



# ROAD ACCIDENTS

## Year 2020

■ Within the scenario of the health and economic crisis exploded in 2020, mobility and road accidents had deep changes, with possible effects also in the near future.

■ In 2020, following the impact of the Covid-19 pandemic, an exceptional decrease in road accidents and injured involved. The lockdown period enacted by government decrees to contain the spread of infections, resulted in the almost total block of mobility and circulation from March to late May and subsequently also in the winter months, to contrast the second pandemic wave, significantly affecting road accidents trend.

■ In 2020 there were 2,395 deaths in road accidents in Italy (within 30 days of the event), down by 24.5% and 159,249 injured (-34%). Road accidents amount to 118,298, in drastic decrease compared to 2019 (-31.3%). Seriously injured are also sharply down, if compared to 2019, with 14,102 cases and a decrease of 20%, smaller than the decrease of victims and injured overall. The ratio of serious injuries out of deaths is equal to 5.9, slightly higher than the average values recorded in the previous five years, before the Covid-19 era.

■ The number of victims fall for all road users, but the occupants of heavy vehicles (117; -14.6%), motorcyclists (586; -16.0%) and pedestrians (409; -23.4%) record the smallest decreases. Among the other users, the victims occupants of cars decrease by 27.9% (1,018), those on mopeds by 33% (59), cyclists recorded, finally, a percentage change equal to -30.4% (176). In 2020 also the first victim on an electric scooter is recorded.

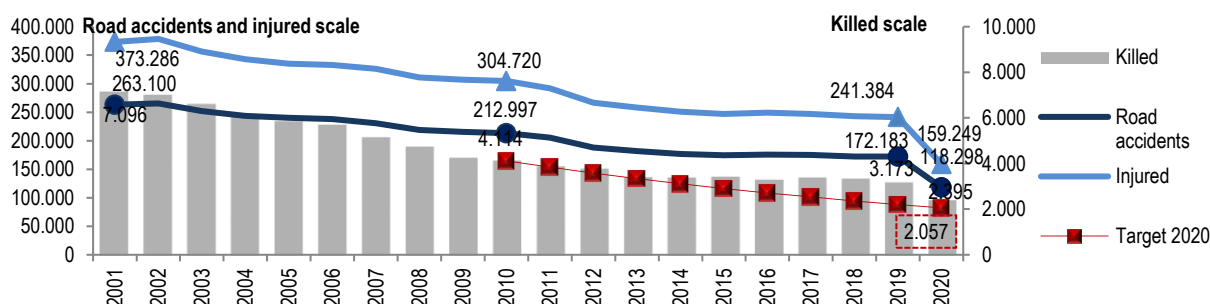
■ The decrease in road accidents affects all road areas; the most significant decline is recorded on motorways with -39.9%, followed by built-up area roads (-31.7%) and rural roads (-27.5%). Fatalities decreased by 37.1% on motorways (195), by 25.7% on rural roads (1. 139) and with a lower percentage on built-up area roads (-20.3%; 1,061).

■ Even in the EU27 the number of road accident victims decreases dramatically, 17.2% less than the previous year. Overall, in 2020, deaths are almost 19,000, against 22,763 in 2019; in the comparison between 2020 and 2010 (benchmark year for road safety) deaths decrease by 36.5% in Europe and by 41.8% in Italy. For every million inhabitants, in 2020 there are 42.3 deaths from road accidents in the EU27 and 40.3 in our country, which goes from 16th to 12th place in the European ranking.

■ Among the most frequent causes, driving distraction, failure to observe precedence rules and speed (overall 40.2%). Violations of the Highway Code decrease, if compared to 2019; penalties for speed excess, non-observance of signs, use of helmets and belts, rules of behavior for cyclists, go down in a less percentage than the average.

■ The car market suffer a severe slowdown in 2020: the first registrations of passenger cars fell by 26% compared to 2019, goods transport vehicles by 16%, while the first registrations of motorcycles reduce of -6,4%, total vehicles of -22%. As a result, the age of the vehicle fleet has further increased. On the motorway network, the annual mileage of vehicles decrease on average by 27.5%; the decrease is greater for light vehicles (-32.1%) while heavy traffic decrease by 12.4%.

CHART 1. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY, KILLED AND INURED. Years 2001-2020. Absolute values



## Covid-19 effect on mobility: sharp decrease in road accidents, deaths and injuries

In 2020, 118,298 road accidents resulting in death or injury<sup>1</sup>, occurred in Italy; the victims were 2,395 and the injured 159,249 (table 1). Compared to the previous year, road deaths decrease significantly (-24.5%). the number of accidents and injuries also peaked (-31.3% and -34.0% respectively). The road mortality rate goes from 52.6 to 40.3 deaths per million inhabitants between 2019 and 2020. Compared to 2010, road deaths decrease by 41.8%.

