Automobile Club d'Italia

Istat
Istituto Nazionale di Statistica

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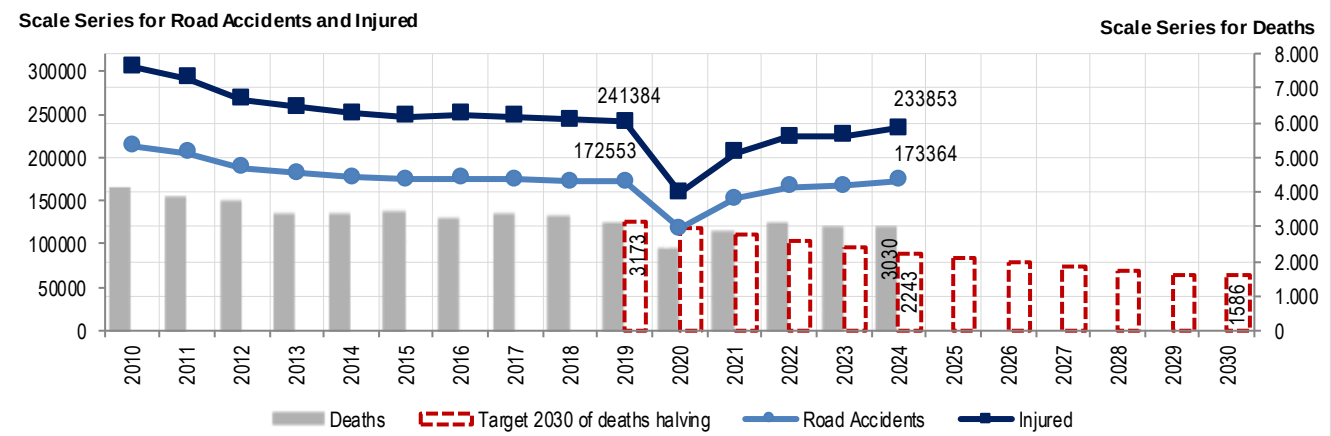
ROAD ACCIDENTS

Year 2024

- During 2024, mobility fully returned to pre-pandemic levels, with increased travel for work, study, and tourism. Road accidents recorded a quite stable number of fatalities compared to 2023, but both the number of accidents and injuries rose up in respect to 2023.
- In 2023, road accidents fatalities amount to 3,030 (-0.3% compared to 2023), while injuries reach 233,853 (+4.1%), across 173,364 road accidents (+4.1%). Compared to 2019, fatalities and injuries decreased (-4.5% and -3.1% respectively), while the number of accidents showed a slight increase (+0.7%) (Chart 1).
- Fatalities increased among motorcyclists, e-scooter users, and truck occupants, while they decreased in other categories. Specifically, motorcyclists recorded 830 deaths (+13.1% compared to 2023), and truck occupants 146 deaths (+30.4%). Among e-scooter users, injuries rose to 3,751 and fatalities (within 30 days of the accident) to 23, along with 1 pedestrian fatality (in 2023, the numbers were 3,195 and 21 respectively). Car occupant deaths dropped to 1,252 (-6.0%), moped riders to 61 (-10.3%), pedestrians to 470 (-3.1%), and cyclists – including e-bike users – to 185 (-12.7%, down from 212 in 2023).
- Between 2023 and 2024, road accidents and injuries increased across all road types, especially on motorways (+6.9% accidents, +7.0% injuries). Motorway fatalities also rose significantly (+7.1%), while fatalities decreased on urban roads (-2.1%) and slightly increased on rural roads (+0.1%). Compared to 2019, accidents rose on motorways and rural roads (+4.0% and +2.7% respectively).
- In 2024, road accidents deaths across the Eu27 declined slightly (-2.2% compared to 2023), continuing the trend from the previous year. Compared to 2019, the decrease put up at -12.1%. In absolute terms, the Eu27 reported 20,017 fatalities in 2024, down from 20,466 in 2023 and 22,823 in 2019. This links to 45 road deaths per million inhabitants in 2024, lower than Italy's rate of 51, which ranks the country 19th in the EU for road mortality.
- The most frequent incorrect driving behaviours continued to be distraction, failure to yield, and excessive speed. Together, these accounted for 37.8% of all causes (85,339 cases), a figure that has remained stable over time.
- Excessive speed is the most punished driving infraction after illegal parking, representing 34% of all traffic violations. Fines for failure to the use seatbelts and child restraint systems declined slightly, while fines for not wearing helmets increased. Authorities continued to issue a high number of fines for improper use of in-vehicle devices, and fines for drug-impaired driving increased, while those for drunk driving slightly declined.
- The car market showed slight growth in 2024: new car registrations rose by 0.7% compared to 2023. On the motorway network, average annual vehicle mileage increased by 2.2%, and total mileage in 2024 exceeded 83 billion vehicle per kilometre.

CHART 1. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY, KILLED AND INURED. Years 2010-2024. Absolute values



In 2024, the number of road fatalities remained stable compared to 2023 and still exceeded 3,000

In 2024, Italy recorded 173,364 road accidents involving injuries[1]. These incidents resulted in 3,030 fatalities and 233,853 injuries (Table 1). Compared to the previous year, road deaths declined by 0.3%, while the number of accidents and injuries increased by 4.1%. The road mortality rate slightly decreased from 51.5 to 51.4 deaths per million inhabitants.

Compared to 2019, the benchmark year for the 2021–2030 Road Safety Decade, fatalities per million inhabitants dropped by 4.5% (from 53.1 to 51.4).

The social cost of road accidents involving injuries, calculated using updated parameters from Istat and ACI[2], (based on data from the State Police, Municipal Police, and Carabinieri), amounted to just over 18 billion of Euros in 2024, representing nearly 1% of national GDP[3]. Including estimated costs from accidents involving property damage only (about 4.4 billion of Euros according to ANIA), the total rises to approximately 22.6 billion of Euros.

TABLE 1. ROAD ACCIDENTS, KILLED AND INJURED PERSONS. Years 2001, 2010-2024. Absolute values, deaths per million and percentage change

YEAR	Road accidents (a)	Killed	Injured	Deaths per million inhabitants (b)	Yearly % change	% change in respect to 2001 (b)	% change in respect to 2010 (b)
2001	263,100	7,096	373,286	124.5	-	-	-
2010	212,997	4,114	304,720	68.8	-	-42.0	-
2011	205,638	3,860	292,019	64.3	-6.2	-45.6	-6.2
2012	188,228	3,753	266,864	62.4	-2.8	-47.1	-8.8
2013	181,660	3,401	258,093	56.4	-9.4	-52.1	-17.3
2014	177,031	3,381	251,147	56.1	-0.6	-52.4	-17.8
2015	174,539	3,428	246,920	56.9	+1.4	-51.7	-16.7
2016	175,791	3,283	249,175	54.6	-4.2	-53.7	-20.2
2017	174,933	3,378	246,750	56.3	+2.9	-52.4	-17.9
2018	172,553	3,334	242,919	55.7	-1.3	-53.0	-19.0
2019	172,183	3,173	241,384	53.1	-4.8	-55.3	-22.9
2020	118,298	2,395	159,249	40.3	-24.5	-66.2	-41.8
2021	151,875	2,875	204,728	48.6	+20.0	-59.5	-30.1
2022	165,889	3,159	223,475	53.6	+9.9	-55.5	-23.2
2023	166,525	3,039	224,634	51.5	-3.8	-57.2	-26.1
2024	173,364	3,030	233,853	51.4	-0.3	-57.3	-26.3

a) Deaths out of resident population (per 1,000,000).
b) The percentage changes of the number of deaths, as yearly average in respect of the previous year or 2001 or 2010 is calculated as: $((D^t/D^{t-1\ o\ 2001\ o\ 2010}) - 1) * 100$.

Mobility levels remained stable in 2024 after the post-pandemic growth

In 2024, mobility levels stabilized, maintaining the recovery seen in 2023 after the sharp decline during the most acute phases of the pandemic.

According to data from Isfort's "Audimob" Observatory[4] (updated to the first half of 2024), the average number of daily trips made by the population aged 14-85 stood at 96.5 million on a typical weekday, the exact same level

[1] A road accident is defined as "an event involving at least one vehicle on the road network, occurring on streets or squares open to traffic, which results in injuries to persons (fatalities within 30 days and/or injuries)" (Vienna Convention, 1968 – UNECE, ITF International Transport Forum, and Eurostat 2019). Data collection follows a framework established by memorandum of understanding and agreements with Istat. In 2024, the following regions and provinces participated: Calabria, Friuli Venezia Giulia, Emilia-Romagna, Lazio, Liguria, Lombardy, Piedmont, Apulia, Tuscany, the Autonomous Provinces of Bolzano/Bozen and Trento, and the Provinces of Rovigo, Vicenza, and Treviso. In 2024, the distribution of accident reporting by authority was as follows: 11.8% by the State Police, 21.4% by the Carabinieri, and 66.8 % by Municipal Police and other local bodies. For some Municipal Police departments, monthly summaries at the municipal level (covering the number of accidents, fatalities, and injuries) were used in place of detailed datasets not submitted to Istat. It is important to note that the Friuli Venezia Giulia Region did not provide Istat with data collected by Municipal Police for 2024. As a result, estimates for road accidents reported by the Municipal Police in the region's provincial capitals were based on quarterly summary data, while estimates for the rest of the region were derived using the 2023 distribution of road accidents, fatalities, and injuries.

