ROAD ACCIDENTS INVOLVING ANIMALS 2022

NATIONAL ROAD SAFETY OBSERVATORY AUGUST 2023



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TABLE OF CONTENTS

5	I. Executive Summary
7	2. Road accidents involving animals
9	3. General evolution of road accidents involving animals over the last 10 years
	3.1 Main road accident indicators
	3.2 Victims of accidents involving animals in 2022
20	4. Identification of patterns in road accidents involving animals
	4.1 According to type of road
	4.2 According to mode of transport
	4.2.1. According to mode of transport and type of road
	4.3 According to type of accident
	4.4 According to type of animal
	4.4.1 According to type of animal and type of interurban road
	4.5 According to timing of the accident
	4.5.1. Month of the accident
	4.5.2. Day of the accident
	4.5.3. Time period in which the accident occurred
	4.6 According to location of the accident
	4.6.1.Autonomous Region
	4.6.2. Province
	4.6.3. Geolocation
	4.7 Analysis of accidents involving animals by section of road
40	Annex I: Geolocation according to type and species of animal
	Wild animals
	Unidentified animal
	Bird
	lbex
	Deer
	Rabbit
	Roe deer
	Fallow deer
	Wildcat
	Wild boar
	Hare

lberian lynx Wolf Mouflon Otter Chamois

	Badger Fox Other animals
	Domestic animals
	Bird
	Dog
	Goat
	Horse
	Cat
	Sheep Pig
	Cattle
	Other animal
55	Annex II: Sources of information
57	Annex III: Glossary
58	Annex IV: List of tables and graphs

I. Executive summary

Traffic accidents involving animals occur when animals, be they domestic or wild, are involved in traffic accidents causing injuries to the persons involved (in which case we are dealing with accidents with victims), or accidents causing material damage without any injuries being sustained by the persons involved (in which case we are dealing with accidents with damages).

The Royal Automobile Club of Catalonia [RACC] (2010) revealed that 94% of drivers reported having encountered an animal on the road. Meanwhile, 50% of those drivers stated that they had felt in danger as a result of their interaction with an animal on the road.

The information presented below corresponds to consolidated data on accidents on interurban roads, excluding accident data from Catalonia and the Basque Country from the analysis. There were 2 fatal accidents and 2 fatalities in this type of accident in 2022.

As regards the **type of road**, 86% of the accidents with victims recorded in 2022 occurred on other interurban roads, where there were 2 fatalities, 32 hospitalised injured casualties and 525 non-hospitalised injured casualties.

With regard to the most frequently used **modes of transport** by victims of accidents involving animals, the majority were cars (65%, 327 accidents), followed by motorcycles (23%, 116 accidents). The two fatalities recorded in 2022 involved vulnerable groups and modes of transport, one registered as being on a moped and the other on a motorcycle.

In relation to the **type of accident**, 69% of accidents with victims involving animals were caused by a vehicleanimal collision, followed by 25% caused by roadway departures.

With regard to the **type of animal** involved in this type of accident, it was recorded that wild animals were more frequently involved in accidents with victims (313), compared to domestic animals (143). Wild boar (201) were the most common type of animal involved in accidents with victims, ahead of dogs (64) and roe deer (63).

In terms of **gender and age**, 59% of non-hospitalised injured casualties were men, with 373 men in 2022, compared to 264 women. In relation to the number of hospitalised injured casualties, 33 of the 35 recorded were men, and the 2 fatalities were also men. Men aged between 45 and 54 accounted for the highest number of hospitalised injured casualties in accidents involving animals in 2022.

As regards the **timing** of accidents with victims involving animals, Saturday was the day with the highest number of hospitalised injured casualties (11), but Sunday was the day with the highest number of accidents with victims involving animals. With respect to the time period in which the accident occurred, the period with the greatest concentration of accidents with victims was between 20:00 and 23:59, representing 38% of accidents (191).

As for the **location** of the accidents, Andalusia and Castile and Leon were the autonomous regions where the highest numbers of non hospitalised injured casualties were recorded, with 144 and 117 respectively. These regions also registered the greatest number of accidents with victims in 2022, with 94 in Andalusia and 98 in Castile and Leon. Regarding the provinces, Asturias (28), León (25) and Valencia (23) recorded the highest numbers of accidents with victims.

Looking now at the **accidents involving animals** as opposed to the victims of these accidents, in 2022 88% of accidents involving animals occurred on other interurban roads, totalling 31,486 accidents in 2022.

In terms of the **type of accident**, besides vehicle-animal collisions, which accounted for 98% of accidents, the next most common type of accident was roadway departures, representing 1% of accidents.

As regards the **type of animal** involved in the accident, in the majority of accidents involving animals in 2022, the animal involved was a wild boar, accounting for 40% of accidents, followed by roe deer (35%) and dogs (9%).

With reference to the **timing** of the accidents, October, November and December were the months with the highest number of accidents involving animals recorded in 2022, together accounting for 31% of the total. November posted the highest figure in the last 10 years, with 3,969 accidents. Sunday was the day of the week with the highest number of accidents involving animals recorded in 2022, representing 5,720 accidents. 40% of accidents involving animals recorded between 20:00 and 23:49, i.e. 14,426 accidents.

In terms of **location**, the autonomous regions that registered the highest number of accidents involving animals were Castile and Leon, with 12,501 accidents, followed by Galicia, with 5,512. The two regions accounted for 35% and 15% respectively of the accidents recorded in 2022.

Burgos and León were the provinces that registered the highest number of accidents involving animals, representing 8% and 6% of the total, respectively.

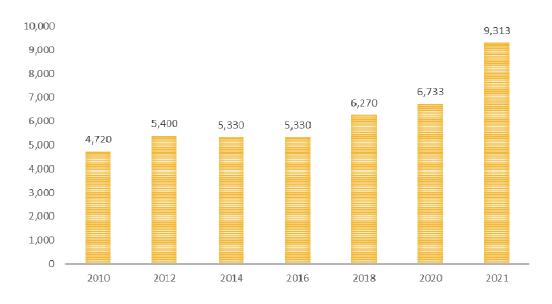
2. Road accidents involving animals

Road accidents involving animals are a problem that has been the subject of growing concern in recent years. These are traffic accidents that occur when animals, be they domestic or wild, are involved in traffic accidents causing injuries to the persons involved (in which case we are dealing with accidents with victims), or accidents causing material damage without any injuries being sustained by the persons involved (in which case we are dealing with accidents with damages).

In many parts of the world, especially rural areas or areas close to natural landscapes, the presence of animals on the roads is an ever-present reality. Not only can vehicle-animal collisions cause serious or fatal injuries to the animals involved and affect their ecosystems, but they can also cause significant material damage to vehicles and serious injuries or loss of human life, which is why this type of road accident poses major challenges in terms of prevention and mitigation.

2.1. Overview of the animal census in Spain and trends in recent years.

With regard to domestic animals, according to the 2021 Census by the National Pet Food Manufacturers' Association (ANFAAC), there were more than 29 million pets in Spain, the majority of which were dogs (9,313,098), fish (7,860,966) and cats (5,858,649), in addition to other types of animals such as birds and reptiles. These figures show an upward trend over the last ten years. Figure 1 illustrates this increase in the number of dogs kept as pets, which intensified in 2020 as a result of the COVID-19 pandemic.





Note: Data from the National Pet Food Manufacturers' Association (ANFAAC)

However, a study conducted by the Affinity Foundation found that 258,300 pets were abandoned in 2020, the highest number in Europe. This figure has some bearing on road accidents involving animals, as abandoned animals can roam loose near roads, crossing them suddenly and surprising drivers. These situations can increase the likelihood of an accident occurring, either through a collision with the animal itself, or as a result of a sudden swerve to avoid running them over, which can lead to collisions with other vehicles or roadway departures.

As for wild animals, in Spain, there is a variety of wildlife that can cause accidents when interacting with vehicles. The Hunting Resources Research Institute estimates that in 2022, there were more than one million wild boar in Spain, a number that could increase in the coming months and even double by 2025. Forest areas can also be home to deer, lynx, foxes and other small wild animals, which, according to data from the Ministry for Ecological Transition and the Demographic Challenge (MITECO), can vary substantially in number depending on the characteristics of the different geographical areas.

Lastly, it is worth mentioning cattle and sheep, as well as other livestock, which are particularly prevalent in rural areas and may graze near roads, as they can cause incidents if they escape from the designated areas and enter the road. According to figures provided in the 2021 Livestock Surveys, published by the Subdirectorate-General

for Analysis, Coordination and Statistics of the Ministry of Agriculture, Fishing and Food, there are currently over two million goats, 16 million sheep, and 6.5 million cattle, numbers that have declined steadily in recent years.

2.2. Causes and consequences of road accidents involving animals: victims and/or material damage to the vehicle

The number of accidents involving animals in 2022 was 35,661, of which 505 were accidents with victims. In these accidents, there were 2 fatalities, 35 hospitalised injured casualties and 637 non-hospitalised injured casualties, whose prevalence and characteristics will be specified in this report.

In this regard, the Royal Automobile Club of Catalonia (RACC) (2010) revealed that 94% of drivers reported having encountered an animal on the road. Meanwhile, 50% of those drivers stated that they had felt in danger as a result of their interaction with an animal on the road.

Later in this study, we will see that 86% of animals involved in accidents in 2022 were wild animals (representing 70% on dual carriageways and motorways and 88% on other interurban roads), some of which are endangered species, such as Iberian lynx, wolves, brown bears, wildcats and otters.

In terms of the material consequences of this type of situation, the average cost of repairing a vehicle that was in an accident involving animals was 1,400 euros (RACC, 2010).

As for the impact of road accidents on animals, in the international context it was estimated that the annual mortality rate of birds for certain European countries ranged from 350,000 to 27 million (Erritzoe et al. 2003). In Brazil, it was estimated that more than 8 million birds and over 2 million mammals die on the roads each year (González-Suárez et al. 2018). With regard to the United States, in the 1990s, between 500,000 and 700,000 deer died each year due to collisions with vehicles (Canover et al. 1995). Likewise, it was calculated that in the United Kingdom between 3 and 7% of the spring population of roe deer die each year (Langheim, 2007). This figure was even more striking in Slovenia, where between 11 and 15% of the roe deer population died as a result of collisions on the road between 2000 and 2006 (Langbein et al. 2011).

In the Spanish context, the same study by the RACC (2010) mentions research by Ecologists in Action, which states that approximately 10 million vertebrates die on Spanish roads each year. Meanwhile, other research by the Association of Infrastructure Conservation and Operation Companies (ACEX) estimates that around one thousand dead animals are removed from the roads every day, amounting to approximately 365,000 animals run over each year.

3. General evolution of road accidents involving animals over the last 10 years

The main road accident indicators for the last 10 years are set out below, together with a detailed analysis of the situation in 2022 in relation to the victims involved in accidents involving animals.

The data presented throughout the report are consolidated data. Data from Catalonia and the Basque Country are not included, as the coverage of this type of accident is highly variable. The same is true for accidents involving animals occurring on urban roads, which is why the data on these roads are excluded.

Therefore, the information presented in subsequent sections corresponds to consolidated data on accidents on interurban roads, excluding accident data from Catalonia and the Basque Country from the analysis.

3.1 Main road accident indicators

With regard to the figures for the main road accident indicators, according to tables 1 and 2, there was an increase in the number of fatal accidents and the number of fatalities compared to 2019, with rises of 6% and 7% respectively, representing a total of 970 fatal accidents and 1,066 fatalities in 2022.

On the other hand, compared to 2019, there was an 11% decrease in the number of accidents with victims, as well as a drop in the number of hospitalised injured casualties and injured but nonhospitalised, down 9% and 13% respectively.

Table 1: Number of fatal accidents, accidents with victims, fatalities, hospitalised injured casualties and nonhospitalised injured casualties. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

	2013	2014	2015	2016	2017	2018	2019	2020	202 I	2022
Fatal accidents	802	837	913	968	980	970	911	757	845	970
Accidents with victims	27,366	25,598	24,529	25,738	26,526	26,781	26,659	19,409	22,877	23,735
Fatalities	997	I,065	I,008	1,069	098, ا	1,060	993	826	919	1,066
Hospitalised injured casualties	4,045	3,815	3,613	3,941	3,727	3,437	3,292	2,635	2,835	2,986
Non-hospitalised injured casualties	37,780	35,581	34,553	36,241	37,170	38,002	36,966	25,042	30,943	32,007

 Table 2: Comparison of fatal accidents, accidents with victims, fatalities, hospitalised injured casualties and nonhospitalised injured casualties. Interurban roads excluding Catalonia and the Basque Country.

	Diff. 22/21	Diff. 22/19
Fatal accidents	15%	6%
Accidents with victims	4%	-11%
Fatalities	16%	7%
Hospitalised injured casualties	5%	-9%
Non-hospitalised injured casualties	3%	-13%

If we compare the aforementioned figures with those for accidents involving animals, it can be observed that the trend is different in some cases.

Contrary to the above, the number of fatal accidents and fatalities decreased in relation to 2019. Two fatalities and two fatal accidents were recorded with regard to accidents involving animals in 2022.

With respect to the number of accidents causing material damage to the vehicle, in terms of accidents involving animals, this increased by 22% compared to 2019, rising from 28,742 to 35,156 in 2022.

Table 3: Number of fatal accidents, accidents with victims, accidents causing material damage to the vehicle, fatalities, hospitalised injured casualties and non-hospitalised injured casualties, where animals were involved. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

	2013	2014	2015	2016	2017	2018	2019	2020	202 I	2022
Fatal accidents	6	4	7	10	4	9	4	4	5	2
Accidents with victims	757	689	494	531	554	576	529	474	509	505
Accidents causing material damage to the vehicle	17,170	16,158	18,093	22,099	25,804	26,944	28,742	27,209	31,481	35,156
Fatalities	7	4	7	11	4	10	4	4	5	2
Hospitalised injured casualties	44	63	40	61	51	49	40	46	41	35
Non- hospitalised injured casualties	1,012	874	640	681	720	738	657	563	601	637

Table 4: Comparison of the number of fatal accidents, accidents with victims, accidents causing material damage to the vehicle, fatalities, hospitalised injured casualties and non-hospitalised injured casualties, where animals were involved. Interurban roads excluding Catalonia and the Basque Country.