**TABLE 1. ROAD ACCIDENTS, KILLED AND INJURED PERSONS.** Years 2001, 2010-2020. Absolute values, deaths per million and percentage change

YEARS	Road accidents (a)	Killed	Injured	Deaths per million inhabitants (b)	% change number of deaths in respect to the previous year (c)	% change number of deaths in respect to 2001 (c)	% change number of deaths in respect to 2010 (c)
2001	263,100	7,096	373,286	124.5	-	-	-
2010	212,997	4,114	304,720	69.4	-2.9	-42.0	-
2011	205,638	3,860	292,019	65.0	-6.2	-45.6	-6.2
2012	188,228	3,753	266,864	63.0	-2.8	-47.1	-8.8
2013	181,660	3,401	258,093	56.2	-9.4	-52.1	-17.3
2014	177,031	3,381	251,147	55.6	-0.6	-52.4	-17.8
2015	174,539	3,428	246,920	56.3	+1.4	-51.7	-16.7
2016	175,791	3,283	249,175	54.2	-4.2	-53.7	-20.2
2017	174,933	3,378	246,750	55.8	+2.9	-52.4	-17.9
2018	172,553	3,334	242,919	55.2	-1.3	-53.0	-19.0
2019	172,183	3,173	241,384	52.6	-4.8	-55.3	-22.9
<b>2020</b>	<b>118,298</b>	<b>2,395</b>	<b>159,249</b>	<b>40.3</b>	<b>-24.5</b>	<b>-66.2</b>	<b>-41.8</b>

(a) Road accident resulting in deaths (within the 30th day) or injuries is defined as the event that involves at least a vehicle circulating on the national road net.

(b) Deaths out of resident population (per 1,000,000). (c) The percentage changes of the number of deaths is calculated as:  $((M^t / M^{t-1} \circ 2001 \circ 2010) - 1) * 100$

The pandemic situation and the measures taken to contain the disease have significantly influenced, in 2020, the volumes and trends of traffic, the car market and the mobility profile of Italians<sup>2</sup>.

On the main rural road network, the overall average annual value of the Detected Mobility Index decrease by 25%, compared to 2019 and relating to heavy vehicle traffic by approximately 10%. A more substantial difference concerns the circulation of vehicles used for goods transport, mainly in Southern Italy, where the measured mobility index fell by 25%. On a monthly level, the maximum decrease in mobility occurred in April 2020, corresponding with the general lockdown period, reaching peaks of -75% for light vehicles and -40% for heavy vehicles (source Anas).

On the motorway network<sup>3</sup>, the annual mileage of vehicles decreased by an average of 27.5%; the decrease was greater for light vehicles (-32.1%) while traffic of heavy vehicles fell by 12.4% (source Aiscat).

Finally, the estimate made by the Ministry of Infrastructure and Sustainable Mobility brings total distances in 2020 to 413,889 million km (-26.1% compared to 2019); the average accident rate is therefore equal to 284 accidents per billion km, while the share of deaths, equal to 5.8 per billion km traveled, is slightly lower than the European average of the last three years (6 deaths per billion km traveled).

On the other hand, the rise of the bicycle as a means of transport used continues: in 2020 more than 2 million of bikes were sold, + 17%, if compared to 2019, while sales of electric bicycles increased by 44%. Among the reasons for the increase in sales, government incentives to purchase bicycles, but also the warned "need to keep the distance" and the "fear of running into crowds on public transport".

In addition to bicycles, 125,000 electric scooters were sold in the first 7 months of 2020 (+ 140%).

<sup>1</sup> The road accident is defined as "that event in which at least one vehicle is involved on the road network, occurring in the streets or squares open to traffic, which involves personal injuries (dead within 30 days and / or injured)" - (Convention of Vienna in 1968, UNECE, ITF and Eurostat 2019). Survey based on Memorandum of Understanding and Agreements with Istat. In 2020, Emilia-Romagna, Friuli-Venezia Giulia, Lombardy, Piedmont, Puglia, Tuscany, Veneto, Liguria, Calabria, Lazio and the autonomous provinces of Bolzano-Bozen and Trento joined. The proportion of road accidents recorded by Motorways Police in 2020 was 13.3%, by Carabinieri at 20.8%, by the Local Police and other bodies at 65.9%.

<sup>2</sup> Fonte: ACI, Aiscat, Anas, ANCM, Istat, Isfort <https://www.isfort.it/progetti/17-rapporto-audimob-sulla-mobilita-degli-italiani/>

<sup>3</sup> Motorway network monitored by Aiscat equal to approximately 83% of the total of motorways: 5,796 km.

