Main figures on Road Traffic Accidents

Spain 2019

MINISTERIO DEL INTERIOR

DGT Dirección General de Tráfico

EDITED BY: DIRECTORATE-GENERAL FOR TRAFFIC

C/ Josefa Valcárcel nº 44
28027 MADRID

AUTHOR: Observatorio Nacional de Seguridad Vial

NIPOe: 128-19-024-3
ISSNe: 2695-7922

Fotografía: Dirección General de Tráfico
Imprime: ESTUGRAF IMPRESORES, S.L.

Catálogo general de publicaciones oficiales: http://publicacionesoficiales.boe.es/
En esta publicación se ha utilizado papel reciclado libre de cloro de acuerdo con los criterios medioambientales de la contratación pública.

Index

Introduction

"Main figures on Road Traffic Accidents" began publication in 2004 with the aim of becoming the benchmark publication in Spain for analysing the trend in the number and characteristics of road traffic accidents as well as assessing the impact of major policies on road safety. We are confident that having reached its 16th edition means that such objective has been achieved.

In 2019, 1,755 people were killed in road traffic accidents in Spain, 51 fewer deaths than in 2018, which means a decrease by 3%. In 2019 the fatality rate was at 37 deaths per million population, equal to the objective indicated in the Strategy on Road Safety 2011-2020 as the highest mortality rate in 2020. This rate puts Spain ahead of other European countries such as Austria (46), France (48), Italy (55), Belgium (56) and Portugal (61). The average rate in the European Union Member States was at 51.

The following is a summary of the main figures on road traffic accidents for the year 2019, paying attention to the most important fields and groups:

– Vulnerable road users: they represent 53% of road deaths (381 pedestrian fatalities; 80 cyclists; 466 motorcyclists), being the first time that vulnerable road users account for more than half of all fatalities. One out of every four deaths is a motorcyclist.

– Conventional roads: 896 fatalities in 2019, the number of deaths on these roads was below 900 for the first time; a decrease of 10% compared to the previous year, as against the observed increase of 5% in dual carriageways and motorways. Even so, fatalities on conventional roads account for 51% of all fatalities reported in road traffic accidents; 72% if we restrict to interurban roads.

– Urban roads: 519 deaths occurred on these roads, 30% of all fatalities, the highest percentage since records began. The number of people killed has increased by 6% and vulnerable road users represent 82% of the deaths. 70% of pedestrian fatalities are 65 years of age or over.

– People over 65 years of age represent 19% of the population although they account for 28% of the deaths.

As regards risky behaviour, distraction was reported as the most common contributory factor in fatal accidents for the fourth consecutive year (it was present in 28%), followed by alcohol consumption (present in 25%) and speed (present in 23%).

This obliges us to redouble our efforts in the fields of training, awareness-raising and monitoring of risky behaviours.

As in previous years, we have received close collaboration from Autonomous Communities that have powers on traffic surveillance; the Ministry of Transport, Mobility and Urban Agenda for reviewing the information on roads under their scope and for the data on the road network and traffic; the Spanish National Toxicology and Forensic Science Institute (INTCF) and the Institutes of Forensic Medicine and Science (IML) in Murcia and Galicia. The Directorate-General for Traffic would like to thank all these institutions for their collaboration and the facilities offered to share their consolidated data.

DGT would also like to thank all the people who made the writing of this report possible and especially the Traffic Division of the Guardia Civil, the Local and Autonomous Police Forces and the experts at the Provincial Traffic Departments and at the National Road Safety Observatory.

Pere Navarro Olivella
Director-General for Traffic

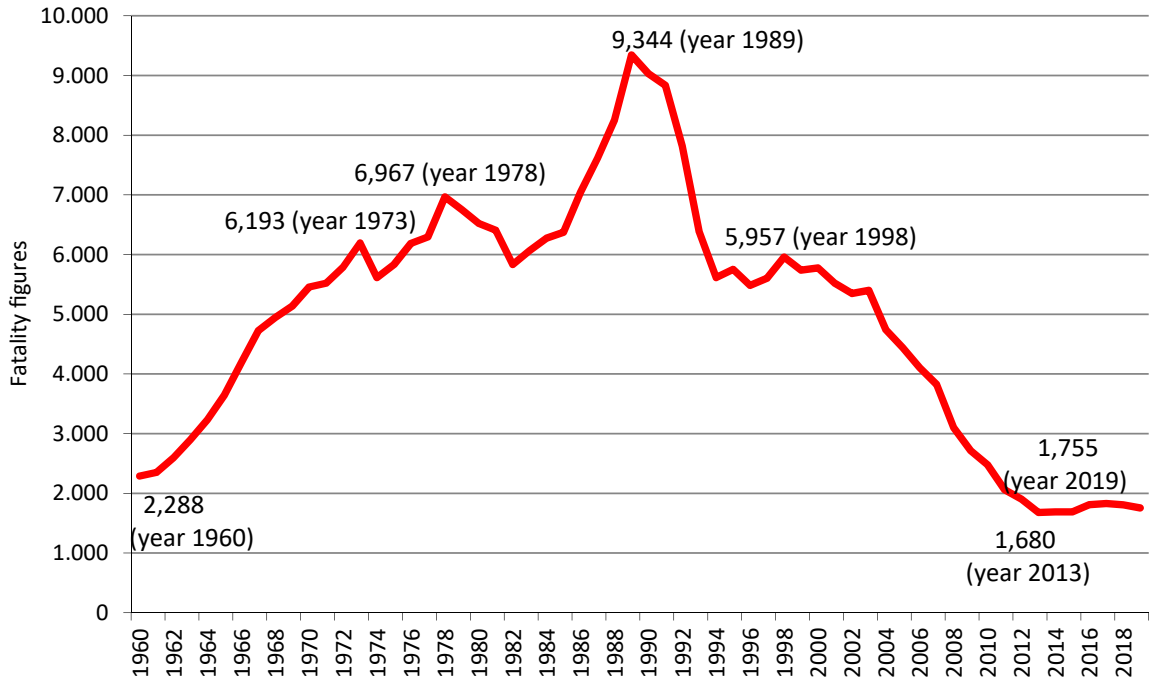
1 Evolución de la siniestralidad vial

Evolution from 1960 to 2019

The figures for road traffic accidents register:

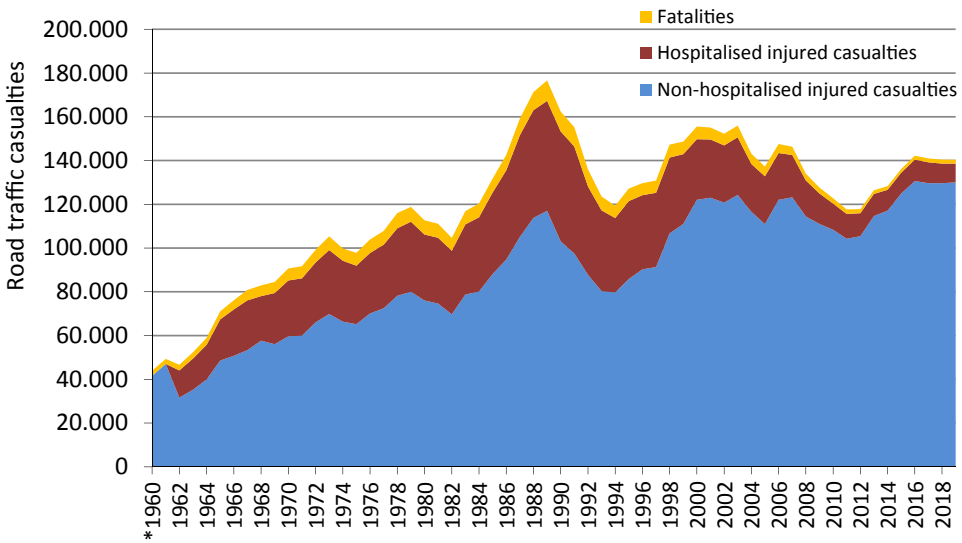
- 1,775 fatalities in 2019, a decrease of 3% compared with 2018.
- The number peaked in 1989 with 9,344 deaths.
- Since 1989, there was an overall decreasing trend reaching a historically low level of 1,680 fatalities in 2013.

Figure 1. Evolution of fatalities in traffic casualty accidents. Spain, 1960-2019



In 2019, fatalities represent 1% of total road traffic victims, 6% of hospitalised injured casualties and 93% of non hospitalised injured casualties.

Figure 2. Evolution of road traffic victims. Spain, 1960-2019

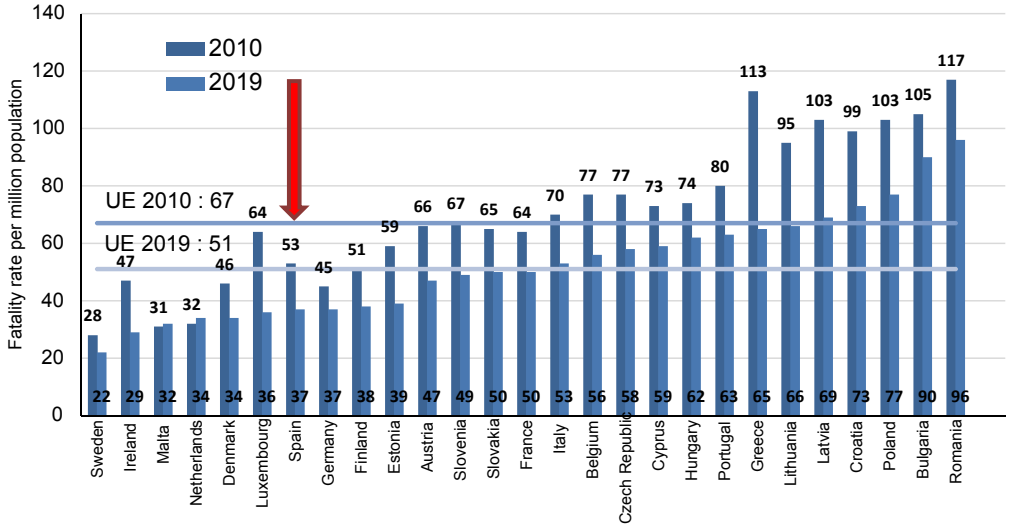


**1960 and 1961: with no distinction between hospitalised and non-hospitalised*

The following figure shows the evolution of fatality rates per million population in the European Union from 2010 to 2019 and, in the case of Spain:

- In 2010, the rate was at 53 fatalities per million population (2,478 deaths), below the European average rate which was at 67.
- In 2019, the rate was at 37, below the European average rate that was at 51, ranking seventh among the countries with the lowest figures on accident rate.

Figure 3. Fatality rate per million population in the European Union. 2010, 2019



**2019 data from Ireland are provisional.*
Sources: European Commission, CARE andEurostat databases.

Evolution of the main indicators 2010-2019

From 2010 to 2019:

- Fatalities and hospitalised injured casualties as a result of a road traffic accident have decreased by 4% year-on-year, although the overall pattern of decrease in fatalities was interrupted between 2014 and 2017. In the last year, the number of people killed has decreased by 3% and of hospitalised injured casualties by 4%.
- Fatality rate per million population fell from 53 to 37.
- The vehicle fleet and traffic show a similar trend: decreases until 2013 and increases from 2014 to present.
- The daily average has gone from 7 to 5 deaths, a value which remains stable since 2013.

Figure 4. Evolution of the main indicators of accident rate and exposure to risk. Spain, 2010-2019

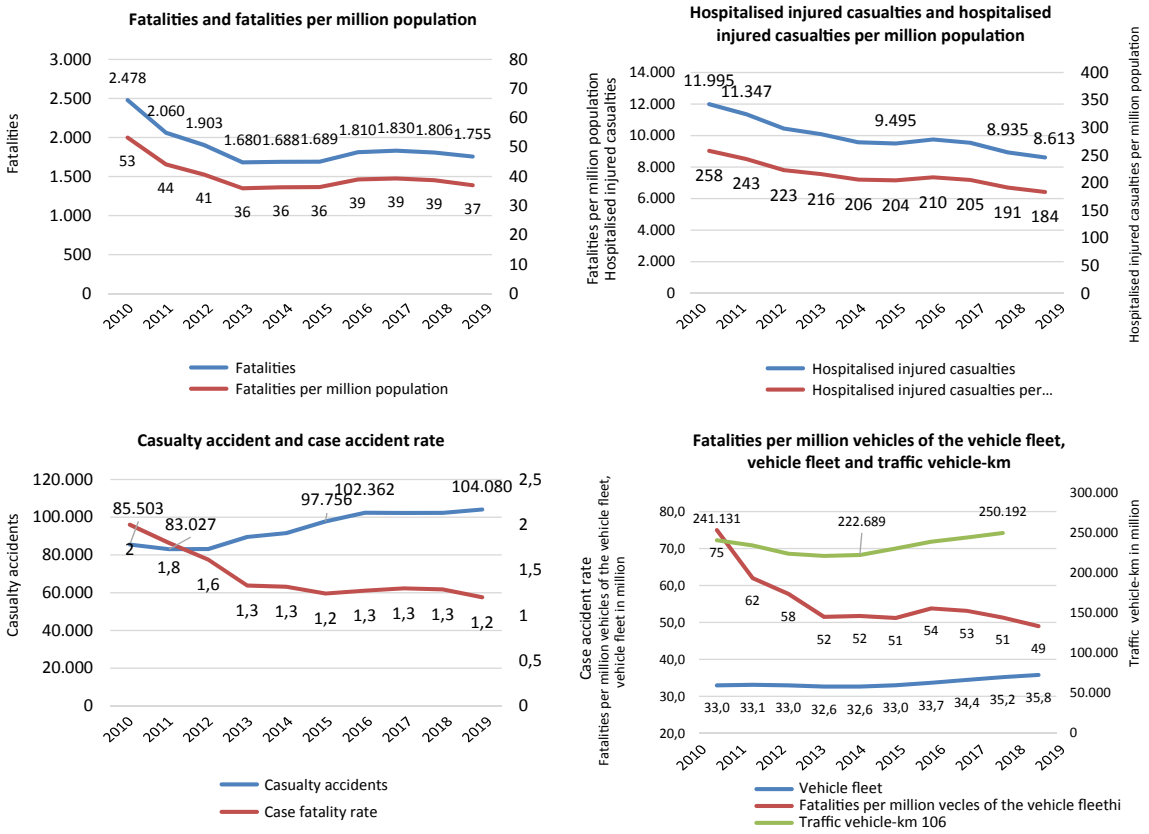


Table 1. Evolution of the main indicators of accident rate and exposure to risk. Spain, 2010-2019

Indicator	2018	2019	Difference[1] 2019/2018	Year-on-year variation 2010-2019
Casualty accidents	102,299	104,080	2%	2%
Fatalities	1,806	1,755	-3%	-4%
Hospitalised injured casualties	8,935	8,613	-4%	-4%
Non-hospitalised injured casualties	129,674	130,745	1%	2%
Fatalities per million population	39	37	-2	-16
Hospitalised injured casualties per M p.tion	191	184	-4%	-4%
Fatality daily average	5	5	0	-2
Case fatality rate[2]	1.3	1.2	-0.1	-0.8
Vehicle fleet	35.2	35.8	2%	1%
Fatalities per million vehicles of the vehicle fleet	51	49	-2	-26
Vehicle-km traffic 10^{6} *	250,192	n.a.	n.a.	n.a.

[1] The differences have been estimated as a percentage when the number of cases is higher than 100 and in absolute values when the number is below 100.
[2] Case fatality rate is defined as the number of fatalities per 100 casualties.
** The source is the Yearbooks from the Ministry of Transport, Mobility and Urban Agenda. Data refer to interurban roads.*

Year 2019

In the year 2019 the following was registered:

- A total of 1,755 deaths —51 fewer than in 2018 (-3%)—, 8,613 hospitalised injured casualties - 322 less (-4%)—, and 130,745 non-hospitalised injured casualties.
- On interurban roads, a decrease by 6% in fatality figures (-10% on conventional roads); on urban roads, an increase by 6% in the number of deaths.
- An increase by 16% of motorcyclist fatalities and a decrease by 12% of car occupant fatalities. Vulnerable road users killed account for 53% of fatalities.

Table 2. Number of casualty accidents, fatalities, hospitalised and non-hospitalised injured casualties. Percentage difference compared with the previous year. Spain, 2019

	2019								Variation 19/18			
	Casualty accidents		Fatalities		Hospitalised injured casualties		Non-hospitalised injured casualties		Casualty accidents	Fatalities	Hospitalised injured casualties	Non-hospitalised injured casualties
	Number	%	Number	%	Number	%	Number	%				
Total	**104,080**	**100%**	**1,755**	**100%**	**8,613**	**100%**	**130,745**	**100%**	**2%**	**-3%**	**-4%**	**1%**
Location												
Interurban road	37,339	36%	1,236	70%	4,303	50%	51,407	39%	-1%	-6%	-3%	-3%
Motorway	3,438	3%	91	5%	254	3%	5,288	4%	-8%	9	-6%	-7%
Dual c'way	9,086	9%	249	14%	650	8%	13,707	10%	-3%	3%	-12%	-6%
Conventional road	24,815	24%	896	51%	3399	39%	32,412	25%	0%	-10%	-1%	-1%
Urban road	66,741	64%	519	30%	4,310	50%	79,338	61%	4%	6%	-4%	4%
Road running through town	1,563	2%	43	2%	127	1%	1,840	1%	-2%	0	-24%	-2%
Streets	65,089	63%	473	27%	4,180	49%	77,348	59%	5%	7%	-2%	5%
Motorway/Urban dual c'way	89	0%	3	0%	3	0%	150	0%	0%	0	-32	0%
Days of week [2]												
Working days	78,855	76%	1,113	63%	5,794	67%	97,644	75%	13%	4%	5%	13%
Weekend day	25,225	24%	642	37%	2,819	33%	33,101	25%	-22%	-13%	-18%	-23%
Type of accident												
Head-on collision	3,434	3%	284	16%	934	11%	5,173	4%	11%	-2%	2%	9%
Side and T-bone collision	31,252	30%	228	13%	2,058	24%	39,855	30%	5%	-6%	2%	5%
Rear and multiple collision	21,542	21%	146	8%	789	9%	33,696	26%	-4%	4%	-18%	-4%
Run-off-road collision	15,104	15%	573	33%	1,873	22%	17,491	13%	2%	-2%	-1%	-1%
Overturning	3,617	3%	32	2%	242	3%	3,787	3%	0%	6	17%	-2%
Pedestrian impact [3]	13,289	13%	373	21%	1,663	19%	12,925	10%	1%	-1%	-7%	2%
Other type	15,842	15%	119	7%	1,054	12%	17,818	14%	3%	-19%	-7%	2%

	2019								Variation 1 2019/2018			
	Casualty accidents		Fatalities		Hospitalised injured casualties		Non-hospitalised injured casualties		Casualty accidents	Fatalities	Hospitalised injured casualties	Non-hospitalised injured casualties
	Number	%	Number	%	Number	%	Number	%				
Mode of travel [4]												
Pedestrian [3]	13,569	13%	381	22%	1,688	20%	12,333	9%	1%	-1%	-8%	1%
Bicycle	7,837	8%	80	5%	646	8%	6,793	5%	3%	22	4%	2%
Moped	6,977	7%	49	3%	471	5%	6,861	5%	-2%	-13	-11%	0%
Motorcycle	29,116	28%	417	24%	2,729	32%	27,601	21%	4%	16%	2%	4%
Car	77,915	75%	641	37%	2,438	28%	65,247	50%	-1%	-12%	-8%	-3%
Goods vehicle	16,149	16%	141	8%	385	4%	6,699	5%	0%	-7%	-3%	-4%
Bus or coach	2,392	2%	3	0%	36	0%	2,307	2%	5%	-9	-40	4%
User [4,5]												
Driver	83,235	80%	1,139	65%	5,641	65%	85,931	66%	2%	-1%	-0%	2%
Passenger	23,859	23%	235	13%	1,284	15%	32,481	25%	-2%	-12%	-11%	-3%
Pedestrian [3]	13,569	13%	381	22%	1,688	20%	12,333	9%	1%	-1%	-8%	1%
Age [4,5]												
0-14	5,585	5%	32	2%	290	3%	6,330	5%	0%	7	-12%	0%
15-24	19,387	19%	172	10%	1,223	14%	21,864	17%	2%	-17%	5%	1%
25-34	26,224	25%	242	14%	1,406	16%	27,755	21%	0%	-7%	-4%	0%
35-44	25,303	24%	256	15%	1,509	18%	26,028	20%	-3%	-15%	-8%	-3%
45-54	21,475	21%	317	18%	1,581	18%	21,310	16%	4%	10%	0%	4%
55-64	13,442	13%	234	13%	1,101	13%	13,115	10%	4%	6%	-3%	4%
65-74	7,096	7%	183	10%	767	9%	6,825	5%	2%	-16%	-6%	4%
75-84	4,049	4%	199	11%	467	5%	3,765	3%	2%	5%	-16%	6%
85 and over	1,290	1%	110	6%	189	2%	1,039	1%	4%	20	17%	1%
Gender [4,5]												
Male	72,167	69%	1,381	79%	6,161	72%	77,434	59%	2%	-1%	-2%	2%
Female	45,567	44%	370	21%	2,429	28%	52,794	40%	0%	-9%	-8%	-1%

[1] *The differences have been estimated as a percentage when the number of cases is higher than 100 and in absolute values when the number is below 100.*
[2] *The working day includes from 0:00 hours on Monday to 14:59 hours on Friday; weekend days start at 15:00 on Friday and end at 23:59 on Sunday.*
[3] *The number of people killed when struck by a vehicle does not include all pedestrians hit by a vehicle because the classification by type of accident is made according to the first manoeuvre and not to its harmful outcome.*
[4] *In the casualty accident indicator, the addition does not correspond to the total because the same accident can fall under various subheadings.*
[5] *Accidents involving at least one casualty are recorded on the reference group.*

2 Infrastructure

Exposure indicators

Road network

In 2018, of the 165,624 km of interurban roads belonging to the Central Administration, the Autonomous Communities, the Provincial Governments and the Island Councils recorded and classified in the Statistical Yearbooks of the Ministry of Transport, Mobility and Urban Agenda 2% were toll motorways, 8% motorways and dual carriageways, 1% multilane roads and 90% were the rest of roads.

Table 3. Length (km) of the interurban road network. Spain, 2009-2018

Type of road	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Increase in km 2018/2017
Toll motorway	3,016	2,991	3,022	3,025	3,026	3,020	3,040	3.039	3,039	2,957	-82
Dual c'way and motorway	11,005	11,271	11,509	11,676	11,955	12,029	12,296	12,405	12,484	12,626	142
Multilane road	1,599	1,703	1,651	1,634	1,602	1,656	1,686	1,665	1,641	1,645	4
Rest of roads	149,843	149,822	149,703	149,260	148,778	149,579	148,981	148,374	148,522	148,396	-126
Total	**165,463**	**165,787**	**165,885**	**165,595**	**165,361**	**166,284**	**166,003**	**165,483**	**165,686**	**165,624**	**-62**

Source: Statistical Yearbooks from the Ministry of Transport, Mobility and Urban Agenda. The latest year available at the time of preparing this report was 2018.

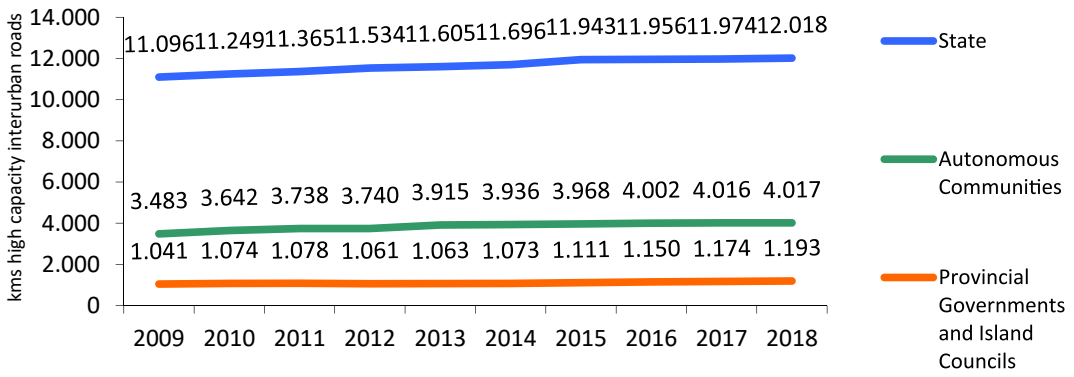
In 2018, the State Road Network was 26,403 kilometres, of which 46% were high capacity roads: motorways, dual carriageways and multilane roads. On the contrary, high capacity roads in the regional and provincial road networks accounted only for 4% of the total.

Table 4. Length (km) of the interurban road network by ownership and road type. Spain, 2018

Type of road	Central Administration	Autonomous Communities	Provincial Governments and Island Councils	Total
Toll motorway	2,457	329	171	2,957
Dual c'way and motorway	9,076	2,933	617	12,626
Multilane road	485	755	405	1,645
Rest of roads	14,385	67,296	66,715	148,396
Total	**26,403**	**71,313**	**67,908**	**165,624**

Source: Yearbooks from the Ministry of Transport, Mobility and Urban Agenda. The latest year available at the time of preparing this report was 2017.

Figure 5. Length (km) of the high-capacity interurban roads. Spain, 2009-2018



Source: Yearbooks from the Ministry of Transport, Mobility and Urban Agenda. The latest year available at the time of preparing this report was 2018

Volume of traffic on interurban roads

The volume of traffic on interurban roads can be studied from the data collected by the Ministry of Transport, Mobility and Urban Agenda on its Statistical Yearbooks.

An analysis of the evolution of the volume of traffic —or exposure to risk—since 2009 shows a reduction until 2014 and an increase again as of 2015.

Table 5. Evolution of volume of traffic on interurban roads. Spain, 2009-2018

Interurban roads	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Variation 2018/2017	Year-on-year variation 2009-2018
Traffic vehicle-km 106 [1]	249,371	241,131	236,065	224,285	221,610	222,689	230,840	239,353	244,661	250,192	2%	0%

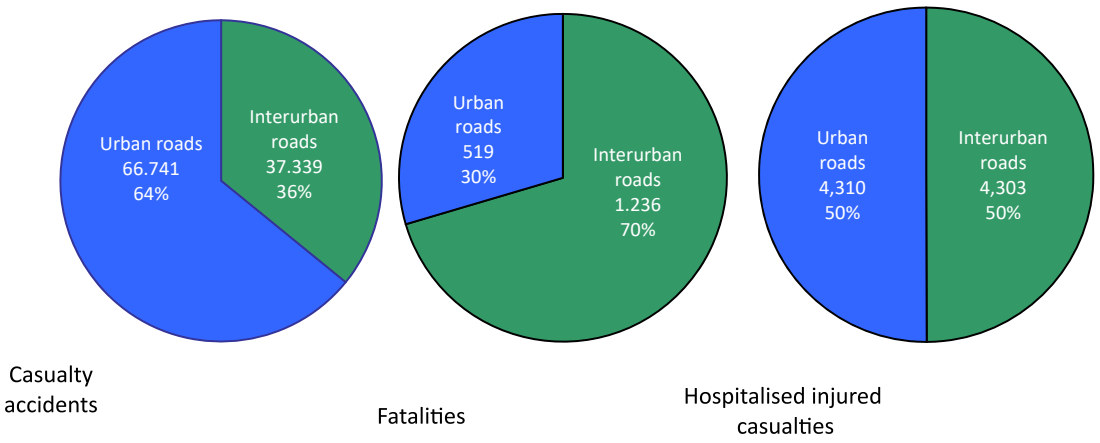
[1] *Source: Statistical Yearbooks from the Ministry of Transport, Mobility and Urban Agenda.*

Performance indicators: accidents and victims

The scene of the casualty accident

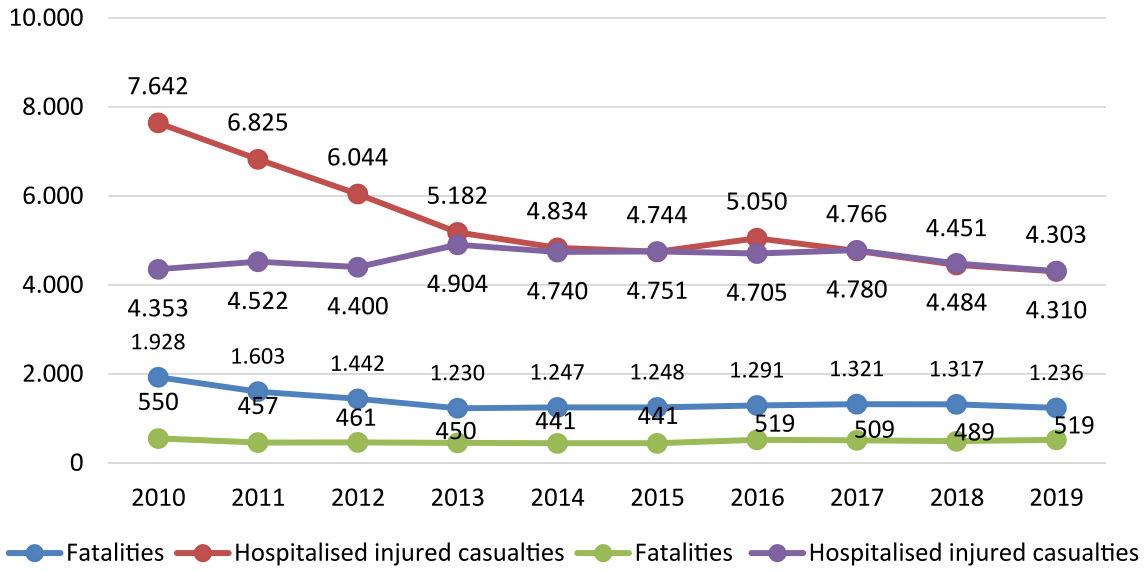
In 2019, 64% of casualty accidents happened on urban roads; however, 70% of the fatalities are registered on interurban roads. The number of hospitalised injured casualties is distributed in the same proportion on urban and on interurban roads.