	Diff. 22/21	Diff. 22/19
Fatal accidents	-3	-2
Accidents with victims	-1%	-5%
Accidents causing		
material damage to the	12%	22%
vehicle		
Fatalities	-3	-2
Hospitalised injured	-6	-5
casualties	Ū	5
Non-hospitalised injured casualties	6%	-3%

The following graphs compare the evolution and trends observed for the aforementioned figures. Looking at the numbers of accidents with victims, accidents causing material damage and hospitalised injured casualties, they all showed a similar evolution and trend, both in general and when only considering accidents involving animals. However, this was not the case for fatal accidents and fatalities.

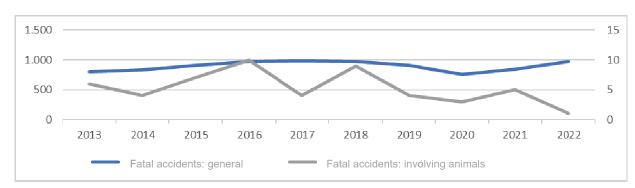


Figure 2: Evolution of the number of fatal accidents in the categories of general accidents vs. accidents involving animals. Interurban roads excluding Catalonia and the Basque Country. 2013-2022



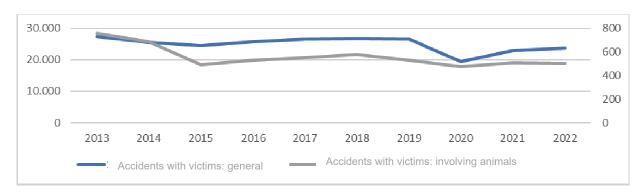


Figure 4: Evolution of the number of fatalities in general accidents vs. accidents involving animals. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

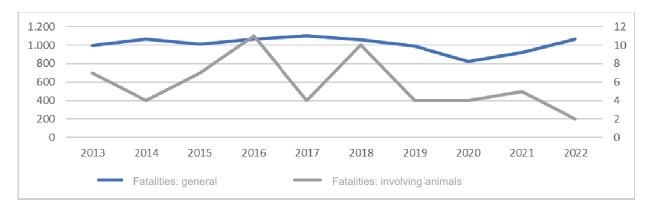


Figure 5: Evolution of the number of hospitalised injured casualties in general accidents vs. accidents involving animals. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

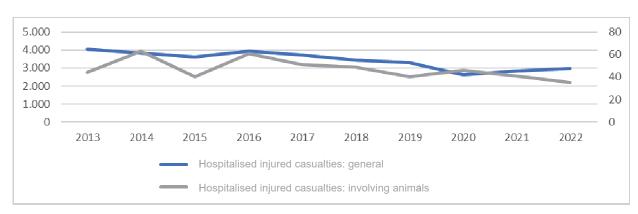
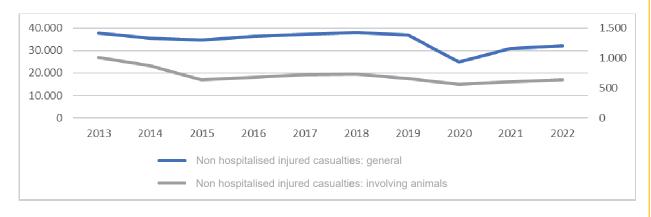


Figure 6: Evolution of the number of non-hospitalised injured casualties in general accidents vs. accidents involving animals. Interurban roads excluding Catalonia and the Basque Country. 2013-2022



3.2 Victims of accidents involving animals in 2022

This section analyses the type of interurban road, mode of transport, type of accident, animal involved in the accident, timing and location of the accident, as well as the gender and age of the victims of accidents involving animals in 2022.

86% (433) of the accidents with victims recorded in 2022 occurred on other interurban roads, where there were 2 fatalities, 32 hospitalised injured casualties and 525 non-hospitalised injured casualties.

 Table 5: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number of accidents with victims, with regard to accidents involving animals, according to type of interurban road. Interurban roads excluding Catalonia and the Basque Country. 2022

According to type of road		Fatalities	Hospitalised injured casualties Non- hospitalised injured casualties		Accidents with victims	Percentage of accidents with victims
Interurban	Motorways and dual carriageways	0	3	112	72	14%
roads	Other interurban roads	2	32	525	433	86%
т	otal	2	35	637	505	100%

With regard to the most frequently used modes of transport by victims of accidents involving animals, the majority were cars (65%, 327 accidents), followed by motorcycles (23%, 116 accidents).

The two fatalities recorded in 2022 involved vulnerable groups and modes of transport, one recorded as being on a moped and the other on a motorcycle. This group also had the highest number of hospitalised injured casualties (27 persons). However, when we analyse the number of nonhospitalised injured casualties, the majority were travelling in cars (454), followed by 147 on motorcycles.

Table 6: Number of fatalities, hospitalised injured casualties and non hospitalised injured casualties and number of accidents with victims, with regard to accidents involving animals, according to mode of transport. Interurban roads excluding Catalonia and the Basque Country. 2022

According to mode of transport	Fatalities	Hospitalised injured casualties	Non-hospitalised injured casualties	Accidents with victims	Percentage of accidents with victims
Pedestrian	0	2	2	5	1%
Bicycle	0	5	21	24	5%
PMV	0	I	0	1	0%
Moped	L	2	18	18	4%
Motorcycle	l	17	106	116	23%
Vulnerable groups and modes of transport	2	27	147	162	32%
Car	0	5	454	327	65%
Van	0	0	28	20	4%
Lorry up to 3500 kg	0	0	2	2	0%
Lorry over 3500 kg	0	I	3	7	١%
Bus	0	0	0	2	0%
Other vehicle	0	2	3	5	١%
Unknown	0	0	0	0	0%
Total	2	35	637	505	100%

69% of accidents with victims involving animals were caused by a vehicle-animal collision, followed by 25% caused by roadway departures.

Roadway departures were responsible for 1 fatality, 10 hospitalised injured casualties and 157 nonhospitalised injured casualties, while vehicle-animal collisions were responsible for 1 fatality, 19 hospitalised injured casualties and 429 nonhospitalised injured casualties.

Table 7: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number of accidents with victims, with regard to accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 2022

According to type of accident	Fatalities	Hospitalised injured casualties	Nonhospitalised injured casualties	Accidents with victims	Percentage of accidents with victims
Vehicle- animal collision	I	19	429	349	69%
Vehicle- pedestrian collision	0	2	0	2	0%
Head-on collision	0	0	5	2	0%
Frontal and frontal-lateral collision	0	0	П	2	0%
Rear-end and multiple collision	0	2	21	П	2%
Roadway departure	I	10	157	126	25%
Roll-over	0	0	0	0	0%
Other type	0	2	14	13	3%
Unknown	0	0	0	0	0%
Total	2	35	637	505	100%

Fatalities in vehicle-pedestrian collisions do not include all pedestrians hit in collisions since the classification by type of accident is based on the first manoeuvre and not the injury outcome thereof

With regard to the type of animal involved in this type of accident, it was recorded that wild animals were more frequently involved in accidents with victims (62%, 313 accidents), compared to accidents involving domestic animals (28%, 143). Wild boar (40%, 201) were the most common type of animal involved in accidents with victims, ahead of dogs (13%, 64) and roe deer (12%, 63).

 Table 8: Number of fatalities, Hospitalised injured casualties and nonhospitalised injured casualties and number of accidents with victims, with regard to accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 2022

		Fatalities	Hospitalised injured casualties	Nonhospitalised injured casualties	Accidents with victims	Percentage of accidents with victims
Unidentified animal	Unidentified animal	0	4	73	49	10%
	Bird	0	2	0	2	0%
	lbex	I	1	2	4	1%
	Deer	0	I	22	17	3%
	Rabbit	0	2	5	7	1%
Wild animal	Roe deer	0	3	74	63	12%
	Fallow deer	0	0	2	2	0%
	Wildcat	0	0	0	0	0%
	Wild boar	I	8	248	201	40%
	Hare	0	0	0	0	0%
	Iberian lynx	0	0	0	0	0%
	Wolf	0	0	I	I	0%
	Mouflon	0	0	I	I	0%
	Otter	0	0	0	0	0%
	Brown bear	0	0	0	0	0%
	Chamois	0	0	0	0	0%
	Badger	0	0	3	3	1%
	Fox	0	I	4	5	1%
	Other animal	0	1	8	7	١%
	Subtotal	2	19	370	313	62%
	Bird	0	0	0	0	0%
	Other animal	0	0	0	0	0%
	Dog	0	6	75	64	13%
Domestic	Goat	0	I	2	3	1%
animal	Horse	0	4	59	35	7%
animai	Cat	0	I	14	11	2%
	Sheep	0	0	8	7	1%
	Pig	0	0	0	0	0%
	Cattle	0	0	36	23	5%
	Subtotal	0	12	194	143	28%
Το	tal	2	35	637	505	100%

The following table analyses the gender and age of victims of accidents involving animals.

59% of nonhospitalised injured casualties were men, with 373 men in 2022, compared to 264 women. In relation to the number of hospitalised injured casualties, 33 of the 35 recorded were men, and the two fatalities were also men.

Men aged between 45 and 54 accounted for the highest number of hospitalised injured casualties in accidents involving animals in 2022.

 Table 9: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties accidents involving animals, according to gender and age group. Interurban roads excluding Catalonia and the Basque Country. 2022

		Fatalities	Hospitalised injured casualties	Nonhospitalised injured casualties
	0-14	0	0	6
	15-24	0	3	84
	25-34	0	I	72
Male	35-44	l l	8	69
	45-54	0	10	83
	55-64	l l	5	39
	65-74	0	5	12
	75-84	0	I	2
	85 and over	0	0	0
	Unknown	0	0	6
	Subtotal	2	33	373
	0-14	0	0	17
	15-24	0	0	53
	25-34	0	0	63
	35-44	0	0	51
	45-54	0	I	43
Female	55-64	0	0	27
	65-74	0	0	3
	75-84	0	0	2
	85 and over	0	0	2
	Unknown	0		3
	Subtotal	0	2	264
Т	otal	2	35	637

With regard to the fatalities in accidents involving animals, one was recorded in January and the other in July. 57% of accidents with victims involving animals were recorded between May and October.

36% of accidents with victims involving animals occurred between Saturday and Sunday. Saturday was the day with the highest number of hospitalised injured casualties (11), but Sunday was the day with the highest number of accidents with victims involving animals.

With respect to the time period in which the accident occurred, the period with the greatest concentration of accidents with victims was between 20:00 and 23:59, representing 38% of accidents (191). However, the period with the highest number of hospitalised injured casualties was between 07:00 and 13:59, with 15 hospitalised injured casualties.

Table 10: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number of accidents with victims, with regard to accidents involving animals, according to timing. Interurban roads excluding Catalonia and the Basque Country. 2022

		Fatalities	Hospitalised injured casualties	Nonhospitalised injured casualties	Accidents with victims	Percentage of accidents with victims
	January	I	I	58	43	9%
	February	0	2	43	39	8%
	March	0	1	31	24	5%
 Month [April	0	5	48	36	7%
	May	0	5	67	46	9%
	June	0	4	42	39	8%
	July	I	3	55	45	9%
	August	0	3	73	56	11%
	September	0	5	55	47	9%
	October	0	3	71	53	10%
_	November	0	1	43	36	7%
	December	0	2	51	41	8%
	Subtotal	2	35	637	505	100%
	Monday	0	5	80	67	13%
	Tuesday	0	3	69	56	11%
Day of	Wednesday	I	4	71	56	11%
the –	Thursday	0	4	82	68	13%
week –	Friday	0	2	104	76	15%
	Saturday	<u> </u>	11	101	86	17%
	Sunday	0	6	130	96	19%
	Subtotal	2	35	637	505	100%
	00:00-06:59	0	5	174	125	25%
Time	07:00-13:59	0	15	116	102	20%
period –	14:00-19:59	1	9	100	87	17%
	20:00-23:59 Subtotal	2	6 35	247 637	191 505	38%

Andalusia and Castile and Leon were the autonomous regions where the highest numbers of nonhospitalised injured casualties were recorded, with 144 and 117 respectively. These regions also registered the greatest number of accidents with victims in 2022, with 94 in Andalusia and 98 in Castile and Leon, accounting for 19% each.

 Table 11: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number of accidents with victims, with regard to accidents involving animals, according to autonomous region. Interurban roads excluding Catalonia and the Basque Country. 2022

	Fatalities	Hospitalised injured casualties	Nonhospitalised injured casualties	Accidents with victims	Percentage of accidents with victims
Andalusia	I	0	144	94	19%
Aragon	0	5	41	41	8%
Asturias	0	3	34	28	6%
Balearic Islands	0	0	5	5	1%
Canary Islands	0	2	7	7	1%
Cantabria	0	I	8	7	1%
Castile-La Mancha	0	2	43	37	7%
Castile and Leon	I.	5	117	98	19%
Catalonia	0	0	0	0	0%
Extremadura	0	2	41	29	6%
Galicia	0	5	84	69	14%
Madrid	0	I	21	17	3%
Murcia	0	2	17	10	2%
Navarre	0	I	2	3	1%
La Rioja	0	0	Н	9	2%
Valencia	0	6	62	51	10%
Basque Country	0	0	0	0	0%
Ceuta and Melilla	0	0	0	0	0%
Total	2	35	637	505	100%

Regarding the provinces, Asturias (28), León (25) and Valencia (23) recorded the highest numbers of accidents with victims.

