

Rail transport accidents decreasing in 2007

In brief

In 2007, there were 2 566 persons killed or seriously injured in railway accidents in the EU-27, which is comparable to the 2006 value and represents an estimated 19.7% decrease compared to 2005. Less than 18% of the victims (fatalities and seriously injured) were either train passengers or railway enterprise employees.

In 2007, a total of 3 855 significant train accidents were reported at EU-27 level. The category “Accidents caused by rolling stock in motion” accounted for 37.5% of all significant accidents, followed by “Accidents involving level crossing”, with a share of 33.2%.

Compared to 2006, the total number of reported accidents in 2007 decreased by 20.7% in the EU-27.

Number of accidents and traffic performance

To measure the relative safety of rail transport, the number of accidents and the related number of victims have to be linked to traffic performance (Table 1).

In most countries, the number of passenger train-kilometres significantly exceeded those registered for goods train-kilometres. The ratio between passenger train and goods train performances was particularly high in Denmark and Ireland where passenger train-kilometres outnumbered that of goods trains by a factor of 23 and 21 respectively. On the other hand, goods rail traffic was substantially more important in the Baltic States, which were the only countries for which the number of goods train-kilometres was greater than the number of passenger train-kilometres.

Two countries alone accounted for almost 40% of all rail victims registered in the EU-27 in 2007: Poland and Germany.

In 2007, the number of persons killed or injured in Turkey corresponds to 0.79 victims per accident, which is surpassed by Croatia, with a ratio of 1.00.

Table 1: Rail traffic performance (all undertakings) and number of significant accidents in the EU-27, 2007

	1000 Train-km			Total number of accidents	Total number of persons killed or seriously injured in accidents
	Goods	Passengers	Total		
Belgium	14 241	79 617	93 858	83	85
Bulgaria	9 341	23 510	32 851	55	60
Czech Republic	35 667	119 257	154 924	115	126
Denmark	3 076	71 142	74 218	24	22
Germany	229 587	786 300	1 015 887	489	399
Estonia	4 129	3 424	7 553	64	33
Ireland	772	16 060	16 832	1	2
Greece	2 506	17 399	19 905	53	56
Spain	40 985	200 856	241 841	123	109
France*	103 013	381 995	485 008	413	126
Italy	62 514	315 204	377 718	133	120
Cyprus	-	-	-	-	-
Latvia	11 136	7 442	18 578	51	45
Lithuania	10 048	4 814	14 862	83	49
Luxembourg	971	5 933	6 904	0	0
Hungary	21 602	86 986	108 588	154	151
Malta	-	-	-	-	-
Netherlands	12 613	138 773	151 386	33	30
Austria	53 903	101 881	155 784	106	115
Poland	83 407	136 171	219 578	944	621
Portugal	8 030	32 566	40 596	93	92
Romania	25 873	69 262	95 135	283	36
Slovenia	8 162	10 613	18 775	61	47
Slovakia	16 156	35 268	51 424	270	93
Finland	17 976	34 601	52 577	58	21
Sweden	45 462	90 435	135 897	59	40
United Kingdom	31 053	460 512	491 565	107	88
EU-27	852 223	3 230 021	4 082 244	3 855	2 566
Croatia	8 320	18 968	27 288	52	52
Turkey	17 506	25 357	42 863	394	312
Liechtenstein	47	106	153	2	0
Norway	8 469	33 534	42 003	8	5

*2006 figures for goods trains

Source: Eurostat

Victims by type of accident and category of person

At EU-27 level, a total of 2 566 persons lost their lives or were seriously injured in rail accidents in 2007 (see Table 2). Suicides are in principle excluded from these statistics, but not all Member States can identify them in the statistics sent to Eurostat.

The most common types of accident for which victims are registered are the accidents caused by rolling stock in motion and those happening at level-crossings. These two categories represent around 88% of the total amount of victims and almost 97% of the fatalities.