Figure 6. Distribution of the number of casualty accidents, fatalities and hospitalised injured casualties by road type. Spain, 2019



The number of fatalities and hospitalised injured casualties on interurban roads is reduced until 2013 and in a similar way on urban roads. Between 2014 and 2018, the number of fatalities increased by 6% on interurban roads and by 11% on urban roads. However, comparing 2019 with 2018, fatalities decreased by 6% on interurban roads but increased by the same percentage on urban roads.

Figure 7. Evolution of fatalities and hospitalised injured casualties on interurban and urban roads. Spain 2010-2019

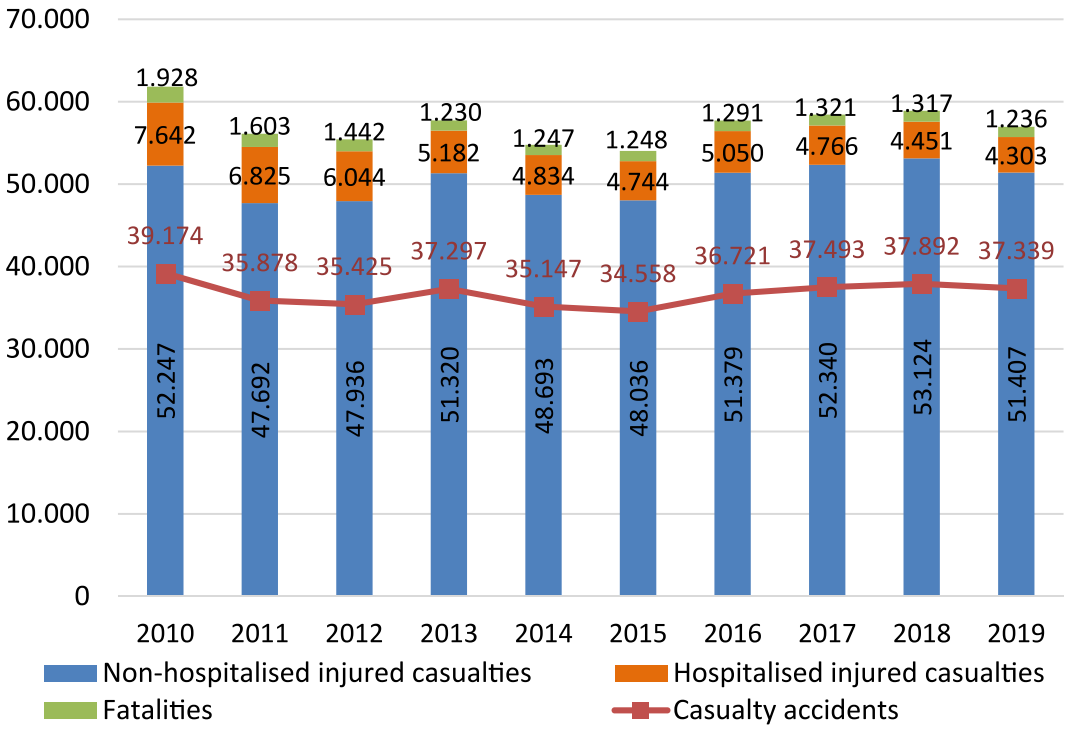


Interurban roads

In 2019, 36% of casualty accidents were recorded on interurban roads. 70% of fatalities (1,236 deaths) and 50% of hospitalised injured casualties (4,303 injured) resulted from those accidents.

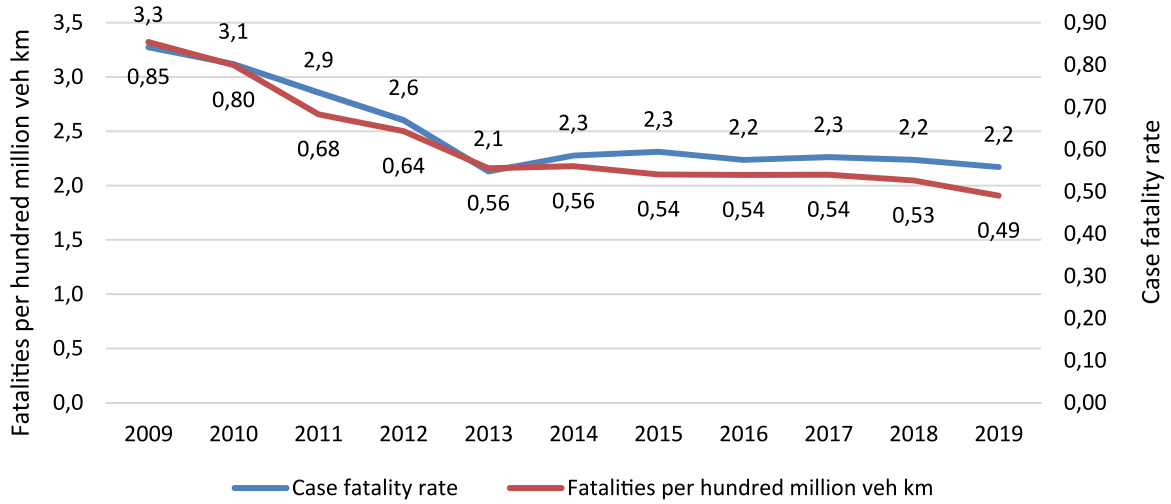
Compared to the previous year, there were 6% fewer fatalities on these roads and hospitalised injured casualties decreased by 3%. Over the last ten years, the year over year reduction rate for fatalities was at 4%.

Figure 8. Evolution of casualty accidents on interurban roads. Spain, 2010-2019



According to mobility, the fatality figure per a hundred million vehicle-km has reduced from 0.85 to 0.53 from 2009 to 2019 whereas case fatality rate (deaths per 100 casualties) has fallen from 3.3 to 2.2.

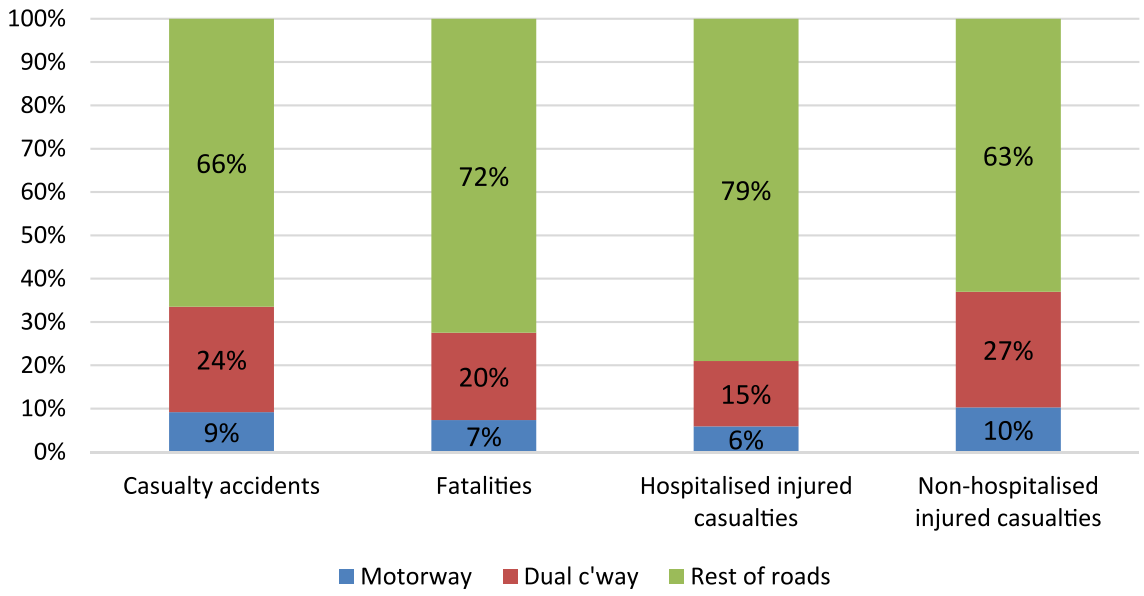
Figure 9. Evolution of case fatality rate and fatality figure per a hundred million vehicle-km on interurban roads. Spain, 2009-2018



By type of interurban road, in 2019:

- 896 people were killed on conventional roads, accounting for 72% of all fatalities on interurban roads; 3,399 injured casualties were hospitalised, which accounted for 79% of the total.
- 20% of the fatalities and 15% of the hospitalised injured casualties were registered on dual carriageways.
- 7% of the fatalities and 6% of the hospitalised injured casualties were registered on motorways.

Figure 10. Casualty accidents, fatalities, hospitalised and non-hospitalised injured casualties on interurban roads by road type. Spain, 2019



In 2019 there were 91 fatalities on motorways, 9 more fatalities than in 2018. On dual carriageways, 249 fatalities have been registered, 8 more than in 2018, which means an increase by 3%; in the rest of roads, with 896 fatalities, we can observe a decrease by 10%, 98 fewer fatalities than in 2018. Hospitalised injured casualties have decreased on motorways, dual carriageways and on the rest of roads in 2019 as compared with 2018 —by 6%, 12% and 1% respectively—.

Table 6. Evolution of casualty accidents on interurban roads by road type. Spain, 2013-2019*

Casualty accidents	2013	2014	2015	2016	2017	2018	2019	2019/2018
Motorway	2,456	2,369	2,398	3,592	3,932	3,722	**3,438**	-8%
Dual c'way	8,712	8,411	8,431	8,641	8,608	9,388	**9,086**	-3%
Rest of roads	26,129	24,367	23,729	24,488	24,953	24,782	**24,815**	0%
Total Interurban	**37,297**	**35,147**	**34,558**	**36,721**	**37,493**	**37,892**	**37,339**	**-1%**

** In 2013 the road catalogue was updated to classify accidents occurring on Catalonian interurban roads, so the data cannot be compared with those corresponding to previous years. In 2016 the data of catalogues of roads from Catalonia and the Basque Country updated to the corresponding year were uploaded into the National Register for Road Traffic Accident Victims.*

Table 7. Evolution of fatalities on interurban roads by road type. Spain, 2013-2019*

Fatalities	2013	2014	2015	2016	2017	2018	2019	2019/2018[1]
Motorway	63	64	75	85	85	82	91	9
Dual c'way	227	226	202	242	223	241	249	3%
Other roads	940	957	971	964	1,013	994	896	-10%
Total Interurban	**1,230**	**1,247**	**1,248**	**1,291**	**1,321**	**1,317**	**1,236**	**-6%**

** In 2013 the road catalogue was updated to classify accidents occurring on Catalonian interurban roads, so the data cannot be compared with those corresponding to previous years. In 2016 the data of catalogues of roads from Catalonia and the Basque Country updated to the corresponding year were uploaded into the National Register for Road Traffic Accident Victims.*
1 The differences have been estimated as a percentage when the number of cases is higher than 100 and in absolute values when the number is below 100.

Table 8. Evolution of hospitalised injured casualties on interurban roads by road type. Spain, 2013-2019*

Hospitalised injured casualties	2013	2014	2015	2016	2017	2018	2019	2019/2018
Motorway	268	263	223	290	285	271	254	-6%
Dual c'way	815	758	741	830	728	741	650	-12%
Other roads	4,099	3,813	3,780	3,930	3,753	3,439	3,399	-1%
Total Interurban	**5,182**	**4,834**	**4,744**	**5,050**	**4,766**	**4,451**	**4,303**	**-3%**

** In 2013 the road catalogue was updated to classify accidents occurring on Catalonian interurban roads, so the data cannot be compared with those corresponding to previous years. In 2016 the data of catalogues of roads from Catalonia and the Basque Country updated to the corresponding year were uploaded into the National Register for Road Traffic Accident Victims.*

Urban roads

In 2019, 64% casualty accidents occurred on urban roads, 30% of the fatalities - 519 deaths, and 50% of the hospitalised injured casualties – 4,310 people injured. Compared to the previous year, there were 6% more fatalities on these roads and hospitalised injured casualties decreased by 3%. Vulnerable road users account for 82% of people killed on urban roads.

Over the last ten years, the year over year reduction rate for fatalities was at 1%.

Sections of road running through towns are included in urban roads, showing a higher severity ratio than the rest of roads in built-up areas. In 2019, 43 people were killed in sections of road running through towns, a figure which remains unchanged from the previous year.

Figure 11. Evolution of casualty accidents on interurban roads. Spain, 2010-2019

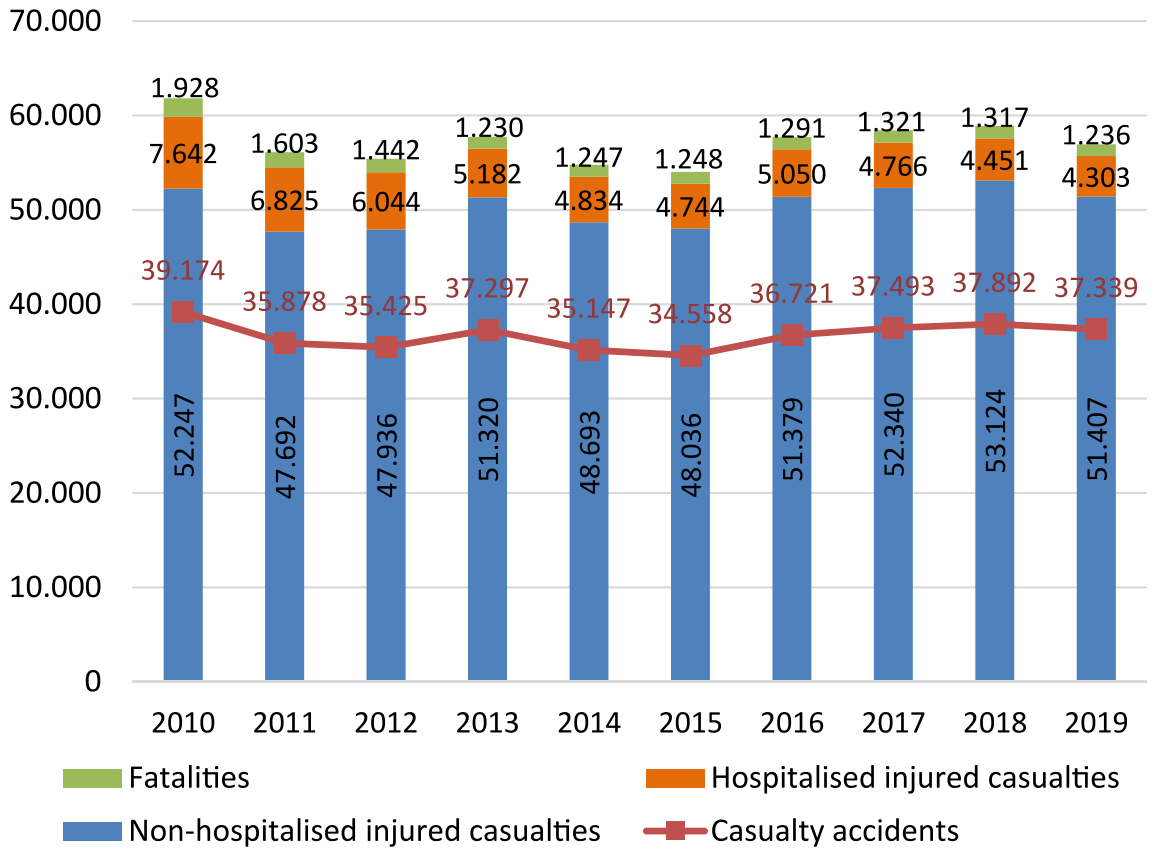


Table 9. Evolution of casualty accidents, fatalities, hospitalised and non-hospitalised injured casualties on sections of road running through towns and rest of urban roads. Spain, 2018-2019

Urban roads	Sections of road running through towns			Others		
	2018	2019	Variation 2019/2018 [1]	2018	2019	Variation 2019/2018
Casualty accidents	1,597	1,563	**-2%**	62,810	65,089	4%
Fatalities	43	43	**0**	446	473	6%
Hospitalised injured casualties	169	127	**-25%**	4,315	4,180	-3%
Non-hospitalised injured casualties	1,883	1,883	**-2%**	74,667	77,348	4%

[1] *The differences have been estimated as a percentage when the number of cases is higher than 100 and in absolute values when the number is below 100.Municipal data*

Madrid and Barcelona, two cities with a population of over a million inhabitants, have recorded 15% of fatalities and 16% of hospitalised injured casualties on urban roads. Cities with a population from 100,001 to 500,000 inhabitants - with 24% of the Spanish population - have recorded the highest number of fatalities (26%) and hospitalised injured casualties (32%).

Figure 12. Fatalities by size of the municipality. Spain, 2010, 2018 and 2019

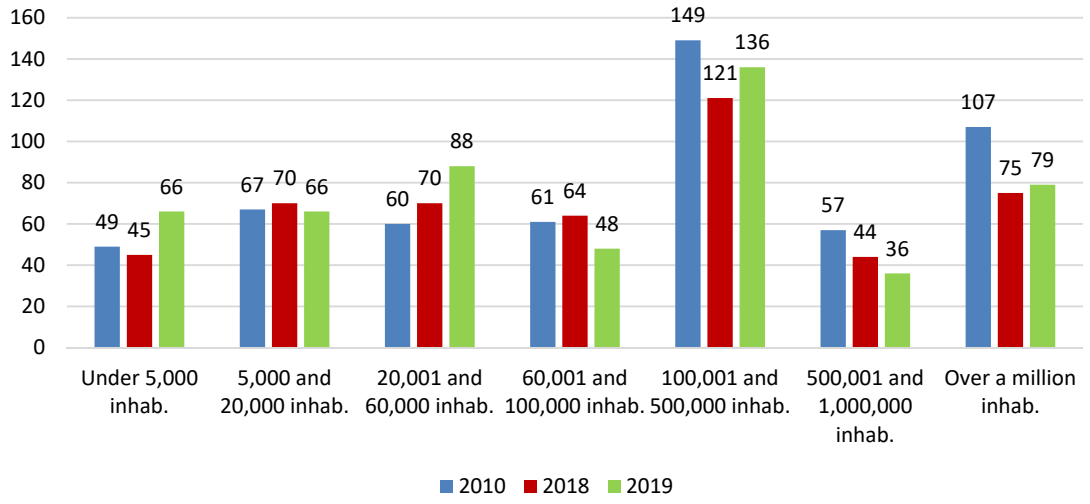
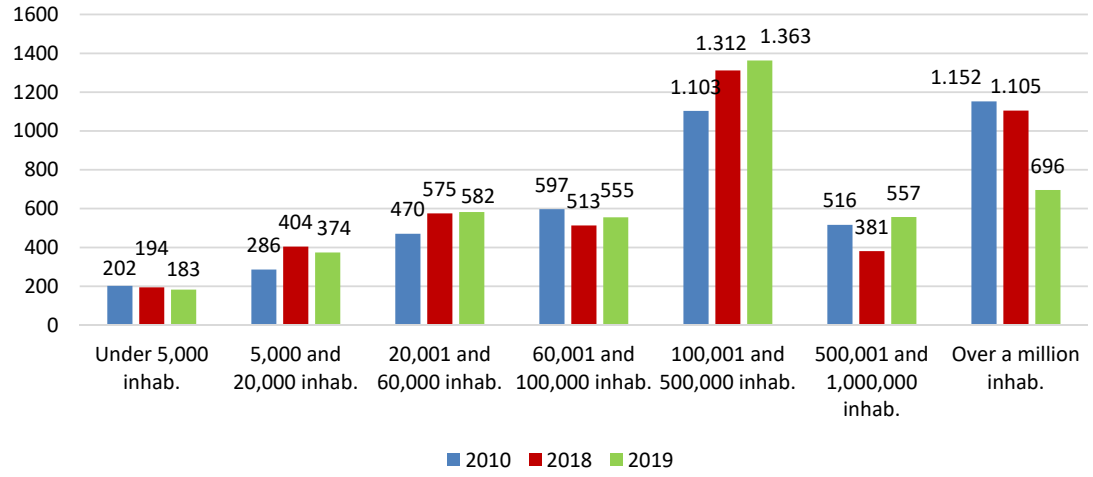


Figure 13. Hospitalised injured casualties by size of the municipality. Spain, 2010, 2018 and 2019

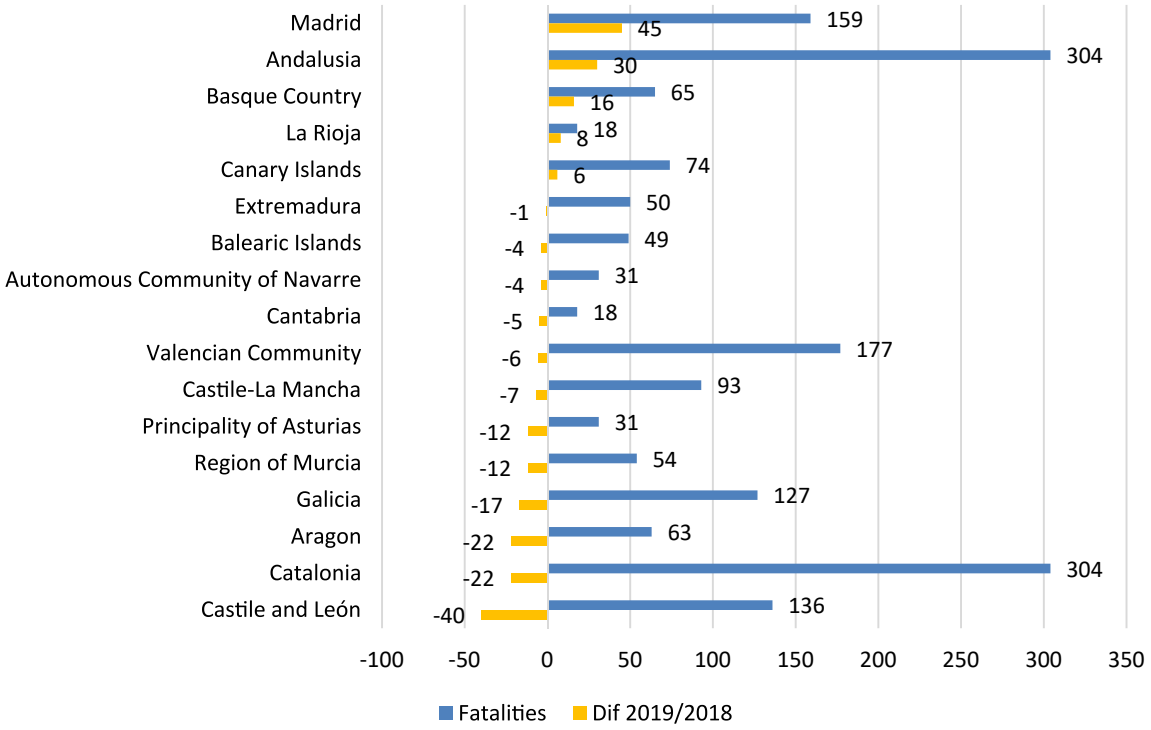


It should be emphasised that the level of communication in case of a non-fatal accident may vary in both the reporting time-frames and among municipalities, although it should be noted that the population coverage as regards information on the accident rates on urban roads (percentage of the population represented by municipalities reporting road accidents) has significantly increased during the last few years, from 78% in 2009 to 92% in 2019.

Autonomous regions and provinces

By Autonomous regions, in 2019 there was a decrease in the number of fatalities in 12 of them, the greatest percentage decrease in fatalities was registered in Castile-Leon and Galicia. However, Andalusia and Madrid show an increase in the number of fatalities by 11% and by 39% respectively. The autonomous cities of Ceuta and Melilla recorded 2 fatalities, 4 fewer deaths than in 2018.

Figure 14. Evolution of fatalities by Autonomous Regions. Spain, 2019 and differences 2019-2018



Compared with 2018, the number of fatalities increased in 18 provinces, decreased in 30 and remained unchanged in 2 of them. In the Autonomous City of Ceuta there was 1 fewer fatality than in 2018 whereas in Melilla there were no fatalities in 2019. It should be taken into account that the fatality trend in figures at provincial level is subject to fluctuations as they are small figures.