Table 12: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number ofaccidents with victims, with regard to accidents involving animals, according to province. Interurban roads excludingCatalonia and the Basque Country. 2022

	E Prince	Hospitalised	Nonhospitalised	Accidents	Percentage of
	Fatalities	injured casualties	injured casualties	with victims	accidents with victims
Araba/Álava	0	0	0	0	0%
Albacete	0	0	10	8	2%
Alicante/Alacant	0	2	27	18	4%
Almería	0	0	6	6	1%
Ávila	I	0	10	10	2%
Badajoz	0	I	17	12	2%
Balearic Islands	0	0	5	5	1%
Barcelona	0	0	0	0	0%
Burgos	0	I	16	15	3%
Cáceres	0	1	24	17	3%
Cadiz	0	0	25	12	2%
Castellón/Castelló	0	I	12	10	2%
Ciudad Real	0	1	7	7	1%
Córdoba	0	0	8	7	1%
A Coruña	0	I	24	19	4%
Cuenca	0	0	8	8	2%
Girona	0	0	0	0	0%
Granada	I	0	12	11	2%
Guadalajara	0	I	7	8	2%
Gipuzkoa	0	0	0	0	0%
Huelva	0	0	23	13	3%
Huesca	0	2	20	20	4%
Jaén	0	0	16	14	3%
León	0	0	34	25	5%
Lleida	0	0	0	0	0%
La Rioja	0	0	П	9	2%
Lugo	0	2	14	13	3%
Madrid	0	I	21	17	3%
Málaga	0	0	21	11	2%
Murcia	0	2	17	10	2%
Navarre	0	I	2	3	1%
Ourense	0	2	19	17	3%
Asturias	0	3	34	28	6%
Palencia	0	0	10	6	1%
Palmas, Las	0	0	2	2	0%
Pontevedra	0	0	27	20	4%
Salamanca	0	2	8	9	2%
Santa Cruz de Tenerife	0	2	5	5	1%
Cantabria	0	I	8	7	1%
Segovia	0	I	16	15	3%
Seville	0	0	33	20	4%
Soria	0	0	6	4	1%
Tarragona	0	0	0	0	0%
Teruel	0	2	5	7	1%
Toledo	0	0	П	6	1%
Valencia/València	0	3	23	23	5%
	-	-			

	Fatalities	Hospitalised injured casualties	Nonhospitalised injured casualties	Accidents with victims	Percentage of accidents with victims
Valladolid	0	I.	13	П	2%
Bizkaia	0	0	0	0	0%
Zamora	0	0	4	3	1%
Zaragoza	0	I.	16	14	3%
Ceuta	0	0	0	0	0%
Melilla	0	0	0	0	0%
Total	2	35	637	505	100%

4. Identification of patterns in road accidents involving animals

The following section analyses road accidents involving animals according to the different types of road, mode of transport, type of accident and type of animal involved, as well as the timing and location of the accident. All accidents involving animals that resulted in casualties and/or material damage are considered in this analysis.

Once again, information on urban roads and the regions of Catalonia and the Basque Country is excluded.

4.1 According to type of road

In 2022, 88% of accidents involving animals occurred on other interurban roads, totalling 31,486 accidents in 2022.

Comparing the situation in 2022 with 2019, all types of road saw an increase in the number of accidents involving animals. There was a rise of 7% on motorways and dual carriageways and 24% on other interurban roads. An upward trend can be seen in the number of accidents involving animals between 2013 and 2022.

Table 13: Number of accidents involving animals, according to type of interurban road. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Motorways	3,169	2,923	2,992	3,482	3,610	3,704	3,895	3,667	3,938	4,175
and dual										
carriageways										
Other	14,758	13,924	15,595	19,148	22,748	23,816	25,376	24,016	28,052	31,486
interurban										
roads										
Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

 Table 14: Difference in the number of accidents involving animals, according to type of interurban road. Interurban roads excluding Catalonia and the Basque Country.

	Diff. 22/21	Diff. 22/19	Brkdn. 22
Motorways and dual carriageways	6%	7%	12%
Other interurban roads	12%	24%	88%
Total	11%	22%	100%

4.2. According to mode of transport

In 2022, the mode of transport registering the greatest increase in the number of accidents involving animals compared to 2019 was cars, with 12% more accidents. An upward trend can be seen in the number of accidents involving animals between 2013 and 2022.

 Table 15: Number of accidents involving animals, according to mode of transport.

 Interurban roads excluding Catalonia and the Basque Country. 2013-2022⁽¹⁾

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Pedestrian	10	19	27	21	24	16	19	25	9	12
Bicycle	20	24	26	22	34	41	40	23	29	31
ΡΜ٧	0	0	0	0	0	0	0	0	0	
Moped	22	13	20	13	27	20	20	4	16	25
Motorcycle	139	146	156	154	168	186	202	171	164	214
Vulnerable groups and	189	200	229	208	251	262	279	232	216	280
modes of transport				200						
Car	15,537	14,000	15,734	19,143	22,162	23,459	24,946	23,816	27,978	31,226
Van	989	1,328	1,419	1,623	2,043	1,940	2,021	1,906	1,901	2,044
Lorry up to 3500 kg	136	176	209	235	263	237	296	218	221	236
Lorry over 3500 kg	440	586	584	741	784	746	769	717	649	711
Bus	57	77	67	78	80	81	78	39	55	84
Other vehicle	179	32	21	42	53	45	63	52	56	50
Unknown	555	644	531	744	913	944	I,005	889	1,089	1,200
Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

The total number of accidents according to mode of transport does not match the sum of the figures included in the categories according to mode of transport, as more than one vehicle may be involved in an accident.

 Table 16: Difference in the number of accidents involving animals, according to mode of transport.

 Interurban roads excluding Catalonia and the Basque Country. 2013-2022

	Diff. 22/21	Diff. 22/19	Brkdn. 22
Pedestrian	3	-7	0%
Bicycle	2	-9	0%
PMV	I		0%
Moped	9	5	0%
Motorcycle	30%	6%	1%
Vulnerable groups and modes of transport	30%	0%	1%
Car	12%	25%	88%
Van	8%	1%	6%
Lorry up to 3500 kg	7%	-20%	١%
Lorry over 3500 kg	10%	-8%	2%
Bus	29	6	0%
Other vehicle	-6	-13	0%
Unknown	10%	19%	3%
Total	11%	22%	100%

The total number of accidents according to mode of transport does not match the sum of the figures included in the categories according to mode of transport, as more than one vehicle may be involved in an accident.

4.2.1. According to mode of transport and type of road

Compared to 2019, there was a 12% rise in the number of cars involved in accidents involving animals on motorways and a 10% rise in this number on dual carriageways. On other interurban roads, this increase stood at 27%.

On the other hand, there was a 14% decrease in the number of lorries over 3500 kg involved in accidents involving animals on dual carriageways and a 6% decrease in this number on other interurban roads.

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	Pedestrian	0	0	I	0	0	0	0	0	0	0
-	Bicycle	0	0	0	0	0	0	0	0	0	0
	PMV	0	0	0	0	0	0	0	0	0	0
	Moped	0	0	0	0	0	0	0	0	0	0
	Motorcycle	I.	3	0	I.	3	0	T	3	0	I
-	Vulnerable groups and modes of transport	I	3	I	I	3	0	I	3	0	I
Interurban	Car	361	352	364	407	410	416	412	371	406	463
motorway	Van	23	26	38	48	39	32	37	39	45	40
	Lorry up to 3500 kg	6	3	2	6	2	3	2	1	0	1
-	Lorry over 3500 kg	21	21	23	34	23	34	40	57	34	41
	Bus	4	3	3	7	4	2	2	1	2	1
	Other vehicle	2	0	I	I	0	I	I	0	0	0
	Unknown	41	25	26	44	28	35	33	33	47	47
	Subtotal	452	427	447	531	503	515	514	496	526	580
	Pedestrian	0	I	0	3	I	I	0	0	0	0
	Bicycle	0	0	0	0	0	0	2	0	0	0
	PMV	0	0	0	0	0	0	0	0	0	0
L	Moped	0	0	0	0	0	I	0	0	0	0
	Motorcycle	10	9	12	9	13	9	7	9	6	7
	Vulnerable groups and modes of transport	10	10	12	12	14	П	9	9	6	7
Interurban	Car	2,384	2,089	2,130	2,467	2,585	2,696	2,849	2,602	2,944	3,127
dual carriageway	Van	144	190	213	214	241	222	222	262	233	227
carriageway	Lorry up to 3500 kg	17	13	13	16	12	15	10	17	9	8
	Lorry over 3500 kg	134	160	164	202	209	203	204	235	174	176
	Bus	11	13	12	12	16	17	16	7	5	14
	Other vehicle	14	3	3	8	6	5	15	5	8	6
_	Unknown	56	74	62	72	82	84	102	95	90	87
	Subtotal	2,717	2,496	2,545	2,951	3,107	3,189	3,381	3,171	3,412	3,595
	Pedestrian	10	18	26	18	23	15	19	25	9	12
	Bicycle	20	24	26	22	34	41	38	23	29	31
	PMV	0	0	0	0	0	0	0	0	0	l l
	Moped	22	13	20	13	27	19	20	14	16	25
	Motorcycle	128	134	144	144	152	177	194	159	158	206
	Vulnerable groups and modes of transport	178	187	216	195	234	251	269	220	210	272
Other interurban	Car	12,792	11,559	13,240	16,269	19,167	20,347	21,685	20,843	24,628	27,636
roads	Van	822	1,112	1,168	1,361	1,763	I,686	1,762	I,605	1,623	1,777
	Lorry up to 3500 kg	113	160	194	213	249	219	284	200	212	227
	Lorry over 3500 kg	285	405	397	505	552	509	525	425	441	494
	Bus	42	61	52	59	60	62	60	31	48	69
	Other vehicle	163	29	17	33	47	39	47	47	48	44
	Unknown	458	545	443	628	803	825	870	761	952	I,066
	Subtotal	14,758	13,924	15,595	19,148	22,748	23,816	25,376	24,016	28,052	31,486
	Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

Table 17: Number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

The total number of accidents according to mode of transport does not match the sum of the figures included in the categories according to mode of transport, as more than one vehicle may be involved in an accident.

		Diff.	Diff.	Brkdn
		22/21	22/19	22
	Pedestrian			0%
	Bicycle			0%
	PMV			0%
	Moped			0%
	Motorcycle	1		0%
	Vulnerable groups and modes of transport			0%
Interurban	Car	14%	12%	1%
motorway	Van	-5	3	0%
	Lorry up to 3500 kg		-1	0%
	Lorry over 3500 kg	7	i	0%
	Bus	- 1	-1	0%
	Other vehicle		-1	0%
-	Unknown		14	0%
-	Subtotal	10%	13%	2%
	Pedestrian	10/0	1370	0%
-	Bicycle		-2	0%
	PMV		2	0%
-	Moped			0%
-	Motorcycle			0%
	Vulnerable groups and modes of transport		-2	0%
Interurban –	Car	6%	10%	9%
dual –	Van	-3%	2%	1%
carriageway	Lorry up to 3500 kg	-3%	-2	0%
-	Lorry over 3500 kg	-1	-14%	0%
-	Bus	9	-14/0	0%
-	Other vehicle	-2	<u>-</u> -9	0%
-	Unknown	-2	-15%	0%
-	Subtotal	-3	-13%	10%
		5%	6% -7	0%
_	Pedestrian	2	-7 -7	0%
-	Bicycle	2	-/	0%
-	PMV	9	5	0%
_	Moped		-	
-	Motorcycle	30%	6%	1%
Other –	Vulnerable groups and modes of transport	30%	1%	1%
interurban	Car	12%	27%	77%
roads	Van	9%	1%	5%
	Lorry up to 3500 kg	7%	-20%	1%
	Lorry over 3500 kg	12%	-6%	1%
	Bus	21	9	0%
	Other vehicle	-4	-3	0%
	Unknown	12%	23%	3%
	Subtotal	12%	24%	88%
	Total	11%	22%	100%

 Table 18: Difference in the number of accidents involving animals, according to mode of transport and type of road.

 Interurban roads excluding Catalonia and the Basque Country.

The total number of accidents according to mode of transport does not match the sum of the figures included in the categories according to mode of transport, as more than one vehicle may be involved in an accident.

4.3 According to type of accident

In terms of the type of accident, besides vehicle-animal collisions, which accounted for 98% of accidents, the next most common type of accident was roadway departures, representing 1% of accidents. The number of vehicle-animal collisions increased by 22% compared to 2019 and roadway departures were up 15%.

	2013	2014	2015	2016	2017	2018	2019	2020	202 I	2022
Vehicle- animal collision	17,221	16,066	17,928	22,003	25,673	26,909	28,693	27,134	31,422	35,077
Vehicle- pedestrian collision	4	18	17	22	24	21	26	9	3	4
Head-on collision	0	12	П	6	5	14	9	23	27	24
Frontal and frontal- lateral collision	19	12	18	7	7	10	9	15	20	17
Rear-end and multiple collision	78	88	70	74	66	52	59	32	38	31
Roadway departure	485	520	427	402	453	427	384	388	409	441
Roll-over	23	15	9	10	6	7	6	4	4	2
Other type	97	93	107	106	124	80	85	78	67	65
Unknown	0	23	0	0	0	0	0	0	0	0
Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

 Table 19: Number of accidents involving animals, according to type of accident. Interurban roads excluding

 Catalonia and the Basque Country. 2013-2022

 Table 20: Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country.