[2] Reference: Decreto Dirigenziale 37/2023_MIT

[3] Istat – GDP and general government net borrowing - Years 2022 - 2024 (2025) https://www.istat.it/en/press-release/gdp-and-general-government-net-borrowing-years-2022-2024/

[4] Source: Isfort - 21° Rapporto sulla mobilità degli Italiani. Il passato, il presente, il futuro. The 'Audimob' observatory on the mobility styles and behaviour of Italians, carried out by Isfort, is based on an annual sample survey. The sample of interviewees is regional and by main demographic characteristics of the population. It consists of approximately in 16,000 individuals. The survey records the trips made by the

recorded in the first half of 2023. For the full year 2023, daily trips averaged 99.5 million, marking a modest increase of 0.6% compared to 2022. This confirms that the post-Covid recovery in travel demand, already evident in 2022 and early 2023, has now stabilized. Compared to 2019 (the last pre-pandemic year), overall daily mobility demand has dropped by approximately 6%. This decline reflects the continued impact of remote working, shifts in post-pandemic lifestyles, and ongoing demographic changes.

In 2023, the total number of passenger per kilometre travelled on an average weekday remained above one billion, despite a slight decline from 2022 (-2.6%). Comparing the first half of 2023 with the same period in 2024 reveals a further decrease (-5.7%). In short, people are still moving but tend to cover shorter distances than in the past. In fact, kilometres travelled in 2023 remained significantly below 2019 levels (-11.7%), suggesting a possible end to the growth in medium- and long-distance travel seen during the 2021–2022 recovery.

In the first half of 2024, 80.1% of the population made at least one trip per day, down slightly from 80.8% in the same period of the previous year. In 2023, the gap from 2019 stood at 3.5 percentage points, despite a partial recovery from 2022 levels.

Another relevant trend concerns "proximity mobility," or people who only moved on foot and for very short distances. In the first half of 2024, this group accounted for 6.7% of the population, down slightly from 6.9% in the first half of 2023, but still above the 6.0% recorded in the first half of 2019. At the same time, the share of people who did not move at all during the day rose from 12% in early 2023 to 13.2% in the first half of 2024.

Bicycle and micro mobility usage held steady at around 4% of the modal share, with a 0.3 percentage point increase between the first halves of 2023 and 2024. Motorcycles also maintained a similar modal share of around 4%, although a noticeable decline occurred in early 2024, falling to 3.5% from 3.9% in the same period of 2023.

Cars remained the most used mode of transport, accounting for 64.7% of trips in 2023. However, this reflects a 1.6% decrease from 2022, followed by a further 2.5% decline in the first half of 2024 compared to the same period the previous year.

Public transport continued its gradual recovery after the sharp decline in 2020, which halved its market share. In 2023, the modal share rose to 8.6% (up from 7.4% in 2022) and reached 8.0% in the first half of 2024, a slight increase from 7.8% in the same period of 2023. Nonetheless, a gap of more than two percentage points remains compared to 2019 levels.

Data from the National Sharing Mobility Observatory[5] indicate a phase of contraction in the overall service offering, both in terms of the number of operators and the availability of vehicles. This trend is partly due to adjustments in the shared e-scooter sector. Despite the shrinking supply, overall demand has remained stable, with rental volumes and travel distances essentially unchanged.

The number of shared e-scooter services dropped significantly from nearly 100 in 2022 to 79 in 2023, and then to 53 at the start of 2024. This reduction resulted from some operators exiting the market and the discontinuation of services in several cities, often due to the conclusion of pilot programs. Nevertheless, the number of rentals in 2023 continued to be stable compared to 2022 and projections for 2024 also show stability. Considering the decline in service supply over the past 18 months, this stability reflects a strong and consistent use of the remaining services. In Italy's two largest cities, Rome and Milan, the number of shared scooter services fell from 7 in 2021 to 3 and 2 respectively by early 2024.

Regarding Demand Responsive Transport (DRT), data show an expansion in service offerings, which reached 41 active systems in spring 2024, mostly operating in Northern regions. Each DRT system is designed based on the specific characteristics of its local context, adapting to the needs of the territory (Isfort).

Nevertheless, private car use continues to dominate nationwide. Italy remains one of the most motorized countries in Europe, with 700.8 cars per 1,000 inhabitants[6]. In the first half of 2024, car use accounted for 63.1% of total trips down slightly from 66.3% in 2022, and close to the 62.5% recorded in 2019. The lowest value ever observed was 59% in 2020. These figures confirm the continued dominance of the car as Italians' preferred mode of transport.

Traffic volumes on the motorway network[7] (for all vehicles) exceeded 83 billion vehicle pre kilometre in 2024, marking a 2.2% increase compared to 2023. Heavy vehicle traffic rose by 2.3%, while light vehicle traffic increased by 2.1%.

The IMR (Observed Mobility Index), calculated by Anas based on monthly average daily traffic by vehicle class, also rose slightly between 2023 and 2024. The overall index grew by 0.7 percentage points, with a stronger increase for heavy vehicles (+1.4%).

respondent on the day preceding the interview, excluding walking trips of less than 5 minutes.

[5] Source: 8° Rapporto Nazionale sulla Sharing Moblity

[6] Fonte: ACI – Annuario Statistico 2025.

[7] Source: AISCAT - Associazione Italiana Società Concessionarie Autostrade e Trafori (2024 data does not include data for A22 Autostrada del Brennero).

As for the bicycle market[8], traditional bike sales declined slightly in 2024 (-0.9%) compared to 2023, totalling 1,080,000 units. In contrast, the e-bike market saw a modest increase of +0.3%, with 274,000 units sold, up 40% compared to 2019. This means that for every five bicycles sold, four were traditional and one electric, with e-bikes now accounting for 20% of total bicycle sales, twice the 11% share recorded in 2019.

The Italian new car market[9] ended 2024 with a slight increase of 0.7% compared to 2023. This modest growth was driven by strong performance in the first half of the year, which offset declines recorded between August and December. At the European level[10], the car market also grew slightly in 2024, with 12,963,614 new registrations, up 0.9% from 12,847,929 in 2023. However, the figure remains well below pre-pandemic levels, as 2019 saw 15,340,188 new car registrations. Among the five major European markets (including the UK), only Spain (+7.1%) and the United Kingdom (+2.6%) recorded growth in 2024. France (-3.2%) and Germany (-1.0%) saw declines. In terms of total volume, Italy ranked fourth among the largest car markets in Europe for the full year.

In 2024, road fatalities in the EU27 continued to decline, though only slightly

In 2024, road fatalities across the EU27 totalled 20,017, compared to 20,466 in 2023, 22,823 in 2019, and approximately 30,000 in 2010. The decrease recorded in 2024 was modest, amounting to -2.2% compared to the previous year, while the drop from 2019 was more significant at -12.3%.

TABLE 2. FATALITIES IN ROAD ACCIDENTS IN THE COUNTRIES OF THE EUROPEAN UNION (Eu27)
Years 2010, 2019, 2023 and 2024. Absolute values, percentage change and road mortality rate per 1,000,000 inhabitants (a)

COUNTRY Eu27 (a)	Absolute values				Percentage change (b)			Road mortality rate		
	2010	2019	2023	2024	2024/2023*	2024/2019*	2024/2010 *	2010	2023	2024
Austria	552	416	402	351	-12.7	-15.6	-36.4	65.9	44.2	38.3
Belgium	850	644	501	469	-6.4	-27.2	-44.8	78.4	42.7	39.7
Bulgaria	776	628	525	478	-9.0	-23.9	-38.4	104.6	81.4	74.2
Croatia	426	297	274	239	-12.8	-19.5	-43.9	99.0	71.2	61.9
Cyprus	60	52	34	41	20.6	-21.2	-31.7	73.2	36.9	42.4
Czechia	802	617	502	494	-1.6	-19.9	-38.4	76.7	46.4	45.3
Denmark	255	199	162	145	-10.5	-27.1	-43.1	46.1	27.3	24.3
Estonia	79	52	59	69	+16.9	32.7	-12.7	59.3	43.2	50.2
Finland	272	211	185	176	-4.9	-16.6	-35.3	50.8	33.2	31.4
France	3992	3244	3167	3193	+0.8	-1.6	-20.0	63.6	48.0	48.3
Germany	3651	3059	2830	2759	-2.5	-9.8	-24.4	44.6	33.5	33.1
Greece	1258	688	646	665	+2.9	-3.3	-47.1	112.5	62.0	63.9
Hungary	740	602	472	497	+5.3	-17.4	-32.8	73.9	49.2	51.9
Ireland	212	140	180	172	-4.4	+22.9	-18.9	46.6	34.1	32.1
Italy	**4114**	**3173**	**3039**	**3030**	**-0.3**	**-4.5**	**-26.3**	**68.8**	**51.5**	**51.4**
Latvia	218	132	138	112	-18.8	-15.2	-48.6	102.8	73.3	59.8
Lithuania	299	186	159	121	-23.9	-34.9	-59.5	95.2	55.6	41.9
Luxembourg	32	22	26	18	-30.8	-18.2	-43.8	63.7	39.3	26.8
Malta	15	16	16	12	-25.0	-25.0	-20.0	36.2	29.5	21.3
Poland	3907	2909	1893	1896	+0.2	-34.8	-51.5	102.4	51.5	51.8
Portugal	937	688	642	634	-1.2	-7.8	-32.3	88.6	64.4	59.6
Romania	2377	1864	1545	1477	-4.4	-20.8	-37.9	117.1	81.1	77.5
Slovakia	345	245	267	262	-1.9	+6.9	-24.1	64.0	49.2	48.3
Slovenia	138	102	83	68	-18.1	-33.3	-50.7	67.4	39.2	32.0
Spain	2478	1755	1806	1751	-3.0	-0.2	-29.3	53.3	37.6	36.0
Sweden	266	221	229	213	-7.0	-3.6	-19.9	28.5	21.8	20.2
The Netherlands	640	661	684	675	-1.3	+2.1	+5.5	38.6	38.4	37.6
Eu27	**29691**	**22823**	**20466**	**20017**	**-2.2**	**-12.3**	**-32.6**	**67.6**	**45.9**	**44.8**

* Preliminary data 2024 for Belgium, Denmark, Finland, Greece, Germany, Ireland, The Netherlands, Portugal, Spain e Romania.
(a) Source: *European Transport Safety Council, Annual PIN report. Year 2025* - 19th Annual Road Safety Performance Index (PIN Report) - ETSC; European Commission 21/03/2025 - European Commission releases preliminary figures on road fatalities for 2024 - European Commission
(b) Percentage change 2024 vs 2023, 2019 o 2010 formula is: $((M^{2024}/ M^{2023 \text{ o } 2019 \text{ o } 2010}) -1) * 100$

[8] Source ANCMA - Associazione Nazionale Ciclo Motociclo Accessori.
[9] Source ACI – Automobile Club d'Italia.
[10] Source UNRAE – Unione Nazionale Rappresentanti Veicoli Esteri.

