 10%      | 18%    | 17%  | 24%    | 17%        | 14%       |
| IT    | 16%      | 15%    | 17%  | 21%    | 16%        | 15%       |
| LU    | 3%       | 22%    | 28%  | 14%    | 19%        | 14%       |
| HU    | 13%      | 21%    | 24%  | 16%    | 11%        | 16%       |
| NL    | 14%      | 18%    | 24%  | 10%    | 10%        | 24%       |
| AT    | 10%      | 20%    | 10%  | 25%    | 21%        | 15%       |
| PL    | 9%       | 19%    | 19%  | 14%    | 14%        | 26%       |
| PT    | 13%      | 12%    | 18%  | 22%    | 23%        | 13%       |
| RO    | 0%       | 16%    | 24%  | 40%    | 4%         | 16%       |
| SI    | 27%      | 33%    | 10%  | 13%    | 17%        | 0%        |
| SK    | 0%       | 0%     | 22%  | 22%    | 33%        | 22%       |
| FI    | 8%       | 25%    | 33%  | 17%    | 17%        | 0%        |
| SE    | 6%       | 17%    | 28%  | 11%    | 17%        | 22%       |
| UK    | 13%      | 20%    | 23%  | 15%    | 14%        | 14%       |
| EU-20 | 14%      | 17%    | 19%  | 18%    | 17%        | 15%       |
| СН    | 9%       | 6%     | 35%  | 12%    | 15%        | 24%       |

Source: CARE Database / EC Date of query: December 2011

Table 12 shows that for the EU-20 countries the highest percentage of fatalities on motorways per fatalities on non-motorways is 8% and is noticed for the six months of the year whereas the lowest respective percentage is noticed only for three months. It should be noted that the unknown road network fatalities are not included.

In the EU-20, the peak period for fatalities on motorways is May/June(19%)

Ger

Table 12: Number of fatalities on motorways as a percentage of fatalities on non motorways per month, 2009<sup>2</sup>

|       | January | February | March | April | Мау  | June | July | August | September | October | November | December |
|-------|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|
| BE    | 27%     | 16%      | 13%   | 12%   | 20%  | 24%  | 24%  | 16%    | 21%       | 22%     | 17%      | 18%      |
| CZ    | 4%      | 4%       | 0%    | 2%    | 1%   | 9%   | 0%   | 0%     | 5%        | 4%      | 2%       | 3%       |
| DK    | 0%      | 22%      | 12%   | 13%   | 7%   | 0%   | 7%   | 13%    | 6%        | 14%     | 5%       | 10%      |
| DE    | 11%     | 21%      | 17%   | 10%   | 14%  | 17%  | 10%  | 13%    | 13%       | 12%     | 9%       | 13%      |
| EL    | 50%     | 50%      | 26%   | 26%   | 82%  | 100% | 26%  | 35%    | 34%       | 80%     | 40%      | 44%      |
| ES    | 21%     | 14%      | 21%   | 29%   | 20%  | 20%  | 17%  | 21%    | 19%       | 22%     | 18%      | 23%      |
| FR    | 5%      | 3%       | 5%    | 9%    | 4%   | 6%   | 7%   | 7%     | 5%        | 5%      | 5%       | 5%       |
| IT    | 10%     | 12%      | 11%   | 7%    | 7%   | 10%  | 11%  | 7%     | 7%        | 9%      | 9%       | 10%      |
| LU    | 100%    | 0%       | 400%  | -     | 400% | -    | -    | 300%   | 200%      | 500%    | 200%     | 100%     |
| HU    | 4%      | 6%       | 1%    | 11%   | 4%   | 8%   | 3%   | 5%     | 2%        | 4%      | 6%       | 4%       |
| NL    | 13%     | 19%      | 11%   | 25%   | 22%  | 17%  | 4%   | 13%    | 9%        | 5%      | 20%      | 30%      |
| AT    | 5%      | 10%      | 26%   | 12%   | 6%   | 6%   | 9%   | 15%    | 10%       | 17%     | 9%       | 11%      |
| PL    | 1%      | 1%       | 3%    | 0%    | 2%   | 1%   | 0%   | 1%     | 1%        | 1%      | 1%       | 2%       |
| PT    | 13%     | 8%       | 16%   | 4%    | 12%  | 17%  | 18%  | 7%     | 19%       | 10%     | 9%       | 10%      |
| RO    | 0%      | 0%       | 2%    | 1%    | 1%   | 2%   | 3%   | 1%     | 0%        | 0%      | 1%       | 0%       |
| SI    | 10%     | 117%     | 50%   | 43%   | 5%   | 17%  | 0%   | 33%    | 11%       | 27%     | 0%       | 0%       |
| SK    | 0%      | 0%       | 0%    | 0%    | 0%   | 6%   | 3%   | 3%     | 8%        | 3%      | 8%       | 0%       |
| FI    | 5%      | 0%       | 19%   | 0%    | 3%   | 10%  | 8%   | 0%     | 0%        | 9%      | 0%       | 0%       |
| SE    | 0%      | 5%       | 0%    | 10%   | 3%   | 10%  | 4%   | 0%     | 3%        | 7%      | 4%       | 21%      |
| UK    | 7%      | 4%       | 3%    | 14%   | 15%  | 5%   | 4%   | 7%     | 7%        | 6%      | 7%       | 6%       |
| EU-20 | 8%      | 9%       | 9%    | 9%    | 9%   | 10%  | 8%   | 8%     | 8%        | 8%      | 7%       | 9%       |
| СН    | 13%     | 3%       | 9%    | 18%   | 11%  | 20%  | 3%   | 19%    | 8%        | 11%     | 12%      | 9%       |

The highest percentage of fatalities on motorways per fatalities on non-motorways is 10% (June) in the EU-20 countries

Source: CARE Database / EC Date of query: December 2011

Although for 2009 the EU-20 average monthly percentage was between 6% and 9%, there were considerably higher percentages in some months in Belgium and Greece. A very high percentage of motorway fatalities occurred in Austria in March (26%), whereas in Slovakia no motorway fatalities were recorded for 6 months in 2009.

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#### For more information

Further statistical information about fatalities is available from the CARE database at the Directorate General for Mobility 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

# Country abbreviations used and definition of EU-level

| EU - 18 | EU-20= EU-18 + |
|---------|----------------|
| LU - 10 | LU-20- LU-10 T |

| BE | Belgium        |  |
|----|----------------|--|
| CZ | Czech Republic |  |
| DK | Denmark        |  |
| DE | Germany        |  |
| EL | Greece         |  |
| ES | Spain          |  |
| FR | France         |  |
| IT | Italy          |  |
| LU | Luxembourg     |  |
| NL | Netherlands    |  |
| AT | Austria        |  |
| PL | Poland         |  |
| PT | Portugal       |  |
| RO | Romania        |  |
| SE | Slovenia       |  |
| FI | Finland        |  |
| SE | Sweden         |  |
| UK | United Kingdom |  |

| HU | Hungary  |
|----|----------|
| 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>.

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