	Diff. 22/21	Diff. 22/19	Brkdn. 22
Vehicle-animal collision	12%	22%	98%
Vehicle-pedestrian collision	I	-22	0%
Head-on collision	-3	15	0%
Frontal and frontal-lateral	-3	8	0%
collision			
Rear-end and multiple collision	-7	-28	0%
Roadway departure	8%	15%	1%
Roll-over	-2	-4	0%
Other type	-2	-20	0%
Unknown	0	0	0%
Total	11%	22%	100%

4.4 According to type of animal

The majority of accidents involving animals concerned wild animals (86%). Wild boar were the most common animal involved in accidents involving animals in 2022, accounting for 40% of accidents, followed by roe deer (35%) and dogs (9%).

Compared with 2019, the number of accidents involving animals increased by 50% for birds, 38% for roe deer and 36% for ibex. On the other hand, accidents involving horses decreased by 18% and those involving hares and dogs were down 14%.

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Unidentified animal	Unidentified animal	557	667	580	566	684	711	710	642	700	730
	Bird	109	89	75	88	165	188	199	216	311	299
	lbex	35	52	66	78	88	111	115	125	161	156
	Deer	612	690	844	977	1,387	1,272	1,432	1,266	1,536	1,795
	Rabbit	27	41	33	47	57	54	71	71	51	65
	Roe deer	4,483	4,162	4,926	6,027	7,641	7,755	8,960	8,523	10,778	12,397
	Fallow deer	8	18	21	23	30	28	34	35	46	54
	Wildcat	12	4	5	7	17	19	15	10	16	15
	Wild boar	6,174	5,689	6,674	8,987	10,099	10,871	11,384	11,628	12,744	14,278
	Hare	59	65	83	95	120	133	142	124	131	122
Wild animal	lberian lynx	0	0	2	0	3	- I	4	4	8	8
	Wolf	23	18	18	16	17	28	20	19	39	31
	Mouflon	2	I	2	I	0	2	3	5	3	5
	Otter	4	5	3	4	4	6	9	8	9	5
	Brown bear	2	0	I	0	2	0	0	2	2	0
	Chamois	3	l I	0	0	0	1	I.	0	8	3
	Badger	164	187	177	233	277	318	379	319	376	391
	Fox	476	516	526	670	756	818	960	897	1,001	1,017
	Other animal	75	94	97	96	129	145	147	146	171	147
	Subtotal	12,268	11,632	13,553	17,349	20,792	21,750	23,875	23,398	27,391	30,788
	Bird	168	5	4	0	3	7	5	1	3	I
	Other animal	49	12	13	П	16	15	19	8	П	5
	Dog	3,900	3,698	3,472	3,725	3,802	4,011	3,688	2,829	2,968	3,155
	Goat	78	41	50	64	68	61	49	38	40	46
Domestic animal	Horse	371	305	309	327	321	254	278	178	229	228
ammai	Cat	119	121	150	171	216	250	246	212	272	251
	Sheep	152	159	175	192	214	190	165	155	147	189
	Pig	55	16	22	24	23	29	19	23	25	22
	Cattle	210	191	259	201	219	242	217	199	204	246
	Subtotal	5,102	4,548	4,454	4,715	4,882	5,059	4,686	3,643	3,899	4,143
To	tal	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

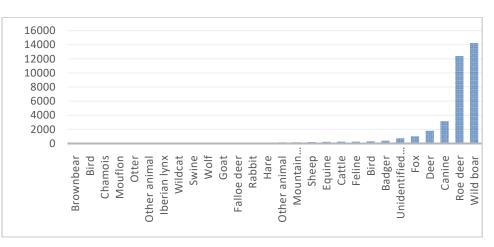
Table 21: Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

Table 22: Comparison of the number of accidents involving animals, according to type of animal. Interurban roads
excluding Catalonia and the Basque Country.

		Diff	Diff	Dadada
		Diff. 22/21	Diff. 22/19	Brkdn. 22
Unidentified	Unidentified		22/17	
animal	animal	4%	3%	2%
	Bird	-4%	50%	1%
	lbex	-3%	36%	0%
	Deer	17%	25%	5%
	Rabbit	14	-6	0%
	Roe deer	15%	38%	35%
	Fallow deer	8	20	0%
	Wildcat	-1	0	0%
	Wild boar	12%	25%	40%
	Hare	-7%	-14%	0%
Wild animal	lberian lynx	0	4	0%
	, Wolf	-8	11	0%
	Mouflon	2	2	0%
	Otter	-4	-4	1%
	Brown bear	-2	0	0%
	Chamois	-5	2	0%
	Badger	4%	3%	1%
	Fox	2%	6%	3%
	Other animal	-14%	0%	0%
	Subtotal	12%	29 %	86%
	Bird	-2	-4	0%
	Other animal	-6	-14	0%
	Dog	6%	-14%	9%
	Goat	6	-3	0%
Domestic	Horse	0%	-18%	1%
animal	Cat	-8%	2%	1%
	Sheep	29%	15%	1%
	Pig	-3	3	0%
	Cattle	21%	13%	0%
	Subtotal	6 %	-12%	12%
То	tal	11%	22%	100%

In the figure below, we can see that in the majority of accidents involving animals, the most common type of animal was wild boar, followed by roe deer.





4.4.1. According to type of animal and type of interurban road

Disaggregating the above information by type of interurban road, in more than 35% of accidents involving animals in 2022, the type of animal involved was wild boar, both on motorways and dual carriageways and on other interurban roads. Meanwhile, roe deer were involved in 12% of accidents on motorways and dual carriageways in 2022, and present in 38% of accidents on other interurban roads. Canines were involved in 22% of accidents occurring on motorways and dual carriageways and 7% of those occurring on other interurban roads.

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Unidentified animal	Unidentified animal	164	194	159	162	159	169	172	157	166	185
	Bird	29	26	29	26	41	51	65	54	93	86
	lbex	4	9	8	14	16	21	14	15	25	29
	Deer	23	22	28	31	33	32	31	25	27	34
	Rabbit	9	15	5	13	9	10	4	14	12	15
	Roe deer	197	217	252	279	312	310	406	334	461	495
	Fallow deer	0	1	0	0	4	5	2	4	2	2
	Wildcat	3	0	2	2	8	3	5	3	4	5
	Wild boar	1,014	847	1,014	I,405	I,406	1,469	1,508	1,788	1,794	1,900
Wild animal	Hare	6	3	8	5	12	11	5	10	9	12
Wild ammai	Iberian lynx	0	0	0	0	- I	1	0	1	2	3
	Wolf	6	3	5	3	4	5	4	5	7	11
	Mouflon	0	0	2	0	0	1	0	1	0	2
	Otter	0	0	2	1	1	1	1	2	0	1
	Chamois	0	0	0	0	0	0	1	0	0	- 1
	Badger	20	29	21	25	33	25	40	50	37	47
	Fox	153	160	160	194	182	198	251	209	261	265
	Other animal	12	21	19	15	20	16	23	23	32	27
	Subtotal	I,476	1,353	1,555	2,013	2,082	2,159	2,370	2,538	2,766	2,935
	Bird	47	0	0	0	0	1	1	0	0	0
	Other animal	10	5	7	4	3	2	10	4	3	
	Dog	1,346	1,262	1,150	1,177	1,220	1,227	1,214	863	872	925
	Goat	15	10	17	17	16	14	10	7	10	9
Domestic	Horse	25	17	21	23	15	16	20	6	12	15
animal	Cat	58	48	51	64	81	83	74	65	84	77
	Sheep	14	20	15	12	19	18	13	6	16	16
	Pig	6	5	4	2		0	0	4		2
	Cattle	8	9	13	8	14	15		17	8	10
	Subtotal	1,529	1,376	1,278	1,307	1,369	1,376	1,353	972	1,006	1,055
	Fotal	3,169	2,923	2,992	3,482	3,610	3,704	3,895	3,667	3,938	4,175

Table 23: Number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

Table 24: Comparison of the number of accidents involving animals by type of animal on motorways and dual
carriageways. Interurban roads excluding Catalonia and the Basque Country.

		Diff. 22/21	Diff. 22/19	Brkdn. 22
Unidentified animal	Unidentified animal	11%	8%	4%
	Bird	-7	21	2%
	lbex	4	15	1%
	Deer	7	3	1%
	Rabbit	3	I	0%
	Roe deer	7%	22%	12%
	Fallow deer	0	0	0%
	Wildcat	I	0	0%
	Wild boar	6%	26%	46%
Wild animal	Hare	3	7	0%
vviid animai	lberian lynx	I	3	0%
	Wolf	4	7	0%
	Mouflon	2	2	0%
	Otter	I	0	0%
	Chamois	I	0	0%
	Badger	10	7	1%
	Fox	2%	6%	6%
	Other animal	-5	4	1%
	Subtotal	6 %	24%	70 %
	Bird	0	-	0%
	Other animal	-2	-9	0%
	Dog	6%	-24%	22%
	Goat	-1	-	0%
Domestic	Horse	3	-5	0%
animal	Cat	-7	3	2%
	Sheep	0	3	0%
	Pig	I	2	0%
	Cattle	2	-1	0%
	Subtotal	5%	-22%	25%
Το	tal	6 %	7%	100%

Table 25: Number of accidents involving animals by type of animal on other interurban roads. Interurban roads
excluding Catalonia and the Basque Country. 2013-2022

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Unidentified animal	Unidentified animal	393	473	421	404	525	542	538	485	534	545
anna	Bird	80	63	46	62	124	137	134	162	218	213
	lbex	31	43	58	64	72	90	101	110	136	127
	Deer	589	668	816	946	1,354	1,240	1,401	1,241	1,509	1,761
	Rabbit	18	26	28	34	48	44	57	57	39	50
	Roe deer	4,286	3,945	4,674	5,748	7,329	7,445	8,554	8,189	10,317	11,902
	Fallow deer	8	17	21	23	26	23	32	31	44	52
	Wildcat	9	4	3	5	9	16	10	7	12	10
	Wild boar	5,160	4,842	5,660	7,582	8,693	9,402	9,876	9,840	10,950	12,378
	Hare	53	62	75	90	108	122	137	114	122	110
Wild animal	lberian lynx	0	0	2	0	2	0	4	3	6	5
	Wolf	17	15	13	13	13	23	16	14	32	20
	Mouflon	2	I	0	I	0	I	3	4	3	3
	Otter	4	5	I	3	3	5	8	6	9	4
	Brown bear	2	0	I	0	2	0	0	2	2	0
	Chamois	3	I	0	0	0	I	0	0	8	2
	Badger	144	158	156	208	244	293	339	269	339	344
	Fox	323	356	366	476	574	620	709	688	740	752
	Other animal	63	73	78	81	109	129	124	123	139	120
	Subtotal	10,792	10,279	11,998	15,336	18,710	19,591	21,505	20,860	24,625	27,853
	Bird	121	5	4	0	3	6	4	I	3	I
	Other animal	39	7	6	7	13	13	9	4	8	4
	Dog	2,554	2,436	2,322	2,548	2,582	2,784	2,474	1,966	2,096	2,230
	Goat	63	31	33	47	52	47	39	31	30	37
Domestic animal	Horse	346	288	288	304	306	238	258	172	217	213
ammai	Cat	61	73	99	107	135	167	172	147	188	174
	Sheep	138	139	160	180	195	172	152	149	131	173
	Pig	49	11	18	22	22	29	19	19	24	20
	Cattle	202	182	246	193	205	227	206	182	196	236
	Subtotal	3,573	3,172	3,176	3,408	3,513	3,683	3,333	2,671	2,893	3,088
Tot	al	14,758	13,924	15,595	19,148	22,748	23,816	25,376	24,016	28,052	31,486

		Diff.	Diff.	Brkdn.
		22/2 I	22/19	22
Unidentified	Unidentified	2%	١%	2%
animal	animal			
Wild animal	Bird	-2%	59%	1%
	lbex	-7%	26%	0%
	Deer	17%	26%	6%
	Rabbit	11	-7	0%
	Roe deer	15%	39%	38%
	Fallow deer	8	20	0%
	Wildcat	-2	0	0%
	Wild boar	13%	25%	39%
	Hare	-10%	-20%	0%
	lberian lynx	- 1	I	0%
	Wolf	-12	4	0%
	Mouflon	0	0	0%
	Otter	-5	-4	0%
	Brown bear	-2	0	0%
	Chamois	-6	2	0%
	Badger	1%	1%	1%
	Fox	2%	6%	2%
	Other animal	-13%	-3%	0%
	Subtotal	13%	30%	88%
Domestic	Bird	-2	-3	0%
animal	Other animal	-4	-5	0%
	Dog	6%	-10%	7%
	Goat	7	-2	0%
	Horse	-2%	-17%	1%
	Cat	-7%	1%	1%
	Sheep	32%	14%	1%
	Pig	-4	I	0%
	Cattle	20%	15%	1%
	Subtotal	7%	-7%	10%
То	tal	12%	24%	100%

Table 26: Comparison of the number of accidents involving animals by type of animal on other interurban roads. Interurban roads excluding Catalonia and the Basque Country.

4.5. According to the timing of the accident

The following section analyses accidents involving animals according to the month, day of the week and time period in which the accident occurred.

4.5.1. Month of the accident

October, November and December were the months with the highest number of accidents involving animals recorded in 2022, together accounting for 31% of the total. November posted the highest figure in the last 10 years, with 3,969 accidents.

Comparing the situation in 2022 with previous years, every month saw an increase in the number of accidents involving animals. September and October were the months with the greatest increase (30%) in respect of 2019.