In 21 Eu27 countries, the number of fatalities declined compared to the previous year, with percentage changes ranging from -30.8% to -0.3%. In 16 of these countries, the reduction was greater than the Eu27 average. The largest decreases were recorded in Luxembourg (-30.8%), Malta (-25.0%), and Lithuania (-23.9%).

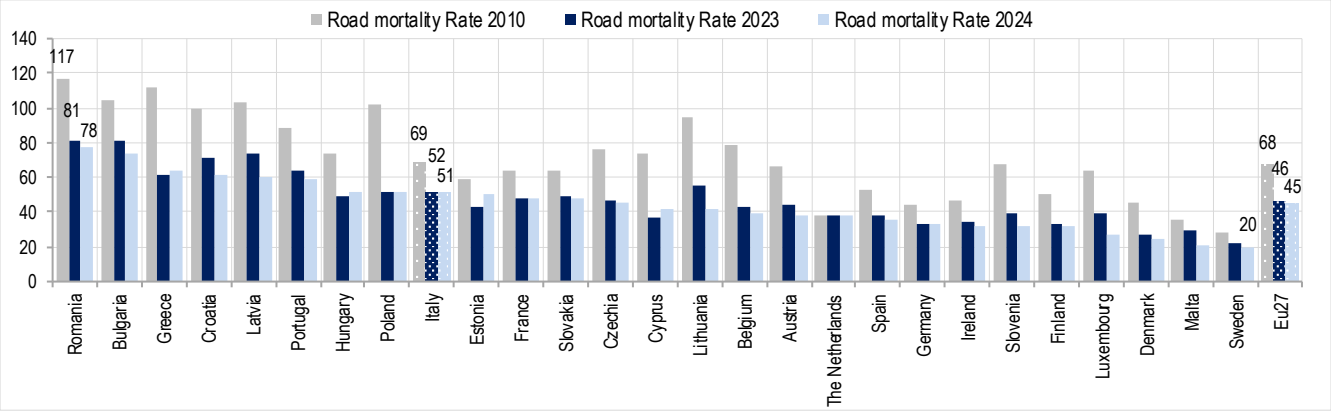
In contrast, six countries reported an increase in road fatalities, with changes ranging from +0.2% to +20.6%. The most notable increases were seen in Cyprus (+20.6%), Estonia (+16.9%), Hungary (+5.3%) and Greece (+2.9%) (Table 2).

In 2024, the average road mortality rate in the Eu27 stood at 44.8 deaths per million inhabitants, 6.6 points lower than Italy's rate of 51.4. With this figure, Italy ranks 19th among EU countries for road mortality (Chart 2).

The European road safety targets call for halving the number of road deaths and serious injuries by 2030 compared to the benchmark year of 2019. To track progress, each country, including Italy, is required to report a set of Key Performance Indicators (KPIs) to the European Commission.

These KPIs include: vehicle speed, use of protective equipment (helmets, seat belts, and child restraints), alcohol and drug consumption, safety level of the vehicle fleet and road infrastructure, driver distraction, and the efficiency of emergency response systems. Additionally, the Stockholm Declaration of February 2020 sets out a long-term vision of "zero fatalities" by 2050.

CHART 2. ROAD MORTALITY RATE IN THE COUNTRIES OF THE EUROPEAN UNION (EU27) (a). Years 2010, 2023 and 2024.



a) Death per million inhabitants; Fonte: *European Transport Safety Council, Annual PIN report. Year 2025.* 19th Annual Road Safety Performance Index (PIN Report) - ETSC

Roads remain unsafe: in 2024, fatalities are increasingly young people

In 2024, road crashes claimed 3,030 lives: 2,427 men (80.1%) and 603 women (19.1%). Among the fatalities were 2,175 drivers (1,939 men and 236 women), 385 passengers (197 men and 188 women), and 470 pedestrians (291 men and 179 women).

Looking at age distribution, the highest number of deaths falls in the 20-24 age group. Among women, however, fatalities are more frequent among those aged over 70. Compared to 2023, the most significant increases occurred among younger age groups: deaths rose by 23.9% among those aged 20-24 and 25-29, while among 15-17-year-olds, fatalities jumped from 51 to 80.

Increases also emerged among people aged 40-44 (+14.7%), 50-54 (+14.1%), and 60-64 (+14.6%).

Despite a slight decline, the number of children (0-14 years) killed in road crashes remains worrying: 29 died in 2024, compared to 41 in 2023.

Numerous efforts have aimed to improve child safety in cars, supported by the 2030 National Road Safety Plan (PNSS), but awareness campaigns and enforcement related to proper use of restraint systems have not yet achieved the expected results. Reaching the "Vision Zero" target for children remains a distant goal.

The number of injured road users continues to rise, especially among the very young. Injuries increased by 15.7% among those aged 15-17 and by 13.6% among 18-19-year-olds. Notably, injuries also rose among those aged 65-69 and over 85 compared to 2019 (the benchmark year for the 2021-2030 decade) (Table 3).

To reduce not only fatalities but also injuries, the new 2030 National Road Safety Plan focuses on better road and vehicle design, stronger legislation and enforcement, and quicker, more effective emergency response. One key goal includes optimizing rescue operations and cutting ambulance response times, both part of the EU's Key Performance Indicators (KPIs).

TABLE 3. FATALITIES AND INJURIES IN ROAD ACCIDENTS BY GENDER AND AGE CLASS. Year 2024. Absolute values and % change 2024/2023 and 2024/2019 (a)

AGE CLASSES	Fatalities (within 30 days)			Injuries			% change 2024/2023		% change 2024/2019	
	Males	Females	Total	Males	Females	Total	Fatalities	Injuries	Fatalities	Injuries
0 - 4	3	5	8	1,232	941	2,173	-38.5	-8.8	-52.9	-15.2
5 - 9	5	5	10	1,577	1,225	2,802	-23.1	-2.7	150.0	-18.2
10 -14	8	3	11	2,976	1,848	4,824	-26.7	+6.6	-21.4	-5.4
15 -17	63	17	80	8,147	3,217	11,364	+56.9	+15.7	19.4	+30.5
18-19	67	11	78	8,295	3,284	11,579	-13.3	+13.6	-14.3	+14.9
20 -24	212	40	252	17,339	8,905	26,244	+13.0	+6.8	+1.6	+1.7
25 -29	169	34	203	13,804	7,646	21,450	+10.9	+2.6	-6.9	-7.1
30 - 34	137	23	160	11,759	6,948	18,707	-3.0	+1.7	-5.9	-4.8
35 - 39	128	24	152	10,329	6,219	16,548	-9.5	+1.5	-16.9	-9.7
40 - 44	142	37	179	9,777	6,118	15,895	+14.7	-1.3	-11.8	-17.9
45 - 49	189	28	217	10,513	7,200	17,713	-2.3	-1.0	-7.7	-13.2
50 -54	194	32	226	11,370	7,464	18,834	+14.1	+2.3	-15.0	-4.1
55 -59	196	36	232	10,425	7,036	17,461	-2.1	+2.4	+5.0	+4.5
60 -64	198	38	236	8,419	5,327	13,746	+14.6	+6.9	+21.6	+14.0
65 -69	145	39	184	5,925	3,725	9,650	+1.1	+9.8	+1.7	+9.4
70 - 74	129	43	172	4,343	3,035	7,378	-13.1	+5.2	-9.9	-7.4
75 - 79	141	59	200	3,727	2,672	6,399	-11.1	+5.3	0.0	0.0
80 - 84	123	48	171	2,672	1,762	4,434	-21.9	-1.1	-19.7	-12.7
85+	144	68	212	2,054	1,190	3,244	-2.3	+6.9	+1.4	+11.6
Non indicata	34	13	47	1,834	1,574	3,408	-19.0	+16.8	-2.1	-35.6
Totale	**2,427**	**603**	**3,030**	**146,517**	**87,336**	**233,853**	**-0.3**	**+4.1**	**-4.5**	**-3.1**

(a) The age class variable, also includes the "unknown or not indicated" mode. For each accident. in fact. Also the occupants of other vehicles involved over the third is counted too. For these individuals of which we only know the number and the outcome, demographic characteristics. Including the age, are not detected

Partly as a result of population aging, a comparison between the age and gender structure of road fatalities in 2024 and 2010 shows a growing share of adult and older people deaths within each gender group.

The distribution of age-specific road mortality rates, calculated based on the resident population, highlights the increased risk faced by both young and elderly individuals. The highest mortality rate appears in the 85-89 age group (103.8 per million inhabitants), followed by the 20-24 age group (84.7 per million inhabitants) (Charts 3 and 4).