Table 10. Evolution of fatalities by provinces on interurban and urban roads Spain, 2015-2019

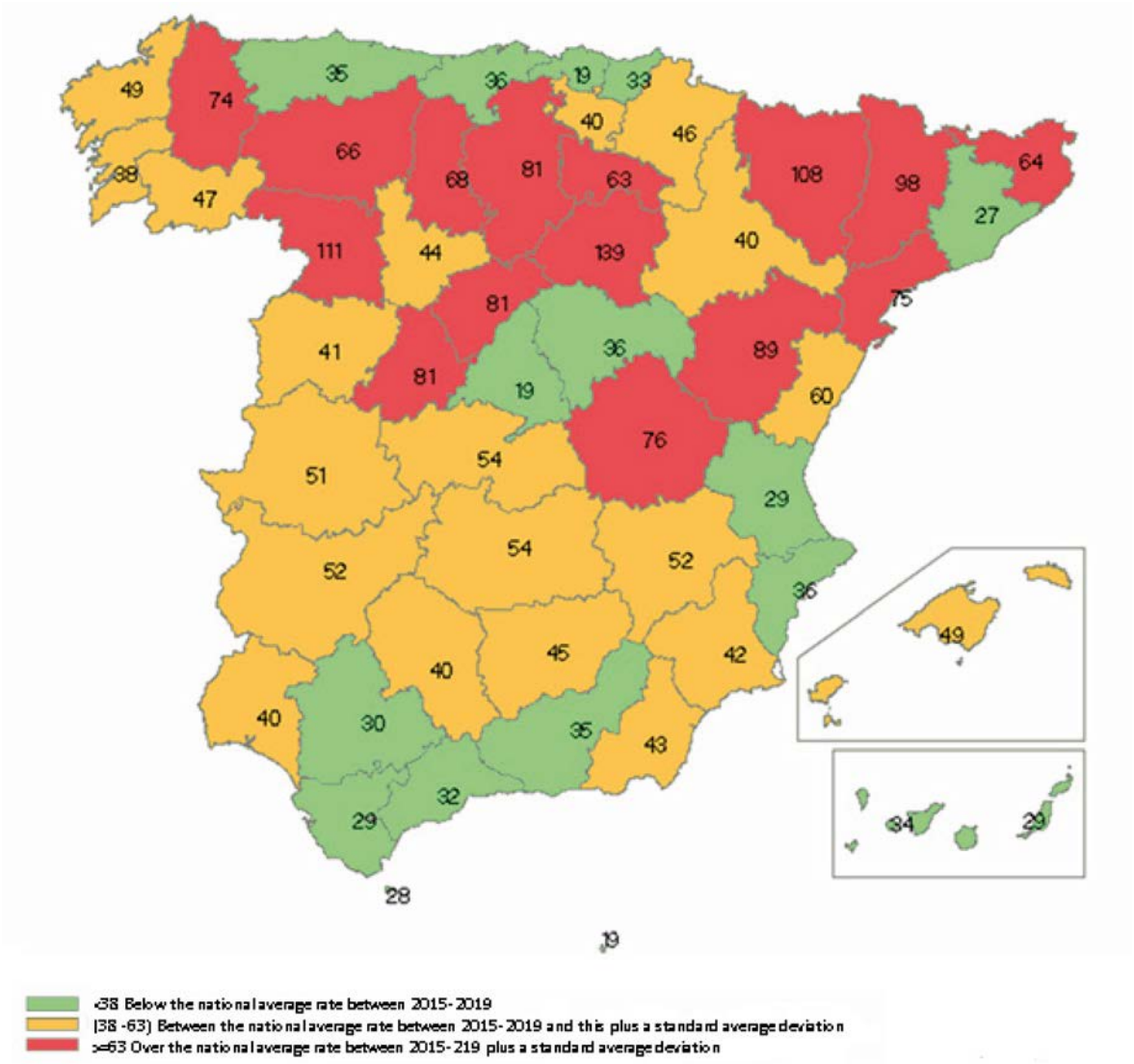
Provinces	2015	2016	2017	2018	2019	Variation 2019/2018[1]	Variation 2019/2015[1]
Araba/Álava	10	13	11	15	16	1	6
Albacete	22	24	16	11	28	17	6
Alicante/ Alacant	62	68	64	60	80	20	18
Almería	26	40	22	27	35	8	9
Ávila	16	12	11	16	11	-5	-5
Badajoz	37	38	36	32	34	2	-3
Balears, Illes	53	60	68	53	49	-4	-4
Barcelona	128	131	145	163	171	5%	34%
Burgos	32	36	31	32	14	-18	-18
Cáceres	17	24	26	19	16	-3	-1
Cádiz	32	41	34	36	36	0	4

Provinces	2015	2016	2017	2018	2019	Variation 2019/2018[1]	Variation 2019/2015[1]
Castellón/ Castelló	28	43	39	35	25	-10	-3
Ciudad Real	27	30	33	25	22	-3	-5
Córdoba	26	22	37	34	38	4	12
Coruña, A	47	58	51	64	53	-11	6
Cuenca	16	15	18	20	8	-12	-8
Girona	41	55	47	55	42	-13	1
Granada	43	27	33	31	25	-6	-18
Guadalajara	11	7	12	10	6	-4	-5
Gipuzkoa	38	17	27	13	23	10	-15
Huelva	23	19	22	18	22	4	-1
Huesca	17	21	25	27	29	2	12
Jaén	23	31	35	31	24	-7	1
León	39	25	22	35	35	0	-4
Lleida	51	37	40	43	39	-4	-12
Rioja, La	20	25	26	10	18	8	-2
Lugo	22	32	22	26	22	-4	0
Madrid	111	121	125	114	159	39%	43%
Málaga	46	57	67	39	56	17	10
Murcia	44	58	85	66	54	-12	10
Navarra	26	26	29	35	31	-4	5
Ourense	11	15	13	19	15	-4	4
Asturias	36	35	37	43	31	-12	-5
Palencia	6	13	13	11	12	1	6
Palmas, Las	22	40	30	39	32	-7	10
Pontevedra	43	36	31	35	37	2	-6
Salamanca	17	10	15	14	13	-1	-4
S.C. Tenerife	40	31	37	29	42	13	2
Cantabria	22	21	22	23	18	-5	-4
Segovia	16	16	10	12	9	-3	-7
Sevilla	43	66	55	58	68	10	25
Soria	10	19	11	15	8	-7	-2
Tarragona	71	59	51	65	52	-13	-19
Teruel	16	9	18	10	7	-3	-9
Toledo	31	42	50	34	29	-5	-2
Valencia/ València	64	69	73	88	72	-16	8
Valladolid	24	24	27	23	18	-5	-6
Bizkaia	19	26	13	21	26	5	7
Zamora	21	20	24	18	16	-2	-5
Zaragoza	38	43	37	48	27	-21	-11
Ceuta	3	2	2	3	2	-1	-1
Melilla	2	1	2	3	0	-3	-2
Total	**1,689**	**1,810**	**1,830**	**1,806**	**1,755**	**-3%**	**4%**

1 The differences have been estimated as a percentage when the number of cases is higher than 100 and in absolute values when the number is below 100.

The national fatality rate per million population over the last five years was at 38 and, as illustrated in the next figure, it was below the national rate in 17 provinces, it was over the national rate within the interval of a standard deviation in 20 provinces and it exceeded the national rate in a standard deviation in 15 provinces.

Figure 15. Average fatality rate per million population disaggregated by the province where the accident occurred. Spain 2015-2019



3

Means of transport

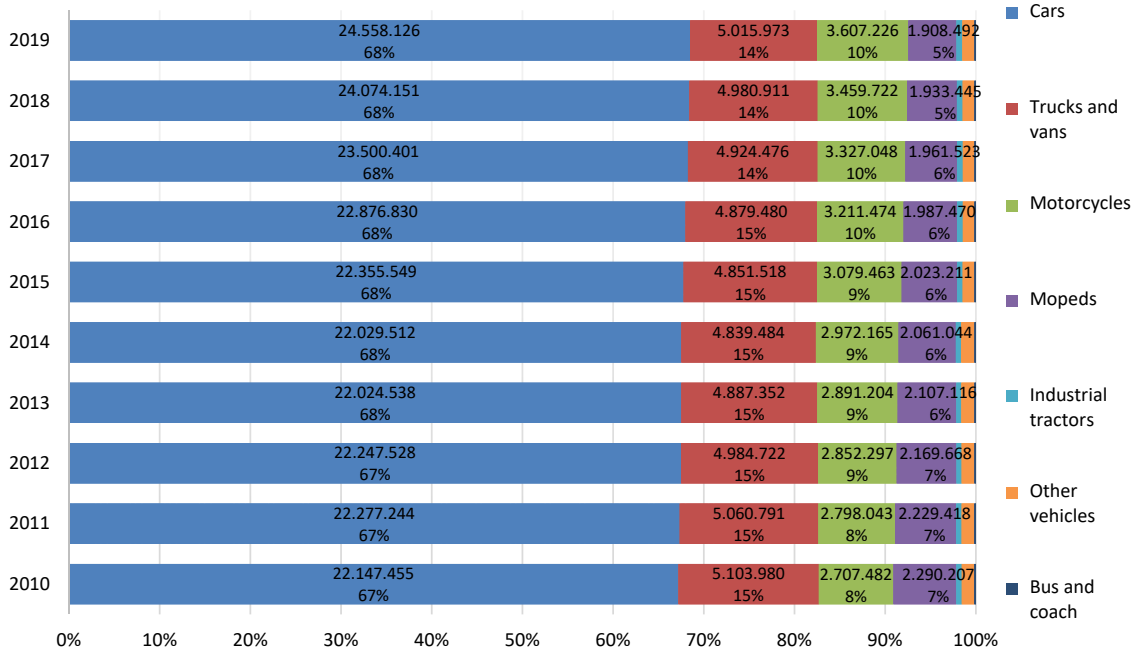
Exposure indicators

Vehicle fleet

The vehicle fleet has grown by more than two million units in the last decade. In 2019 there has been an increase by 2% (666,770) compared with the previous year and the greatest increase in absolute figures is for cars with an increase by 2%.

The vehicle fleet is mainly made up by cars with more than 24 million units which represent 68% of the fleet; cars are followed by trucks and vans, 14% of the total vehicle fleet; and by motorcycles, 10%.

Figure 16. Evolution of the vehicle fleet over the last ten years Spain, 2010-2019



[1] *The other vehicles category includes special vehicles such as sweepers, snowploughs, cranes, work-site machines, etc. Trailers and semi-trailers have been excluded.*

Volume of traffic of the vehicles

The following is an analysis of the different phases the vehicle must undergo when passing the technical inspection. The ITV stations register and inform the DGT's Motor Vehicle Registry of the kilometres indicated on the odometer. By comparing the kilometres recorded in two successive inspections on the same vehicle we can determine the kilometres travelled over a period of time, and if we add all the kilometres travelled by all the vehicles we obtain all the kilometres travelled by the vehicle fleet. Due to the fact that some vehicles have not been tested, either for being exempted or because the owner fails to comply with the obligation to take the vehicle to the ITV station, the calculation of the kilometres travelled by the vehicles requires an extrapolation of data.

As can be noted from the following charts of the average kilometres travelled, there is not a significant change in the data when analysed from the evolution point of view during the last three years available, although the trend is, in general terms, downwards.

Figure 17. Evolution of the annual average kilometres travelled by mopeds, motorcycles and cars subject to technical inspection in 2017, 2018 and 2019

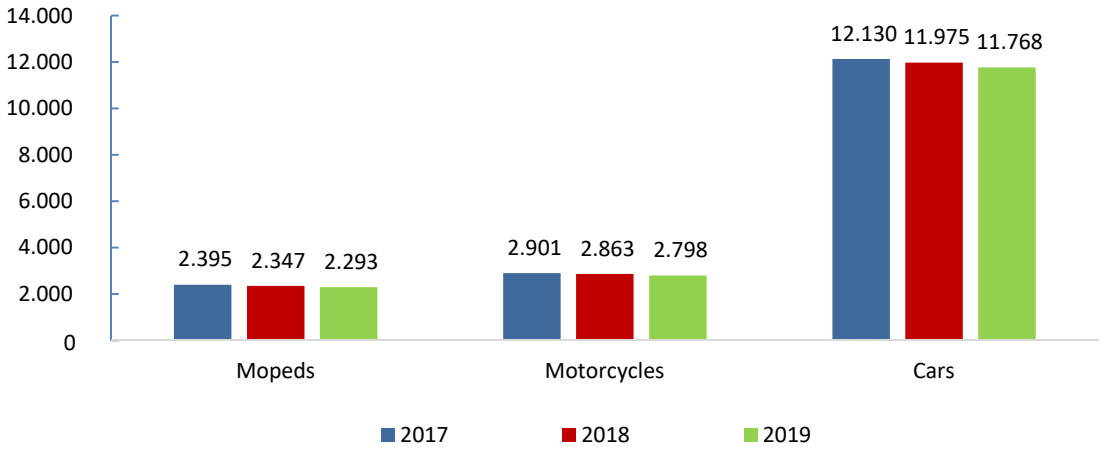
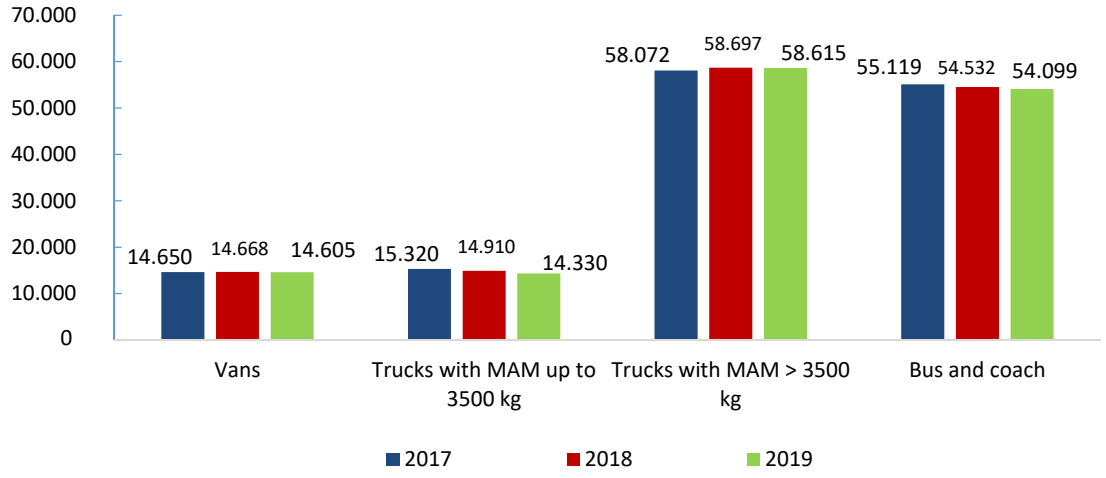


Figure 18. Evolution of the annual average kilometres travelled by vans, trucks and buses or coaches subject to technical inspection in 2017, 2018 and 2019



The following figures show the annual average kilometres travelled by the vehicles subject to technical inspection in 2019. In order to analyse the impact of the age of a vehicle on the kilometres travelled, the vehicles belonging to each category are divided into age groups. Buses or coaches and trucks exceeding 3,500 kg show average kilometres travelled higher than 54,000 and 58,000 kilometres respectively; vans and lorries up to 3,500 kg 14,300 and 14,605 kilometres respectively; cars 11,768 kilometres; motorcycles 2,798 kilometres; mopeds 2,293 kilometres.

Extrapolating these kilometres to the vehicle fleet leads to an estimate of 411,522 million vehicle-km, of which 70% corresponds to cars, 10% to trucks exceeding 3,500 kg, 9% to vans and 6% to lorries up to 3,500 kg.

Figure 19. Annual average kilometres travelled by mopeds, motorcycles and cars subject to technical inspection in 2019

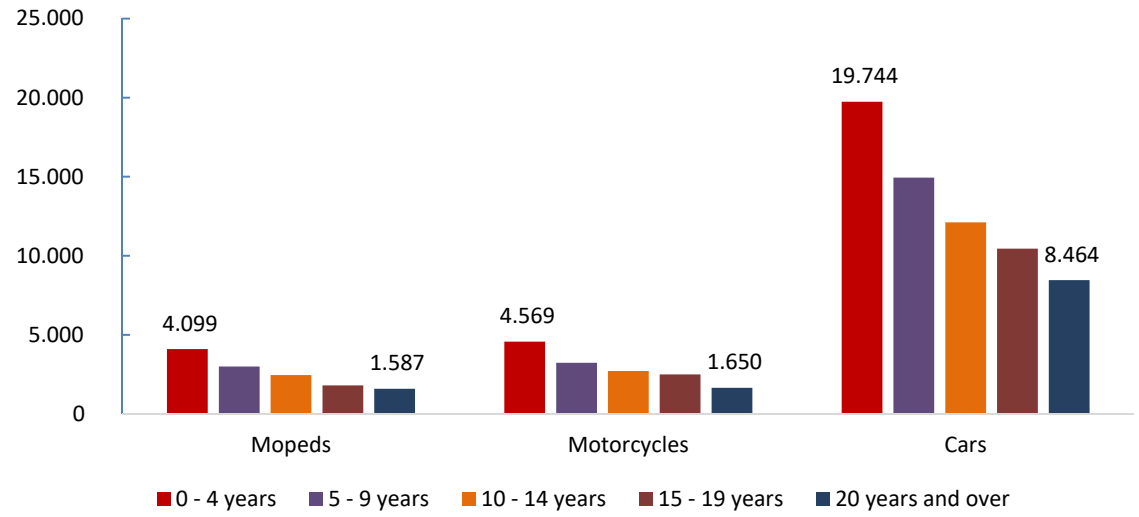


Figure 20. Annual average kilometres travelled by vans, trucks and buses or coaches subject to technical inspection in 2019

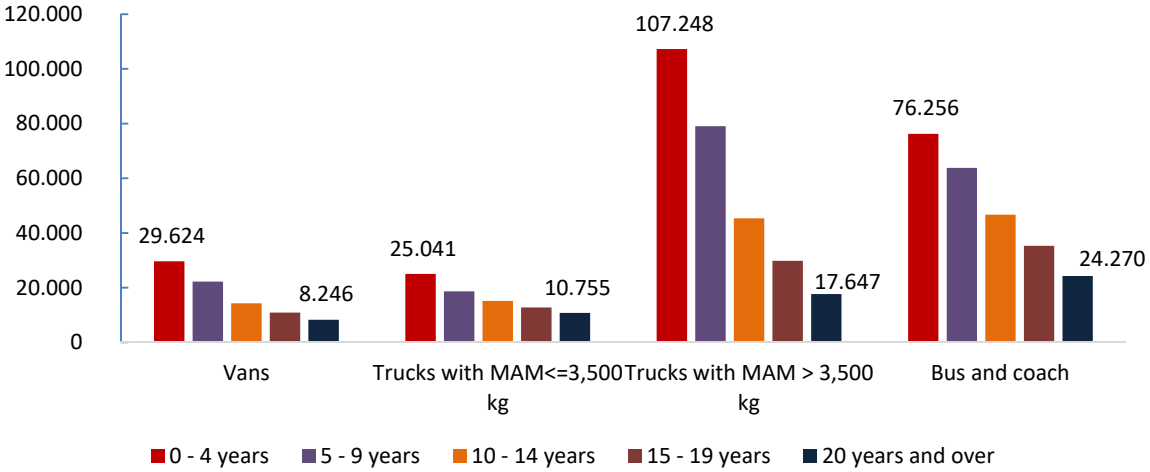
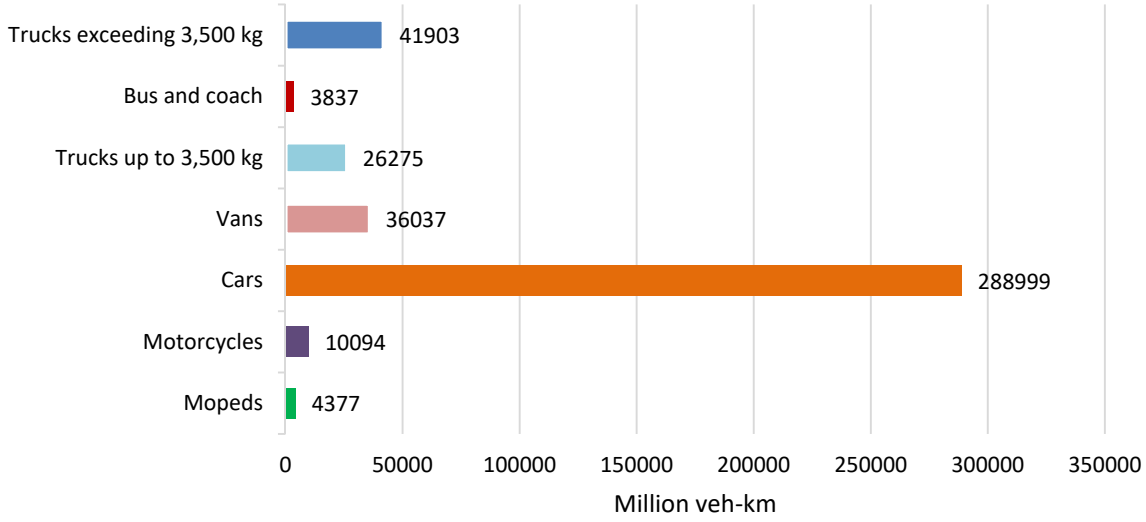


Figure 21. Total kilometres travelled by type of vehicle. Million veh-km. Year 2019



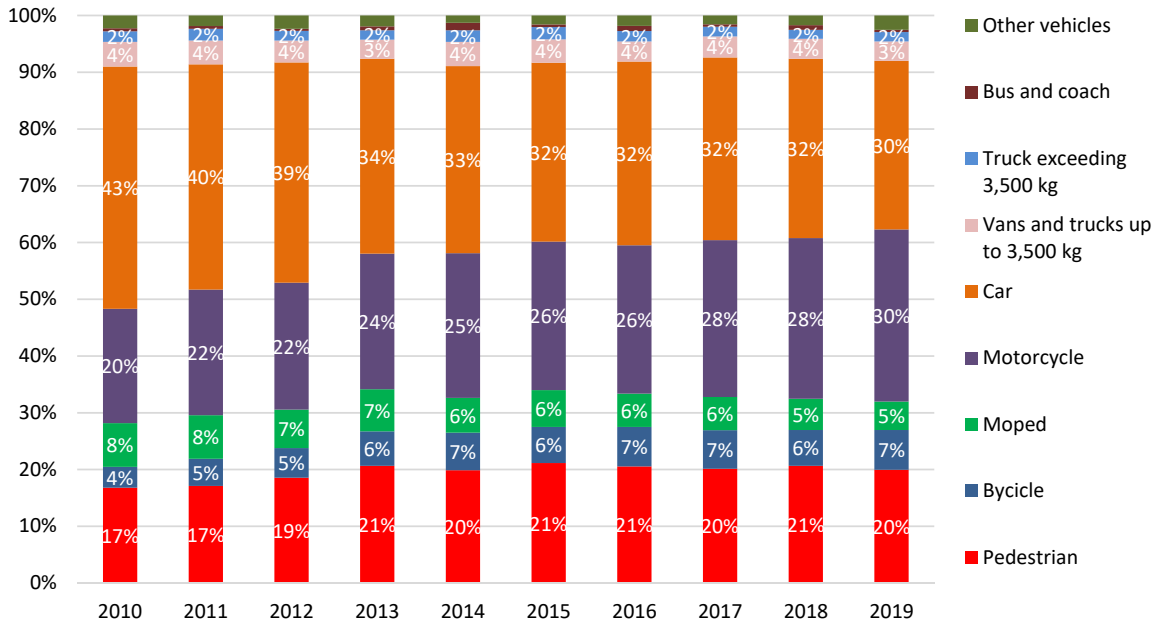
Performance indicators: accidents and victims

Mode of transport in casualty accidents

Cars are the most commonly involved mode of transport in road traffic accidents. There is at least one car involved in four out of five casualty accidents, a ratio that has remained roughly constant over the last decade. However, in terms of fatalities plus hospitalised injured casualties in cars, the evolution is positive (from 43% in 2010 to 30% in 2019). The modes of transport which show a growing participation are all vulnerable: motorcycles - in 2010 they represented 20% of the fatalities and hospitalised injured casualties, in 2019 they represented 30%; pedestrians - they have gone from 17% in 2010 to 20% in 2019; and bicycles - from 4% in 2010 to 7% in 2019.

The following figure shows the percentage of fatalities as well as hospitalised injured casualties on all roads by mode of transport.

Figure 22. Evolution of the distribution of fatalities and hospitalised injured casualties by mode of transport. Spain, 2010-2019



Comparing with 2018, in 2019 there have been decreases in the number of car fatalities (91 individuals), moped fatalities (13 individuals), bus or coach fatalities (9 individuals), van and trucks up to 3,500 kg fatalities (7 individuals), pedestrian fatalities (5 individuals) and trucks exceeding 3500 kg fatalities (3 individuals). In the rest of modes of transport, the number of fatalities has increased, especially motorcyclists (58 individuals) and bicycle users (22 individuals).

If we standardize to 100 the number of fatalities in 2010 (figure 24), the values in 2019 express the percentage change compared to 2010. Bicycles and motorcycles are the modes of transport which show the worst evolution and at the opposite end are mopeds, cars, vans and trucks up to 3,500 kg.

Figure 23. Evolution of fatalities by mode of transport. Spain, 2010-2019

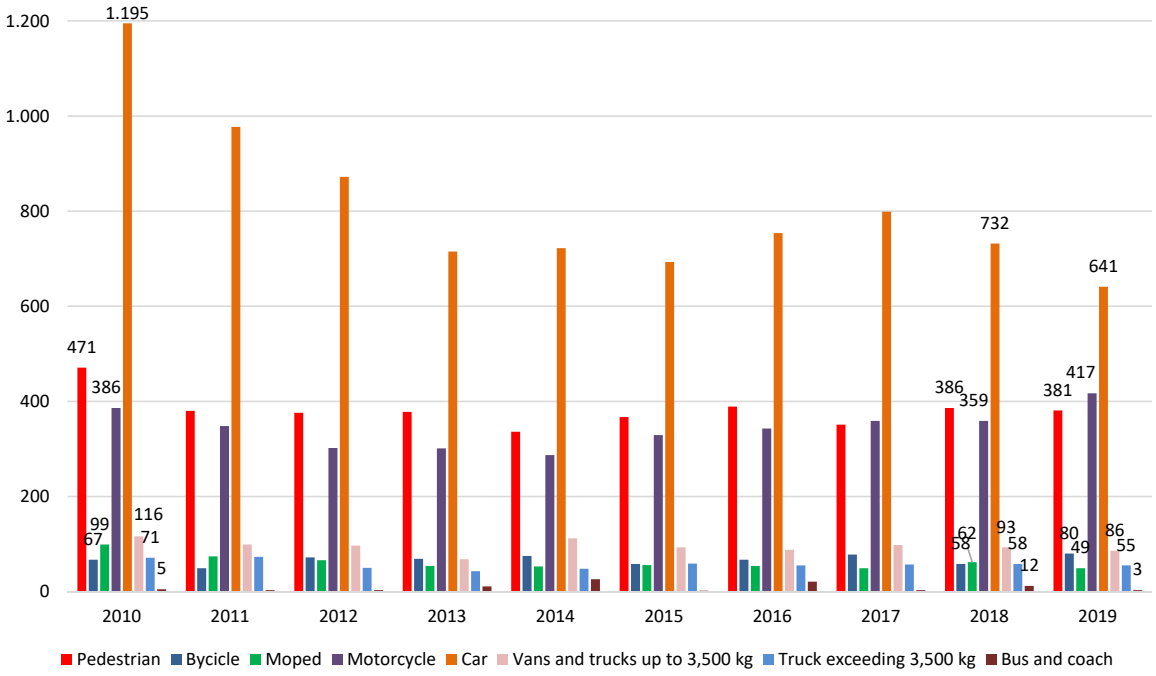
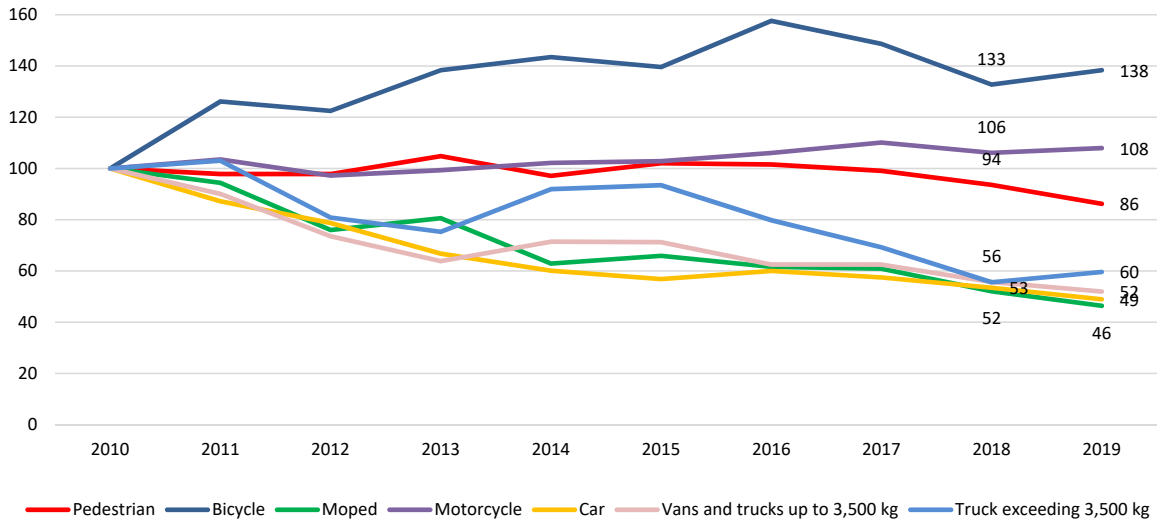


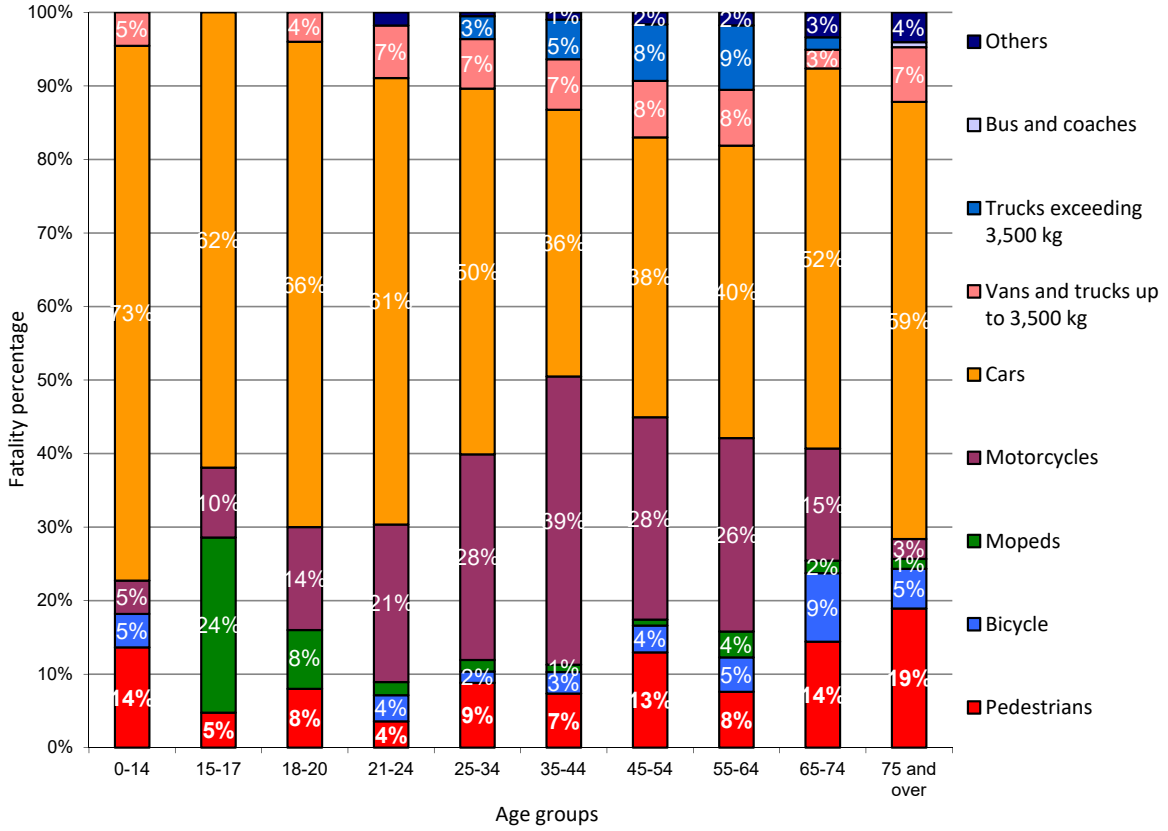
Figure 24. Evolution of fatalities by mode of transport. Base 2010=100. Spain, 2010-2019



As regards the distribution by age and by mode of transport:

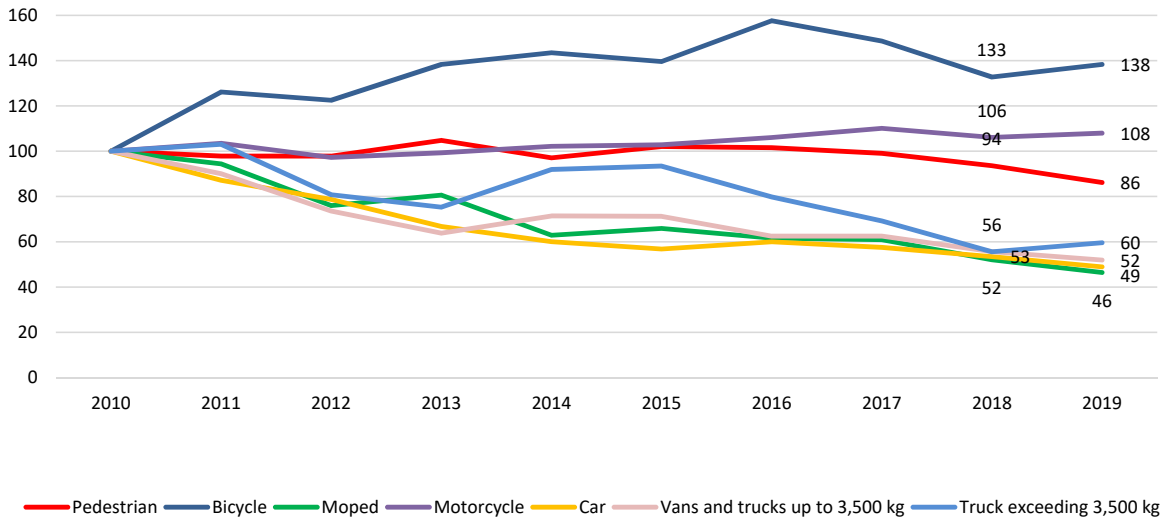
- Between 0 and 14 years of age, the fatalities are mainly car occupants and pedestrians.
- Between 18 and 24 years of age, the highest percentage is as car occupants.
- As motorcyclists, the most affected groups are the 25 - 54 years of age, whereas the 15 - 17 age group is the most affected group in mopeds.
- Persons aged over 75 show high percentages as pedestrians.