 Table 27: Number of accidents involving animals, according to the month of the accident. Interurban roads
 excluding Catalonia and the Basque Country. 2013-2022

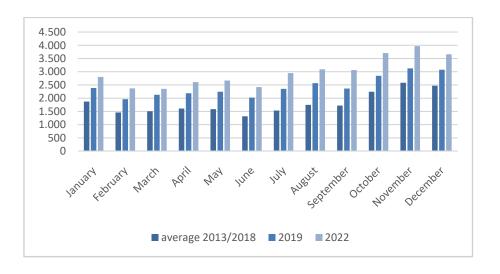
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
January	1,551	1,738	1,543	1,818	2,181	2,402	2,385	2,720	2,202	2,804
February	1,261	1,345	1,212	1,372	1,769	1,812	1,964	2,172	1,888	2,372
March	1,236	1,318	1,269	1,511	1,717	1,978	2,128	1,500	2,211	2,353
April	1,276	1,297	1,385	1,596	1,981	2,110	2,188	1,307	2,420	2,608
May	1,315	1,249	I,403	1,564	1,792	2,181	2,245	1,628	2,543	2,668
June	1,087	960	1,211	1,352	1,603	1,682	2,023	1,990	2,093	2,420
July	1,236	1,147	1,324	1,597	1,976	1,920	2,354	2,382	2,392	2,948
August	I,478	1,353	1,557	1,823	2,130	2,152	2,569	2,503	2,731	3,091
September	I,460	1,334	1,526	1,844	2,095	2,064	2,364	2,634	2,672	3,065
October	1,827	1,502	1,907	2,527	2,855	2,841	2,847	3,096	3,282	3,704
November	2,148	1,778	2,058	2,877	3,352	3,282	3,127	2,918	3,961	3,969
December	2,052	1,826	2,192	2,749	2,907	3,096	3,077	2,833	3,595	3,659
Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

 Table 28: Comparison of the number of accidents involving animals, according to the month of the accident.
 Interurban roads excluding Catalonia and the Basque Country. 2013-2022

	Diff.	Diff.	Brkdn.
	22/21	22/19	22
January	27%	18%	8%
February	26%	21%	7%
March	6%	11%	7%
April	8%	19%	7%
May	5%	19%	7%
June	16%	20%	7%
July	23%	25%	8%
August	13%	20%	9%
September	15%	30%	9%
October	13%	30%	10%
November	0%	27%	11%
December	2%	19%	10%
Total	11%	22%	100%

Looking at the figure below, there was an upward trend in the last few months of the year, as has historically been the case for the period analysed, with November being the month that recorded the highest figures.





4.5.2. Day of the accident

Sunday was the day of the week with the highest number of accidents involving animals recorded in 2022, representing 5,720 accidents, 20% more than in 2019.

Thursdays and Fridays were the days that saw the greatest increase compared to 2019, both with 26% more accidents.

 Table 29: Number of accidents involving animals, according to the day of the accident. Interurban roads excluding

 Catalonia and the Basque Country. 2013-2022

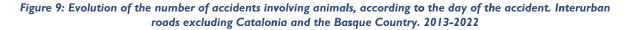
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Monday	2,618	2,410	2,544	3,284	3,706	3,913	4,212	4,130	4,751	5,151
Tuesday	2,274	2,160	2,342	2,924	3,540	3,707	3,962	3,802	4,272	4,610
Wednesday	2,189	2,147	2,437	2,874	3,447	3,629	3,800	4,016	4,319	4,552
Thursday	2,368	2,218	2,520	2,968	3,585	3,716	3,890	3,914	4,461	4,885
Friday	2,651	2,525	2,776	3,414	3,770	3,975	4,359	4,147	5,035	5,503
Saturday	2,653	2,560	2,847	3,422	3,912	4,017	4,290	3,668	4,438	5,240
Sunday	3,174	2,827	3,121	3,744	4,398	4,563	4,758	4,006	4,714	5,720
Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

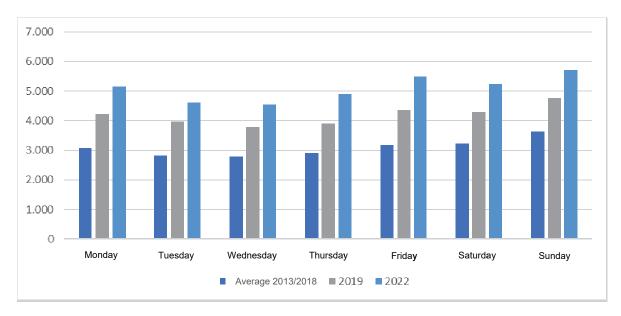
 Table 30: Comparison of the number of accidents involving animals, according to the day of the accident.

 Interurban roads excluding Catalonia and the Basque Country.

	Diff. 22/21	Diff. 22/19	Brkdn. 22
Monday	8%	22%	14%
Tuesday	8%	16%	13%
Wednesday	5%	20%	13%
Thursday	10%	26%	14%
Friday	9%	26%	15%
Saturday	18%	22%	15%
Sunday	21%	20%	16%
Total	11%	22%	100%

There was an increase in the number of accidents on all days of the week in the period analysed, especially Saturdays and Sundays, and they were distributed in a similar way to previous years.





4.5.3. Time period in which the accident occurred

40% of accidents involving animals recorded in 2022, i.e. 14,426 accidents, occurred between 20:00 and 23:49.

The time period that saw the greatest increase compared to 2019 was 00:00-06:59, rising by 26%.

 Table 31: Number of accidents involving animals, according to the time period in which the accident occurred.

 Interurban roads excluding Catalonia and the Basque Country. 2013-2022

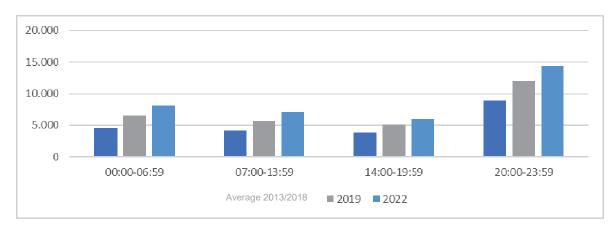
	2013	2014	2015	2016	2017	2018	2019	2020	202 I	2022
00:00- 06:59	3,860	3,450	3,974	4,827	5,638	5,905	6,466	5,895	6,341	8,166
07:00- 3:59	3,512	3,391	3,634	4,311	5,083	5,264	5,716	5,522	6,832	7,113
14:00- 19:59	3,325	3,087	3,254	3,942	4,573	4,960	5,124	5,046	5,836	5,956
20:00- 23:59	7,230	6,919	7,725	9,550	11,064	11,391	11,965	11,220	12,981	14,426
Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

 Table 32: Comparison of the number of accidents involving animals, according to the time period in which the accident occurred. Interurban roads excluding Catalonia and the Basque Country.

	Diff. 22/21	Diff. 22/19	Brkdn. 22
00:00-06:59	29%	26%	23%
07:00-13:59	4%	24%	20%
14:00-19:59	2%	16%	17%
20:00-23:59	11%	21%	40%
Total	11%	22%	100%

The figure below shows that historically, the majority of accidents in this period occurred between 20:00 and 23:59.





4.6. Acording to location of the accident

This section analyses the location of accidents involving animals that have occurred since 2013, both in terms of autonomous region and province.

4.6.1. Autonomous Region

The autonomous regions that registered the highest number of accidents involving animals were Castile and Leon with 12,501 accidents, followed by Galicia with 5,512. These two regions accounted for 35% and 15% respectively of the accidents recorded in 2022.

Aragón and Castile-La Mancha were the regions that saw the greatest rise compared to 2019, with an increase of 44% in Aragón and 43% in Castile-La Mancha. Cantabria, on the other hand, recorded 15% fewer accidents involving animals in 2022.

		0014					0010			
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Andalusia	I,648	1,629	1,692	1,717	1,976	2,114	2,178	1,985	2,185	2,482
Aragon	1,394	1,290	1,494	1,958	2,084	2,189	2,105	2,274	2,558	3,033
Asturias	832	770	781	901	I,004	1,107	1,081	1,119	1,148	I,364
Balearic Islands	94	103	88	88	79	76	67	53	46	49
Canary Islands	110	Ш	104	96	109	77	82	68	62	65
Cantabria	384	312	271	339	398	444	502	447	438	429
Castile-La Mancha	1,015	962	1,020	1,371	2,553	2,804	3,264	3,009	3,807	4,677
Castile and Leon	6,316	5,797	6,622	8,477	9,832	9,291	10,083	9,697	11,474	12,501
Extremadura	651	764	918	1,022	1,185	1,268	1,390	1,105	1,339	1,470
Galicia	3,207	2,952	3,542	3,972	4,085	4,880	5,140	4,935	5,291	5,512
Madrid	372	327	366	375	405	431	403	407	466	532
Murcia	191	198	175	202	246	294	341	252	354	384
Navarre	65 I	613	573	839	000, ا	1,002	1,044	882	1,099	1,175
La Rioja	281	274	248	384	494	482	456	377	538	558
Valencia	781	745	692	889	908	1,061	1,135	1,073	1,184	I,430
Ceuta and Melilla	0	0	I	0	0	0	0	0	I	0
Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

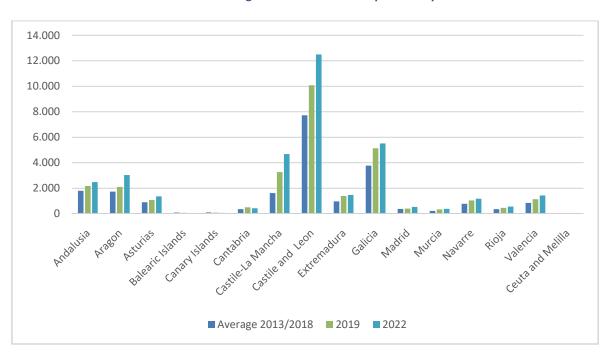
 Table 33: Number of accidents involving animals, according to Autonomous Region.

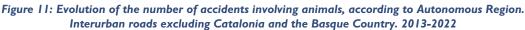
 Interurban roads excluding Catalonia and the Basque Country. 2013-2022

	Diff. 22/21	Diff. 22/19	Brkdn. 22
Andalusia	14%	14%	7%
Aragon	19%	44%	9%
Asturias	19%	26%	4%
Balearic Islands	3	-18	0%
Canary Islands	3	-17	0%
Cantabria	-2%	-15%	1%
Castile-La Mancha	23%	43%	13%
Castile and Leon	9%	24%	35%
Extremadura	10%	6%	4%
Galicia	4%	7%	15%
Madrid	14%	32%	1%
Murcia	8%	13%	1%
Navarre	7%	13%	3%
La Rioja	4%	22%	2%
Valencia	21%	26%	4%
Ceuta and Melilla	-1	0	0%
Total	11%	22%	100%

 Table 34: Comparison of the number of accidents involving animals, according to Autonomous Region. Interurban roads excluding Catalonia and the Basque Country.

The figure below shows that there has been no change in the trend for this type of accident in terms of the autonomous region where they occur. Although the numbers have increased significantly, the regions with the highest figures have not changed since 2013.





4.6.2. Province

In 2022, Burgos and León were the provinces that registered the highest number of accidents involving animals, representing 8% and 6% of the total, respectively.

Comparing the situation in 2022 with 2019, Cantabria was the province that saw the greatest decrease, going from 502 accidents in 2019 to 429 in 2022. On the other hand, Almería registered a 65% increase in this type of

accident compared to 2019, bringing the total to 355 accidents, the highest figure recorded in Almería in the last 10 years.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Albacete	150	168	173	197	408	541	488	458	598	629
Alicante/Alacant	255	289	238	274	276	342	334	352	399	467
	187	139	171	66	157	217	215	258	306	355
Almería Ávila		262	273	371	393	433	422	385	491	581
	271 364	394	457	523	568	632	669	533	613	638
Badajoz	94	103	88	88	79	76	67	53	46	49
The Balearic										
Burgos	1,533	1,396	1,458	1,954	2,367	2,324	2,466	2,246	2,723	2,935
<u>Cáceres</u> Cadiz	287 130	370 136	461 115	499 128	617 116	636 134	721 136	572 114	726 123	832 145
Castellón/Castelló	171	146	147	227	236	266	304	309	393	432
Ciudad Real	129	109	49	216	482	464	545	494	638	755
Córdoba	260	284	281	283	356	368	385	382	318	346
A Coruña	707	627	804	848	948	I,204	1,147	1,092	1,249	1,316
Cuenca	238	227	312	391	567	619	700	727	910	1,108
Granada	228	228	260	282	311	334	342	318	386	369
Guadalajara	196	166	244	315	735	830	1,114	996	1,299	1,665
Huelva	140	115	180	247	279	323	356	280	282	359
Huesca	754	618	752	968	1,003	962	927	1,025	1,038	1,309
Jaén	209	222	197	267	327	309	280	267	295	343
León	1,413	1,100	1,318	1,756	2,078	1,710	I,854	1,968	2,112	2,279
La Rioja	281	274	248	384	494	482	456	377	538	558
Lugo	1,183	1,127	1,323	I,402	1,444	1,714	I,876	1,739	1,723	1,599
Madrid	372	327	366	375	405	431	403	407	466	532
Málaga	152	170	196	132	133	115	145	117	168	203
Murcia	191	198	175	202	246	294	341	252	354	384
Navarre	651	613	573	839	1,000	1,002	1,044	882	1,099	1,175
Ourense	773	740	937	1,154	I,085	1,241	I,428	1,381	1,500	1,621
Asturias	832	770	781	901	I,004	1,107	1,081	1,119	1,148	1,364
Palencia	524	485	606	731	801	738	836	846	1,054	1,051
Las Palmas	53	42	56	40	53	36	40	30	26	23
Pontevedra	544	458	478	568	608	721	689	723	819	976
Salamanca	350	334	411	468	608	542	612	544	531	622
Santa Cruz de Tenerife	57	69	48	56	56	41	42	38	36	42
Cantabria	384	312	271	339	398	444	502	447	438	429
Segovia	328	309	373	469	582	624	707	737	920	980
Seville	342	335	292	312	297	314	319	249	307	362
Soria	805	812	944	I,207	1,311	1,333	1,290	I,207	I,580	1,866
Teruel	257	276	312	444	514	560	578	666	789	886
Toledo	302	292	242	252	361	350	417	334	362	520
Valencia/València	355	310	307	388	396	453	497	412	392	53 I
Valladolid	291	316	345	418	513	536	721	700	897	1,010
Zamora	801	783	894	1,103	1,179	1,051	1,175	I,064	1,166	1,177
Zaragoza	383	396	430	546	567	667	600	583	731	838
Ceuta	0	0	1	0	0	0	0	0	I	0
Total	17,927	16,847	18,587	22,630	26,358	27,520	29,271	27,683	31,990	35,661