CHART 3. KILLED IN ROAD ACCIDENTS. AGE PYRAMID BY AGE CLASS. Year 2010-2024. Percentage values

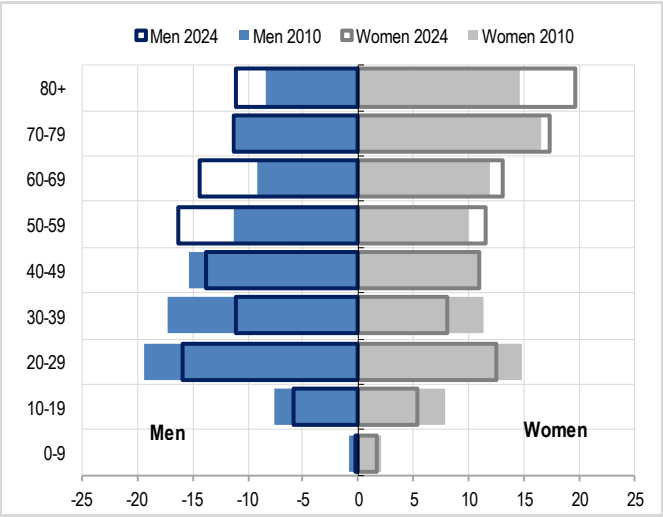
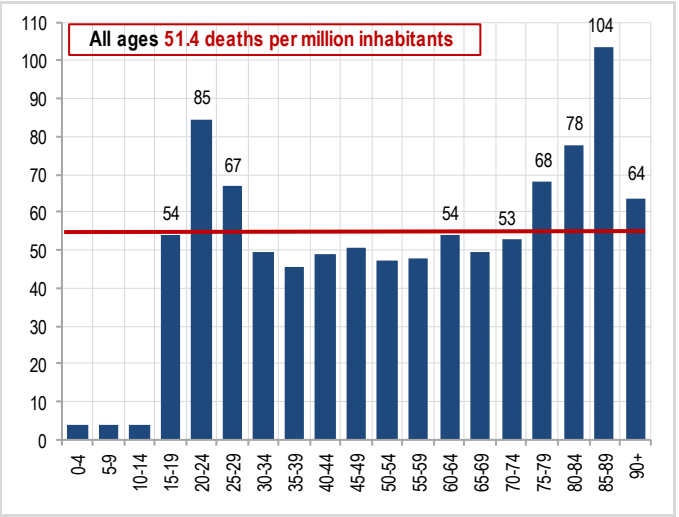


CHART 4. ROAD MORTALITY RATE BY AGE CLASS. Year 2024, per million inhabitants



Fatalities on the rise among motorcyclists, electric scooter users and truck occupants

In 2024, the growing spread of zero-emission electric micro mobility vehicles, now an integral part of the Italian urban landscape, is confirmed. To document the accident rate of these new vehicles, as of May 2020, Istat included the new "electric scooter" and "electric bicycle" vehicles.

Road accidents resulting in death or injury, involving at least one electric scooter, reach 3,895 in 2024, a figure that is gradually increasing from 564 in 2020 (the starting year of the survey in May). Among users, there are 23 fatalities, to which a pedestrian is added (in 2023 there were 21, in 2022 16, and in 2021 there were 9, the first fatality in 2020), and there are 3,751 injured drivers and passengers on e-scooters (3,562 drivers and 189 passengers). Uninjured drivers total 328, while there are 179 injured pedestrians.

Electric bicycles are involved in 1,767 accidents (figure progressively increasing from 240 in 2020), with 20 fatalities among drivers and passengers of the vehicles and one among pedestrians (12 fatalities in 2023, 21 in 2022, 13 in 2021, and 6 in 2020); there are 1,724 injured drivers and passengers and 61 among pedestrians.

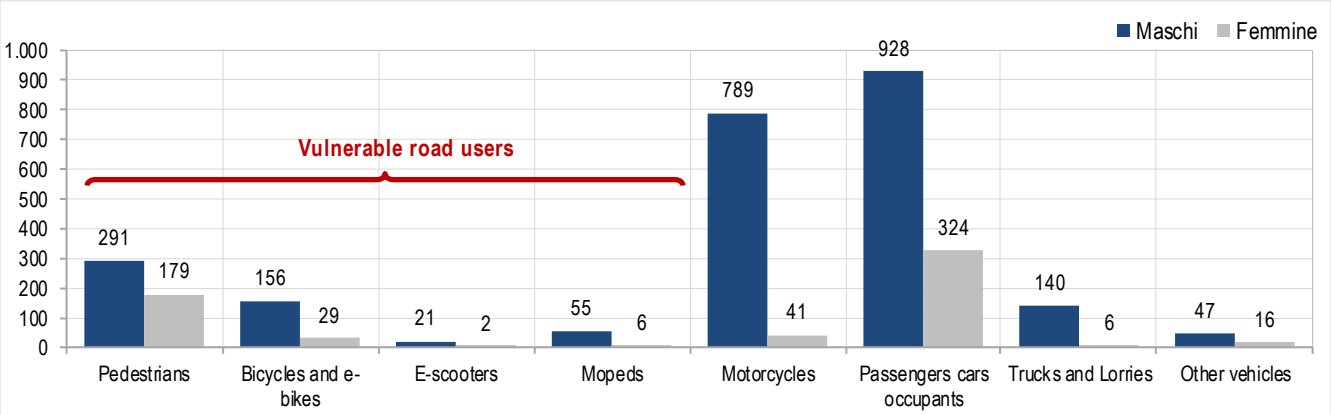
Traditional (non-electric) bicycles are involved in 15,237 accidents (higher than the 15,118 in 2023, but lower than the 15,981 in 2022 and 15,771 in 2021), with 165 fatalities and no pedestrian fatalities (204 fatalities including 4 pedestrian fatalities in 2023, 185 fatalities in 2022, 211 in 2021 and 169 in 2020); 14,839 drivers and passengers and 388 pedestrians are injured.

In 2024, the number of fatalities increases among drivers and passengers of motorcycles, e-scooters, and trucks, while decreasing for other categories of road users. Specifically, there are 830 fatalities among motorcyclists (up 13.1 percent from 2013); fatal truck occupants are146, up 30.4 percent; among electric scooter users, both injuries and fatalities increase: 3,751 injured, 23 killed (within 30 days of the accident), plus 1 pedestrian fatality (in 2023 there were 3,195 and 21, respectively). On the other hand, fatalities decrease among: occupants of passenger cars, 1,252 fatalities (-6.0% compared to 2023); moped riders, 61 fatalities (-10.3%); pedestrians, 470 fatalities (-3.1%); and bicycle and e-bike users, 185 fatalities (-12.7% compared to 2023 when there were 212).

The gender distribution of fatalities confirms the distinctly male disadvantage again in 2024, particularly for drivers, among whom the proportion of men reaches 89.1 percent; among passengers the share stops at 51.2 percent (48.8 percent female). Finally, for pedestrians, the shares are 61.9% for men and 38.1% for women. Overall, vulnerable users account for 51.8% of road deaths (50.0% in 2023, 49.3% in 2022, and 50.9% in 2021 and 51.4% during 2020) (Chart 5).

Higher risks of mortality and injury are recorded among vulnerable road users. The mortality index for pedestrians[11], at 2.5 deaths per 100 pedestrian-involved accidents, is four times higher than that for car occupants (0.6). The mortality index for motorcyclists is 2.5 times higher (1.5 deaths per 100 accidents), and it's almost twice as high for cyclists (e-bikes and traditional) and scooter riders (1.1 deaths per 100 accidents).

CHART 5. KILLED IN ROAD ACCIDENTS BY GENDER AND ROAD USER TYPE. Year 2024. Absolute values. Mortality and harmfulness index (a)



(a) Trucks and Lorries units' category includes: Trucks, Trucks with trailers, Lorries, Special vehicles, Road tractors or tractor units. Other road users category includes: Buses or trolleybuses in urban service or extra urban service, Passengers cars, Rural vehicles, Motorcycles and motor vans, Animal-drawn or arm-drawn vehicles, Hit and Run Vehicles, Minicar

Regarding the European target of halving the number of fatalities and serious injuries compared to 2010 and 2019, the categories with the less significant decreases over time in terms of mortality (in some cases even increases) are motorcyclists (-12.6% since 2010 and +18.9% since 2019), cyclists (-21.5% since 2010, -17.8% since 2019), and pedestrians (-24.3% since 2010, -12.0% since 2019).

[11] This refers to the number of deaths or injuries per 100 pedestrian-involved accidents or vehicles involved in accidents by type.

On the other hand, moped riders and car occupants show the highest reduction in mortality in recent decades. This is due to a variety of factors, including increased awareness regarding the correct use of helmets and safety devices, and significant advancements in vehicle safety technology. It's also worth noting that the number of mopeds in circulation has significantly decreased over time (Charts 6 and 7).

CHART 6. ROAD FATALITIES BY MAIN ROAD USER CATEGORIES. Year 2001-2024. Absolute values

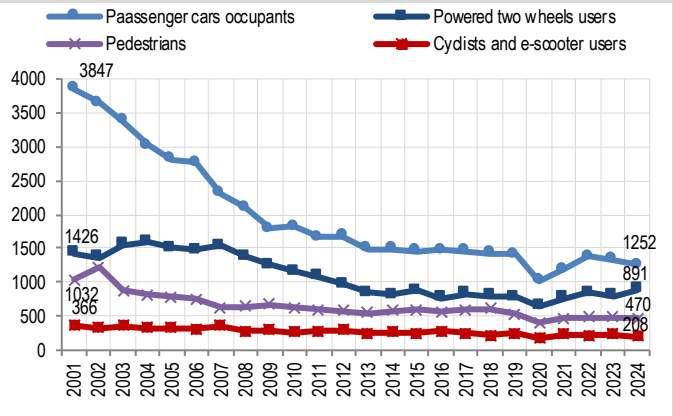
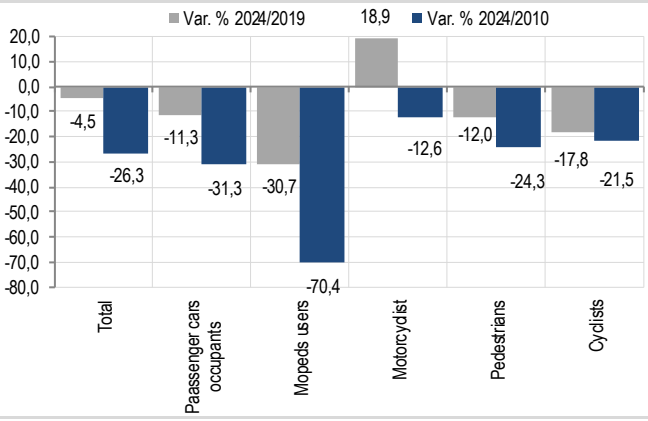


CHART 7. ROAD FATALITIES BY MAIN ROAD USER CATEGORIES. Percentage changes 2024/2019 and 2024/2010



Motorways fatalities rise, while urban roads deaths fall

In 2024, compared to 2023, road accidents and injuries increase across all road types. It is detected a rise in road accidents on motorways and rural roads, and an increase in injuries only on motorways, even when compared to 2019. On motorways, between 2023 and 2024, road accidents climbed by 6.9% and injuries by 7.0%. On urban and rural roads, road accidents increased by 4.0% and 3.9% respectively.