Only a minority (less than 18%) of rail accident victims in the EU-27 were actually passengers travelling on trains or railway employees. The majority, the remaining 82%, were 'other persons' (e.g.: level-crossing users or unauthorised persons on railway premises).

Table 2 indicates that out of a total of 1 371 persons killed in train accidents in 2007, 33% were killed in level-crossing accidents and 64% in accidents caused by

rolling stock in motion. However, among these fatalities, as observed earlier, only 65 were train passengers and 38 were employees.

A total of 1 195 persons were seriously injured in 2007. However, there may be some methodological differences in reporting seriously injured people by the different participating countries (see Methodological notes). For this reason, the number of fatalities is considered as a more reliable measure than the number of seriously injured persons or the number of accidents.

In general, when looking at the number of persons killed and those seriously injured, it appears that accidents involving rolling stock in motion and accidents occurring at level-crossings are more frequent and severe. This is far more evident for victims other than passengers and employees. The proportion for this category is 94% for victims in accidents involving level-crossings and 85% for fatalities in accidents to persons caused by rolling stock in motion.

Table 2: Number of persons killed and injured by type of accident and category of persons in EU-27, 2007

	Number of persons											
	Killed				Seriously Injured				Total			
	Passengers	Employees	Other	Total	Passengers	Employees	Other	Total	Passengers	Employees	Other	Total
Collisions	2	5	8	15	20	29	66	115	22	34	74	130
Derailments	2	3	0	5	14	4	0	18	16	7	0	23
Accidents involving level-crossings	6	2	440	448	32	12	361	405	38	14	801	853
Accidents to persons caused by rolling stock in motion	45	27	806	878	105	37	390	532	150	64	1 196	1 410
Fires in rolling Stock	0	0	0	0	0	0	0	0	0	0	0	0
Others	10	1	14	25	91	12	22	125	101	13	36	150
Total	65	38	1 268	1 371	262	94	839	1 195	327	132	2 107	2 566

Source: Eurostat

While Table 2 gives an insight into the victims of accidents in the EU-27, Table 3 focuses on the number of persons killed in various types of rail accidents, broken down by reporting country.

The image drawn from Table 2 is confirmed when looking at the situation in the different countries. Indeed, for all the participating countries, the largest number of fatalities were registered either in accidents caused by

rolling stock in motion or in accidents involving level-crossings.

There were 350 fatalities in Poland and 200 in Germany and, for both countries, the majority of victims were attributed to 'rolling stock in motion' (83% for Poland and 58% for Germany).

The highest share of fatalities due to collisions in the total number of fatalities was observed in Greece (17%).

Table 3: Fatalities by type of accident in 2007

	Collisions	Derailments	Accidents involving level-crossings	Accidents to persons caused by rolling stock in motion	Fires in rolling Stock	Others	Total
Belgium	1	0	19	17	0	0	37
Bulgaria	0	0	5	22	0	0	27
Czech Republic	1	0	23	1	0	0	25
Denmark	0	0	5	4	0	1	10
Germany	3	1	80	116	0	0	200
Estonia	0	0	4	10	0	0	14
Ireland	0	0	1	0	0	0	1
Greece	3	0	5	10	0	0	18
Spain	0	0	25	46	0	4	75
France	2	0	38	37	0	3	80
Italy	4	0	16	51	0	0	71
Cyprus	-	-	-	-	-	-	-
Latvia	0	0	4	24	0	0	28
Lithuania	0	0	6	30	0	0	36
Luxembourg	0	0	0	0	0	0	0
Hungary	0	0	20	37	0	2	59
Malta	-	-	-	-	-	-	-
Netherlands	0	0	19	1	0	0	20
Austria	0	0	33	16	0	3	52
Poland	1	0	48	289	0	12	350
Portugal	0	3	20	35	0	0	58
Romania	0	0	22	14	0	0	36
Slovenia	0	0	9	8	0	0	17
Slovakia	0	0	15	42	0	0	57
Finland	0	0	10	8	0	0	18
Sweden	0	0	9	16	0	0	25
United Kingdom	0	1	12	44	0	0	57
EU-27	15	5	448	878	0	25	1 371
Croatia	0	0	12	14	0	1	27
Turkey	0	1	43	64	0	0	108
Liechtenstein	0	0	0	0	0	0	0
Norway	0	0	0	2	0	0	2