Figure 25. Percentage distribution of the number of fatalities by mode of travel and age. Spain, 2019



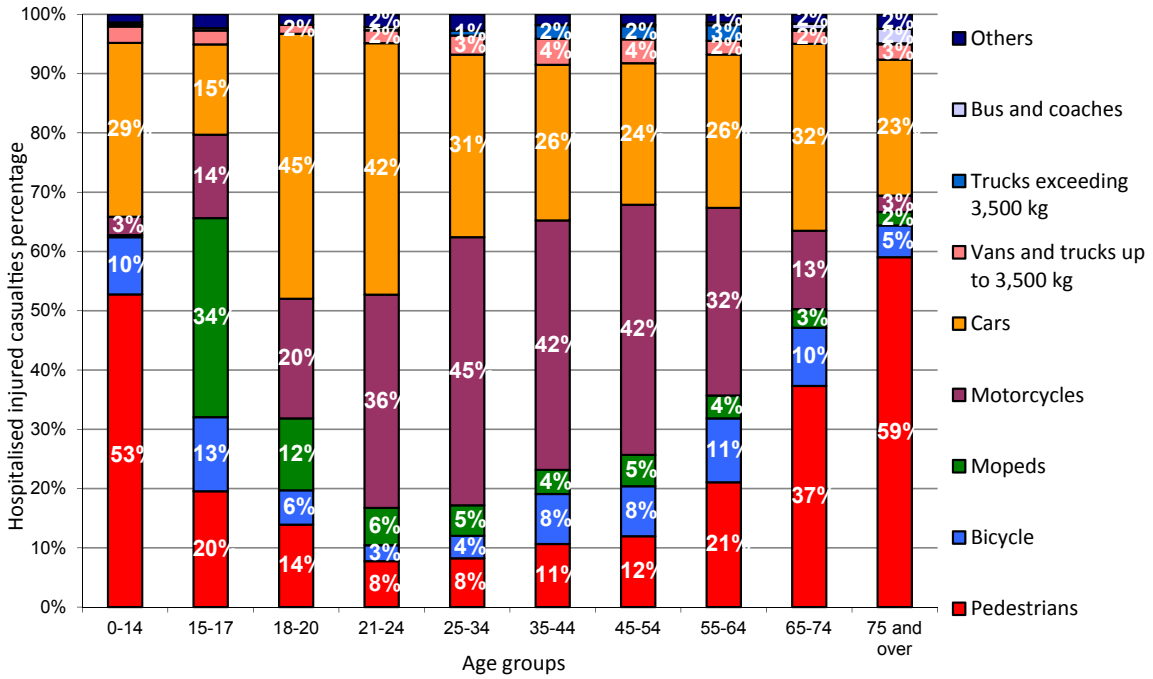
In comparison with the previous year, in 2019 there have been widespread decreases in the number of hospitalised injured casualties: car occupants (224 individuals), pedestrians (145 individuals), moped users (57 individuals), bus or coach users (40 individuals), vans and trucks up to 3,500 kg (19 individuals). The increases were seen in users of motorcycles (47 individuals), bicycles (26 individuals) and trucks exceeding 3,500kg (8 individuals).

Figure 26. Evolution of hospitalised injured casualties by mode of transport. Base 2009=100. Spain, 2010-2019



As regards the distribution by age and by mode of transport of the hospitalised injured casualties:

Figure 27. Percentage distribution of the number of hospitalised injured casualties by mode of transport and age. Spain, 2019

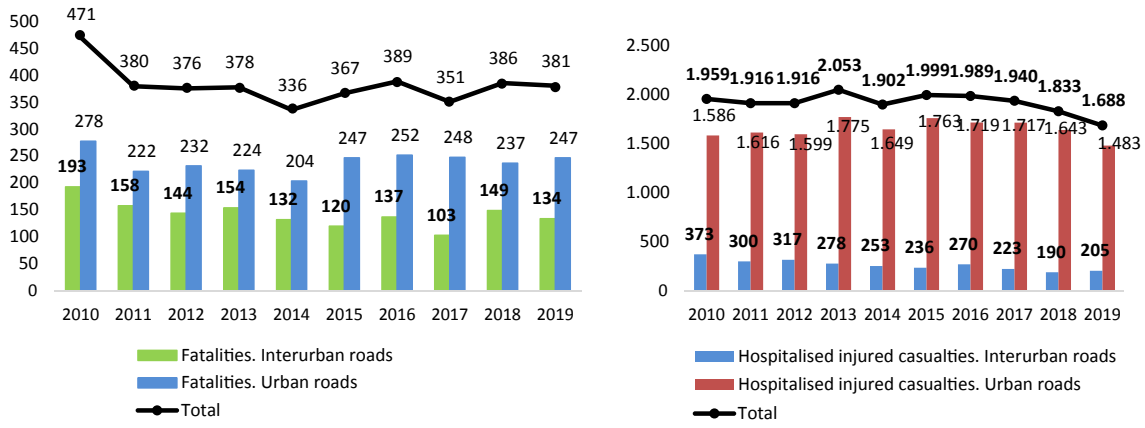


Pedestrians

In 2019, 381 pedestrians were killed, accounting for 22% of all fatalities; 1,688 were admitted to hospital and 12,333 were non-hospital injured casualties. Accidents involving pedestrians mainly occurred on urban roads (94%), roads that registered the highest percentage of pedestrians killed (65%) and required admission to hospital (88%).

There were 5 fewer pedestrian fatalities (-1%) in 2019 compared to 2018, distributed as follows: 15 fewer pedal cyclists on interurban roads (-10%) and 10 more on urban roads (+4%).

Figure 28. Evolution of road fatalities and hospitalised injured casualties on interurban and urban roads. Spain, 2010-2019



On urban roads, the number of pedestrian fatalities presents slightly higher figures between 2015-2019 than between 2011-2014, opposite behaviour to the pattern observed on interurban roads

.

Table 11. Road traffic casualty accidents involving a pedestrian on urban and interurban roads. Spain, 2019

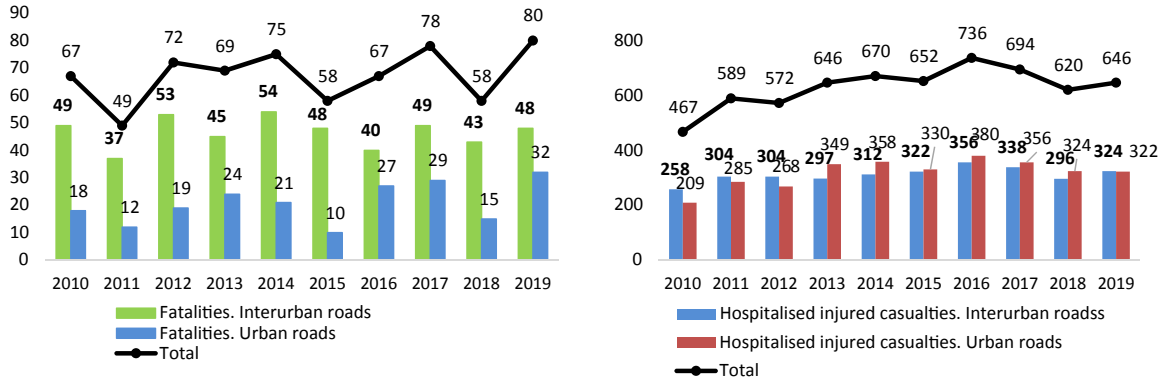
Type of road	Casualty accidents		Fatalities		Hospitalised injured casualties		Non-hospitalised injured casualties	
	Number	%	Number	%	Number	%	Number	%
Interurban roads	825	6%	134	35%	205	12%	561	5%
Urban roads	12,744	94%	247	65%	1,483	88%	11,772	95%
Total	**13,569**	**100%**	**381**	**100%**	**1,688**	**100%**	**12,333**	**100%**

Pedal cyclists

In 2019, there were 80 pedal cyclist fatalities, 646 hospitalised and 6,793 non-hospitalised injured casualties. The majority occurred on urban roads (72%), however, the greatest number of pedal cyclist fatalities occurred on interurban roads - 48 deaths - as against the 32 deaths on urban roads.

There were 22 more pedal cyclist fatalities in 2019 compared to 2018, distributed as follows: 5 more pedal cyclists on interurban roads and 17 more on urban roads.

Figure 29. Evolution of pedal cyclist fatalities and hospitalised injured casualties on interurban and urban roads. Spain, 2010-2019



On urban roads, the number of pedal cyclist fatalities indicates a relatively growing trend since 2011 against a slight stabilisation on interurban roads.

Table 12. Road traffic casualty accidents involving a pedal cycle on urban and interurban roads. Spain, 2019

Type of road	Casualty accidents		Fatalities*	Hospitalised injured casualties		Non-hospitalised injured casualties	
	Number	%	Number	Number	%	Number	%
Interurban roads	2,213	28%	48	324	50%	2,039	30%
Urban roads	5,624	72%	32	322	50%	4,754	70%
Total	**7,837**	**100%**	**80**	**646**	**100%**	**6,793**	**100%**

**The percentage distribution is not shown, as the total number of fatalities is below 100.*

Moped users

In 2019 the number of casualty accidents involving a moped was 6,977, accounting for 7% of the total, two percentage points above the figure corresponding to mopeds in the 2019 vehicle fleet.

The majority of accidents involving a moped occur on urban roads (88%) and it is where the highest number of hospitalised and non-hospitalised injured casualties (77% and 88% respectively) is registered. In the case of fatalities, the distribution is somewhat higher on interurban roads (27) than on urban roads (22).

In 2019 there were fewer moped user fatalities (13) and fewer hospitalised injured casualties (11%) than in 2018.

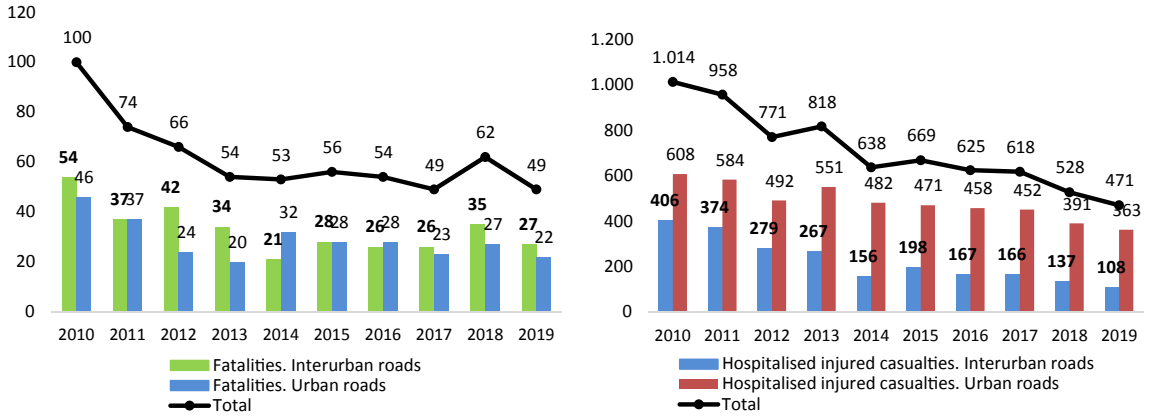
The evolution of the number of moped users killed and injured shows a decreasing trend since 2010, stabilising in the current values as of 2014, except in 2018, a year in which there was a slight increase.

Table 13. Road traffic casualty accidents involving a moped on urban and interurban roads. Spain, 2019

Type of road	Casualty accidents		Fatalities*	Hospitalised injured casualties		Non-hospitalised injured casualties	
	Number	%	Number	Number	%	Number	%
Interurban roads	831	12%	27	108	23%	790	12%
Urban roads	6146	88%	22	363	77%	6071	88%
Total	**6,977**	**100%**	**49**	**471**	**100%**	**6,861**	**100%**

*The percentage distribution is not shown, as the total number of fatalities is below 100.

Figure 30. Evolution of road fatalities and hospitalised injured casualties involving a moped on interurban and urban roads. Spain, 2010-2019



Motorcyclists

In 2019 motorcycle users represented 28% of the total casualty accidents, i.e. they were involved in 29,116 accidents whereas the percentage of motorcycles on the vehicle fleet was 10%. 75% of

the casualty accidents involving motorcycles occurred on urban roads where 55% of hospitalised and 77% of non-hospitalised injured motorcyclists was registered. Meanwhile, fatal injuries occurred more frequently on interurban roads: 70% of motorcyclist fatalities occurred on this type of road.

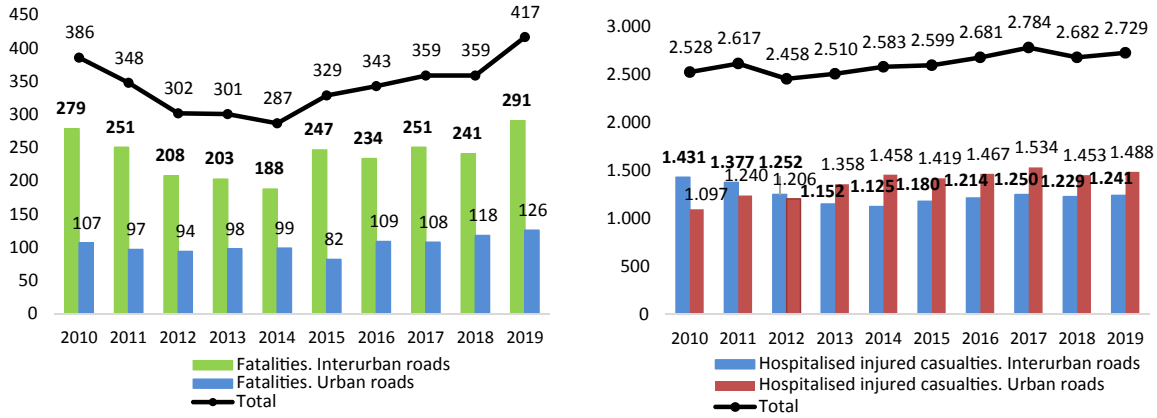
In 2019 compared with 2018, there was an increase in the number of motorcyclists killed by 21% and hospitalised injured casualties by 1% on interurban roads. On urban roads, there were 10 more motorcyclist fatalities and 2% more hospitalised injured casualties as against the previous year.

The evolution of fatalities since 2009 indicates that figures have worsened slightly both in the urban and interurban areas since the year 2014, when there was a change in the trend, the number of fatalities increased during the last few years.

Table 14. Road traffic casualty accidents involving a motorcycle on urban and interurban roads. Spain, 2019

Type of road	Casualty accidents		Fatalities		Hospitalised injured casualties		Non-hospitalised injured casualties	
	Number	%	Number	%	Number	%	Number	%
Interurban roads	7,169	25%	291	70%	1,241	45%	6,345	23%
Urban roads	21,947	75%	126	30%	1,488	55%	21,256	77%
Total	**29,116**	**100%**	**417**	**100%**	**2,729**	**100%**	**27,601**	**100%**

Figure 31. Evolution of road fatalities and hospitalised injured casualties involving a motorcycle on interurban and urban roads. Spain, 2010-2019



Car users

Car users were involved in 77,915 casualty accidents, that is, in 75% of the accidents registered in 2019; cars account for 68% in the Spanish vehicle fleet. Of the 1,755 road traffic deaths that occurred in 2019, 37% (641 fatalities) were travelling in a car, either as drivers or passengers.

63% of the casualty accidents involving at least one car occurred on urban roads; however, 90% (579 individuals) of car fatalities occurred on road accidents on interurban roads.

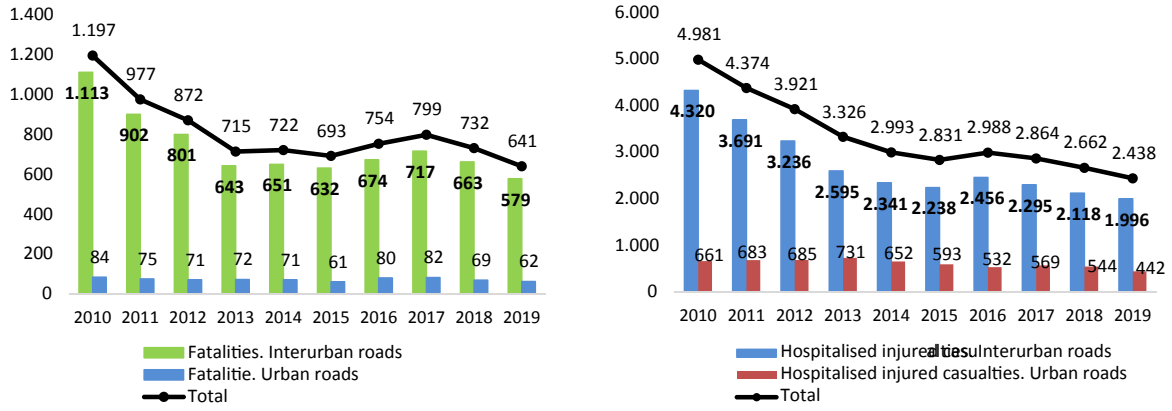
Car fatalities have decreased by 13% on interurban roads in 2019 in comparison with 2018. On urban roads the number of fatalities has decreased by 7 fatalities in 2019 compared with 2018.

The evolution shows a downward trend since 2009 both in the number of fatalities and in hospitalised injured car occupants, except in 2016 and 2017, years with a slight increase.

Table 15. Road traffic casualty accidents involving cars on urban and interurban roads. Spain, 2019

Type of road	Casualty accidents		Fatalities		Hospitalised injured casualties		Non-hospitalised injured casualties	
	Number	%	Number	%	Number	%	Number	%
Interurban roads	29,045	37%	579	90%	1,996	82%	36,376	56%
Urban roads	48,870	63%	62	10%	442	18%	28,871	44%
Total	**77,915**	**100%**	**641**	**100%**	**2,438**	**100%**	**65,247**	**100%**

Figure 32. Evolution of road fatalities and hospitalised injured casualties involving a car on interurban and urban roads. Spain, 2010-2019



Users of vehicles for the transport of goods and passengers

Van users

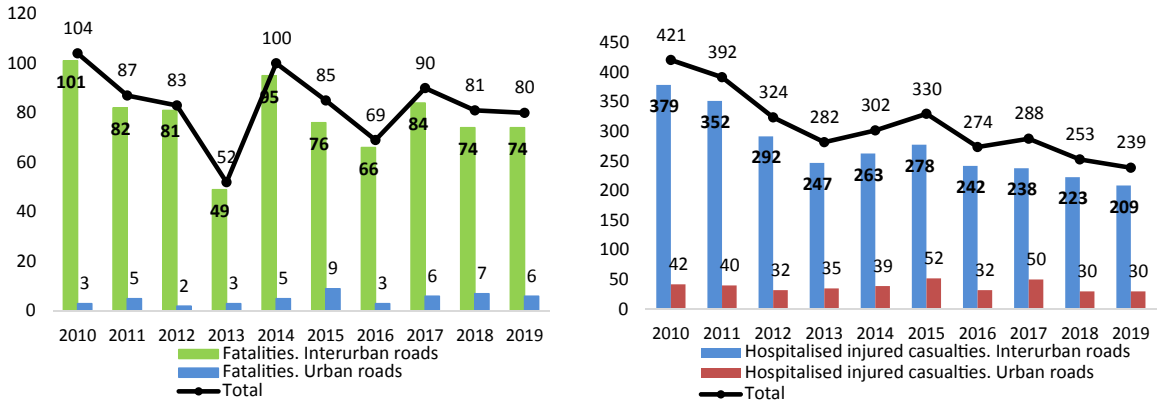
In 2019, the number of van occupants killed on interurban roads was: 74 of the 80 occupants killed lost their lives on this type of road. As for third-party fatalities (occupants in other vehicles or pedestrians) involved in van accidents, 78 of the 129 fatalities occurred on interurban roads.

In 2019 there was 1 fewer fatality in vans, the same number of fatalities on interurban roads and 1 fewer fatality on urban roads than in 2018.

Table 16. Road traffic casualty accidents involving a van on urban and interurban roads. Spain, 2019

Type of road	Casualty accidents		Total fatalities		Occupant fatalities	Third-party fatalities		Hospitalised injured occupants		Non-hospitalised injured occupants	
	Number	%	Number	%	Number	Number	%	Number	%	Number	%
Interurban roads	4,688	43%	152	73%	74	78	60%	209	87%	3,319	66%
Urban roads	6,286	57%	57	27%	6	51	40%	30	13%	1,732	34%
Total	**10,974**	**100%**	**209**	**100%**	**80**	**129**	**100%**	**239**	**100%**	**5,051**	**100%**

Figure 33. Evolution of road fatalities and hospitalised injured casualties involving a van on interurban and urban roads. Spain, 2010-2019



Users of trucks with a MAM not exceeding 3,500 kg

In 2019, trucks with a MAM not exceeding 3,500 kg were involved in 1,535 casualty accidents; its incidence was similar to the accidents occurring on urban roads (54%) and on interurban roads (46%).

As regards fatalities, hospitalised and non-hospitalised injured occupants of trucks with a MAM not exceeding 3,500 kg were most frequently reported in accidents occurring on interurban roads (6 fatalities, 24 hospitalised and 343 non-hospitalised injured casualties). On urban roads, no truck occupant fatality was reported and there were 3 hospitalised injured occupant casualties. As regards third-party fatalities (occupants in other vehicles or pedestrians, in an accident in which there was a truck of this category involved), there were 19 fatalities on interurban roads and 3 on urban roads.

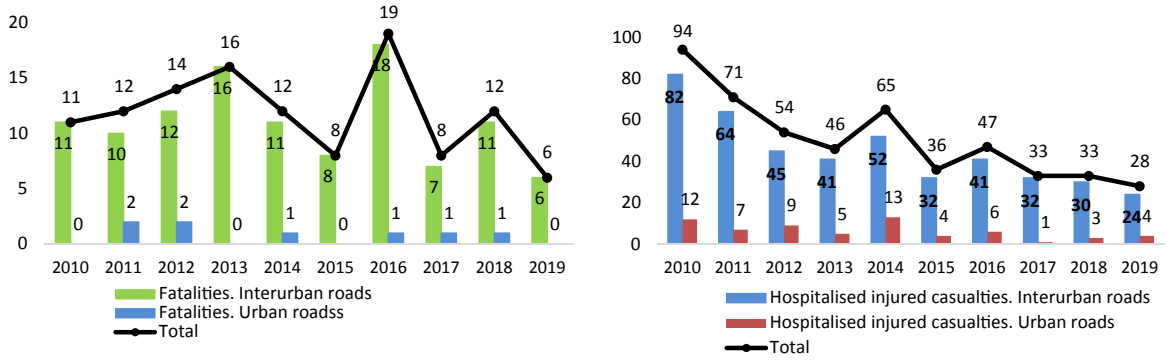
As compared to 2018, there were 5 fewer fatalities and 6 fewer hospitalised injured casualties on interurban roads in 2019; they were travelling as occupants in trucks with a MAM not exceeding 3,500 kg. On urban roads and for this truck category, in 2019 there was 1 fewer fatality and 1 more fatality.

Table 17. Casualty accidents involving trucks with a MAM not exceeding 3500 kg on interurban and urban roads. Spain, 2019

Type of road	Casualty accidents		Total fatalities*	Occupant fatalities*	Third-party fatalities*	Hospitalised injured occupants*	Non-hospitalised injured occupants	
	Number	%	Number	Number	Number	Number	Number	%
Interurban roads	706	46%	25	6	19	24	343	69%
Urban roads	829	54%	3	0	3	4	152	31%
Total	**1,535**	**100%**	**28**	**6**	**22**	**28**	**495**	**100%**

**The percentage distribution is not shown, as the total number of fatalities is below 100.*

Figure 34. Evolution of fatalities and hospitalised injured casualties involving trucks not exceeding 3,500 kg on interurban and urban roads. Spain, 2010-2019



Users of trucks with MAM exceeding 3,500 kg

Trucks with MAM exceeding 3500 kg were involved in 4,252 casualty accidents, occurring mainly on interurban roads (74%).

As for occupant fatalities, third-party fatalities (occupants in other vehicles involved in an accident in which there was a truck of this category involved), hospitalised and non-hospitalised injured occupants mainly occurred in accidents on interurban roads.

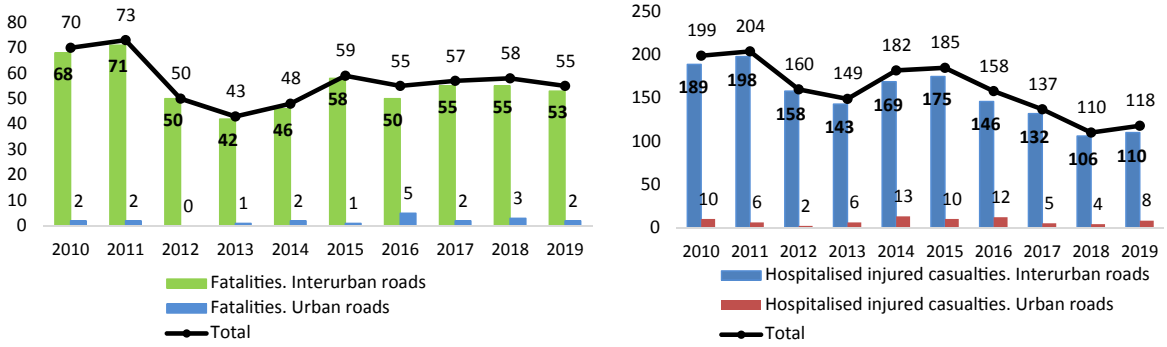
There were 2 fewer fatalities (53 occupants of trucks with MAM exceeding 3500 kg) on interurban roads in 2019 than in 2018. On these roads, the number of occupants of these trucks requiring hospitalization increased (4% more) as compared with 2018. On urban roads, there was 1 fewer fatality and 4 more hospitalised injured casualties than in 2018.