Fatalities decreased only on urban roads (-2.1%) in 2024. Conversely, they increased on motorways (+7.1%), despite a sharp decrease in 2023 (-19%), and on rural roads (+0.1%).

Compared to 2019, the number of fatalities decreased across all road types, showing an overall drop of 4.5%. On motorways, this decrease was quite significant, reaching -17.4%.

Road accidents occur most frequently on urban roads (73.2%), while most fatalities concentrate on rural roads (48.6%). Motorways, however, account for 5.4% of accidents and 8.4% of deaths (Table 4 and Chart 8).

The mortality index remains highest on rural roads, with 4.0 deaths per 100 accidents. It drops to 2.7 on motorways, while on urban roads, it stands at 1.0 (compared to 4.1, 2.7, and 1.1 in 2023, respectively). The national average, practically unchanged since 2010, is 1.7.

Overall, most road accidents involve vehicles in motion (67.5%), 91.0% of accidents involve one or two vehicles, 7.0% involve three vehicles, and 2.0% involve four or more vehicles. Single-vehicle accidents, excluding pedestrian collisions, make up 21.5%. Pedestrian collisions account for 11.0% of the total.

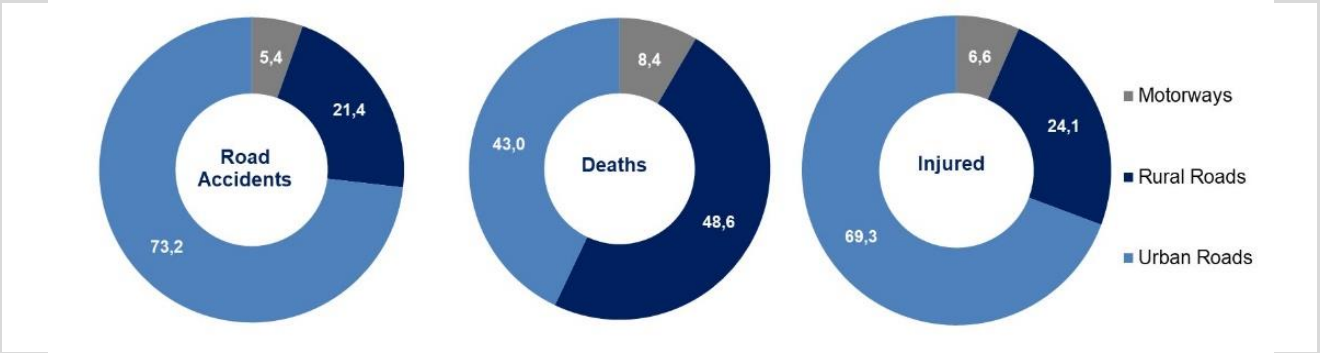
Accidents on a straight road happen on urban roads in 46.9% of cases and on rural roads in 58.3%. In urban areas, accidents at intersections represent 39.0% of the total, in curves 7.2%, and near roundabouts 5.4%. Along rural roads, in addition to the high percentage of accidents on straight sections, 23.0% of accidents occur on curves and 13.0% at an intersection.

TABLE 4. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY, DEATHS AND INJURED BY ROAD TYPE. Years 2024, 2023 and 2019. Absolute values and percentage changes 2024/2022 and 2024/2019 (a)

ROAD TYPE	Road Accidents 2024	Road Accidents 2023	Road Accidents 2019	Deaths 2024	Deaths 2023	Deaths 2019	Injuries 2024	Injuries 2023	Injuries 2019	%change Accidents 2024/2023	%change Deaths 2024/2023	%change Accidents 2024/2019	%change Deaths 2024/2019
Urban Roads	126,837	122,011	127,000	1,301	1,329	1,331	162,022	155,980	168,794	+4.0	-2.1	-0.1	-2.3
Motorways	9,443	8,835	9,076	256	239	310	15,479	14,469	15,009	+6.9	+7.1	+4.0	-17.4
Rural Roads (a)	37,084	35,679	36,107	1,473	1,471	1,532	56,352	54,185	57,581	+3.9	+0.1	+2.7	-3.9
Total	**173,364**	**166,525**	**172,183**	**3,030**	**3,039**	**3,173**	**233,853**	**224,634**	**241,384**	**+4.1**	**-0.3**	**+0.7**	**-4.5**

(a) Rural roads include National, Regional, and Provincial roads outside urban areas, as well as municipal rural roads, motorways, and their connecting trunks.

CHART 8. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY. KILLED AND INJURED BY ROAD TYPE (a). Year 2024 percentage values



(a) Rural roads include National, Regional, and Provincial roads outside urban areas, as well as municipal rural roads, motorways, and their connecting trunks.

Road user mortality profiles: the Collision Matrix

Road accidents represent a multifactorial subject. Often, for an exhaustive interpretation of data, the use of new indicators and innovative measures, compared to traditional analyses, is recommended. In order to study the different features of all road users and their interactions, it is very important to relate the specific risk elements of the connections between users and vehicles on the road. Confirming what Istat introduced in the last edition of the road accident report, we processed new "collision matrices." The matrices regards both fatalities and injuries, by road type, providing together absolute and percentage values (see Data Tables attached to this report).

TABLE 5. COLLISION MATRIX FOR ROAD ACCIDENTS FATALITIES BY ROAD USER AND OTHER VEHICLES INVOLVED. Year 2023, absolute and percentage values (row %) (a) (b)

FATALITIES BY ROAD USER TYPE	IN COLLISION WITH												
	Traffic Unit Pedestrian	Bicycles	E-bikes	E-scooters	Mopeds	Motor-bikes	Passengers cars	Lorries (< 3,5 t)	Heavy Good Vehicles (> 3,5 t)	Buses or Coach	Other vehicles	No other vehicle involved	Total
Pedestrians	-	-	1 (0.2%)	1 (0.2%)	4 (0.9%)	**28 (6.0%)**	**341 (72.5%)**	**37 (7.8%)**	**32 (6.8%)**	13 (2.8%)	13 (2.8%)	-	**470**
Bicycles	-	5 (3.0%)	-	-	-	10 (6.1%)	**95 (57.7%)**	**22 (13.3%)**	8 (4.8%)	5 (3.0%)	1 (0.6%)	**19 (11.5%)**	**165**
E-bikes	-	-	-	-	-	-	**16 (80.0%)**	-	1 (5.0%)	-	-	3 (15.0%)	**20**
E-scooters	-	2 (8.7%)	-	1 (4.3%)	-	-	**13 (56.6%)**	-	-	-	-	7 (30.4%)	**23**
Mopeds	-	-	-	-	1 (1.6%)	4 (6.6%)	**31 (50.8%)**	2 (3.3%)	4 (6.6%)	-	1 (1.6%)	**18 (29.5%)**	**61**
Motor-bikes	5 (0.6%)	4 (0.5%)	-	-	4 (0.5%)	47 (5.7%)	**394 (47.5%)**	**56 (6.7%)**	30 (3.6%)	7 (0.8%)	13 (1.6%)	**270 (32.5%)**	**830**
Passengers cars	8 (0.6%)	1 (0.1%)	-	-	3 (0.2%)	2 (0.2%)	**494 (39.5%)**	**61 (4.9%)**	**123 (9.8%)**	12 (1.0%)	13 (1.0%)	**535 (42.7%)**	**1,252**
Lorries (< 3,5 t)	-	-	-	-	-	-	12 (24.0%)	8 (16.0%)	4 (8.0%)	1 (2.0%)	1 (2.0%)	**24 (48.0%)**	**50**
Heavy Good Vehicles (> 3,5 t)	-	-	-	-	-	-	**24 (25.0%)**	4 (4.2%)	**42 (43.8%)**	1 (1.0%)	-	**25 (26.0%)**	**96**
Buses or Coach	-	-	-	-	-	1 (12.5%)	-	1 (12.5%)	1 (12.5%)	-	-	**5 (62.5%)**	**8**
Other vehicles	-	-	-	-	1 (1.8%)	4 (7.3%)	**24 (43.7%)**	2 (3.6%)	8 (14.5%)	-	-	**16 (29.1%)**	**55**
Total	**13**	**12**	**1**	**2**	**13**	**96**	**1,444**	**193**	**253**	**39**	**42**	**922**	**3,030**

(a) The values within the matrix cells are calculated with a partition of the total cases, such that the sum per column and per row produces marginal distributions whose sum coincides with the total number of cases (fatalities in the table 5). Underlined in red, the highest frequencies recorded in the matrix cells.