Source: Eurostat

Table 4: Fatalities by category of person in 2007

	Passengers	Employees	Other	Total
Belgium	9	3	25	37
Bulgaria	2	0	25	27
Czech Republic	0	1	24	25
Denmark	0	0	10	10
Germany	3	13	184	200
Estonia	4	1	9	14
Ireland	0	0	1	1
Greece	0	0	18	18
Spain	13	1	61	75
France	9	0	71	80
Italy	7	4	60	71
Cyprus	-	-	-	-
Latvia	0	1	27	28
Lithuania	0	0	36	36
Luxembourg	0	0	0	0
Hungary	3	0	56	59
Malta	-	-	-	-
Netherlands	0	0	20	20
Austria	1	3	48	52
Poland	9	3	338	350
Portugal	1	5	52	58
Romania	0	0	36	36
Slovenia	0	0	17	17
Slovakia	1	0	56	57
Finland	0	1	17	18
Sweden	0	0	25	25
United Kingdom	3	2	52	57
EU-27	65	38	1 268	1 371
Croatia	3	1	23	27
Turkey	1	1	106	108
Liechtenstein	0	0	0	0
Norway	1	0	1	2

Source: Eurostat

At EU-27 level, only five persons lost their lives in a derailment accident, and no fatalities were registered in train fires. Train collisions recorded relatively few deaths at EU-27 level (15 persons, out of which Italy alone accounted for almost 27%).

In Norway, all fatalities were recorded as caused by rolling stock in motion. This can however be explained by the small absolute number of fatalities reported by this country. More generally and due to the rarity of fatalities in railway accidents, one should be very careful when comparing developments between years, especially at national level.

As noted earlier, rail passengers and railway employees constitute only a minority of the total number of persons killed (see Table 4). Nine EU Member States and Liechtenstein reported no fatalities in these categories.

METHODOLOGICAL NOTES

Data availability

The figures presented in this publication have been extracted from the Eurostat rail transport database, which includes the statistics on rail accidents in the Member States, collected according to the Regulation n°91/2003. Please note that all statistics presented here concern significant accidents.

Country characteristics of data availability

DK, SE Until 2006, statistics use 10 000€ as a threshold for reported material damage accidents
CY, MT No railway transport
FI Level crossing accidents include both significant and non significant accidents
SE Some slightly injured people may be included as 'seriously injured'

Methodology

According to the Regulation 91/2003, during the first five years of application of this Regulation, Member States may report these statistics according to national definitions, if data conforming to harmonised definitions are not available.

Definitions

Definitions on *train-km*, *significant accident*, *serious injury accident*, *person killed*, *person seriously injured* and *rail passenger* can be found directly in the [Regulation n° 1192/2003](#).

Significant damage to stock, track, other installations or environment

This means damage that is equivalent to EUR 150 000 or more.

Level crossing accident

Any accident at level crossings involving at least one railway vehicle and one or more road vehicles, other users of the road such as pedestrians or other objects temporarily present at or near the track.

Accident to persons caused by rolling stock in motion

Any accident to one or more persons that are either hit by a railway vehicle or part of it or hit by an object detached from the vehicle. Persons that fall from railway vehicles are included, as well as persons that fall or are hit by loose objects when travelling on-board vehicles.

Others

As a category of victim, "others" includes, for example, level crossing users and trespassers.

Symbols:

: not available
- not applicable
0 actual zero or very negligible transport

This publication was prepared with the assistance of Mathieu Erzar and Julien Tardivon.

Further information

Data: [Eurostat Website: http://ec.europa.eu/eurostat](http://ec.europa.eu/eurostat)

Data on "Transport":

<http://epp.eurostat.ec.europa.eu/portal/page/portal/transport/data/database>

Journalists can contact the media support service:

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