Table 35: Number of accidents involving animals, according to province. Interurban roads excluding Catalonia and the Basque Country. 2013-2022

	Diff. 22/21	Diff. 22/19	Brkdn. 22
Albacete	5%	29%	2%
Alicante/Alacant	17%	40%	1%
Almería	16%	65%	1%
Ávila	18%	38%	2%
Badajoz	4%	-5%	2%
The Balearic	3	-18	0%
Burgos	8%	19%	8%
Cáceres	15%	15%	2%
Cadiz	18%	7%	0%
Castellón/Castelló	10%	42%	1%
Ciudad Real	18%	39%	2%
Córdoba	9%	-10%	1%
	5%	-10%	4%
A Coruña	22%	58%	3%
Cuenca	-4%	58% 8%	3% %
Granada		8% 49%	
Guadalajara	28%		5%
Huelva	27%	1%	1%
Huesca	26%	41%	4%
Jaén	16%	23%	1%
León	8%	23%	6%
La Rioja	4%	22%	2%
Lugo	-7%	-15%	4%
Madrid	14%	32%	1%
Málaga	21%	40%	1%
Murcia	8%	13%	1%
Navarre	7%	13%	3%
Ourense	8%	14%	5%
Asturias	19%	26%	4%
Palencia	0%	26%	3%
Las Palmas	-3	-17	0%
Pontevedra	19%	42%	3%
Salamanca	17%	2%	2%
Santa Cruz de Tenerife	6	0	0%
Cantabria	-2%	-15%	1%
Segovia	7%	39%	3%
Seville	18%	13%	1%
Soria	18%	45%	5%
Teruel	12%	53%	2%
Toledo	44%	25%	1%
Valencia/València	35%	7%	1%
Valladolid	13%	40%	3%
Zamora	1%	0%	3%
Zaragoza	15%	40%	2%
Ceuta	-1	0	0%
Total	11%	22%	100%
	- 1/0	/v	

Table 36: Comparison of the number of accidents involving animals, according to province. Interurban roads excluding Catalonia and the Basque Country.

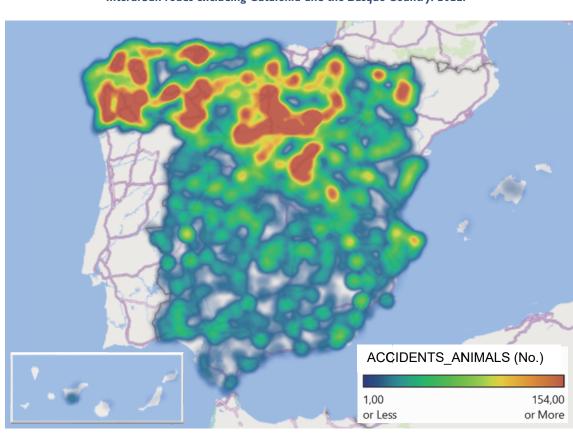


Figure 12: Geolocation of accidents involving animals. Interurban roads excluding Catalonia and the Basque Country. 2022.

4.6.3. Geolocation

4.7. Analysis of accidents involving animals by section of road

The following table shows a ranking of the twenty 5-kilometre long sections of road with the highest number of accidents involving animals in the last 6 years (between 1 January 2016 and 31 December 2021). The 20 sections of road with the highest number of accidents were located in provinces such as Lugo, Burgos, Soria, Navarre, Zamora, León, Huesca and Ourense.

The province of Burgos topped the ranking in terms of the number of sections with the most accidents.

Table 37: Ranking of the twenty 5-kilometre long sections of road with the highest number of accidents involving animals in the last 6 years (between 1 January 2016 and 31 December 2021). Interurban roads excluding Catalonia and the Basque Country.

Province	Road	Starting kilometre point	End kilometre point	No. of accidents
Lugo	N-640	82,800	87,800	169
Burgos	N-234	476,000	481,000	152
Burgos	N-234	438,900	443,900	145
Soria	SO-100	9,800	14,800	128
Navarre	NA-134	9,200	14,200	128
Burgos	N-234	451,881	456,881	127
Zamora	N-63 I	I,450	6,450	127
León	N-VI	392,800	397,800	125
Huesca	N-123a	29,250	34,250	121
León	CL-631	6,600	11,600	121
Burgos	N-122	253,820	258,820	121
Soria	N-234	378,400	383,400	120
Burgos	CL-117	2,500	7,500	120
Zamora	ZA-P-1511	3,100	8,100	119
Segovia	N-110	107,800	112,800	118
Burgos	N-234	462,400	467,400	116
Soria	SO-100	0,000	5,000	112
León	N-630	124,000	129,000	111
Zamora	N-63 I	23,800	28,800	
Ourense	OU-540	8,100	13,100	110

Annex I: Geolocation according to type and species of animal

Wild animals

Unidentified animal

Figure 13: Geolocation of accidents involving unidentified animals. Interurban roads excluding Catalonia and the Basque Country. 2022.

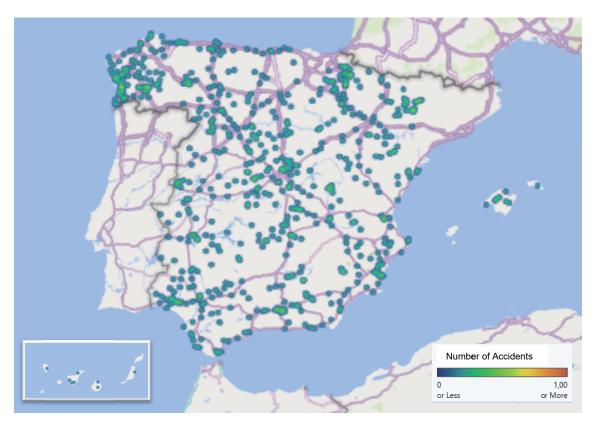
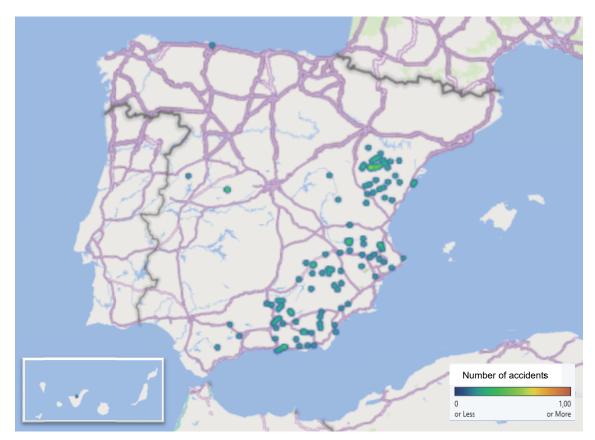


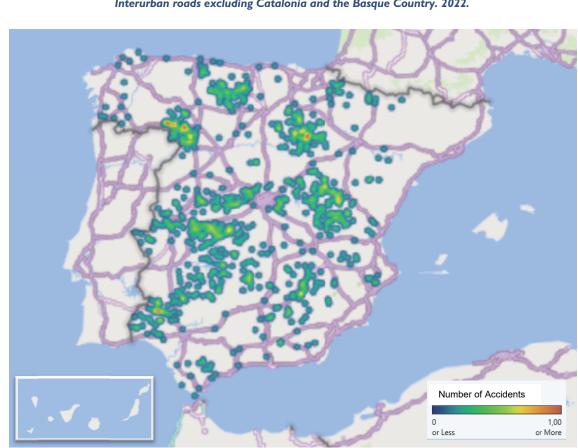
 Image: Contract of the second of th

lbex

Figure 15: Geolocation of accidents involving ibex. Interurban roads excluding Catalonia and the Basque Country. 2022.



Bird



Rabbit

42

Deer

Figure 17: Geolocation of accidents involving rabbits. Interurban roads excluding Catalonia and the Basque Country. 2022.

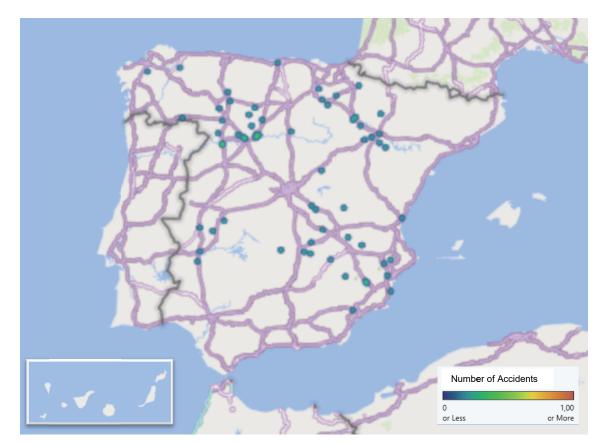
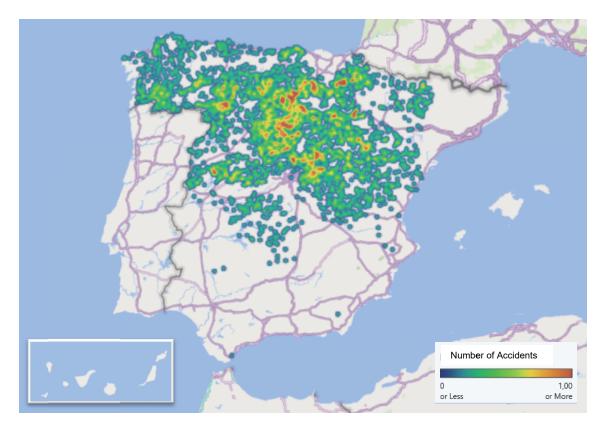


Figure 16: Geolocation of accidents involving deer. Interurban roads excluding Catalonia and the Basque Country. 2022. Roe deer

Figure 18: Geolocation of accidents involving roe deer. Interurban roads excluding Catalonia and the Basque Country. 2022.



Fallow deer

Figure 19: Geolocation of accidents involving fallow deer. Interurban roads excluding Catalonia and the Basque Country. 2022.

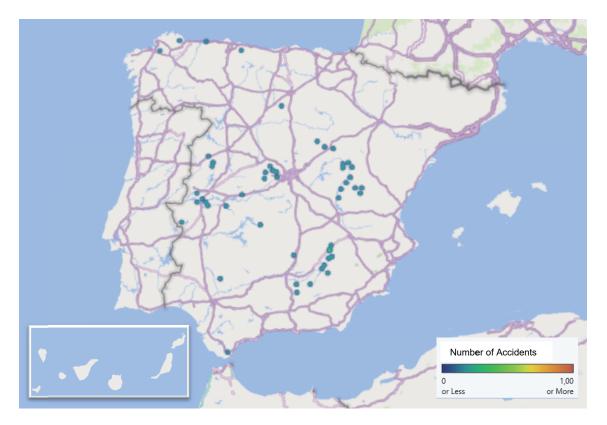




Figure 20: Geolocation of accidents involving wildcats. Interurban roads excluding Catalonia and the Basque Country. 2022.



Wild boar

Figure 21: Geolocation of accidents involving wild boar. Interurban roads excluding Catalonia and the Basque Country. 2022.

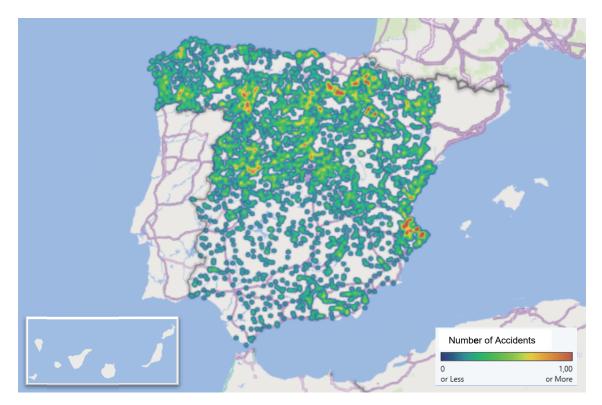


 Image: Number of Accidents

Iberian Lynx

Figure 23: Geolocation of accidents involving Iberian lynx. Interurban roads excluding Catalonia and the Basque Country. 2022.

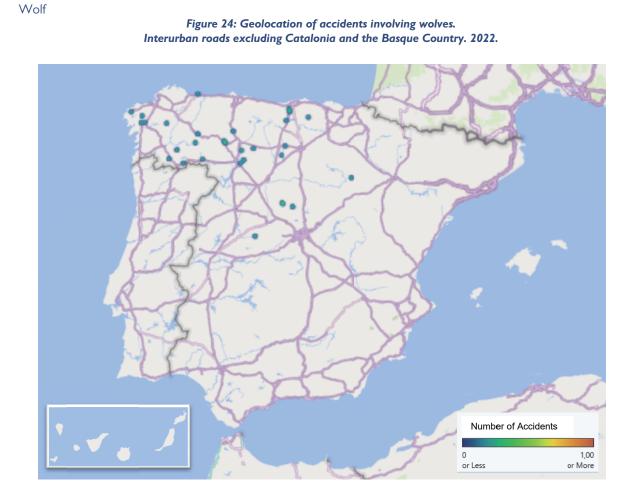


Figure 22: Geolocation of accidents involving hares. Interurban roads excluding Catalonia and the Basque Country. 2022.