(b) Light Commercial Vehicles (<3.5 t) include all light commercial vehicles weighing less than 3.5 tonnes, while Heavy Goods Vehicles (>3.5 t) includes industrial vehicles weighing over 3.5 tonnes.

Collision matrices are built using a refined technique that considers, on the flank (rows), fatalities (within 30 days) in road accidents and injuries to vehicle occupants or pedestrians, and, on the head (columns), the types of vehicles involved in the collision. Starting from the 2024 data edition, the collision matrix now also includes a "pedestrian" column. We define a pedestrian as a "traffic unit" that can be involved in road accidents where occupants of other vehicles involved suffer death or injury. Building the collision matrices relies on a national indicator inspired to the best practices from European Commission. Istat also refined the first edition data of the European calculation methodology and added new disaggregation for vehicles, especially e-scooters and e-bikes.

Regarding the main results, the matrix calculated for fatalities highlights a high risk of mortality for bicycle and e-scooter riders involved in accidents with passenger cars or in single-vehicle incidents. Motorized two-wheelers show a high number of accidents in collisions with passenger cars, light commercial vehicles, and in single-vehicle accidents. Pedestrians face a higher risk compared to other road users when they collide with passenger cars and trucks (Table 5).

This report includes a broad selection of collision matrices calculated for fatalities and injuries, both within and outside urban areas, and for key road safety reference years from recent decades: 2010, and 2019, as well as 2023 and 2024. By analysing these collision matrices, we conducted an interesting comparison of historical series. This analysis shows, for example, how driver distraction due to improper device use while driving, especially in cars, can contribute to the increased percentage of single-vehicle accidents related to loss of control and skidding (rising from 39.1% in 2001 to 42.7% in 2024).

Extra tables and charts collection:

CHART 9. DRIVERS INVOLVED IN ACCIDENTS BY OUTCOME. Year 2024. Percentage values

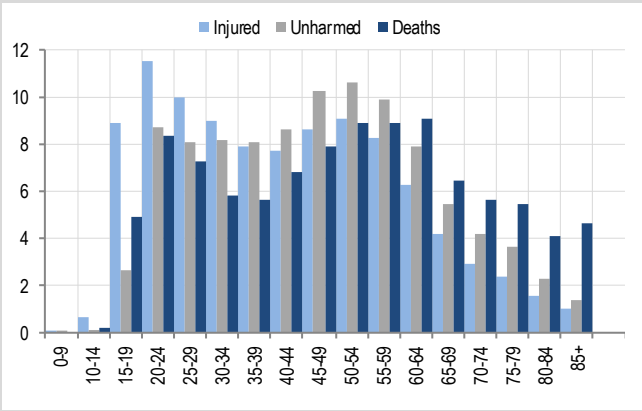


CHART 10. DRIVERS INVOLVED IN ACCIDENTS BY GENDER AND CITIZENSHIP. Year 2024. Absolute values

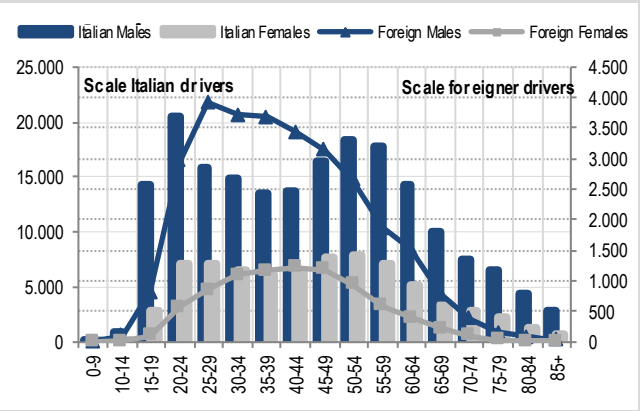


CHART 11. ROAD ACCIDENTS BY DAY HOURS AND DAY TYPE. Years 2023 and 2024, percentage values (a)

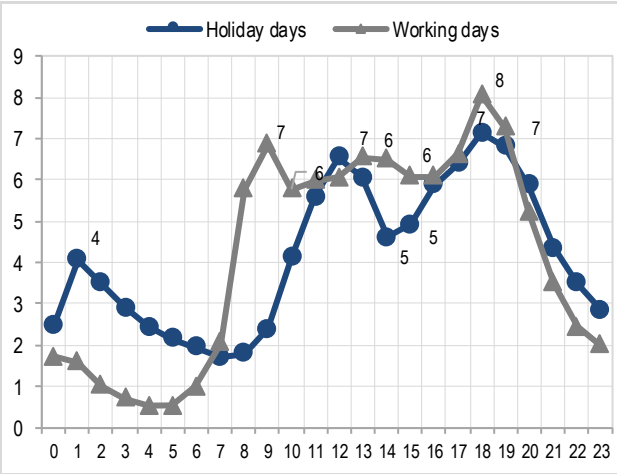
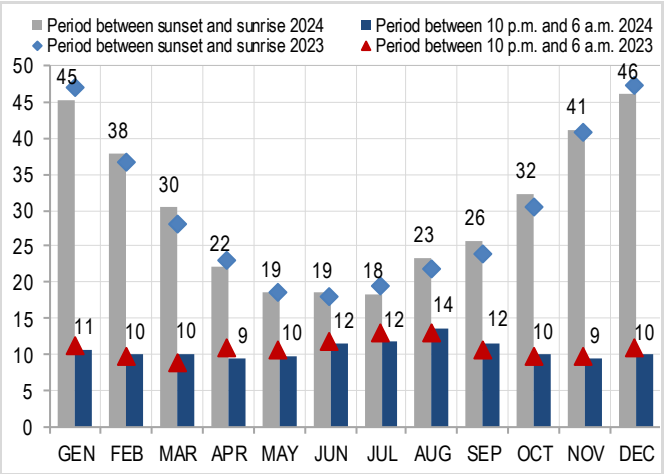


CHART 12. ROAD ACCIDENTS BY MONTH AND PERIOD IN THE DAY AND NIGTH. Years 2023 and 2024, percentage values (b)



(a) Rounded hour. (b) Conventional night period between 10,01 p.m and 6,00 a.m..

TABLE 6. DEATHS IN ROAD ACCIDENTS BY REGION AND TERRITORIAL AREA IN ITALY. Year 2019, 2023 e 2024, absolute values and road mortality rate per 100,000 inhabitants

REGION AND TERRITORIAL AREA	Deaths (absolute values)			% change 2024/2023 (a)	% change 2024/2019 (a)	Road mortality rate 2024 (b)	Road mortality rate 2023 (b)
	2024	2023	2019				
Piemonte	171	178	232	-3.9	-26.3	4.0	4.2
Valle d'Aosta/*Vallée*	7	5	4	40.0	75.0	5.7	4.1
Lombardia	383	377	438	1.6	-12.6	3.8	3.8
Bolzano/Bozen	32	36	*46*	-11.1	-30.4	6.0	6.7
Trento	38	35	*25*	8.6	52.0	7.0	6.4
Veneto	269	309	336	-12.9	-19.9	5.5	6.4
Friuli-Venezia Giulia	73	56	72	30.4	1.4	6.1	4.7
Liguria	62	55	64	12.7	-3.1	4.1	3.6
Emilia-Romagna	273	279	352	-2.2	-22.4	6.1	6.3
Toscana	188	202	209	-6.9	-10.0	5.1	5.5
Umbria	62	45	51	37.8	21.6	7.2	5.3
Marche	72	89	99	-19.1	-27.3	4.9	6.0
Lazio	319	346	295	-7.8	8.1	5.6	6.0
Abruzzo	86	72	78	19.4	10.3	6.8	5.7
Molise	12	16	28	-25.0	-57.1	4.1	5.5
Campania	261	220	223	18.6	17.0	4.7	3.9
Puglia	241	232	207	3.9	16.4	6.2	6.0
Basilicata	32	27	29	18.5	10.3	6.0	5.0
Calabria	96	109	104	-11.9	-7.7	5.2	5.9
Sicilia	240	241	210	-0.4	14.3	5.0	5.0
Sardegna	113	110	71	2.7	59.2	7.2	7.0
North-West	*623*	*615*	*738*	*1.3*	*-15.6*	*3.9*	*3.9*
North-East	*685*	*715*	*831*	*-4.2*	*-17.6*	*5.9*	*6.2*
Centre	*641*	*682*	*654*	*-6.0*	*-2.0*	*5.5*	*5.8*
South	*728*	*676*	*669*	*7.7*	*8.8*	*5.4*	*5.0*
Islands	*353*	*351*	*281*	*0.6*	*25.6*	*5.5*	*5.5*
Italy	***3,030***	***3,039***	***3,173***	***-0.3***	***-4.5***	***5.1***	***5.2***

a) Percentage change formula: $((D^{2024}/D^{2023 \text{ o } 2019}) - 1) * 100$
b) Rape per 100 thousand inhabitants.