Table 18. Casualty accidents involving trucks with MAM exceeding 3500 kg on interurban and urban roads. Spain, 2019

Type of road	Casualty accidents		Total fatalities		Occupant fatalities*	Third-party fatalities		Hospitalised injured occupants		Non-hospitalised injured occupants	
	Number	%	Number	%	Number	Number	%	Number	%	Number	%
Interurban roads	3,164	74%	204	86%	53	151	83%	110	93%	996	86%
Urban roads	1,088	26%	32	14%	2	30	17%	8	7%	157	14%
Total	**4,252**	**100%**	**236**	**100%**	**55**	**181**	**100%**	**118**	**100%**	**1,153**	**100%**

**The percentage distribution is not shown, as the total number of fatalities is below 100.*

Figure 35. Evolution of road fatalities and hospitalised injured casualties involving trucks exceeding 3,500 kg on interurban and urban roads. Spain, 2010-2019



Bus or coach users

In 2019, there were 2,392 casualty accidents in which a bus or coach was involved; 88% of them occurred on urban roads. On this type of road there were 2,108 accidents in which 23 people were killed (2 occupants), 31 bus or coach occupants required hospitalization and 2,027 injured occupants did not require hospitalization.

On interurban roads, there were 284 casualty accidents in which a bus or coach was involved. There was 1 occupant fatality, 5 occupants required hospitalization and 280 occupants did not.

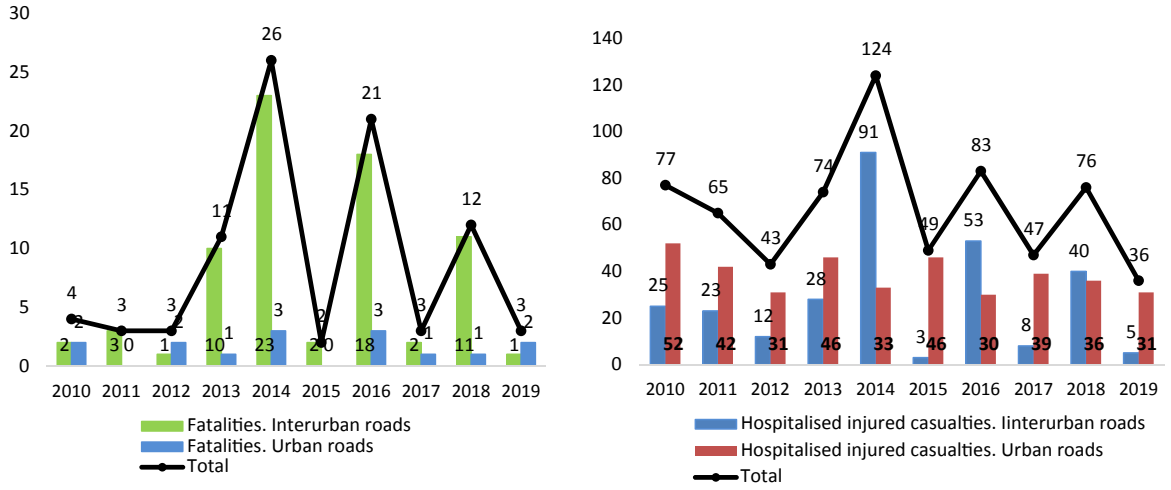
In 2019, on interurban roads, there were 10 occupant fatalities and 35 fewer hospitalised injured casualties than in 2018; on urban roads there were 2 occupant fatalities, one more than in 2018, and 5 fewer hospitalised injured occupant casualties than in 2018.

Table 19. Road traffic casualty accidents involving buses or coaches on urban and interurban roads. Spain, 2019

Type of road	Casualty accidents		Total fatalities*	Occupant fatalities*	Third-party fatalities*	Hospitalised injured occupants	Non-hospitalised injured occupants	
	Number	%	Number	Number	Number	Number	Number	%
Interurban roads	284	12%	11	1	10	5	280	12%
Urban roads	2,108	88%	23	2	21	31	2,027	88%
Total	**2,392**	**100%**	**34**	**3**	**31**	**36**	**2,307**	**100%**

**The percentage distribution is not shown, as the total number of fatalities is below 100.*

Figure 36. Evolution of road fatalities and hospitalised injured casualties involving a bus or coach on interurban and urban roads. Spain, 2010-2019



Performance indicators

Age of the vehicle fleet

To determine the age of the vehicle fleet is essential to make the following observations:

1. Mopeds are excluded from the calculation of the age of fleet since it was not compulsory to register them until 27 July 1999, date of entry into force of the General Regulations on Vehicles (RD 2822/98) with latest deadline for moped registration 27 January 2002.

2. There are vehicles that almost certainly are not used on public roads and have not been deregistered by their owners so the fleet figures are probably overstated, and the older the vehicles the greater the overestimation.

For the above reasons, a detailed study on the age of the vehicle fleet requires excluding mopeds and considering various groups depending on the age of the vehicles, that involve an approach to the real vehicle fleet. The vehicle fleet under 25 years of age represent 87% of the total registered vehicles; the vehicles under 15 years of age represent 60% of the registered vehicles.

Table 20. Basic statistical measures of the vehicle fleet (moped excluded) and their age by vehicle type. Spain, 2019

Age of the fleet	Measure	Trucks and vans	Buses or coaches	Cars	Motorcycles	Industrial Tractors	Other vehicles	Total without Mopeds
	Total	**5,015,973**	**65,470**	**24,558,126**	**3,607,226**	**232,680**	**467,493**	**33,946,968**
Complete	Age average (years)	16.5	14.1	13.9	16.4	10.7	16.3	14.6
	St. dev.	11.2	13.5	11.0	14.0	9.6	9.2	11.4
	Coef. variation	67.8	95.3	79.0	85.3	89.9	56.3	78.3
	Total	**4,134,050**	**56,946**	**21,861,269**	**2,781,993**	**216,074**	**400,062**	**29,450,394**
Less than 25 years	Age average (years)	12.5	9.7	10.9	9.9	8.7	13.4	11.1
	St. dev.	6.7	6.1	6.5	6.0	6.3	5.7	6.5
	Coef. variation	53.4	63.4	59.7	60.4	71.9	42.8	58.9
	Total	**2,539,841**	**45,418**	**15,212,741**	**2,304,136**	**177,683**	**237,212**	**20,517,031**
Less than 15 years	Age average (years)	8.3	7.5	7.6	8.1	6.5	10.1	7.8
	St. dev.	4.9	4.6	4.7	4.7	4.5	4.8	4.8
	Coef. variation	58.2	62.0	62.0	58.3	68.1	47.8	61.1

Other useful statistical measures to avoid the problem of older vehicles that probably are not in circulation are the percentile values, especially the median or the 50th percentile. Thus, in the following table, in which the percentiles for the entire vehicle fleet have been calculated, it can be observed that half of all the passenger cars are 12,5 years or older. Where the rest of the vehicles are concerned, the medians range from 7.5 of industrial tractors and 14.5 of trucks and vans.

Table 21. Percentiles in years by type of vehicle of the vehicle fleet. Spain, 2019

Type of Vehicle/Percentile	10	20	30	40	50	60	70	80	90
Trucks and vans	2.5	6.5	10.5	13.5	14.5	16.5	19.5	23.5	30.5
Buses or coaches	1.5	3.5	5.5	8.5	11.5	13.5	15.5	18.5	31.5
Cars	1.5	3.5	6.5	10.5	12.5	14.5	16.5	19.5	25.5
Motorcycles	2.5	4.5	8.5	10.5	12.5	14.5	17.5	27.5	36.5
Industrial Tractors	1.5	2.5	3.5	5.5	7.5	11.5	13.5	15.5	20.5
Other Vehicles[1]	2.5	10.5	12.5	13.5	14.5	15.5	17.5	20.5	27.5
All without moped	**1.5**	**4.5**	**7.5**	**10.5**	**12.5**	**14.5**	**16.5**	**20.5**	**28.5**

[1] *The other vehicles category includes special vehicles such as sweepers, snowploughs, cranes, work-site machines, etc. Trailers and semi-trailers have been excluded.*

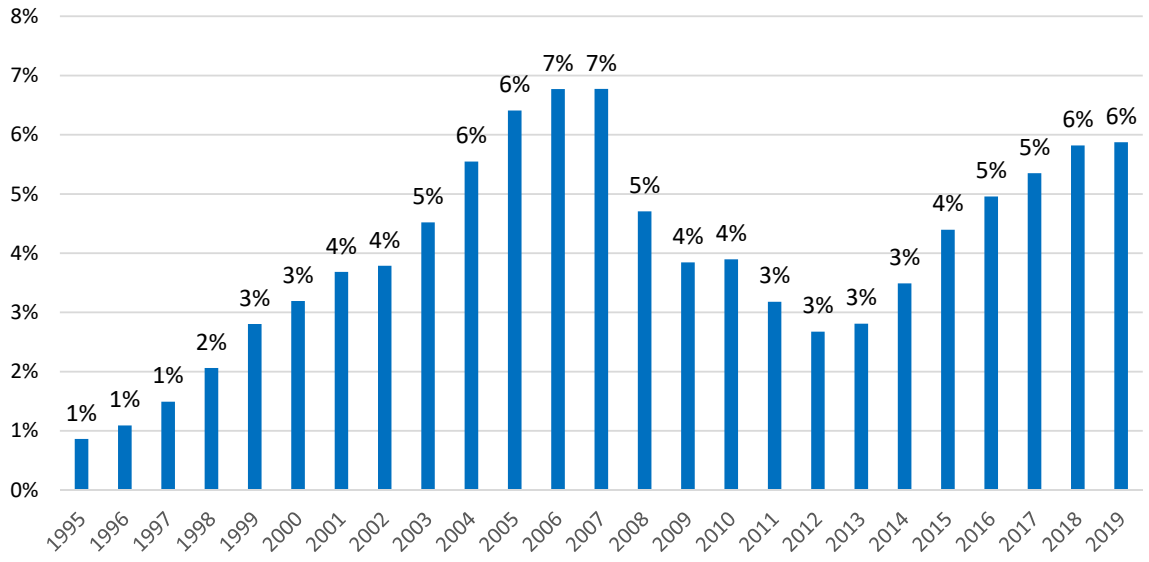
The average age of the vehicle fleet under 25 years ranges from 8.7 years for industrial tractors to 13.4 years for trucks with a MAM exceeding 3,500 kg. The average age of buses or coaches is 9.7 years. The average age of cars is 10.9 years, over the average age of motorcycles that is 9.9 years.

Table 22. Age of vehicle fleet*. Spain, 2011-2019.

Age of the fleet	Trucks ≤ 3,500kg	Trucks > 3,500kg	Industrial tractors	Vans	Buses or coaches	Cars	Motorcycles
2011	9.0	11.4	8.3	11.8	8.9	9.3	8.8
2019	13.3	13.4	8.7	11.4	9.7	10.9	9.9

** Only vehicles under 25 years of age are considered.*

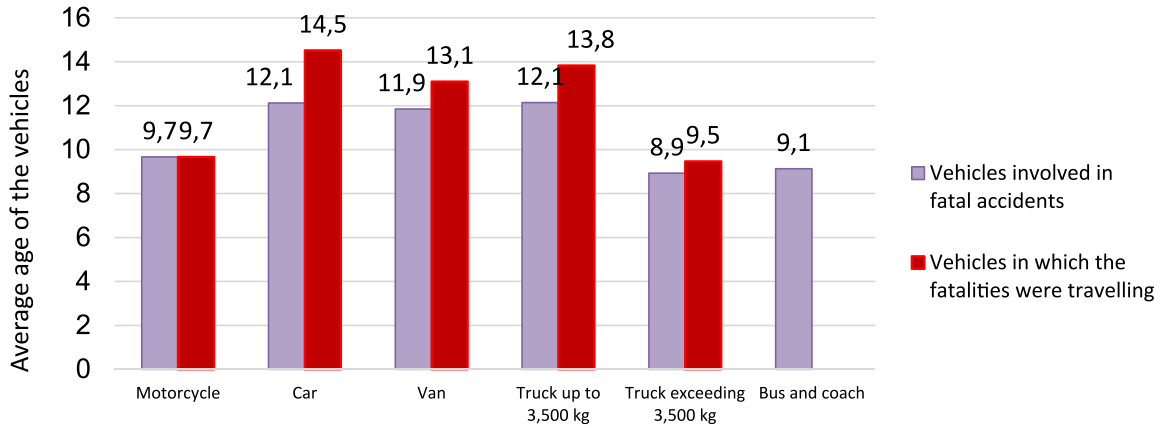
Figure 37. Percentage distribution of the vehicle fleet under 25 years of age, without mopeds, by registration year. Spain, 2019



Age of the vehicles involved in fatal traffic accidents

In 2019 on interurban roads, in the case of cars, vans, trucks up to 3,500 kg and exceeding 3,500 kg, the average age of the involved vehicles in fatal accidents is below the average age of the vehicles in which the fatalities were travelling, except in motorcycles, which are the same. For cars, the average age was 12.1 years in all the vehicles involved in fatal accidents and 14.5 years when selecting those in which the fatalities were travelling; in the case of vans, the average age was 11.9 years and 13.1 years respectively.

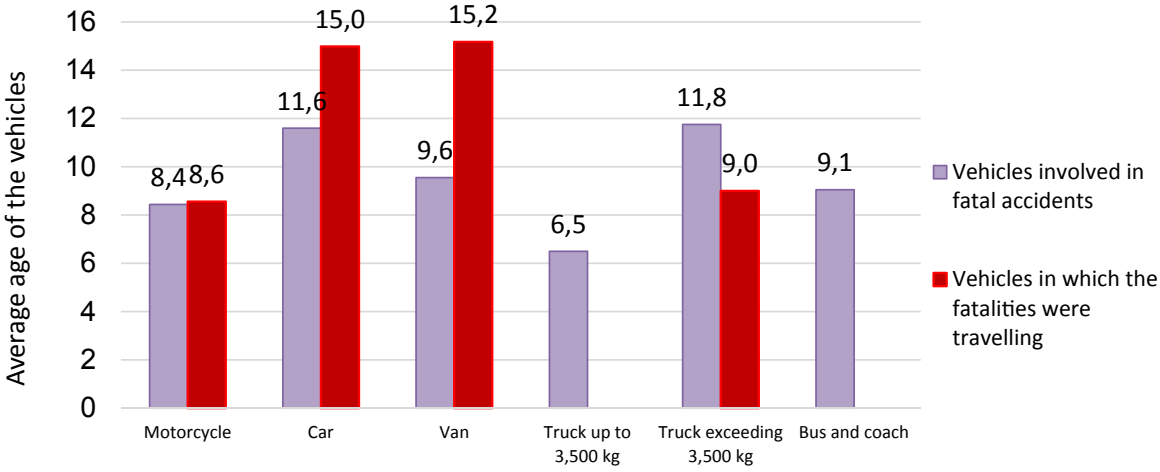
Figure 38. Average age of the vehicles involved in fatal accidents and of the vehicles in which the fatalities were travelling. Interurban roads. Spain, 2019



(The average age of the vehicles is not shown when the number of the units is below 10)

In 2019, on urban roads, the average age of the cars involved in fatal accidents was 11.6 years, a figure lower than that of cars in which fatalities were travelling (15.0).

Figure 39. Average age of the vehicles involved in fatal accidents and of the vehicles in which the fatalities were travelling. Urban roads. Spain, 2019



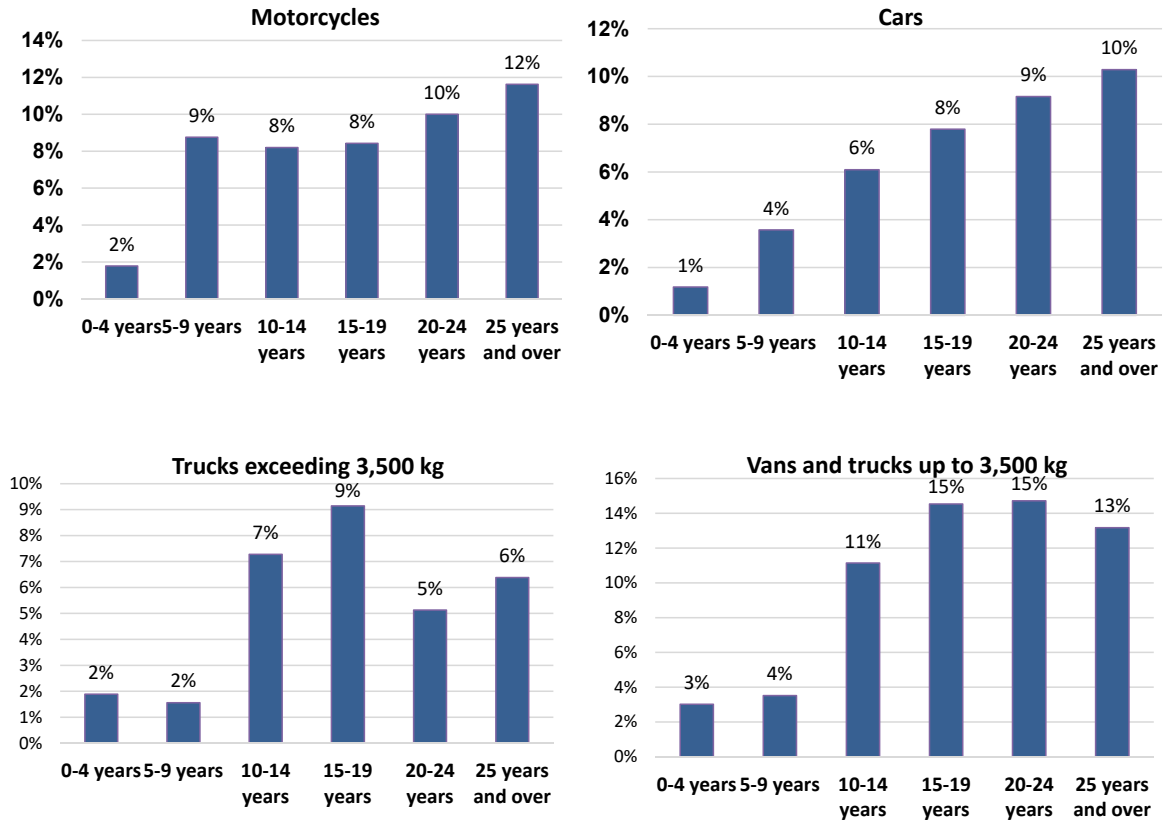
(The average age of the vehicles is not shown when the number of the units is below 10)

Roadworthiness tests for the vehicles involved in accidents

There is a link between the age of the vehicle involved in an accident and the result of its roadworthiness test, as may be noted from the data below. In the case of motorcycles, the percentage of vehicles with an expired roadworthiness test certificate went from 2% between 0 and 4 years to 8% from the age of 10 years. In the case of cars, the percentage went from 4% between 5 and 9 years to 8% from the age of 15 years.

As for vans and trucks up to 3,500 kg, the percentage of vehicles with an expired roadworthiness test certificate ranged between 3% and 15%. In trucks exceeding 3,500 kg the variation is between 2% and 9%.

Figure 40. Percentage of vehicles with an expired roadworthiness test certificate at the time of the accident. Vehicles involved in casualty accidents on interurban roads*. Spain, 2019



**Those accidents occurring in the Autonomous Regions of Catalonia and the Basque Country are not included. The total number of cases is indicated in brackets in each age group.*

4

Users

Exposure indicators

Registered drivers

In 2019 there were 27,311,015 registered drivers, a figure which means a percentage increase by 2% compared with 2018.The registered driver rate was at 683 per thousand driving age population. Between the age of 40 and 59, the rate exceeds 800 drivers per thousand population; for the age groups 25-39 and 60-64 the rate exceeds 700 drivers per thousand population; and for the age group 65-69 the rate exceeds the value 600.

Figure 41. Evolution of the registered drivers. Number of holders with at least one permit or driving licence. Evolution of the rate of drivers per 1,000 population whose age authorises them to drive. Spain, 2010-2019

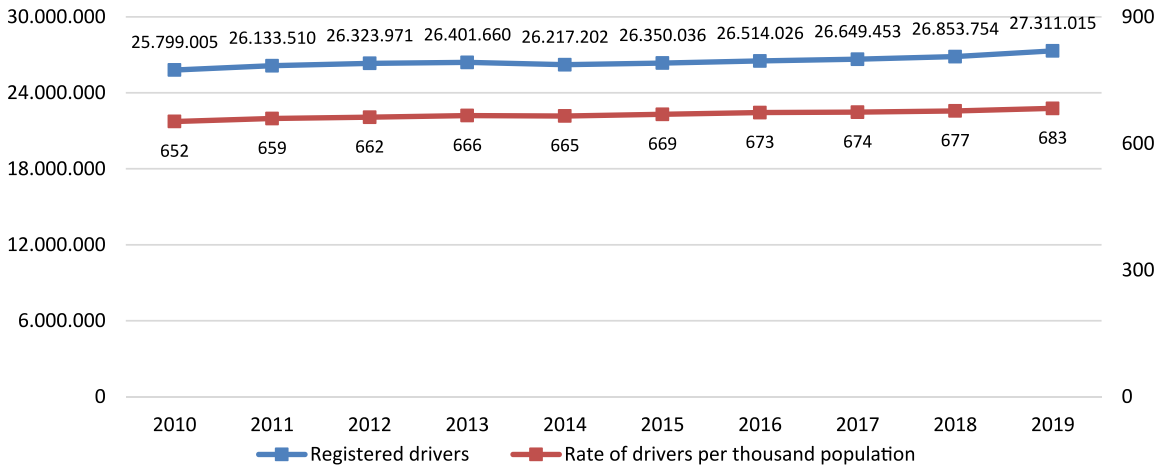
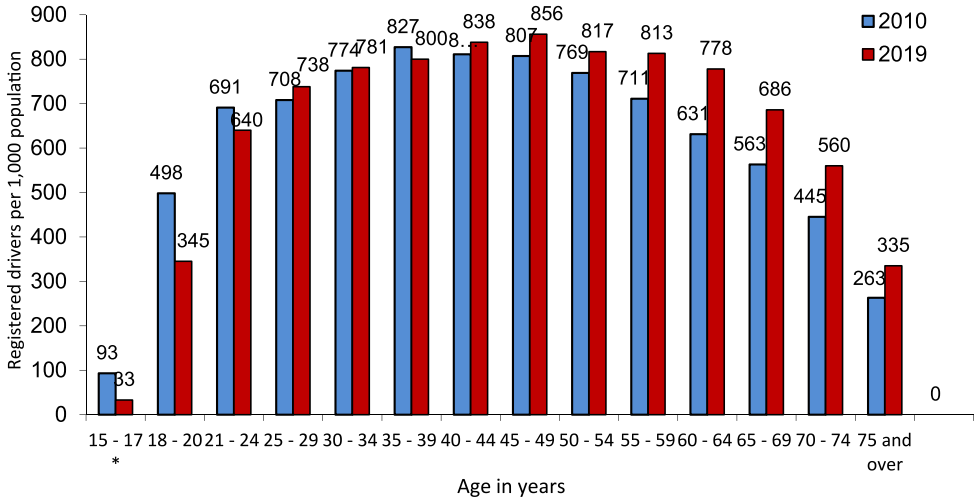


Figure 42. Registered drivers per 1,000 population whose age authorises them to drive. Spain, 2010-2019



Performance indicators: accidents and victims

Age and gender

- In 2019, males were killed 3.7 times more than females, the number of male fatalities was higher than female fatalities in all age groups. Males also register the greatest fatality rates per million population.
- Fatality rates per million population have increased compared to 2018 in the 45-54, 55-64, 75-84 and 85 and over age groups; the rates have decreased in the rest of the age groups. However, in comparison with 2010, the rates have decreased in all the age groups.

Figure 43. Fatalities by age groups and by gender. Spain, 2019

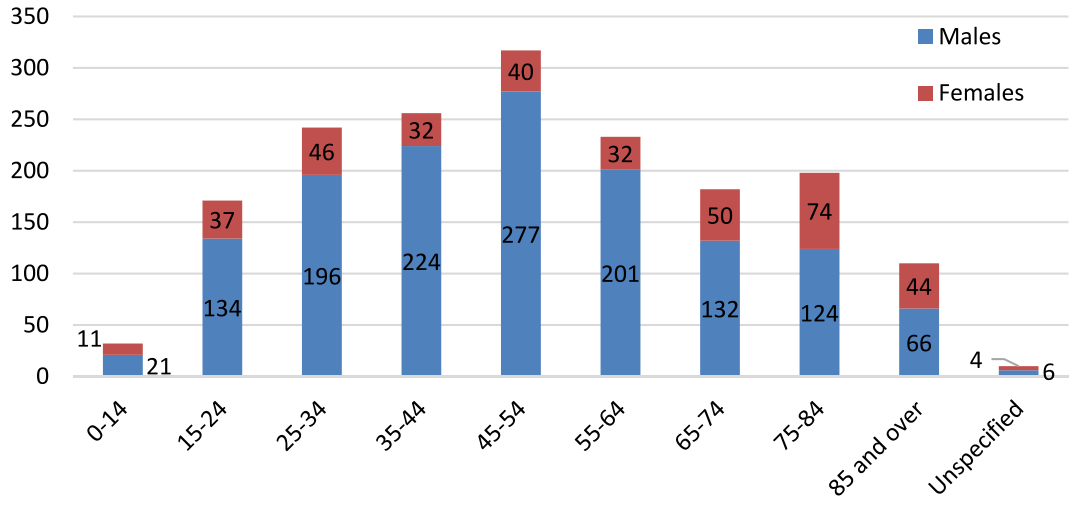
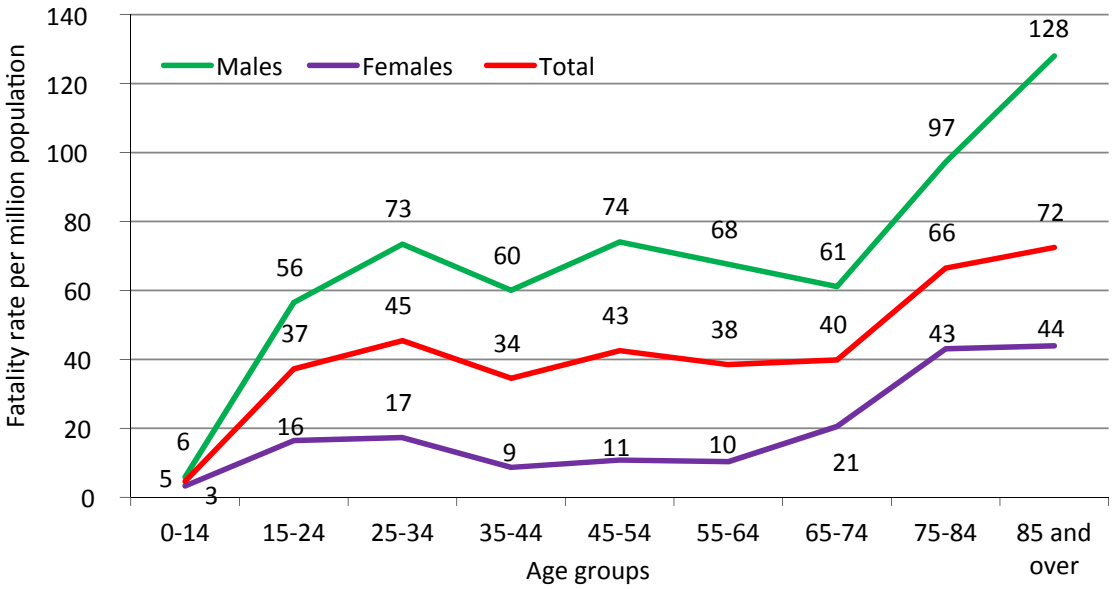
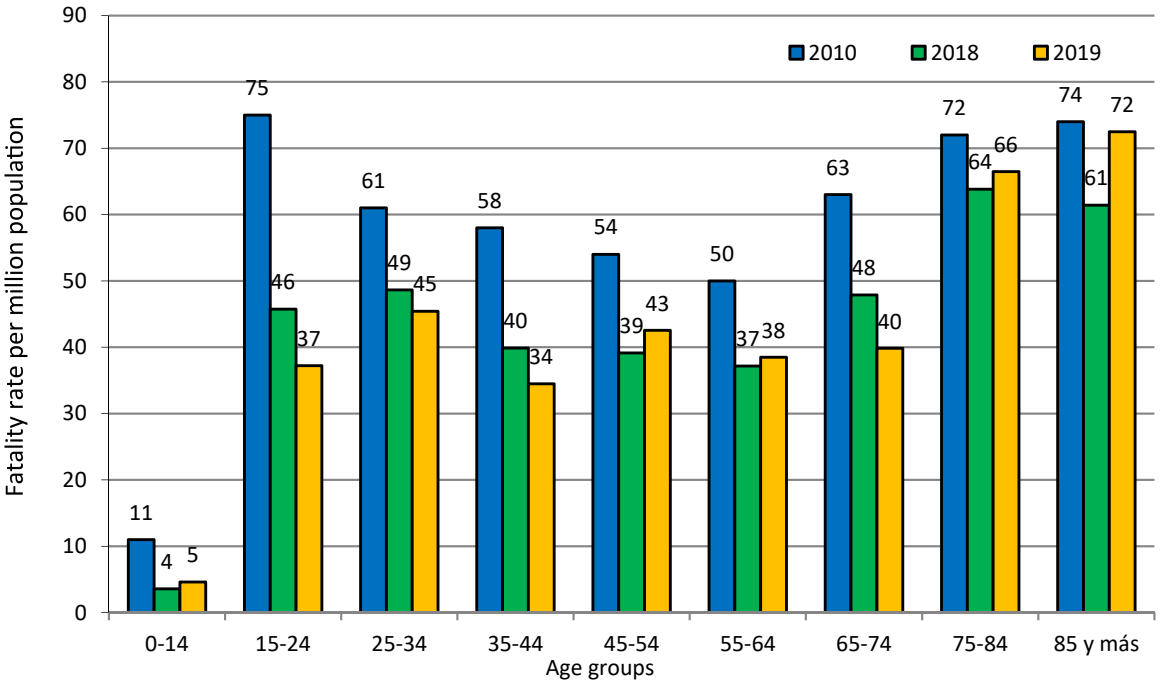


Figure 44. Fatality rate by age and gender per million population. Spain, 2019



As regards fatality rates per population by age and by gender, males register the highest rate in all age groups, the differences are largest with females in the 35-44, 45-54 and 55-64 age groups (almost seven times the rate for females).