1,00 or More

0 or Less

Hare



Mouflon

Figure 25: Geolocation of accidents involving mouflon. Interurban roads excluding Catalonia and the Basque Country. 2022.

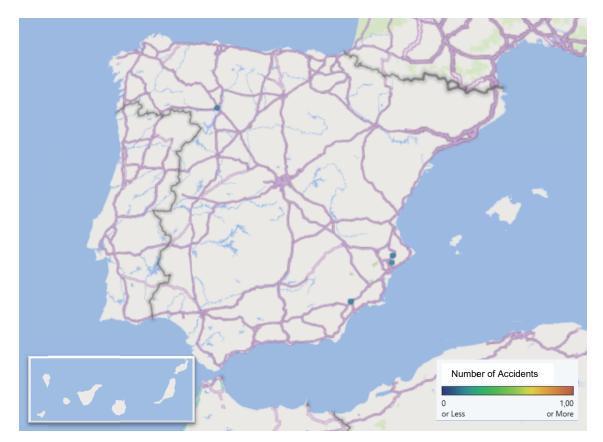


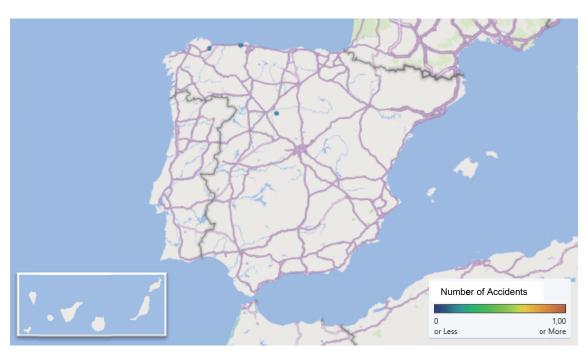
Figure 26: Geolocation of accidents involving otters. Interurban roads excluding Catalonia and the Basque Country. 2022.



Chamois

Figure 27: Geolocation of accidents involving chamois. Interurban roads excluding Catalonia and the Basque Country. 2022.

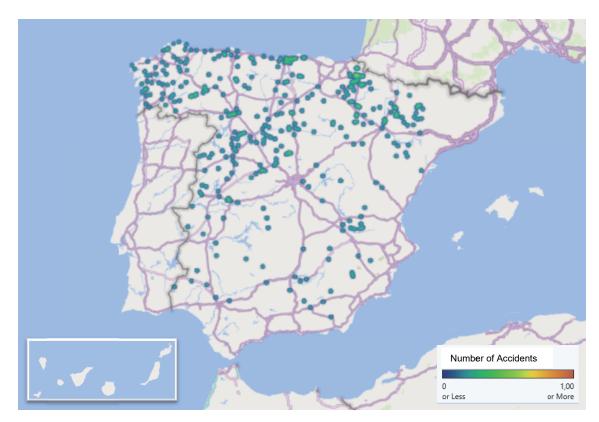
47



Otter



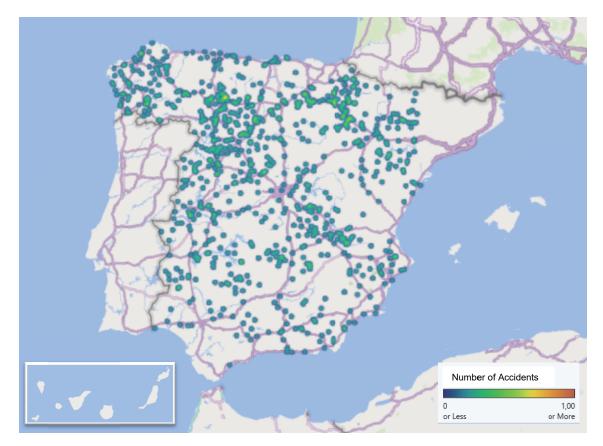
Figure 28: Geolocation of accidents involving badgers. Interurban roads excluding Catalonia and the Basque Country. 2022.



48

Fox

Figure 29: Geolocation of accidents involving foxes. Interurban roads excluding Catalonia and the Basque Country. 2022.



Other animal

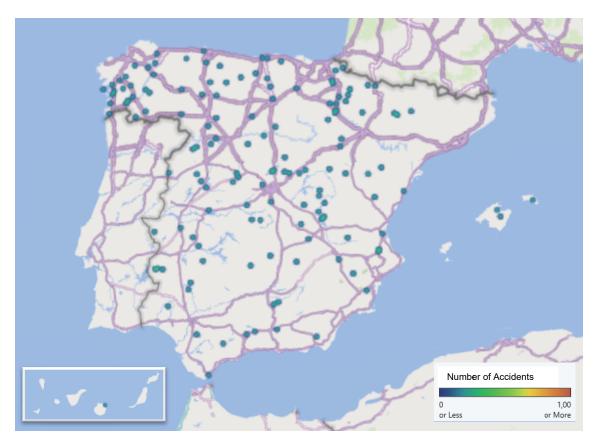


Figure 30: Geolocation of accidents involving other wild animals. Interurban roads excluding Catalonia and the Basque Country. 2022.

Domestic animals

Bird





Dog

Figure 32: Geolocation of accidents involving dogs. Interurban roads excluding Catalonia and the Basque Country. 2022.

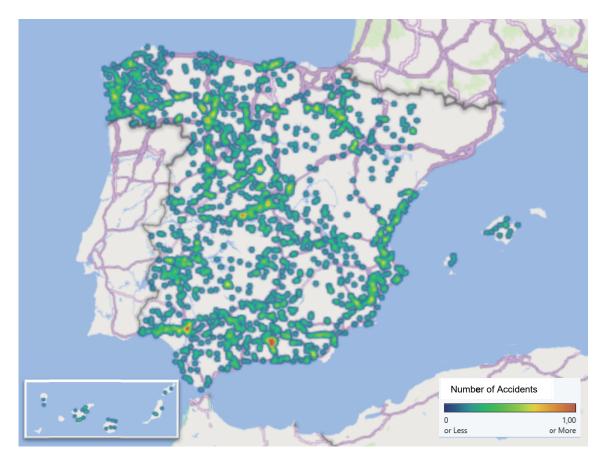


Figure 33: Geolocation of accidents involving goats. Interurban roads excluding Catalonia and the Basque Country. 2022.



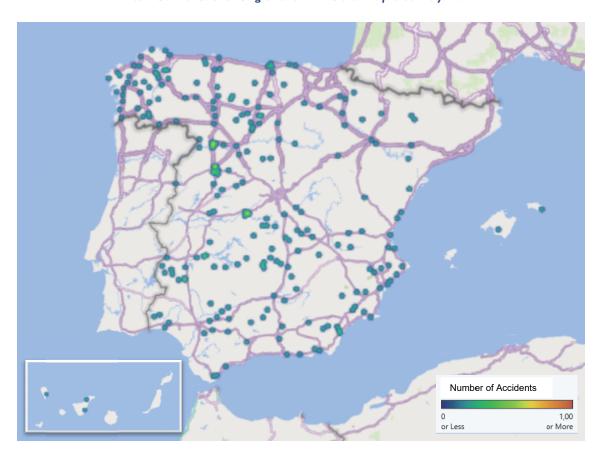
Horse

Figure 34: Geolocation of accidents involving equine species. Interurban roads excluding Catalonia and the Basque Country. 2022.

5 I



Goat





Sheep

Cat

Figure 36: Geolocation of accidents involving sheep. Interurban roads excluding Catalonia and the Basque Country. 2022.

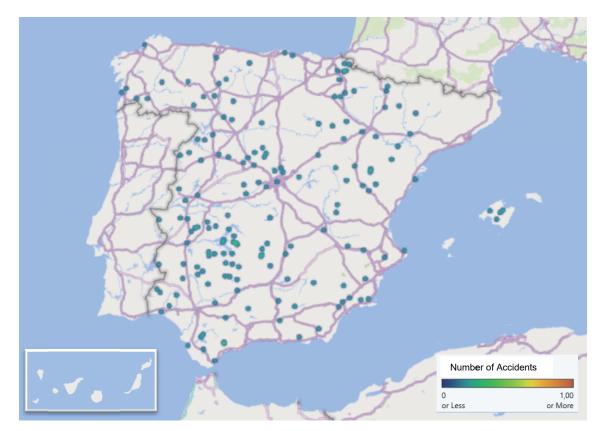
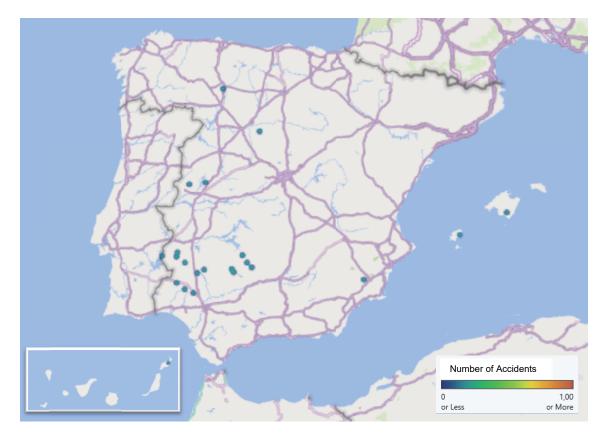
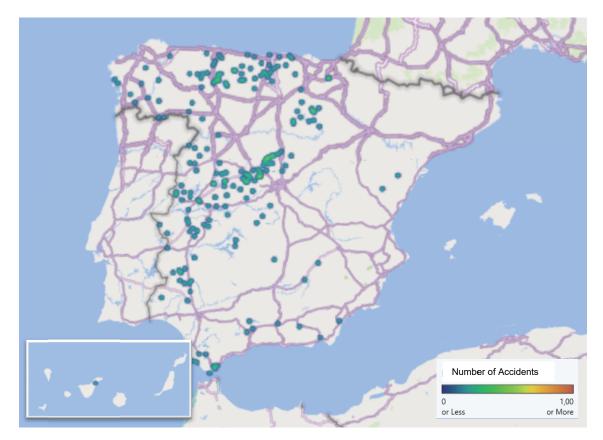


Figure 37: Geolocation of accidents involving pigs. Interurban roads excluding Catalonia and the Basque Country. 2022.



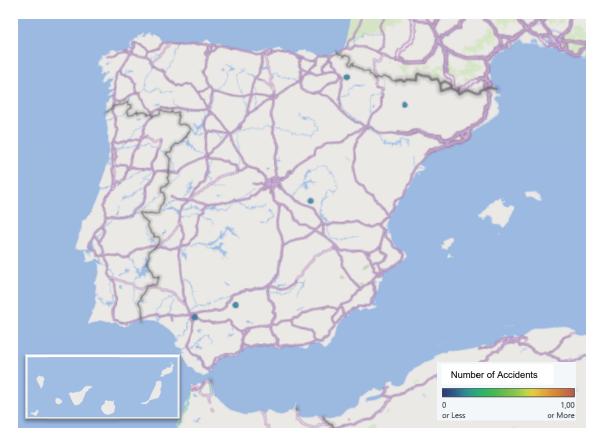
Cattle

Figure 38: Geolocation of accidents involving cattle. Interurban roads excluding Catalonia and the Basque Country. 2022.



Other animal

Figure 39: Geolocation of accidents involving other domestic animals. Interurban roads excluding Catalonia and the Basque Country. 2022.



Annex II: Sources of information

National Register of Traffic Accident Victims.

The National Register of Traffic Accident Victims (governed by Order INT/2223/2014 of 27 October governing the communication of information to the National Register of Traffic Accident Victims) contains the data corresponding to traffic accidents with victims, meaning those in which at least one of the persons involved was injured.

The data are reported to the register by the law enforcement officers in charge of traffic surveillance and monitoring. In the case of the Autonomous Regions of Catalonia and the Basque Country, the data are sent by the regional authorities with responsibility for traffic.

Population figures from the Spanish National Statistics Institute (INE).

The **population figures** statistical operation provides a quantitative measurement of the resident population in Spain in each autonomous region, province and island (for the island provinces), disaggregated according to basic demographic characteristics such as gender, year of birth, age, nationality and country of birth. A population series is available for 1971 onwards, which is obtained from intercensal population estimates for the period 1971-2012, and from the Population figures operation itself from 2012 onwards.

General Statistical Yearbook 2022.

Report containing tables with annual statistical data relating to the following subjects: vehicles, drivers and tickets issued.

National Pet Food Manufacturers' Association (ANFAAC)

Report containing the annual pet census for Spain for the years between 2012 and 2022. Available at: https://www.anfaac.org/datos-sectoriales/

Abandonment and Adoption Studies by the Affinity Foundation

Infographics from recent studies on the abandonment and adoption of cats and dogs in Spain. Available at: https://www.fundacion-affinity.org/estudios-abandono-y-adopcion

Hunting Resources Research Institute

News article from National Geographic Spain containing data from the study conducted in 2022 by the Hunting Resources Research Institute. Available at:<u>https://www.nationalgeographic.com.es/naturaleza/espana-hay-mas-</u>millon-jabalies-numero-que-podria-duplicarse-2025 18440

Ministry for Ecological Transition and the Demographic Challenge (MITECO)

The Spanish Inventory of Terrestrial Species gathers information on the distribution, abundance and conservation status of terrestrial fauna and flora in Spain. Available at:

https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-especiesterrestres/inventario-nacional-de-biodiversidad/bdn-ieet-default.html

Livestock Surveys 2021

The Livestock Survey is prepared by the Ministry's Subdirectorate-General for Analysis, Coordination and Statistics and is published by the Subdirectorate-General for Analysis, Coordination and Statistics of the Ministry of Agriculture, Fishing and Food. It is one of the main instruments available to both the Administration and the public for obtaining information on Spanish livestock. It is a useful indicator of the state of the sector as seen from different perspectives: census and production classification, husbandry guidance, importance in absolute and relative terms for each province, Autonomous Region and the country as a whole, as well as Spain's position within the framework of the European Union. Available at:

https://www.mapa.gob.es/es/estadistica/temas/estadisticas-agrarias/ganaderia/encuestas-ganaderas/

Royal Automobile Club of Catalonia (RACC)

In 2010, the RACC produced the report "Traffic accidents involving animals. Analysis of the situation at the European and Spanish level". Available at: <u>https://movilidad.racc.es/wp-content/uploads/importfichas/fichasFundacion/Multimedia/1428320118226/blob/28592 Estudio de accident es con animales definitivo - RACC.pdf</u>

Conover, M. R., Pitt, W. C., Kessler, K. K., DuBow, T. J. and Sanborn, W. A. (1995). Review of human injuries, illnesses, and economic losses caused by wildlife in the United States. Wildlife Society Bulletin 23, 407-414 Erritzøe, Johannes & Mazgajski, Tomasz & Rejt, Lukasz. (2003). Bird Casualties on European Roads — A Review. Acta Ornithologica. 38. 77–93. 10.3161/068.038.0204.