TABLE 7. ROAD ACCIDENTS AND DEATHS BY ROAD CATEGORY IN MAIN MUNICIPALITIES. Years 2024 and 2023, absolute values and road mortality rate per 100,000 inhabitants

MAIN MUNICIPALITIES	URBAN ROADS				RURAL ROADS (a)				Road Mortality Rate 2024 (b)	Road Mortality Rate 2023 (b)
	Accidents 2024	Accidents 2023	Deaths 2024	Deaths 2023	Accidents 2024	Accidents 2023	Deaths 2024	Deaths 2023		
Torino	2,931	2,875	16	23	39	44	0	0	1.9	2.7
Milano	7,457	7,479	35	42	289	338	3	5	2.8	3.4
Verona	1,121	1,058	12	14	108	110	1	1	5.1	5.9
Venezia (c)	498	507	2	4	171	155	3	26	2.0	12.0
Trieste	809	721	8	3	28	69	1	2	4.5	2.5
Genova	3,607	3,412	10	12	265	256	3	1	2.3	2.3
Bologna	1,772	1,942	9	17	174	216	2	4	2.8	5.4
Firenze	2,225	2,530	12	16	66	50	2	1	3.9	4.7
Roma	12,266	11,320	115	121	1,658	1,495	19	33	4.9	5.6
Napoli	2,321	2,195	33	34	222	183	2	3	3.8	4.0
Bari	1,558	1,386	6	10	222	176	6	2	3.8	3.8
Palermo	1,947	1,843	20	23	40	44	2	4	3.5	4.3
Messina	679	612	11	7	89	111	2	4	6.0	5.0
Catania	1,363	1,291	8	13	96	78	2	4	3.4	5.7
Total	**40,554**	**39,171**	**297**	**339**	**3,467**	**3,325**	**48**	**90**	**3.7**	**4.6**

(a) Rural roads include National, Regional, and Provincial roads outside urban areas, as well as municipal rural roads, motorways, and their connecting trunks.
(b) Rate per 100,000 inhabitants.
(c) On October 3rd 2023, an urban bus fell from an overpass in Marghera (Venezia), causing 21 deaths and 14 injuries.

TABLE 8. CAUSES OF ACCIDENTS REFERRED TO INVOLVED DRIVERS BY ROAD CATEGORY.[12] Year 2024, absolute and percentage values (a)

CAUSE OF ROAD ACCIDENTS	Urban Roads		Rural Roads		Total	
	Absolute value	%	Absolute value	%	Absolute value	%
Driving while distracted or with an indecisive course	21,571	13.2	13,800	22.1	35,371	15.7
Proceeding without respecting right-of-way or traffic light	26,761	16.4	3,710	5.9	30,471	13.5
Proceeding without respecting a stop sign	9,288	5.7	1,538	2.5	10,826	4.8
Proceeding without giving way to a vehicle from the right	6,882	4.2	866	1.4	7,748	3.4
Proceeding without respecting a "give way" sign	9,104	5.6	1,213	1.9	10,317	4.6
Proceeding without respecting traffic light signals or traffic officer's directions	1,487	0.9	93	0.1	1,580	0.7
Proceeding with excessive speed	12,523	7.7	6,974	11.2	19,497	8.6
Proceeding with excessive speed	12,187	7.5	6,645	10.6	18,832	8.3
Proceeding without respecting speed limits	336	0.2	329	0.5	665	0.3
Proceeding without maintaining a safe distance	8,895	5.4	6,883	11.0	15,778	7.0
Manoeuvring irregularly	13,568	8.3	4,243	6.8	17,811	7.9
Turning irregularly	4,269	2.6	596	1.0	4,865	2.2
Proceeding against traffic	3,173	1.9	1,845	3.0	5,018	2.2
Overtaking irregularly	3,279	2.0	1,498	2.4	4,777	2.1
Accidental obstacle	2,680	1.6	1,979	3.2	4,659	2.1
Domestic or wild animal hit or avoided	190	0.1	337	0.5	527	0.2
Stationary vehicle avoided	546	0.3	537	0.9	1083	0.5
Not giving way to pedestrian at designated crossings	7,763	4.8	206	0.3	7,969	3.5
Potholes, etc., avoided or hit	434	0.3	500	0.8	934	0.4
Unspecified circumstance	34,584	21.2	9,288	14.9	43,872	19.4
Stationary vehicle in irregular position hit	1,934	1.2	544	0.9	2,478	1.1
Other causes related to driving behaviour	6,767	4.1	2,522	4.0	9,289	4.1
Incorrect pedestrian behaviour	5,850	3.6	595	1.0	6,445	2.9
Total incorrect driver and pedestrian behaviour	154,787	94.8	56,057	89.8	210,844	93.4
Other causes	8,501	5.2	6,376	10.2	14,877	6.6
Total (b)	**163,288**	**100.0**	**62,433**	**100.0**	**225,721**	**100.0**

(a) This table includes all causes recorded for the first two vehicles involved in a road accident. For each vehicle, we can list up to three types of causes.
(b) The "Total" in the table refers to the overall number of causes reported by law enforcement at the time of the survey, corresponding to the drivers of the first two vehicles involved in the accident. The detailed breakdown of individual items in the table only refers to causes related to road traffic inconvenience.

Istat gathered information on road accidents related to alcohol and drug use from an alternative sources too, as current data collection does not always provide exhaustive data. Istat used data from Carabinieri and the Road Police (who collectively record about a third of all injury-causing road accidents). These sources provide data on the penalties issued at the time of a road accident.

From these sources, out of a total of 57,500 road accidents resulting in death or injury, reported by the two law forces, at least one of the drivers involved was under the influence of alcohol in 4,717 cases and under the influence of drugs in 1,737 cases. This means that 8.2% of accidents recorded by the Carabinieri and Traffic Police overall related to alcohol and 3.0% to drugs. These proportions show a slight decrease compared to 2023, when they were 8.5% and 3.2% respectively. In 2019, the percentages stood at 8.7% and 3.4%.

[12] Table 4 does not include data on road accidents detailed by causes related to the psychophysical state of drivers. Currently, the Police providing of this information to Istat has improved but remains not fully exhaustive. This is because involved drivers can refuse to undergo tests for their psychophysical state (drunkenness or drug use). In such cases, unless the act constitutes a more serious crime, the penalties outlined in paragraph 2 of Article 186 of the Road Code apply, but the information not sent to Istat.
To enrich the dataset on accident causes, Istat made available violations contested by the Road Police, Carabinieri, and Local Police. Istat also launched a pilot study on data related to violations of Articles 186, 186-bis, and 187 (alcohol and drug abuse) in occasion of a road accident (some results provided in this report).

TABLE 9. SANCTIONS APPLIED BY ROAD POLICE, CARABINIERI AND LOCAL POLICE OF THE MAIN MUNICIPALITIES WIYHIN THE PROVINCES. VIOLATIONS OF THE ROAD CODE: TITLE V - RULES OF CONDUCT. Year 2024, absolute values (a), (b),(c)

ITALIAN ROAD CODE (ARTICLES)[13]	Violation description Title V - Rules of conduct (Art. 141-193)	Number of violations/sanctions (Absolute values)		
		Motorway Police (a)	Carabinieri (b)	Local Police (c)
Art.141	Speeding	41.911	24.294	41.828
Art.142	Exceeding the speed limits	591.383	241	2.451.617
Art.143-144	Position of vehicles on the roadway, use of lanes, driving in parallel lines	11.017	10.723	12.043
Art.145	Obligations of precedence	4.662	9.734	21.776
Art.146	Failure to comply with road markings and traffic lights	26.759	5.727	652.256
Art.148	Regulation of overtaking vehicles	13.049	19.119	5.964
Art.149	Respect for the safety distance	5.851	3.046	4.402
Art.152-153	Use of visual signaling and lighting devices	7.664	1.329	1.702
Art.154	Rules for changing direction and lane	6.319	3.220	24.308
Art.155	Limitation of noise from silencers and radio equipment	493	938	518
Art.157-158	Discipline of arrest, stop and parking outside and inside inhabited centers	16.032	22.299	3.567.921
Art.161-162-165	Encumbrance of the roadway, signaling and towing of vehicles in breakdown	2.502	418	346
Art.164	Regulations on the arrangement of cargo on vehicles	6.597	659	1.008
Art.167	Carrying goods and exceeding vehicle weight limits	34.484	67	1.551
Art.168	Rules on the transport of dangerous goods	4.138	9	176
Art.169	Transportation of people, animals and objects on motor vehicles	5.239	1.856	3.407
Art.170	Transport of people and objects on two-wheeled motor vehicles	482	1.340	735
Art.171	Use of helmet	3.439	8.455	56.950
Art.172	Use of seat belts and child restraint systems	77.306	45.946	28.982
Art.173	Failure to use contact lenses or use of radiotelephones or headphones	48.070	20.601	52.589
Art.174-178	Respect for driving times and rest periods for drivers of heavy vehicles	38.304	33	1.942
Art.175-176	Circulation and behavior on motorways and main extra-urban roads.	174.766	298	127
Art.179	Installation, alteration, tampering with the Chrono tachograph	7.800	72	914
Art.180-181	Possession of traffic documents	92.695	54.174	132.039
Art.182	Rules of behavior for cyclists	121	215	1.708
Art.186	Driving under the influence of alcohol	15.893	15.047	6.738
Art.187	Driving under the influence of drugs	1.639	2.019	853
Art.189	Behavior of drivers in the event of an accident	2.007	2.714	6.979
Art.190	Pedestrian behavior	210	271	2.179
Art.191	Behavior of drivers towards pedestrians	638	1.185	8.290
Art.193	Insurance obligation	36.801	49.695	54.992
Total	**Violations of the Road Code: Title V - Rules of conduct**	**1.135.943**	**305.744**	**7.146.840**

(a) Source: Ministry of Interior - Motorway Police Service; (b) Source: Carabinieri - Chronological register of disputed violations; (c) Source: ACI survey on the local police headquarters of the main municipalities in the province (ref. 1/1/2024).