Figure 45. Evolution of fatality rates by age groups. Rates per million population. Spain, 2010, 2018 and 2019



Children

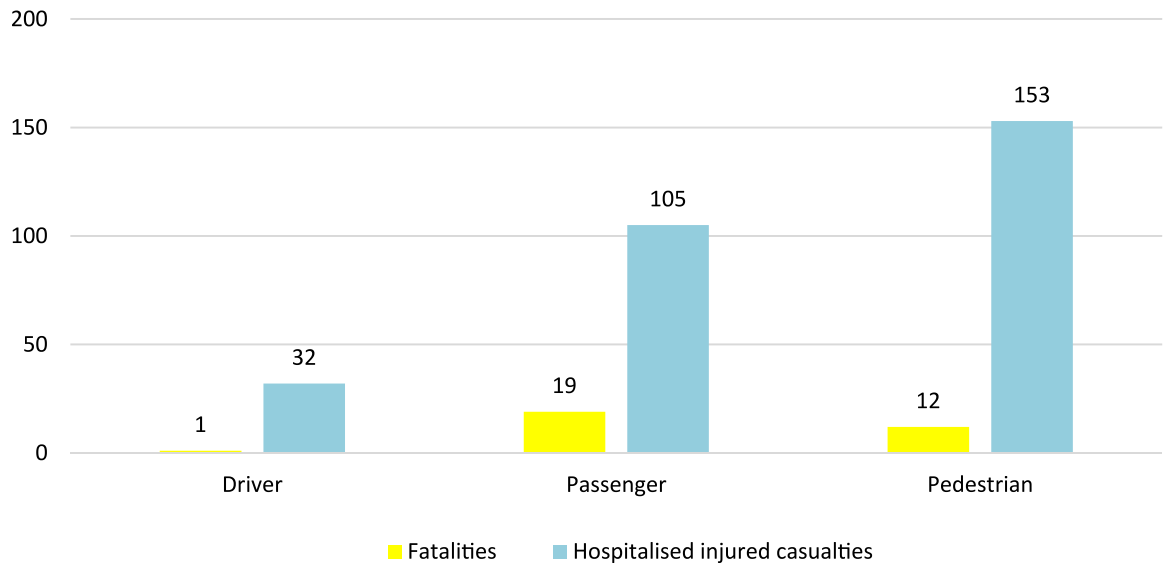
There were 32 child deaths in 2019 caused by a traffic accident (up to the age of 14), representing 2% of all fatalities. The case fatality rate for the 0-14 age group was 0.5, whereas for the rest of the age groups it was 1.3; the child fatality rate per million population was 5, whereas for the complementary set of ages it was 43.

Table 23. Comparison of severity degree as a result of road traffic accidents in children as compared with the rest of the population. Spain, 2019

	Up to 14 years	% on the total of ages	Other ages
Fatalities	32	2%	1,723
Hospitalised injured casualties	290	3%	8,323
Non-hospitalised injured casualties	6,330	5%	124,415
Total casualties	**6,652**	**5%**	**134,461**
Case fatality rate	0.5	-	1.3
Fatalities per million population	5	-	43
Hospitalised injured casualties per M p.tion	42	-	208

The greatest number of fatalities between 0 and 14 years (19 of the 32 fatalities) was registered when the children were passengers in cars. Of the hospitalised injured children, the highest frequency occurred as pedestrians - 53% - and secondly as passengers - 36%.

Figure 46. Child fatalities and hospitalised injured casualties (0 to 14 years) by type of user. Spain, 2019



Young people

There were 172 child deaths in 2019 caused by a traffic accident (aged 15 to 24), representing 10% of all fatalities. This group accounts for 9.8% of the Spanish population and 6.2% of the registered drivers.

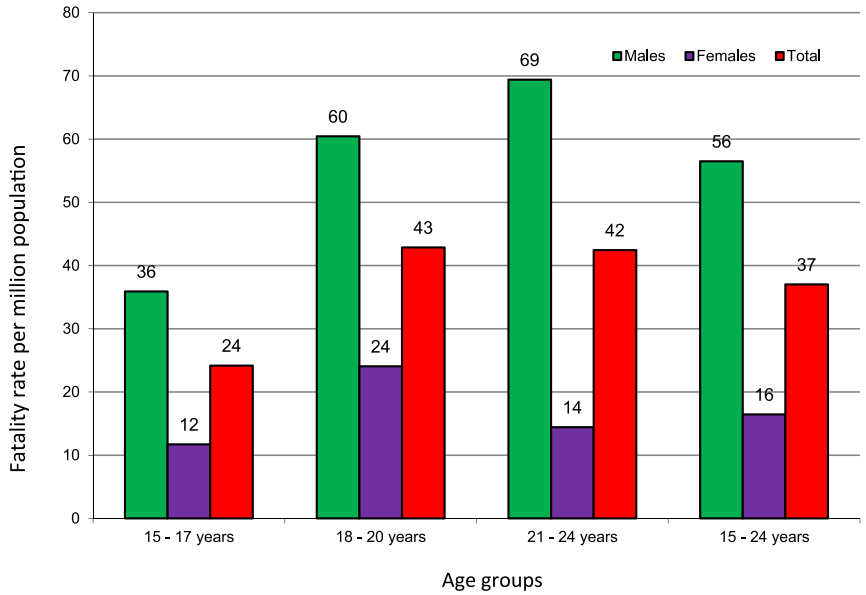
Their case fatality rate was at 0.7 in 2019. The fatality rate per million population for young people was at 37.

The fatality rate per million population for young people shows considerable differences by gender: in males is five times as high as that among females in the 21-24 age group and more than twice in the 18-20 age group.

Table 24. Comparison of severity degree as a result of road traffic accidents in young people (15-24 years) and rest of population. Spain, 2019

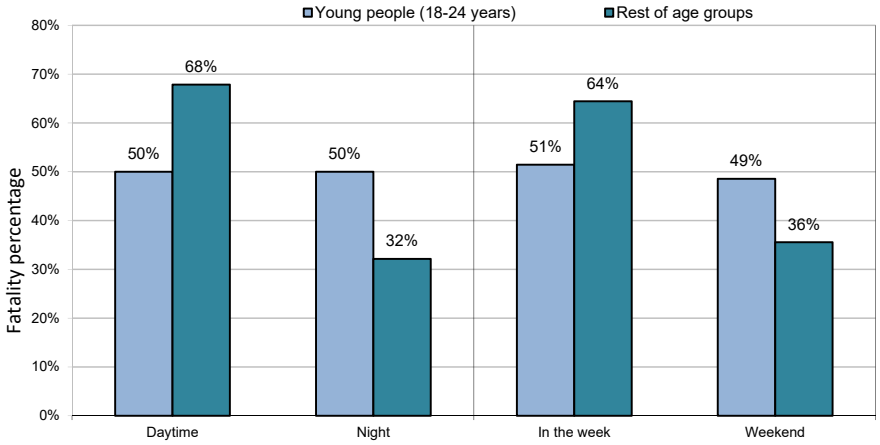
	Age 15-24	% on the total of ages	Other ages
Fatalities	172	10%	1,583
Hospitalised injured casualties	1,223	14%	7,390
Non-hospitalised injured casualties	21,864	17%	108,881
Total casualties	23,259	16%	117,854
Case fatality rate	0.7	-	1.3
Fatalities per million population	37	-	37
Hospitalised injured casualties per M p.tion	265	-	175

Figure 47. Fatality rate in young people per million population distributed by gender and by age groups. Spain, 2019



The weekend and the night present a risk to young people comparing with the rest of the population. 50% of the deaths of young people between the ages of 18 and 24 years were registered during the night whereas for the rest of the population the percentage was 32%. During the weekend, the percentage of fatalities for young people was 49% and for the rest of the population was 36%.

Figure 48. Percentage distribution of young fatalities and rest of ages based on the parameters day/night and weekend[1]/not weekend. Spain, 2019



1 Weekend: weekend days start at 15:00 on Friday and end at 23:59 on Sunday.

Elderly people

In 2019 people aged over 64 years represented 28% of the fatalities. At global level, elderly people account for 19% of the Spanish population and 15% of the registered drivers.

Their case fatality rate was at 3.6 in 2019. This rate increases as age increases, in such a way that for the 65-74 age group it was 2.4, for the 75-84 it was 4.5 and for the 85 and over age group it was 8.2.

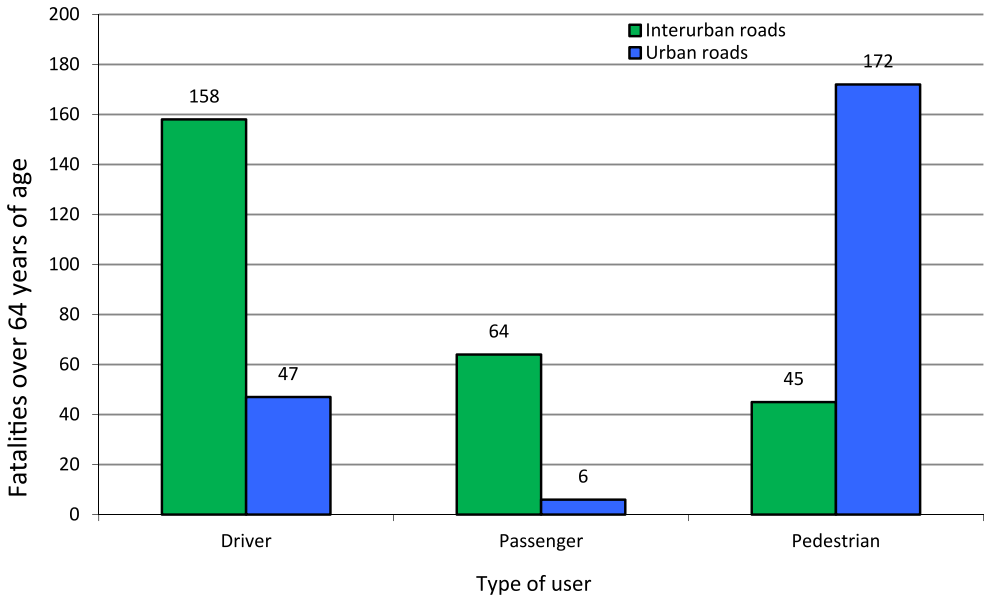
The rate per million population for the 65 and over age group was 54 whereas the rate for the rest of age groups was 33.

Table 25. Comparison of severity degree as a result of road traffic accidents in elderly people (aged 65 and over) and rest of the population. Spain, 2019

	Age 65+	% on the total of ages	Other ages
Fatalities	492	28%	1,263
Hospitalised injured casualties	1,423	17%	7,190
Non-hospitalised injured casualties	11,629	9%	119,116
Total casualties	**13,544**	10%	**127,569**
Case fatality rate	3.6	-	1.0
Fatalities per million population	54	-	33
Hospitalised injured casualties per M p.tion	156	-	190

Accident pattern has been different according to the type of road; people aged 65 and over were killed mainly as drivers on interurban roads and as pedestrians on urban roads.

Figure 49. Fatalities over 64 years of age by area (urban or interurban) and type of user. Spain, 2019



The role as users is also different in these age groups, depending on the place where the accident occurred. On interurban roads, fatalities have an increased frequency as drivers. On urban roads, fatalities in the three age groups considered present an increased frequency as pedestrians.

Figure 50. Distribution by type of user and by age group of fatalities older than 65 years old. Interurban roads. Spain, 2019

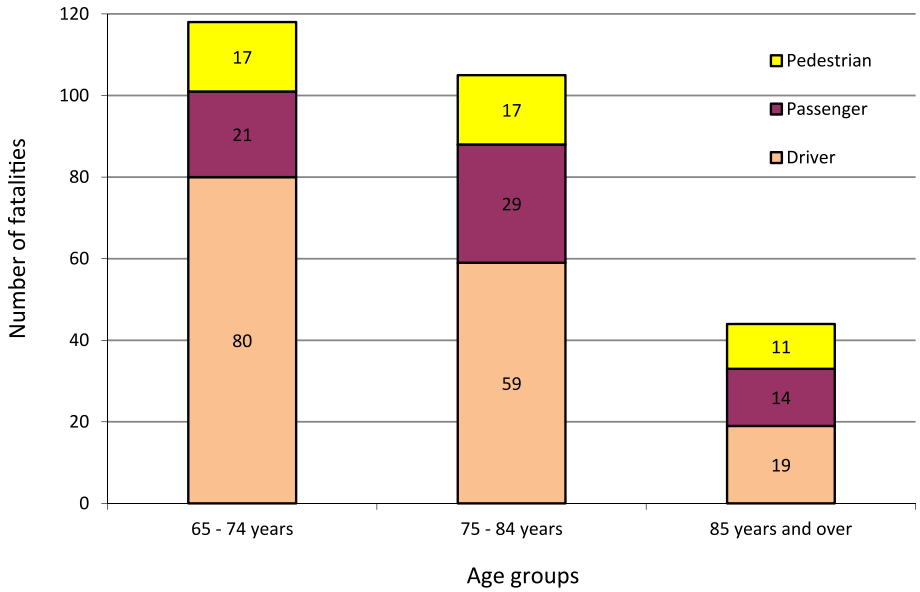
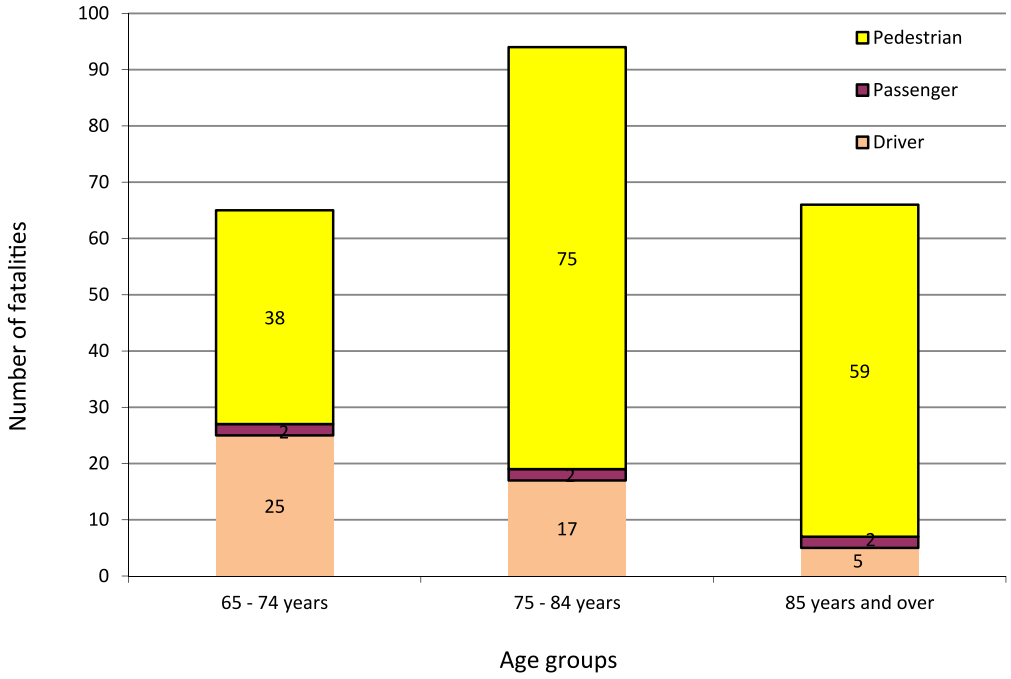


Figure 51. Distribution by type of user and by age group of fatalities older than 65 years old. Urban roads. Spain, 2019



Drivers

In 2019, 1,139 drivers were killed in road traffic accidents, 65% of total fatalities. 90% of the driver fatalities were males, 45% were below 45 years of age and 40% were driving a car. In addition, 78% of the drivers were killed in accidents occurring on an interurban road.

In 2019 there was a decrease in the number of road accident fatalities by 3% and driver fatalities by 1%. The year-on-year variation for total fatalities has been 4% and 3% for driver fatalities over the past ten years. An analysis of the percentage of the drivers killed over the total fatalities indicates that it was 65% in 2019.

Figure 52. Evolution of total fatalities and driver fatalities. Spain, 2010-2019

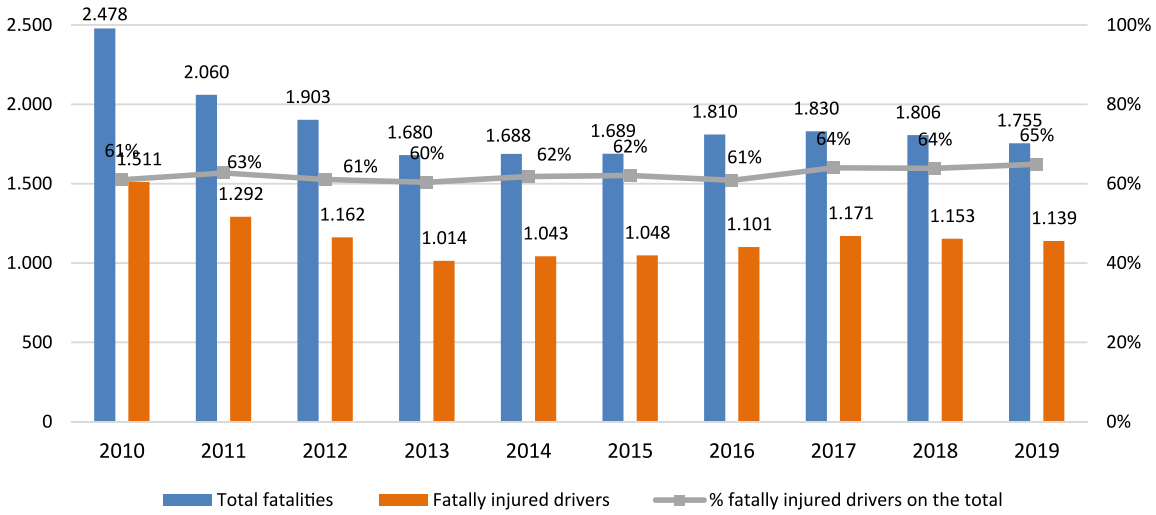
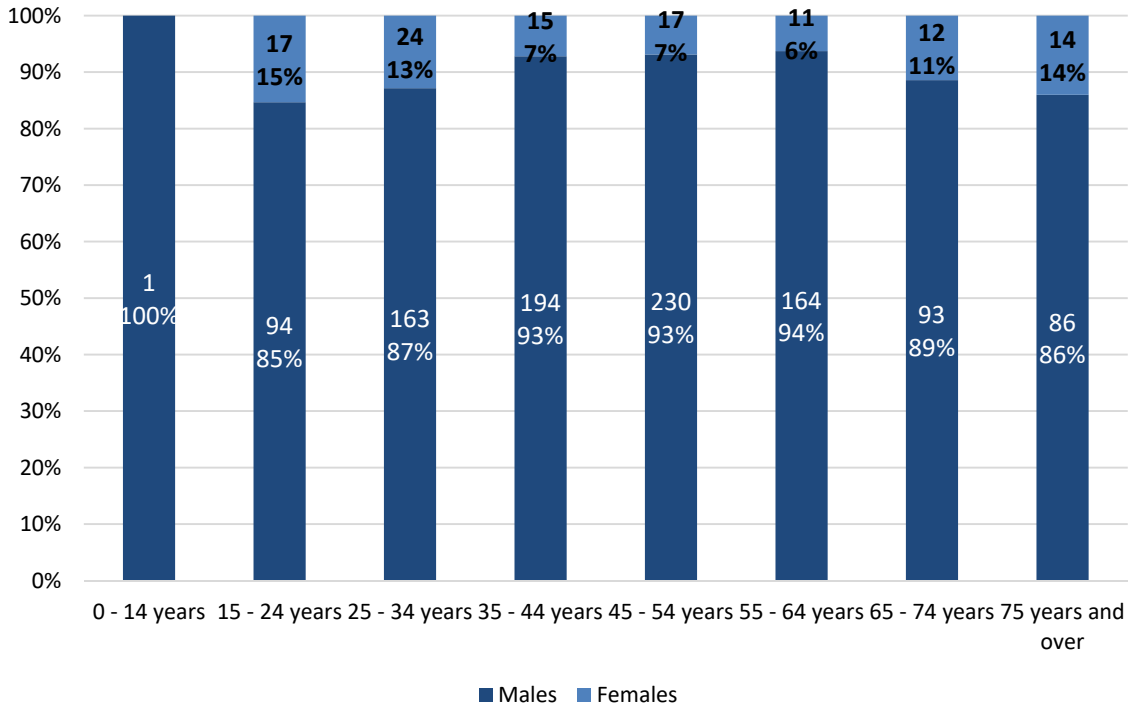
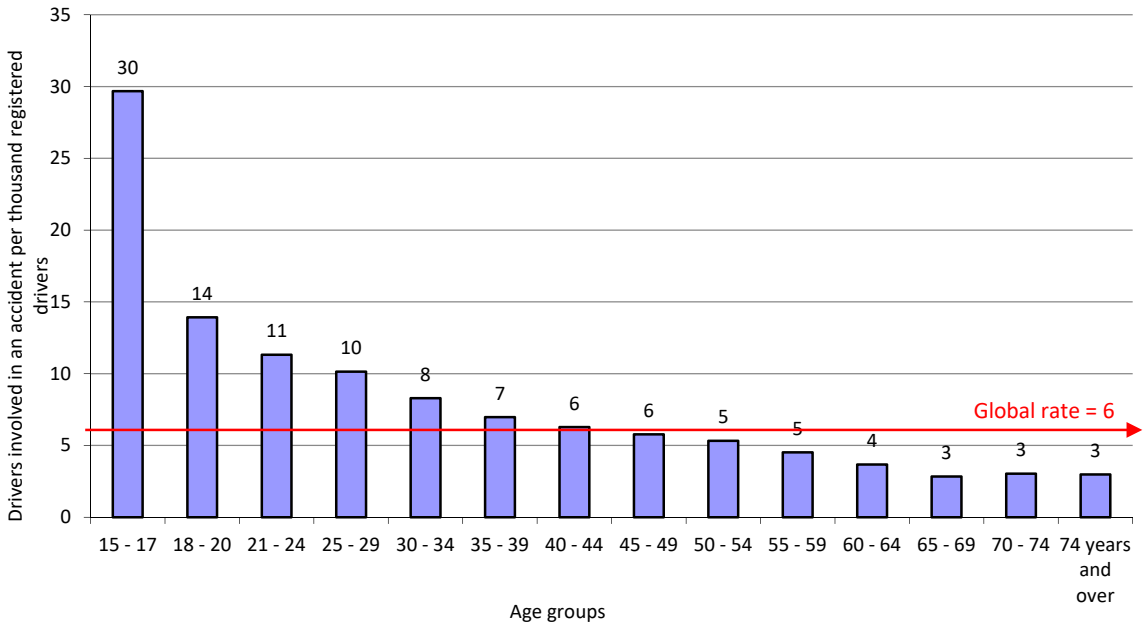


Figure 53. Proportion of driver fatalities by age groups and by gender. Spain, 2019



The rate of drivers involved in an accident per thousand registered drivers was at 6 in 2019. This rate decreases with age, registering rates lower than global rates from the age of 49 years, and the minimum from the age of 65 years. The greatest rate is at 30, with drivers aged 15 - 17 years.

Figure 54. Rate of drivers involved in casualty accidents per thousand registered drivers. Spain, 2019



Pedestrians

381 pedestrians were killed in road traffic accidents in 2019 which account for 22% of total fatalities.

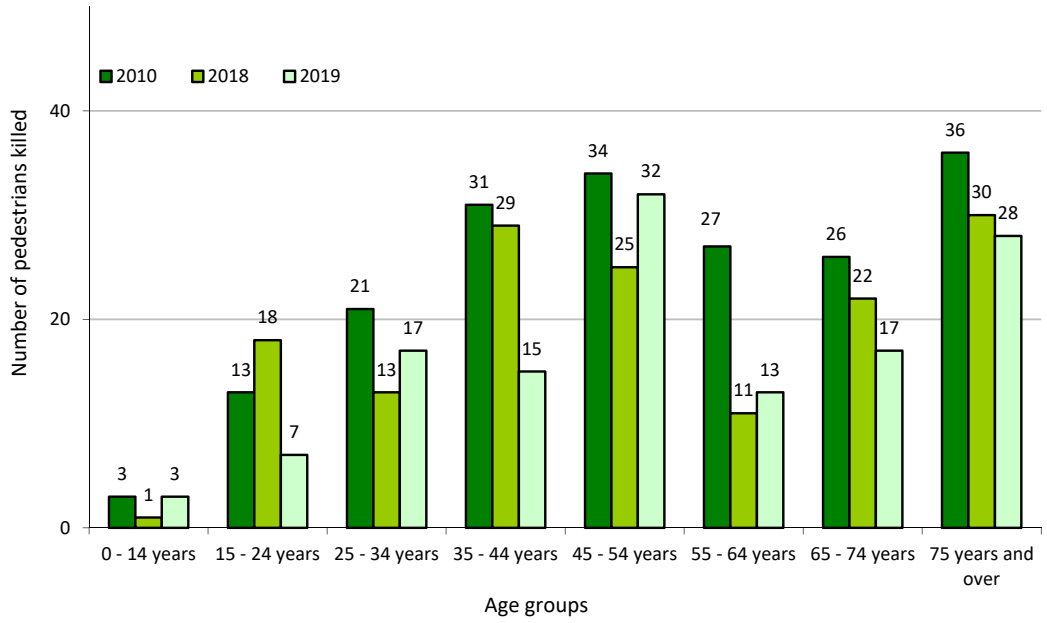
Table 26. Pedestrian fatalities, hospitalised and non-hospitalised injured pedestrians and case fatality rate. Interurban and urban roads. Spain, 2019

Type of road	Fatalities		Hospitalised injured casualties		Non-hospitalised injured casualties		Number
	Number	%	Number	%	Number	%	
Interurban roads	134	35%	205	12%	561	5%	14.9
Urban roads	247	65%	1,483	88%	11,772	95%	1.8
Total	**381**	**100%**	**1,688**	**100%**	**12,333**	**100%**	**2.6**

In 2019, pedestrian fatalities decreased by 10% on interurban roads whereas increased by 4% on urban roads.