González-Suárez, Manuela & Zanchetta Ferreira, Flavio & Grilo, Clara. (2018). Spatial and species-level predictions of road mortality risk using trait data. Global Ecology and Biogeography. 1-12. 10.1111/geb.12769.

Langbein, J. (2007) National Deer-Vehicle Collisions Project: England 2003-2005. Final Report to the Highways Agency. The Deer Initiative, Wrexham

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Annex III: Glossary

Road accident with victims: a traffic accident with fatalities or persons hospitalised, or an accident with nonhospitalised injured casualties.

Road accident with victims involving an animal: a traffic accident with fatalities or persons hospitalised, or an accident with nonhospitalised injured casualties, in which an animal was involved.

Road accident causing material damage involving an animal: a traffic accident in which material damage was caused, no injuries were sustained by the persons involved, and an animal was involved.

Fatal road accident: Traffic accident in which at least one person died within the first 30 days.

Fatality: Person who dies as a result of the road accident within the first 30 days.

Hospitalised injure casualty: Person who was injured as a result of the road accident and hospitalised for more than 24 hours.

Non hospitalised injured casualty: Person who was injured as a result of the road accident but not hospitalised for more than 24 hours, and who was treated by the relevant healthcare services.

Animal involved in a road accident: An animal is considered to be involved in a road accident in the event of one or more of the following circumstances:

- a) The vehicle collides with the animal.
- b) The position, behaviour or path of the animal is a factor in the accident.

Annex IV: List of tables and graphs

Table I: Number of fatal accidents, accidents with victims, fatalities, hospitalised injured casualties and
nonhospitalised injured casualties. Interurban roads excluding Catalonia and the Basque Country. 2013-20229
Table 2: Comparison of fatal accidents, accidents with victims, fatalities, hospitalised injured casualties and
nonhospitalised injured casualties. Interurban roads excluding Catalonia and the Basque Country9
Table 3: Number of fatal accidents, accidents with victims, accidents causing material damage to the vehicle,
fatalities, hospitalised injured casualties and nonhospitalised injured casualties, where animals were involved.
Interurban roads excluding Catalonia and the Basque Country. 2013-2022
Table 4: Comparison of the number of fatal accidents, accidents with victims, accidents causing material damage
to the vehicle, fatalities, hospitalised injured casualties and nonhospitalised injured casualties, where animals were
involved. Interurban roads excluding Catalonia and the Basque Country
Table 5: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number of
accidents with victims, with regard to accidents involving animals, according to type of interurban road. Interurban
roads excluding Catalonia and the Basque Country. 2022
Table 6: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number of
accidents with victims, with regard to accidents involving animals, according to mode of transport. Interurban
roads excluding Catalonia and the Basque Country. 2022
Table 7: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number of
accidents with victims, with regard to accidents involving animals, according to type of accident. Interurban roads
excluding Catalonia and the Basque Country. 2022
Table 8: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties and number of
accidents with victims, with regard to accidents involving animals, according to type of animal. Interurban roads
excluding Catalonia and the Basque Country. 2022
Table 9 : Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualties in accidents
involving animals, according to gender and age group. Interurban roads excluding Catalonia and the Basque
Country. 2022
Table 10: Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualtiesand number
of accidents with victims, with regard to accidents involving animals, according to timing. Interurban roads
excluding Catalonia and the Basque Country. 2022
Table 11 : Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualtiesand number
of accidents with victims, with regard to accidents involving animals, according to autonomous region. Interurban
roads excluding Catalonia and the Basque Country. 2022
Table 12 : Number of fatalities, hospitalised injured casualties and nonhospitalised injured casualtiesand number
of accidents with victims, with regard to accidents involving animals, according to province. Interurban roads
excluding Catalonia and the Basque Country. 2022
Table 13 : Number of accidents involving animals, according to type of interurban road. Interurban roads
excluding Catalonia and the Basque Country. 2013-2022
Table 14 : Difference in the number of accidents involving animals, according to type of interurban road.
Interurban roads excluding Catalonia and the Basque Country
Table 15: Number of accidents involving animals, according to mode of transport. 20
Table 16: Difference in the number of accidents involving animals, according to mode of transport
Teble 17. Number of accidents involving enimals, according to mode of there out and time of head, Interview
Table 17 : Number of accidents involving animals, according to mode of transport and type of road. Interurban
roads excluding Catalonia and the Basque Country. 2013-2022
roads excluding Catalonia and the Basque Country. 2013-2022
roads excluding Catalonia and the Basque Country. 2013-2022
 roads excluding Catalonia and the Basque Country. 2013-2022 Table 18: Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. Table 19: Number of accidents involving animals, according to type of accident. Interurban roads excluding
 roads excluding Catalonia and the Basque Country. 2013-2022 Table 18: Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. Table 19: Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 2013-2022
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roads excluding Catalonia and the Basque Country. 2013-2022 22 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. 23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 20
roads excluding Catalonia and the Basque Country. 2013-2022 22 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. 23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding 20
roads excluding Catalonia and the Basque Country. 2013-2022 22 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. 23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21
roads excluding Catalonia and the Basque Country. 2013-2022 22 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. 23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban 21
roads excluding Catalonia and the Basque Country. 2013-2022 22 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. 23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 22
roads excluding Catalonia and the Basque Country. 2013-2022 22 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. 23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 22 Table 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways. 22
roads excluding Catalonia and the Basque Country. 2013-202222 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country.23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 2013-2022.24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country.20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.20 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.22 Table 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country.20 Table 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country.20 232323232425262526272628272828
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roads excluding Catalonia and the Basque Country. 2013-202222 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country.23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 2013-2022.24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country.20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.22 Table 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country.23 Table 24 : Comparison of the number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country.23 Table 24 : Comparison of the number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country.24
roads excluding Catalonia and the Basque Country. 2013-202222 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type ofroad. Interurban roads excluding Catalonia and the Basque Country.23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excludingCatalonia and the Basque Country. 2013-2022.24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurbanroads excluding Catalonia and the Basque Country.20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excludingCatalonia and the Basque Country. 2013-2022.21 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excludingCatalonia and the Basque Country. 2013-2022.21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excludingCatalonia and the Basque Country.22 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.22 Table 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways.Interurban roads excluding Catalonia and the Basque Country. 2013-2022. Table 24 : Comparison of the number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country. 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads exc
roads excluding Catalonia and the Basque Country. 2013-2022 22 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type of road. Interurban roads excluding Catalonia and the Basque Country. 23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 22 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country. 22 Table 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country. 23 Table 24 : Comparison of the number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country. 24 Tab
roads excluding Catalonia and the Basque Country. 2013-202222 Table 18 : Difference in the number of accidents involving animals, according to mode of transport and type ofroad. Interurban roads excluding Catalonia and the Basque Country.23 Table 19 : Number of accidents involving animals, according to type of accident. Interurban roads excludingCatalonia and the Basque Country. 2013-2022.24 Table 20 : Comparison of the number of accidents involving animals, according to type of accident. Interurbanroads excluding Catalonia and the Basque Country.20 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excludingCatalonia and the Basque Country. 2013-2022.21 Table 21 : Number of accidents involving animals, according to type of animal. Interurban roads excludingCatalonia and the Basque Country. 2013-2022.21 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excludingCatalonia and the Basque Country.22 Table 22 : Comparison of the number of accidents involving animals, according to type of animal. Interurban roads excluding Catalonia and the Basque Country.22 Table 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways.Interurban roads excluding Catalonia and the Basque Country. 2013-2022. Table 24 : Comparison of the number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads excluding Catalonia and the Basque Country. 23 : Number of accidents involving animals by type of animal on motorways and dual carriageways. Interurban roads exc

Table 27: Number of accidents involving animals, according to the month of the accident. Interurban roads
excluding Catalonia and the Basque Country. 2013-2022
Table 28: Comparison of the number of accidents involving animals, according to the month of the accident.
Interurban roads excluding Catalonia and the Basque Country. 2013-2022
Table 29: Number of accidents involving animals, according to the day of the accident. Interurban roads
excluding Catalonia and the Basque Country. 2013-2022
Table 30: Comparison of the number of accidents involving animals, according to the day of the accident.
Interurban roads excluding Catalonia and the Basque Country
Table 31: Number of accidents involving animals, according to the time period in which the accident occurred.33
Table 32: Comparison of the number of accidents involving animals, according to the time period in which the
accident occurred. Interurban roads excluding Catalonia and the Basque Country
Table 33: Number of accidents involving animals, according to Autonomous Region
Table 34: Comparison of the number of accidents involving animals, according to Autonomous Region.
Interurban roads excluding Catalonia and the Basque Country31
Table 35: Number of accidents involving animals, according to province. Interurban roads excluding Catalonia
and the Basque Country. 2013-2022
Table 36: Comparison of the number of accidents involving animals, according to province. Interurban roads
excluding Catalonia and the Basque Country
Table 37: Ranking of the twenty 5-kilometre long sections of road with the highest number of accidents involving
animals in the last 6 years (between 1 January 2016 and 31 December 2021). Interurban roads excluding
Catalonia and the Basque Country

Figure I: Number of dogs kept as pets in Spain from 2010 to 2021 (in thousands)......7 Figure 2: Evolution of the number of fatal accidents in the categories of general accidents vs. accidents involving Figure 3: Evolution of the number of accidents with victims in the categories of general accidents vs. accidents Figure 4: Evolution of the number of fatalities in general accidents vs. accidents involving animals. Interurban Figure 5: Evolution of the number of hospitalised injured casualties in general accidents vs. accidents involving Figure 6: Evolution of the number of nonhospitalised injured casualties in general accidents vs. accidents involving Figure 7: Number of accidents according to the animal involved. Interurban roads excluding Catalonia and the Figure 8: Evolution of the number of accidents involving animals, according to the month of the accident. Figure 9: Evolution of the number of accidents involving animals, according to the day of the accident. Interurban Figure 10: Evolution of the number of accidents involving animals, according to the time period in which the Figure 11: Evolution of the number of accidents involving animals, according to Autonomous Region. Interurban Figure 12: Geolocation of accidents involving animals. Interurban roads excluding Catalonia and the Basque Figure 13: Geolocation of accidents involving unidentified animals. Interurban roads excluding Catalonia and the Figure 14: Geolocation of accidents involving wild birds. Interurban roads excluding Catalonia and the Basque Figure 15: Geolocation of accidents involving ibex. Interurban roads excluding Catalonia and the Basque Figure 16: Geolocation of accidents involving deer. Interurban roads excluding Catalonia and the Basque Figure 17: Geolocation of accidents involving rabbits. Interurban roads excluding Catalonia and the Basque Figure 18: Geolocation of accidents involving roe deer. Interurban roads excluding Catalonia and the Basque Figure 19: Geolocation of accidents involving fallow deer. Interurban roads excluding Catalonia and the Basque Figure 20: Geolocation of accidents involving wildcats. Interurban roads excluding Catalonia and the Basque

Figure 21: Geolocation of accidents involving wild boar. Interurban roads excluding Catalonia and the Basque Figure 22: Geolocation of accidents involving hares. Interurban roads excluding Catalonia and the Basque Figure 23: Geolocation of accidents involving Iberian lynx. Interurban roads excluding Catalonia and the Basque Figure 24: Geolocation of accidents involving wolves. Interurban roads excluding Catalonia and the Basque Figure 25: Geolocation of accidents involving mouflon. Interurban roads excluding Catalonia and the Basque Figure 26: Geolocation of accidents involving otters. Interurban roads excluding Catalonia and the Basque Figure 27: Geolocation of accidents involving chamois. Interurban roads excluding Catalonia and the Basque Figure 28: Geolocation of accidents involving badgers. Interurban roads excluding Catalonia and the Basque Figure 29: Geolocation of accidents involving foxes. Interurban roads excluding Catalonia and the Basque Figure 30: Geolocation of accidents involving other wild animals. Interurban roads excluding Catalonia and the Figure 31: Geolocation of accidents involving domestic birds. Interurban roads excluding Catalonia and the Figure 32: Geolocation of accidents involving dogs. Interurban roads excluding Catalonia and the Basque Figure 33: Geolocation of accidents involving goats. Interurban roads excluding Catalonia and the Basque Figure 34: Geolocation of accidents involving equine species. Interurban roads excluding Catalonia and the Figure 35: Geolocation of accidents involving cats. Interurban roads excluding Catalonia and the Basque Figure 36: Geolocation of accidents involving sheep. Interurban roads excluding Catalonia and the Basque Figure 37: Geolocation of accidents involving pigs. Interurban roads excluding Catalonia and the Basque Figure 38: Geolocation of accidents involving cattle. Interurban roads excluding Catalonia and the Basque Figure 39: Geolocation of accidents involving other domestic animals. Interurban roads excluding Catalonia and



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