[13] Road Code - Legislative Decree n. 285 dated 30/04/1992 and Law 29 July 2010, n. 120 Road safety provisions

TABLE 10. NUMBER OF SERIOUSLY INJURED IN ROAD ACCIDENTS AND RATE OF SERIOUS INJURY BY AGE (a)
Years 2018-2023, absolute values and rates per 100,000 (a)

AGE CLASSES	Year 2018		Year 2019		Year 2020		Year 2021		Year 2022		Year 2023	
	Seriously injured	Serious injury rate*	Seriously injured	Serious injury rate*	Seriously injured	Serious injury rate*	Seriously injured	Serious injury rate*	Seriously injured	Serious injury rate*	Seriously injured	Serious injury rate*
0-19	1,739	16.1	1,734	16.2	1,351	12.8	1,788	17.2	1,730	17.0	1,757	17.5
20-29	1,997	32.4	1,798	29.4	1,401	23.2	1,760	29.5	1,919	32.2	1,669	27.7
30-39	1,614	22.9	1,463	21.2	1,193	17.6	1,394	20.9	1,482	22.6	1,456	22.2
40-49	2,367	25.6	2,181	24.1	1,807	20.5	2,001	23.3	2,107	25.8	1,944	24.5
50-59	2,900	31.5	2,893	30.9	2,397	25.4	2,735	28.8	2,966	30.9	3,042	31.7
60-69	2,493	34.2	2,436	33.3	2,012	27.2	2,227	29.7	2,443	31.1	2,619	32.5
70-79	2,834	48.1	2,630	44.2	2,087	34.9	2,067	34.4	2,253	36.9	2,312	37.4
80+	2,670	63.0	2,465	56.6	1,854	41.7	2,018	44.9	1,975	43.5	2,190	47.9
Total	**18,614**	**31.1**	**17,600**	**29.5**	**14,102**	**23.7**	**15,990**	**27.0**	**16,875**	**28.6**	**16,989**	**28.8**

***** Source: Ministry of Health, Directorate General for Health Planning - Office 6 - Istat - Average Italian Resident Population 2018-2023. Rates per 100,000 inhabitants.

(a) We identified cases of injuries from road accidents using combined information. This included the ICD-9-CM code for the injuries (assigned for primary and/or secondary diagnoses of hospital discharge), information on the nature of the trauma, and the external cause code (ICD-9-CM E), which we only assigned when a person was admitted to the hospital following a trauma or poisoning. We considered only each individual's first hospitalization. The data excludes those who died within 30 days of hospitalization.

Glossary:

Bus: passenger-carrying vehicle, most commonly used for public transport, having more than 16 seats for passengers.

Collision Matrix: the Collision Matrix is a statistical tool introduced by Istat (the Italian National Institute of Statistics) in 2024, using road accident data referred to 2023. This marked Italy's adoption of a European best practice, specifically the "collision matrix" published by the European Commission in 2022 (sourced from the EU CARE database on road crashes). In the Italian version of the matrix, the values within each cell represent a breakdown of total cases (fatalities or injuries). This is determined by an algorithm that combines and permutes all vehicles, fatalities, and injuries involved in road accidents, as well as all collision interactions between vehicles, pedestrians, and other road users. A significant customization, introduced by Italian researchers in the matrices edited in 2024 version, was the inclusion of two new vehicle types: electric bicycles (e-bikes) and electric scooters (e-scooters). This innovation was later adopted by the European Commission in its 2025 edition. Furthermore, starting with the 2024 data edition of the collision matrix, a "pedestrian" column was added. A pedestrian is defined as a "traffic unit" that can be involved in road accidents where fatalities or injuries occur among the occupants of other vehicles involved.

Istat algorithm for constructing the collision matrix uses an iterative process that sequentially considers the following steps and datasets:

- Single-vehicle accidents: This includes accidents involving only one vehicle (a single vehicle and all pedestrians), also considering pedestrians as "traffic units" involved in road accidents that caused casualties in other vehicles.
- Accidents with at least two vehicles (Vehicle A and B): Comparisons are made between the first two vehicles, A vs. B and B vs. A.
- Accidents with at least three vehicles (Vehicles A, B, and C): Comparisons are made between vehicles B vs. C and C vs. B, noting that comparisons involving Vehicle A have already been completed.

Subsequent steps follow the same iterative process.

While the collision matrix developed by the European Commission also includes data on fatalities in road accidents involving a single vehicle or multiple traffic units, it employs a different criterion for multi-vehicle accidents. The European approach designates the "main vehicle" as the one with the greatest mass, based on the assumption that heavier vehicles tend to cause more severe consequences. This re-proportion method is not utilized in the Italian customization.

Deaths: the number of people involved in road accidents, who die immediately or within 30 days after the event occurred. This definition was adopted on 01st January 1999, while in the past (up until 31st December 1998) deaths were considered to include only deaths within seven days of the accident.

Goods vehicle: Motor vehicle used only for the transport of goods.

Injured: the road user was seriously or slightly injured (but not killed within 30 days) in the road accident.

Moped: two or three wheeled vehicle equipped with internal combustion engine, with size less than 50 cc and maximum speed that does not exceed 45 km/h (28mph).

Motorcycle: two or three wheeled motor vehicle, with engine size up to 125 cc. or maximum speed exceeding 45km/h (28 mph) or with engine size more than 125 cc.

Passenger car: motor vehicle with 3 or 4 wheels, mainly used to transport people, seating for no more than 8 occupants. Motor vehicles with these characteristics used as taxis as well as motor caravans are also included.

Pedal cycle: vehicle with at least 2 wheels, without engine. In some cases it can also use electric power.

Electric scooter: equivalent to pedal cycle, vehicle with maximum power 500 W and with speed limits 6 km / h or 30 km/h as the areas where they circulate vary (paragraph 75 of the Budget Law 2020 DL 160/2019).

Pedestrian: person on foot; person pushing or holding bicycle. Person who uses a wheel chair, a pram or a pushchair, leading or herding an animal, riding a toy cycle on the footway, person on roller skates, skateboard or skis. Does not include persons in the act of boarding or alighting from a vehicle.

Percentage change: between two data X_t e X_{t-k}, measured respectively at time t e t-k, is calculated as $(X_t/X_{t-k} -1)*100$.

Public motor vehicle registry (PRA): the registry holding all public deeds relating to the transfer of property and rights of ownership, in addition to the records of loans and mortgages on all motor vehicles registered in Italy.

Road accident: the 1968 Vienna Convention defines a road accident as an event occurring on the roads or squares open to traffic involving standing or moving vehicles and which results in injury to people. For this reason, if the accident only involves damage to objects, it is excluded from the statistics. This definition therefore reserves attention exclusively for reported accidents involving injury to people.

Road accidents harmfulness index: the ratio of the number of injuries caused by road accidents and the number of collisions, per 100 accidents.

Road accidents mortality index: the ratio of the number of fatalities caused by road accidents and the number of collisions, per 100 accidents.

Road accidents seriousness index: the ratio of the number of fatalities caused by road accidents and the total number of deaths and injuries as a result of accidents, per 100 accidents.

Road tractor road motor vehicle designed, exclusively or primarily, to haul other road vehicles which are not power-driven (mainly semi-trailers).

Rural or non-built up roads: outside urban area, no motorway

Serious injuries: the serious injuries are identified by MAIS classification (Maximum Abbreviated Injury Scale). The severity level is measured by a 6-level scale. Serious injuries have a score of 3 or higher (MAIS3+).

Two wheel motor vehicle: motor vehicle moving on two wheels. Includes mopeds and motorcycles but not bicycles.

Urban or built up roads: inside urban area, no motorway.

Vehicle: A machine of any kind, circulating on the road, driven by a person or towed by other means. Vehicles for use by children or invalids are not included in this definition.

Methodological note

Data flow and definitions

The survey on road accidents resulting in death (within 30 day) or injury carried out by the Italian National Institute of Statistics (Istat), with the cooperation of ACI (Automobile Club of Italy) and other local organisations, is an exhaustive and monthly based data collection (National Statistical Programme - PSN – 00142 code).

The survey collects all road accidents involving at least a vehicle circulating on the national road net, resulting in death or injury and documented by a Police authority.

The detection unit is the single road accident resulting in death or injury; all information is referred to the period when the accident occurred.

As regards the data flow, a flexible model was adopted by Istat, through the subscription of a Memorandum of understanding or special agreements signed with regions (NUTS2 level) and provinces (NUTS3 level). in order to facilitate the local authority information needs and to improve the timeliness and quality of data collected.

Main information collected:

• Date, time and location of the accident
• Type of road, Road surface, Signals, Weather conditions
• Type of accident (collision. investment. etc.)
• Type of vehicles involved
• Consequences of the accident to people
• Causes of the accident

Timeliness and dissemination
The figures for every year **t-1** are disseminated in July of the year **t**. approximately five months after the collection deadline.

European Union law of reference:

Reference: COUNCIL DECISION of 30 November 1993 on the creation of a Community database on the road accidents Decision n. 704 of 1993

Link to database and websites:

- Noi Italia: http://noi-italia.istat.it/
- DWH IstatData: https://esploradati.istat.it/databrowser/ (Health Statistics/Road Accidents)
- IstatData https://esploradati.istat.it/databrowser/#/en/dw/categories/IT1,Z0810HEA,1.0/HEA_ROAD
- Time series: http://seriestoriche.istat.it/

CARE - Community database on road accidents resulting in death or injury – DG-MOVE European Commission
http://ec.europa.eu/transport/road_safety/specialist/statistics/index_en.htm

Since **2010**, both **Research Files** and **mIcro.STAT Public Use Files** have been available. The **Research Files** are designed for scientific research needs and undergo specific statistical treatments to limit respondent recognisability while maintaining a high level of detailed information. The **mIcro.STAT Public Use Files**, on the other hand, are collections of elementary data that can be freely downloaded from the Istat website. These are developed for certain specific surveys from their corresponding Research Files, though they contain less detailed information.
Furthermore, data on road accidents involving injuries in Italy is also provided to the European Commission to update the **CARE database (Community database on road accidents resulting in death or injury - DG-MOVE European Commission).**

- Microdata Research File – Road accidents https://www.istat.it/en/microdata/survey-on-road-accidents-resulting-in-death-or-injury/
- Public Use File – Road accidents https://www.istat.it/en/microdata/survey-on-road-accidents-resulting-in-death-or-injury-2/
- CARE - Community database on road accidents resulting in death or injury – DG MOVE European Commission https://road-safety.transport.ec.europa.eu/statistics-and-analysis/methodology-and-research/care-database_en

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