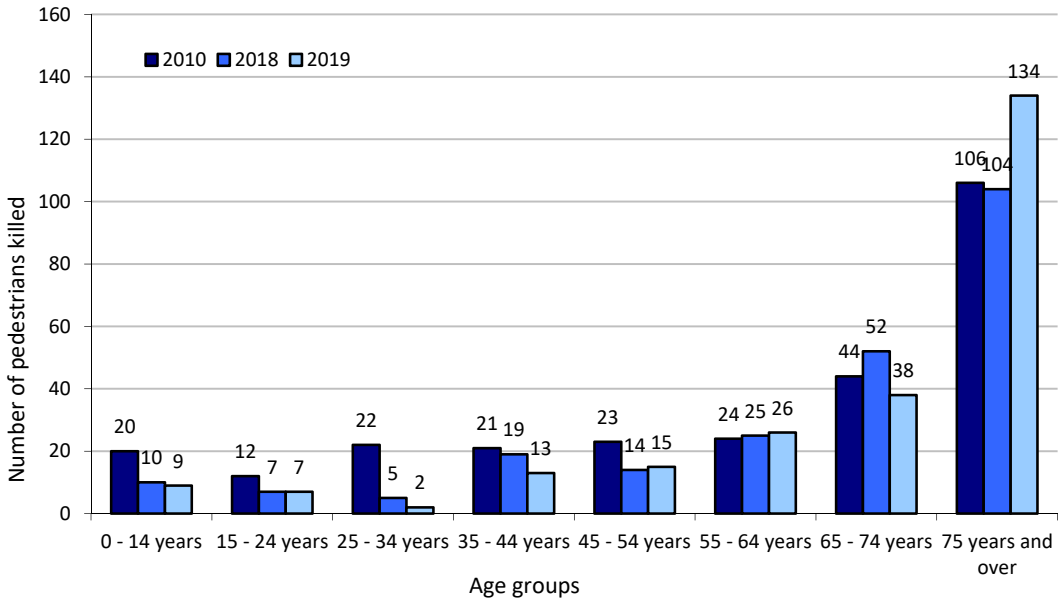
In the figure below, the evolution of the number of pedestrians killed on interurban roads by age groups is shown and it can be seen, in comparison with 2018, an increase in fatalities in the 0-14, 25-34, 45-54, 55-64 age groups and a decrease in the rest of age groups. The 45-54 age group showed the greatest increase, 7 more fatalities, followed by the 25-34 age group, with 4 more fatalities.

Figure 55. Number of pedestrians killed by age groups. Interurban roads. Spain, 2010, 2018 and 2019



With regard to the evolution of the number of pedestrians killed on urban roads by age groups, in comparison with 2019 it can be seen an increase in the number of pedestrians killed in the 45-54 and 55-64 age groups. The greatest variation concentrates on the 75 and over age group, with a decrease of 30 fatalities. On these roads, 70% of the pedestrians killed were 65 years of age or over.

Figure 56. Number of pedestrians killed by age groups. Urban roads. Spain, 2010, 2018 and 2019



Contributory factors

Contributory factors are all those factors related to individuals, vehicles and infrastructure which may have played a role in the occurrence of an accident or in aggravating its consequences. One or several contributory factors can be present in an accident, whose identification may in many instances depend on the thoroughness of the investigation conducted by law enforcement officers. At present, the classification of the contributory factors used by law enforcement officers is laid down in Order INT/2223/2014, of 27 October, which regulates the reporting of information to the National Register for Road Traffic Accident Victims.

The presence of the three main contributory factors —distraction, inappropriate speed and alcohol— to accidents resulting in fatalities and casualties occurring on interurban and urban roads is analysed below. Distraction appears as a contributory factor in 28% of fatal accidents; alcohol consumption in 25%; and speed in 23%.

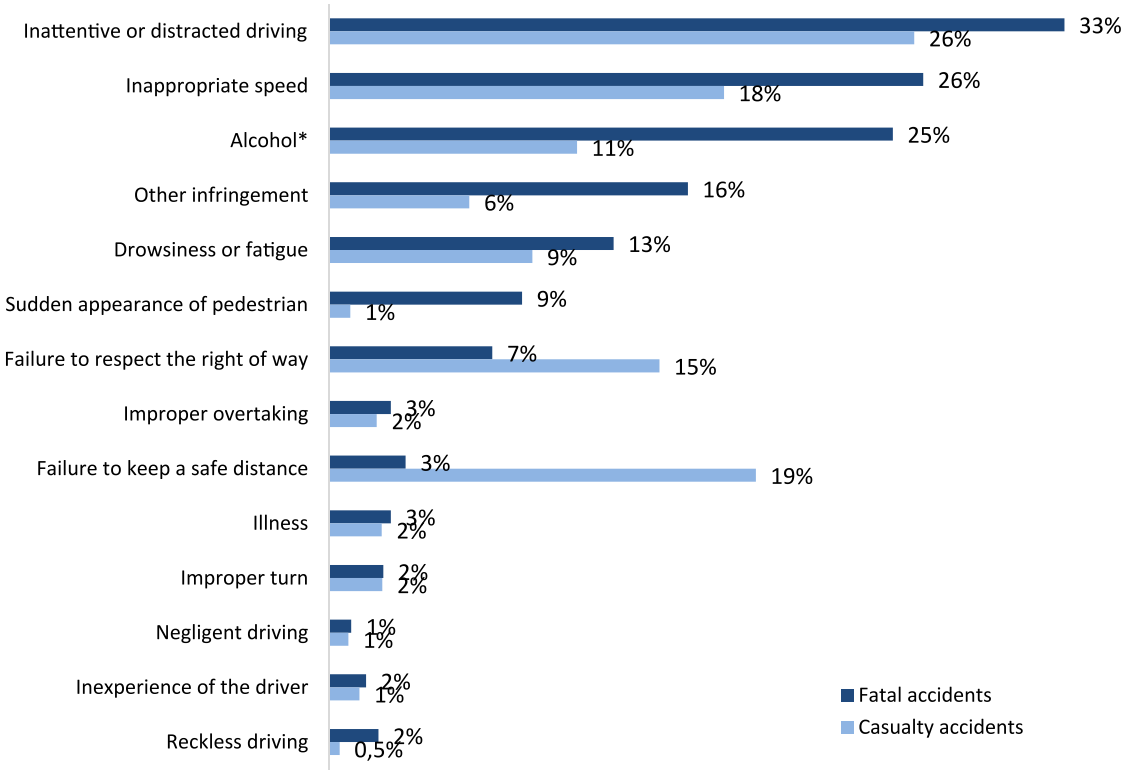
Table 27. Distribution of contributory factors in casualty and fatal accidents occurring on interurban and urban roads. Year 2019. (Catalonia and Basque Country excluded).

Contributory factor	Casualty accidents		Fatal accidents	
	Cases	% over total accidents	Cases	% over total accidents
Inattentive or distracted driving	11,942	16%	359	28%
Alcohol	3,161 (out of 24,745)	13%	216 (out of 870)	25%
Inappropriate speed	6,049	8%	298	23%

*Note: The actual total number of casualty accidents is 72,652 and of fatal accidents is 1,301. Several factors may be present in a single accident. *As regards alcohol, the sample considered is 24,745 casualty accidents and a sample of 870 fatal accidents, in which all drivers involved were submitted to test. Of these accidents, alcohol is considered as a contributory factor when, at least, one of the drivers involved in the accident tests positive.*

On interurban roads it is possible to conduct a more accurate study of the contributory factors. As for casualty accidents, the most common factors identified in police reports are distraction (26%), failure to keep a safe distance (19%), inappropriate speed (18%), failure to respect the right of way (15%) and alcohol consumption (11%). As regards fatal accidents, the most common factors are distraction (33%), inappropriate speed (26%) and alcohol (25%).

Figure 57. Distribution of contributory factors in casualty and fatal accidents occurring on interurban roads. Year 2019. (Catalonia and Basque Country excluded)



Note: The actual total number of casualty accidents is 26,659 and of fatal accidents is 911. Several factors may be present in a single accident.
** As regards alcohol, the sample considered is 18,716 casualty accidents and a sample of 621 fatal accidents in which all drivers involved were submitted to test. Of these accidents, alcohol is considered as a contributory factor when, at least, one of the drivers involved in the accident tests positive.*

Performance indicators

Seat belt and helmet

95% of the motorcyclists killed on interurban roads in 2019 were wearing the helmet. On urban roads, 91% of fatally injured motorcyclists wore the safety helmet in 2019.

As regards moped fatalities in 2019, 78% wore the helmet on interurban roads and 91% did on urban roads.

Figure 58. Motorcyclist fatalities regarding the use of the helmet. Spain, 2010-2019

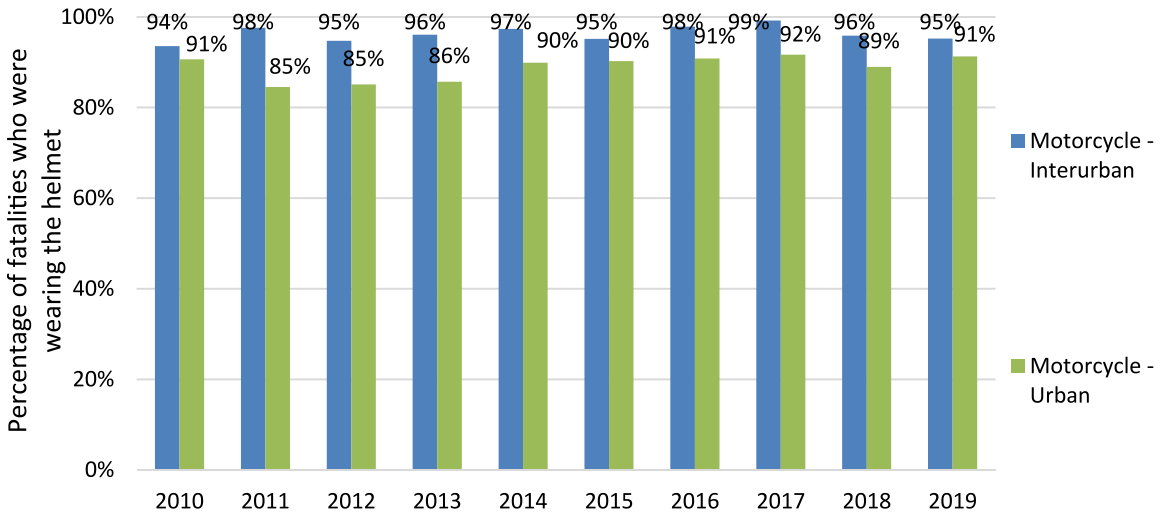
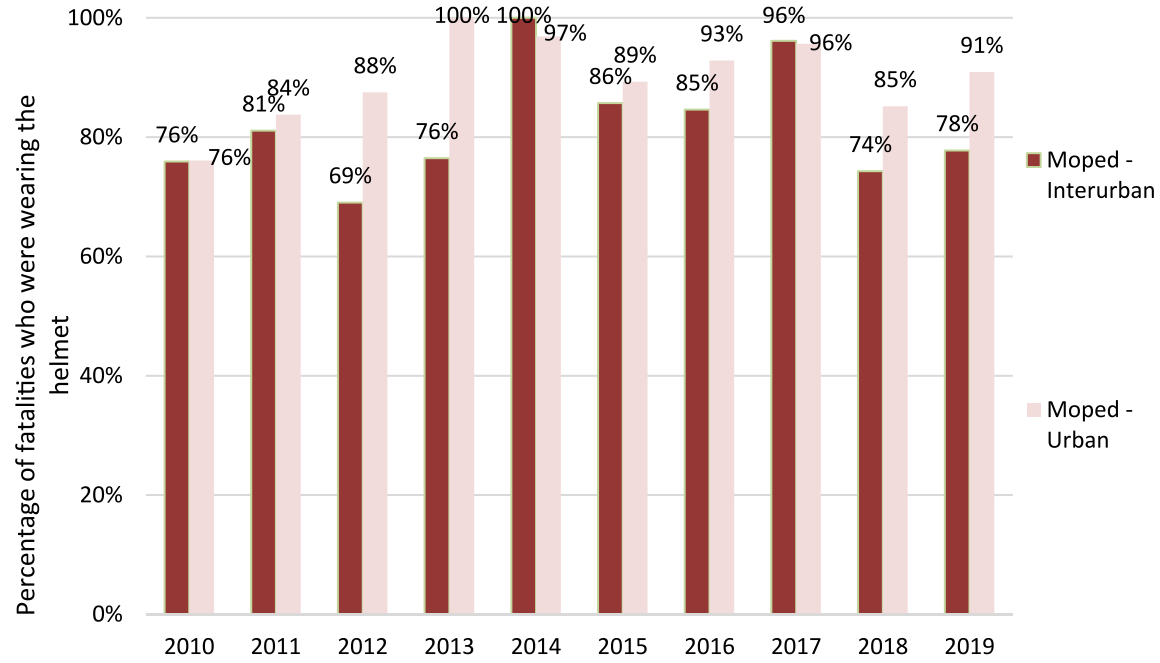
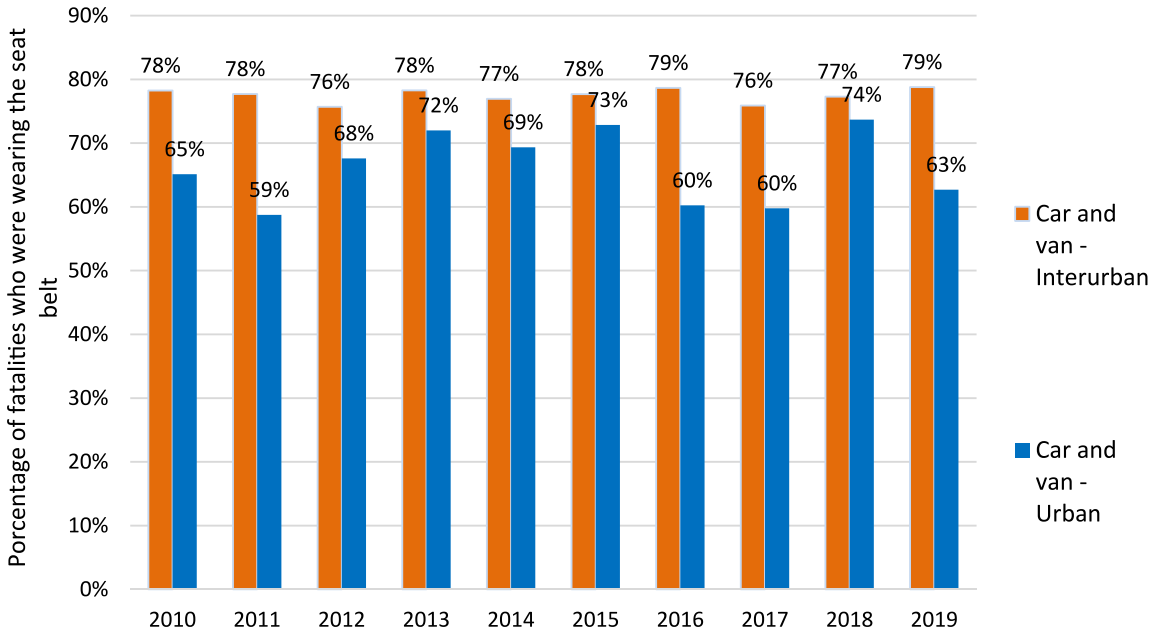


Figure 59. Moped user fatalities regarding the use of the helmet. Spain, 2010-2019



On interurban roads, in 2019, 79% of car and van fatalities aged 12 and over wore the seat belt and on urban roads 63% of the fatalities did so.

Figure 60. Fatally car and van occupants aged 12 and over by seat belt use. Spain, 2010-2019

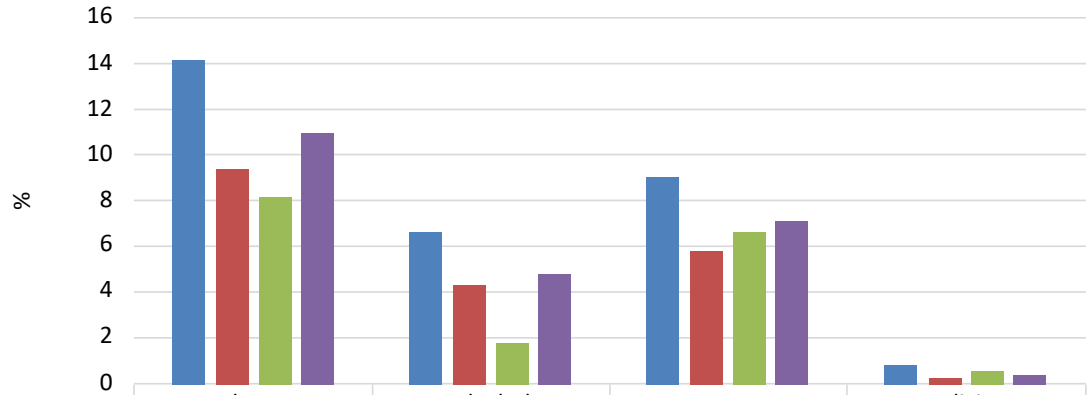


Alcohol and drugs

Prevalence of psychoactive substances consumption in drivers.

Since 2008, prevalence studies have been carried out on a regular basis to determine the consumption of psychoactive substances by drivers travelling on public roads. To date, four editions of the study have been completed: DRUID project (2008-2009), Study on the EDAP prevalence for 2013, 2015 and 2018.

Figure 61. Evolution of the consumption of alcohol, drugs and medicines when driving (years 2008, 2013, 2015 and 2018)



	A substance	Alcohol	Drugs	Medicines
DRUID-2008	14,05	6,61	9,01	0,73
DRUID-2013	9,34	4,16	5,79	0,29
EDAP-2015	8,09	*	6,63	0,40
EDAP-2018	10,94	4,72	7,08	0,35

Note: Alcohol >0,05 mg/l exhaled air

(*) Figure is still being reviewed

Presence of psychoactive substances by drivers involved in a road traffic accident[1]

Over the past two years DGT has established a collaboration with the Spanish National Toxicology and Forensic Science Institute (INTCF) and the Institutes of Forensic Medicine and Science (IML) in Murcia and Galicia, with the objective of connecting the National Register for Road Traffic Accident Victims (RNVAT) database, which contains detailed information on people, vehicles, infrastructures and environments, with the INTCF and the IML databases, which record the results of the alcohol and drug tests conducted on the samples taken from fatally injured drivers. This collaboration has enabled us to significantly enrich the quantity and quality of the available information on the role that alcohol and drugs play on road traffic accidents.

The Spanish National Toxicology Institute performed the analysis of samples from fatally injured drivers, of which 558 cases could be identified in the National Register for Road Traffic Accident Victims. The Institute of Forensic Medicine and Science in Murcia performed analysis on samples from 34 drivers identified in the RNVAT. The Institute of Forensic Medicine and Science in Navarra performed analysis on samples from 4 drivers identified in the RNVAT. At present, collaboration mechanisms with new Institutes of Forensic Medicine and Science are being developed so that experts can have access to an enhanced percentage of killed drivers for whom there is a blood test available. It should be recalled that in case of death it is compulsory to perform a blood test.

[1] The information from Catalonia and the Basque Country is not included.

Besides, it should be taken into account that the Traffic Division of the Guardia Civil, the Chartered Police of Navarra and the various local police forces have performed, and recorded on RNVAT, alcohol tests to 46,800 surviving drivers and drugs tests to 7,108 surviving drivers.

In the analysis below a positive alcohol test means those results exceeding the legal limit established in Article 20 of the General Regulations on Road Traffic[2]: on a general basis, a blood alcohol content higher than 0.5 grams per litre or a breath alcohol content higher than 0.25 milligrams per litre; in the case of novice or professional drivers, a blood alcohol content higher than 0.3 grams per litre, or a breath alcohol content higher than 0.15 milligrams per litre[3].

In 2019, 123,957 drivers were involved in casualty accidents on interurban and urban roads; there is evidence of having tested 38% of them for alcohol. In the case of fatally injured drivers - 883 in 2019 -, the percentage of tested drivers was 68%, the percentage of hospitalised injured drivers was 26%, of non-hospitalised injured drivers was 36% and of non-injured drivers was 42%.

As regards the tests for alcohol with a positive result: 29% of killed drivers tested positive, 15% of the hospitalised injured drivers, 9% of the non-hospitalised injured drivers and 7% of the non-injured drivers. In comparison with 2018, the percentage of fatally injured drivers testing positive increased from 23% to 29%, covering 68% of the cases in both years.

Table 28. Results of alcohol testing in drivers involved in casualty accidents. Total, interurban and urban roads. Year 2019, 2018 values in red and in brackets. (Catalonia and Basque Country excluded).

Total	Total drivers	Drivers with proof of testing	% of drivers with proof of testing	Drivers testing positive	Alcohol positive percentage
Fatalities	883	598	68% (68%)	175	29% (23%)
Hospitalised injured casualties	4,250	1,100	26% (25%)	162	15% (12%)
Non-hospitalised injured casualties	59,305	21,605	36% (36%)	1,953	9% (8%)
No healthcare required	57,251	23,778	42% (41%)	1,616	7% (7%)
Not classified	2,268	317	14% (18%)	17	5% (8%)
Total	**123,957**	**47,398**	**38% (38%)**	**3,923**	**8% (8%)**

Interurban roads	Total drivers	Drivers with proof of testing	% of drivers with proof of testing	Drivers testing positive	Alcohol positive percentage
Fatalities	696	482	69% (70%)	128	27% (23%)
Hospitalised injured casualties	2,398	915	38% (38%)	98	11% (9%)
Non-hospitalised injured casualties	24,265	18,158	75% (71%)	1,275	7% (6%)
No healthcare required	18,311	16,672	91% (89%)	657	4% (4%)
Not classified	470	197	42% (44%)	4	2% (2%)
Total	**46,140**	**36,424**	**79% (76%)**	**2,162**	**6% (5%)**

2 Royal Decree 1428/2003 of 21 November approving the General Regulations on Road Traffic for applying and implementing the articled text on the Law on Road Traffic, Motor Vehicles and Road Safety, approved by Royal Legislative Decree 339/1990 of 2 March 1990.

3 The Spanish National Toxicology and Forensic Science Institute, in its road traffic fatality records identify as positive those cases with a blood alcohol content higher than 0.3g/l.

Urban roads	Total drivers	Tested drivers	% of tested drivers	Drivers testing positive	Alcohol positive percentage
Fatalities	187	116	62% (60%)	47	41% (28%)
Hospitalised injured casualties	1,852	185	10% (9%)	64	35% (28%)
Non-hospitalised injured casualties	35,040	3,447	10% (9%)	678	20% (20%)
No healthcare required	38,940	7,106	18% (18%)	959	13% (14%)
Not classified	1,798	120	7% (8%)	13	11% (24%)
Total	**77,817**	**10,974**	**14% (14%)**	**1,761**	**16% (16%)**

As regards driver fatalities, the most remarkable fact is that 69% of the positive cases show a concentration three times higher than the legal limit established in the General Regulations on Road Traffic. On interurban roads, this percentage is 70% and on urban roads it is 66%. Besides, the percentage of cases exceeding the legal limit established in Article 379 of the Spanish Criminal Code (a breath alcohol concentration above 0.60 milligrams per litre or a blood alcohol concentration above 1.2 grams per litre, any levels higher than these are considered a crime against road safety) is 80% for interurban roads and 83% for urban roads.

Figure 62. Blood alcohol concentration in drivers killed in traffic accidents who tested positive. Interurban and urban roads. Year 2019. (Catalonia and Basque Country excluded)

As regards the consumption of illegal drugs[4] there is evidence of having tested 69% of fatally injured drivers, of whom 20% tested positive. The percentage of fatally injured drivers submitted to test was 70% on interurban roads and 63% on urban roads, of whom 18% tested positive on interurban roads and 25% on urban roads.

Table 29. Results of drug testing in drivers involved in casualty accidents. Interurban and urban roads. Year 2019, 2018 values in red and in brackets. (Catalonia and Basque Country excluded).

	Total driver fatalities	Fatally injured drivers with proof of testing	% of fatally injured drivers with proof of testing	Fatally injured drivers testing positive	Drug positive percentage
Interurban roads	696	489	70% (69%)	90	18% (17%)
Urban roads	187	117	63% (60%)	29	25% (27%)
Total	**883**	**606**	**69% (68%)**	**119**	**20% (19%)**

The most common substances on fatally injured drivers testing positive for drugs are cocaine (50%) and cannabis (60%). Opioids and amphetamines are less common (7%).

Table 30. Substances tested for in drug testing performed on drivers with a positive result. Interurban and urban roads. Year 2019, 2018 values in red and in brackets. (Catalonia, Basque Country excluded).

Substances	Fatally injured drivers	Percentage
Cocaine	65	55% (50%)
Opioids	1	1% (6%)
Amphetamine	7	6% (6%)
Cannabis	67	56% (60%)
Drivers testing positive for drugs	**119**	**100% (100%)**

The percentage of fatally injured drivers testing positive for alcohol and/or drugs was 39% in 2019

Table 31. Fatally injured drivers submitted to alcohol and/or drug testing and results. Interurban and urban roads. Year 2019, 2018 values in red and in brackets. (Catalonia and Basque Country excluded).

	Evidence of tests performed for alcohol and/or drugs	Positive in alcohol and/or drug testing	Percentage of positive in alcohol and/or drug testing
Fatally injured drivers	608	240	39% (35%)

[4] The following substances have been considered: amphetamines, cocaine, cannabis and opioids. The annual reports of the Spanish National Toxicology and Forensic Science Institute include an analysis of the presence of psychotropic drugs in fatally injured drivers.

Activity indicators

Controls performed by the Traffic Division of the Guardia Civil (ATGC)[5]:

Alcohol

In 2019 the Traffic Division of the Guardia Civil performed 6,598,675 breath alcohol tests within the framework of their competences, which means 20% more as compared to the tests conducted in 2018. Of the 5,610,291 preventive control tests performed, 1.23% were positive for alcohol (above the legal limits).

Drugs

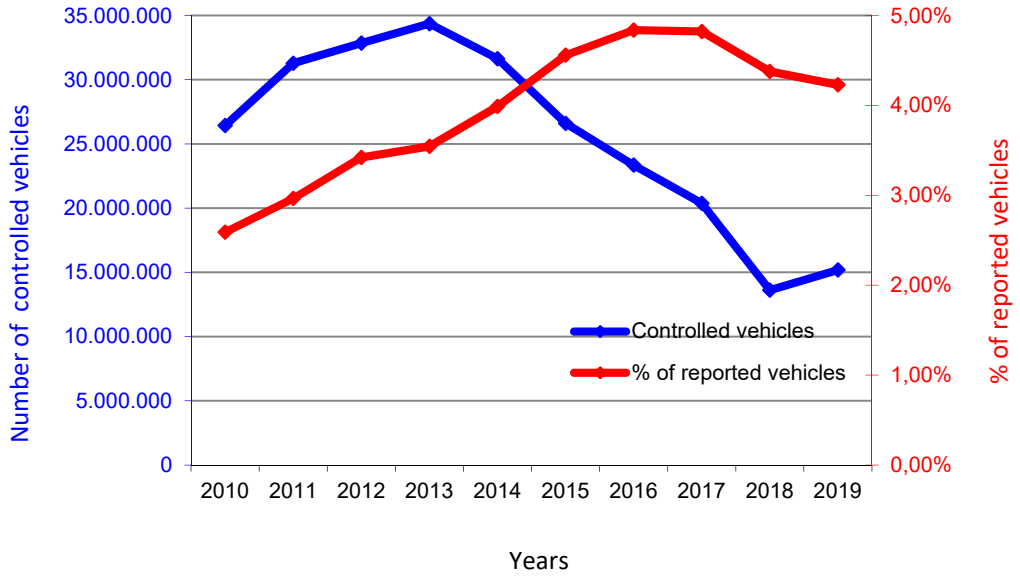
In the context of the duties performed by the Traffic Division of the Guardia Civil, they carried out 101,893 drug tests in 2019, as against the 139,703 tests performed in 2018, which means a decrease by 27%. Of the 79,300 preventive control tests performed, 37% were positive.

Speed

In 2019, DGT reported a total of 4,685,581 traffic offences. Of them, 62% were speed-related. These traffic offences were detected by the Traffic Division of the Guardia Civil and by fixed safety and point-to-point speed cameras and helicopters.

In 2019, the Traffic Division of the Guardia Civil[6] performed speed controls to 15.2 million vehicles, with an outcome of 642,286 vehicles being reported. As compared with 2018, around 1.6 million more vehicles have been controlled and the percentage of reported vehicles has been 4.2%.

Figure 63. Controls performed by the Traffic Division of the Guardia Civil. Years 2010-2019



5 Their scope excludes public roads on the Basque Country and Catalonia as well as Municipalities with their own local police forces.

6 Whose activity excludes public roads on the Basque Country and Catalonia as well as Municipalities with their own local police forces.

5

Others

The type of casualty accident

Running off the road was the most commonly reported type of fatal accident in 2019, with 33% of all deaths, followed by accidents involving a pedestrian (21%) and head-on collisions (16%).

Table 32. Road fatalities by type of accident. Spain, 2010-2019

Type of Accident	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Variation (1) 2019/2018	Year-on-year variation 2010-2019	Distribution % 2019
Run-off-road collision	752	646	663	508	548	522	601	601	582	573	-2%	-3%	33%
Head-on collision	350	336	250	222	225	209	277	327	290	284	-2%	-2%	16%
Side and T-bone collision	428	329	282	246	204	190	253	259	243	228	-6%	-7%	13%
Rear and multiple collision	227	191	165	153	145	169	145	144	140	146	4%	-5%	8%
Pedestrian collision*	449	367	355	349	310	306	386	338	378	373	-1%	-2%	21%
Overturning	66	47	47	30	17	16	22	20	26	32	6	-34	2%
Other type of accidents	206	144	141	172	239	277	126	141	147	119	-19%	-6%	7%
Total	**2,478**	**2,060**	**1,903**	**1,680**	**1,688**	**1,689**	**1,810**	**1,830**	**1,806**	**1,755**	**-3%**	**-4%**	**100%**

** The number of people killed when struck by a vehicle does not include all pedestrians hit by a vehicle because the classification by type of accident is made according to the first manoeuvre and not to its harmful outcome. (1) The differences have been estimated as a percentage when the number of cases is higher than 100 and in absolute values when the number is below 100.*

On interurban roads, the type of accident with more fatalities was running off the road (39%) and on urban roads pedestrians struck by a vehicle (47%).

Table 33. Road fatalities by type of accident. Interurban roads. Spain, 2010-2019

Type of Accident	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Variation (1) 2019/2018	Year-on-year variation 2010-2019	Distribution % 2019
Run-off-road collision	690	578	594	441	476	464	524	519	506	482	-5%	-4%	39%
Head-on collision	335	322	232	214	208	195	254	306	282	263	-7%	-3%	21%
Side and T-bone collision	341	254	223	184	153	140	183	179	173	152	-12%	-9%	12%
Rear and multiple collision	197	163	136	132	122	136	114	126	109	125	15%	-5%	10%
Pedestrian collision*	179	150	132	135	118	97	133	99	146	128	-12%	-4%	10%
Overturning	48	38	30	26	11	12	17	16	19	23	4	-25	2%
Other type of accidents	138	98	95	98	159	204	66	76	82	63	-19	-8%	5%
Total	**1,928**	**1,603**	**1,442**	**1,230**	**1,247**	**1,248**	**1,291**	**1,321**	**1,317**	**1,236**	**-6%**	**-5%**	**100%**

** The number of people killed when struck by a vehicle does not include all pedestrians hit by a vehicle because the classification by type of accident is made according to the first manoeuvre and not to its harmful outcome. (1) The differences have been estimated as a percentage when the number of cases is higher than 100 and in absolute values when the number is below 100.*

Table 34. Road fatalities by type of accident. Urban roads. Spain, 2010-2019

Type of Accident	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Variation (1) 2019/2018	Year-on-year variation 2010-2019	Distribution % 2019
Run-off-road collision	62	68	69	67	72	58	77	82	76	91	15	29	18%
Head-on collision	15	14	18	8	17	14	23	21	8	21	13	6	4%
Side and T-bone collision	87	75	59	62	51	50	70	80	70	76	6	-11	15%
Rear and multiple collision	30	28	29	21	23	33	31	18	31	21	-10	-9	4%
Pedestrian collision*	270	217	223	214	192	209	253	239	232	245	6%	-1%	47%
Overturning	18	9	17	4	6	4	5	4	7	9	2	-9	2%
Other type of accidents	68	46	46	74	80	73	60	65	65	56	-9	-12	11%
Total	**550**	**457**	**461**	**450**	**441**	**441**	**519**	**509**	**489**	**519**	**6%**	**-1%**	**100%**

** The number of people killed when struck by a vehicle does not include all pedestrians hit by a vehicle because the classification by type of accident is made according to the first manoeuvre and not to its harmful outcome. (1) The differences have been estimated as a percentage when the number of cases is higher than 100 and in absolute values when the number is below 100.*

The temporal component in casualty accidents

Months of the year

In 2019, an average of 146 people a month was killed in road traffic accidents. The maximum figures are registered in July and October, 21% of the annual total fatalities. July is the month with the greatest case fatality rate (1.5) and June with the lowest (0.9).

Figure 64. Distribution of fatalities by months. Spain, 2010-2019

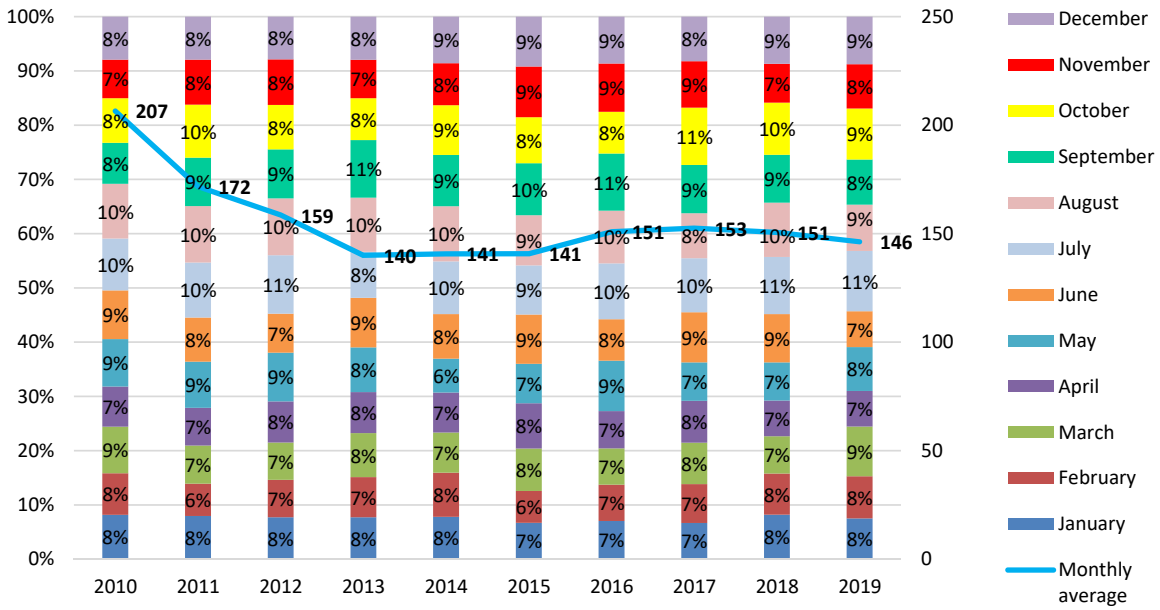
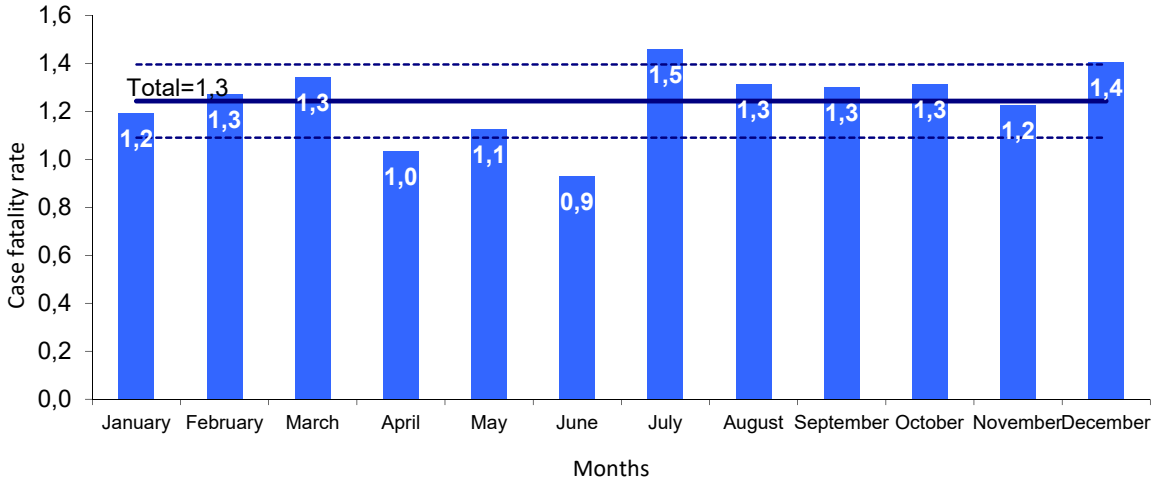


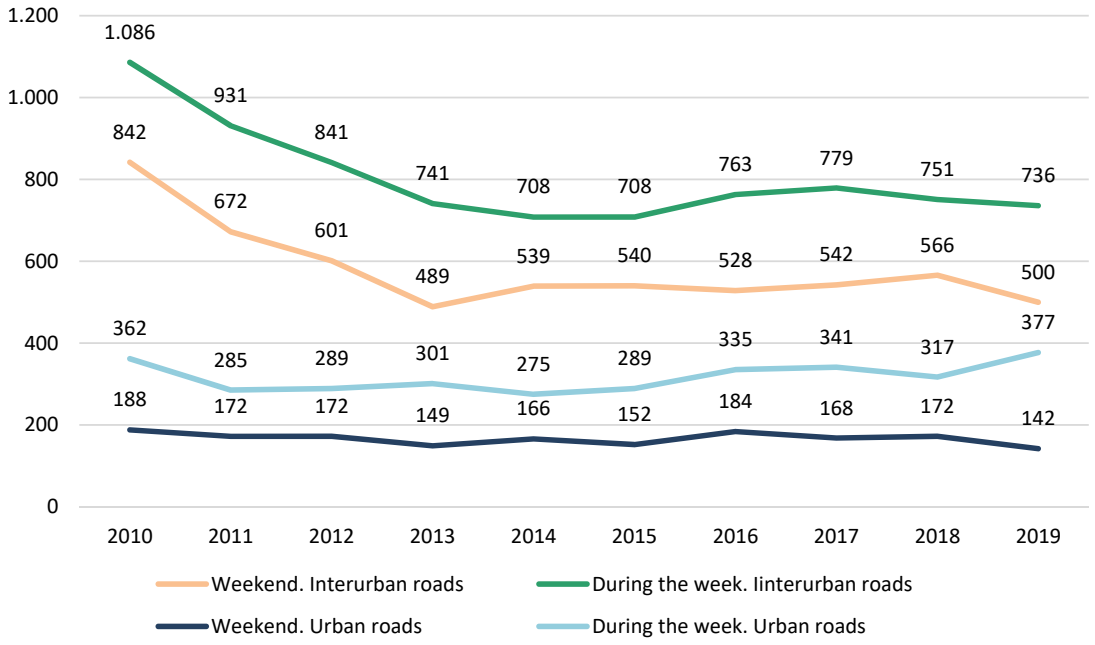
Figure 65. Case fatality rate by months. Spain, 2019



Days of the week

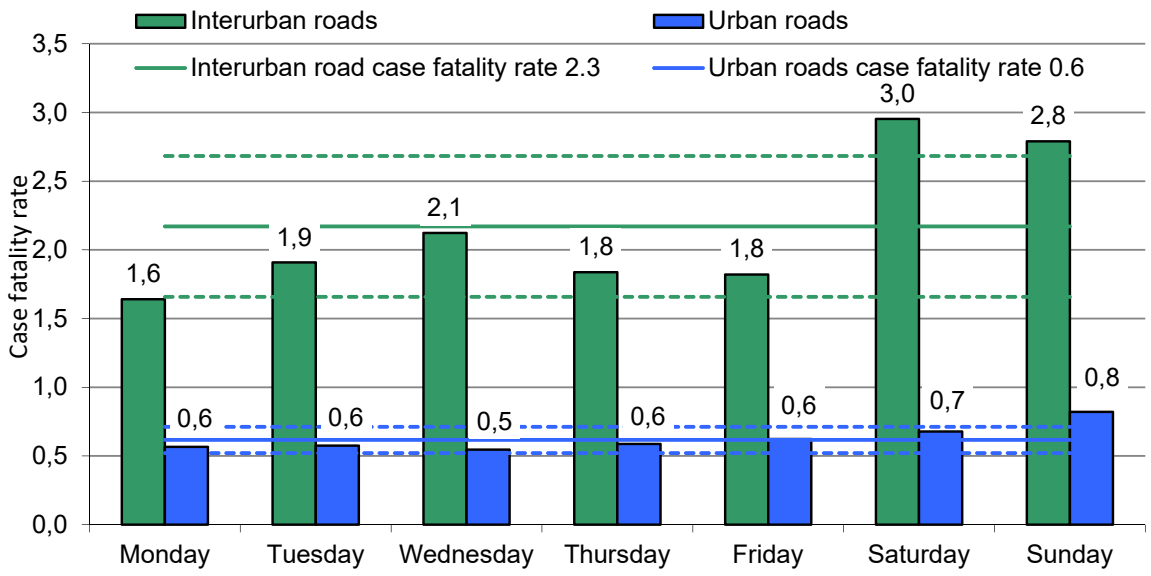
63% of the road fatalities in 2019 occurred in accidents happening from Monday to Friday. Notwithstanding the above, Mondays and Thursdays were the days of the week recording fewer accumulated fatalities throughout the year (201 and 216, respectively)

Figure 66. Fatalities by days of the week, on interurban and urban roads. Spain, 2019



The weekend days start at 15:00 on Friday and end at 23:59 on Sunday.

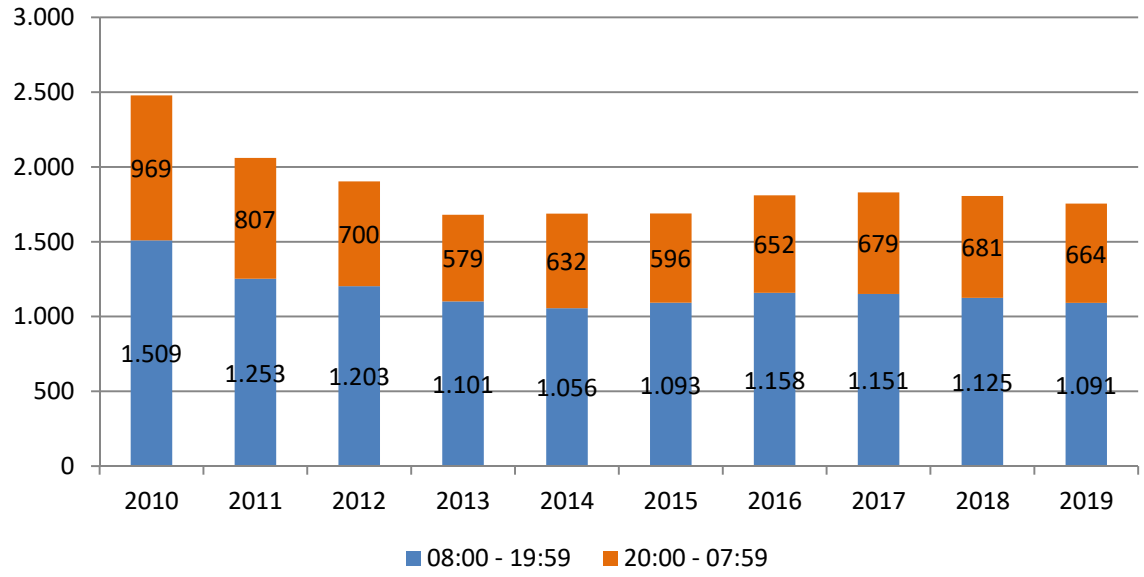
Figure 67. Case fatality rate by days of the week, on interurban and urban roads. Spain, 2019



Times of the day

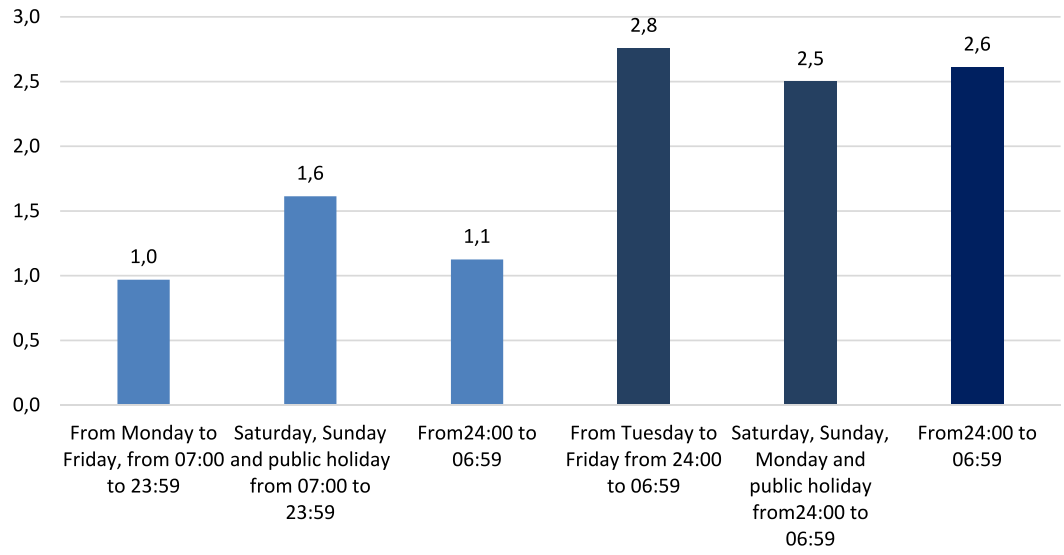
In 2019, 62% of the reported road fatalities occurred within the time frame between 08.00 and 19.59 hours. As compared with 2018, the number of road fatalities occurring during the slot 08.00 - 19.59 decreased by 3%.

Figure 68. Fatalities by time slot. Spain, 2010-2019



If the combination of time slot and day of the week is analysed, the case fatality rate is higher on Saturdays, Sundays and public holidays than during the week.

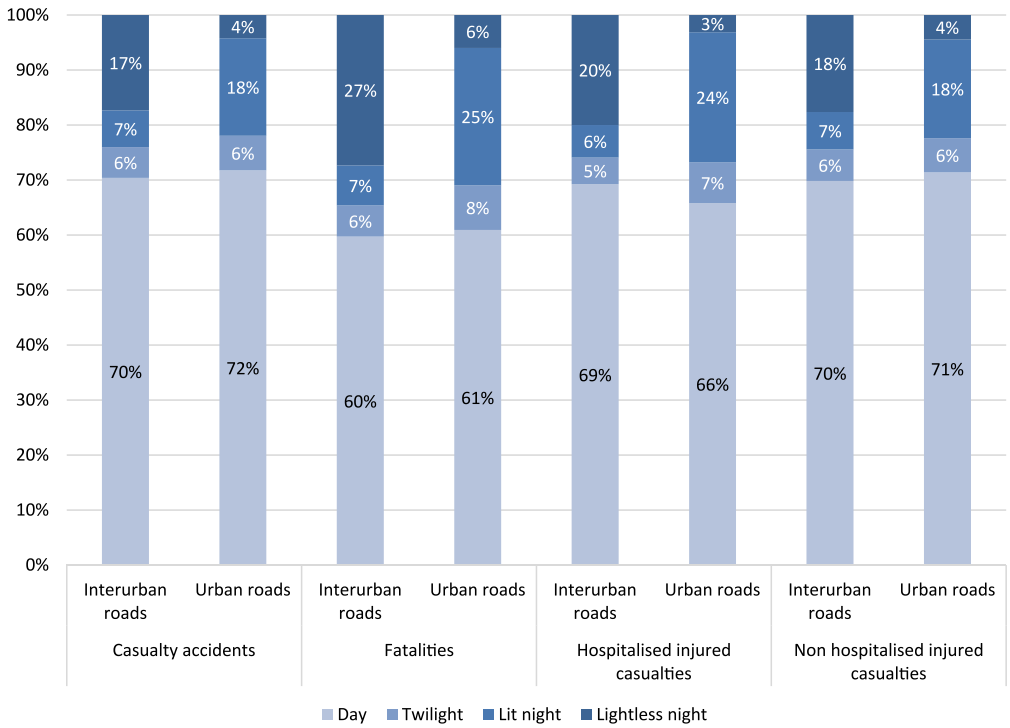
Figure 69. Case fatality rate by time slot and day of the week. Spain, 2019



Brightness

In 2019, 70% of casualty accidents, 60% of fatalities and 69% of hospitalised and 70% non-hospitalised injured casualties on interurban roads occurred during the day. On urban roads, the highest concentration of accidents and casualties occurs on urban roads during the day.

Figure 70. Casualty accidents, fatalities, hospitalised and non-hospitalised injured casualties by brightness. Interurban and urban roads. Spain, 2019



6 The cost of casualty accidents

In 2011, the Directorate-General for Traffic, in collaboration with the University of Murcia, estimated the costs relating to casualty accidents using the willingness-to-pay method. As a result, a fatality would involve a cost of € 1.4 million, including direct and indirect costs (medical expenses, administrative expenses, etc.) and the fair actuarially price associated to the premium that society would pay to reduce the risk of being killed in a road traffic accident, known as the value of a statistical life. In the same way the costs associated to a hospitalised injured casualty, 219,000 €, and a non-hospitalised injured casualty, 6,100 €, have been calculated. These estimates have been updated to 1 January 2019, taking as reference the nominal variation of the Gross Domestic Product per capita, so that a fatality involved a cost of €1,615,281, a hospitalised injured casualty a cost of €252,676 and a non-hospitalised injured casualty a cost of €7,038.

By applying the above costs to the number of people killed, hospitalised and non-hospitalised injured casualties in road traffic casualties in 2019 we obtain that the costs associated to the victims are estimated at around € 5,931 million, but if we explore other information systems they could reach € 11,383 million. Taking into account that the GDP at market prices on 1 January 2019[7] was € 1,244,772 million, the percentage of GDP that these costs represent is as a minimum 0.48%, although it is reasonable to assume 0.91%, a percentage obtained by analysing jointly the information sources from the health and transport sectors.

Table 35. Calculation of the cost associated to casualty accidents. Spain, 2019

Victims	Unit cost (€ 2019)	Victims		Total cost € (2019)	
		If only are counted the victims recorded by the transport sector[1]	If only are counted the victims recorded by the transport and health sectors[2]	If only are counted the victims recorded by the transport sector[1]	If only are counted the victims recorded by the transport and health sectors[2]
Fatalities	1,615,281	1,755	1,755	2,834,818,460	2,834,818,460
Hospitalised injured casualties	252,676	8,613	20,542	2,176,299,477	5,190,472,989
Non-hospitalised injured casualties	7,038	130,745	477,022	920,184,726	3,357,286,001
				5,931,302,662	11,382,577,450

1 The casualty figures for the Transportation Industry are from 2019.
2 The number of fatalities is from 2019, the number of hospitalized casualties is from 2015 and the number of injured non-hospitalized casualties is from 2014.

7 Advance by the National Statistical Institute (published in December 2020)

ANNEX I.- Methodological notes

Databases used to prepare this report

a) National Register for Road Traffic Accident Victims

The National Register for Road Traffic Accident Victims (regulated by Order INT/2223/2014, of 27 October, governing the report of information to the National Register for Road Traffic Accident Victims) contains the data concerning road traffic casualty accidents, defined as those accidents in which at least one of the persons involved was injured. The definitions of the main indicators that must be used are detailed in the abovementioned Order.

The latest available information corresponds to 2018.

The National Register for Road Traffic Accident Victims database may be requested to the Directorate-General for Traffic via e-mail at the following address: observatorio@dgt.es.

The most significant micro-data and statistical tables may be accessed on the "Portal estadístico" of the Directorate-General for Traffic website www.dgt.es.

b) Deceased records from the Registry Office

On the basis of the Under-Secretary's Resolution of 7 February 2005, publishing that the Secretariat of State for Justice entrusts the management tasks to the National Statistical Institute (INE) as regards the transfer of computerised data on births, marriages and deaths records registered at the Civil Registers, INE facilitates all data corresponding to each and every death recorded at Civil Registers in the whole Spanish territory. These data have been used to merge them with data from road traffic accident registers, according to the methodology explained in this Annex.

c) Death statistics by cause of death

Drawn up by INE, it includes all deaths occurring on the national territory, regardless of the deceased's place of origin. The information must be completed by the physician certifying death, who in addition fills in the statistical death bulletin, stating the immediate cause of death, the pre-existing condition and the underlying cause of death, being the latter the disease or injury that initiated the chain of pathological events that led directly to death or the circumstances of the

accident or violence that produced the fatal injury. Every cause-of-death statement is coded according to the International Classification of Diseases (ICD) established by the World Health Organization (WHO), at present the ICD-10 classification is being used.

d) Information on the road network and traffic on the interurban network.

The Ministry of Transport, Mobility and Urban Agenda publishes annually in its Statistical Yearbook (https://www.mitma.gob.es/informacion-para-el-ciudadano/informacion-estadistica/anuario-estadisticas-de-sintesis-y-boletin/anuario-estadistico) the road network, by ownership and road type, as well as the vehicle-kilometres, by road type and province. These indicators are developed from the Ministry's own information —for the State Road Network—, the Autonomous Communities and the Provincial and Island Councils.

Definition of the main indicators

Casualty accident: that with the following conditions:

a) Occurs, or is caused, on a road or land which is subject to the legislation on road traffic, motor vehicles and road safety.

b) One or several persons are killed or injured as a result or consequence of the accident.

c) Be involved, at least, a vehicle in motion.

Fatal accident: road traffic accident with victims in which, at least, one of them is killed.

Casualty: any person who, as a result of a road traffic accident, is killed or injured.

Fatality: a person who, as a result of a road traffic accident, is killed on the spot or within 30 days after the accident. Confirmed cases of natural death or those where there is evidence of suicide will be excluded.

Injured: any person who, as a result of a road traffic accident, is injured and requires hospitalization or not, and the fatality definition does not apply to him/her.

Hospitalised injured casualty: any person who, as a result of a road traffic accident, requires hospitalization for more than 24 hours, and the fatality definition does not apply to him/her.

Non-hospitalised injured casualty: any person injured in a road traffic accident requiring health assistance for less than 24 hours, provided that the hospitalised injured casualty and fatality definitions do not apply to him/her.

Methodology used to estimate fatalities within 30 days

In the field of transport statistics, it is understood that the fatality figures due to a road traffic accident must be counted within the threshold of 30 days, as stated in the Glossary for Transport Statistics by UNECE-Eurostat-ITF.

In the case of Spain, the number of fatalities occurring within the first 24 hours is determined through the monitoring of all cases by law enforcement officers. The number of fatalities occurring within 30 days of the accident has been determined using correction factors deducted from the effective monitoring of a representative sample of hospitalised injured casualties. These correction factors were first applied in 1993 and reviewed on two occasions, in 1996 and in 2000; they were used until 2010.

From 2011 to 2015 the method of calculation was a two-phased process:

During the first phase, the DGT's road traffic accident register is combined with the INE's death records, so the hospitalised injured casualties recorded in the road traffic accident registers can be searched, provided that the entries contain identifying information that allows such search. Those hospitalised injured casualties recorded as deceased in the INE's death records are considered road traffic fatalities as long as the date of death is within the 30 day period following the accident.

During the second phase, the correction factor is calculated. This factor will be applied to those hospitalised injured casualties lacking enough identifying information to make the search in the INE's death records. The calculation of the factor is based on the data obtained in the preceding phase and is as follows:

$$Correction\ \_\ factor\ = x = \frac{nr\ \_\ of\ \_\ linked\ \_\ records\ (only\ \_\ seriouly\ \_\ injured\ )}{nr\ \_\ of\ \_\ records\ \_\ of\ \_\ the\ \_\ first\ \_\ stratum\ (only\ \_\ seriously\ \_\ injured\ )}$$

As regards the identifying information concerning hospitalised injured casualties recorded in the road traffic accident register, in 2011 there was enough information for 65% of the hospitalised injured casualties; this percentage rose to 80% in 2012, dropped to 76% in 2013 and rose again to 96% in 2014. In 2014 the correction factors were applied to the 438 hospitalised injured casualties lacking identifying information corresponding to the autonomous community of the Basque Country and to the City Council of San Cristóbal de La Laguna.

No correction factor has been applied since 2015 because the provision of identifying information concerning hospitalised injured casualties has significantly improved, which is added to the reporting of fatalities within 30 days following the accident by the autonomous regions with powers in traffic issues.

INDEX OF TABLES

INDEX OF FIGURES

GOBIERNO DE ESPAÑA
MINISTERIO DEL INTERIOR
DGT
Dirección General de Tráfico

Josefa Valcárcel, 44 - 28071 Madrid

www.dgt.es