A research carried out by Isfort in 2020, in fact, shows how in the post-lockdown period (18 May-15 October) the share of soft mobility increased (population moving on foot, by bicycle or scooter: + 11%), to the disadvantage of all other motorized vehicles, but above all of local public transport.

Considering the atypical situation caused by the pandemic and the lockdown periods, it is clear that 2020 cannot represent a reference year for analyzes and benchmarks for the European 2030 targets (further halving in the number of victims and a 50% reduction in the number of seriously injured). In order to correctly monitor progress and performance indicators for road safety, the European Commission and the EU countries decided, in fact, to consider 2019 as the baseline year, or the average for the three-year period 2017-2019 (Italy has chosen for the second) which seems optimal because it smooths the random fluctuations that a single year could suffer from.

In the period 2017-2019 in Italy an average of 173,223 accidents were recorded every year, with 3,295 deaths and 243,684 injuries of which 17,841 seriously injured, according to the MAIS3 + definition (Maximum Abbreviated Injury Scale), equal to 7.3% of the total. Each year, therefore, an average of 5.4 people are added to each death, with serious and often disabling consequences.

The social cost of road accidents resulting in death or injury, detected by the Motorways Police, Local Police and Carabinieri, in 2020, is equal to 11.6 billion euros (0.7% of the national GDP).

In the decade 2011-2020, approximately 390,000 accidents, 7,700 human lives and more than 590,000 injured were spared. In terms of social costs, compared to a situation of stability of the parameters used, based on 2010, the amount saved amounts to approximately 41 billion euros.

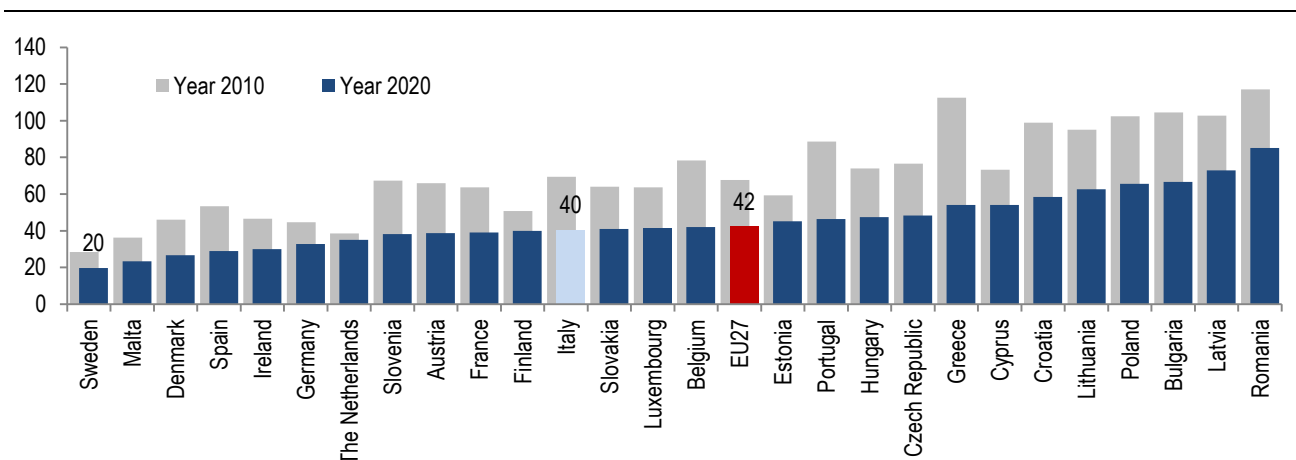
### Drop in the number of victims also on the roads of the EU27

The lower traffic volumes following the Covid-19 pandemic had a clear impact on road accidents on EU roads, as in Italy. Victims drastically decreased in Europe (EU27, excluding the United Kingdom): in 2020 they were almost 19 thousand, compared to about 30 thousand in 2010, with a reduction of 36.5% over the period. A better result than the European one is recorded in Italy, where the decrease is 41.8%. Compared to the previous year, in 2020 the number of victims decreased by 17.2% in the EU27 and by 24.5% in Italy.

The road death rate (deaths per million inhabitants) in 2020 is equal to 42.3 in the EU27 and 40.3 in Italy (in 2010, respectively, 67.6 and 69.5). Our country thus rises to twelfth place in the European ranking from the sixteenth of 2019.

However, the reduction did not affect all countries. Road fatalities increase in 2020 in Luxembourg (+ 18.2%), Estonia (+ 15.4%), Ireland (+ 6.4%), Latvia (+ 5.3%), Finland (4, 7%). This situation could be caused by an increased exposure to risky behaviors, particularly speeding, during periods of lockdown. The most significant decreases were recorded, however, in Bulgaria, Belgium, Malta, Italy and Hungary (between 26.3% and 22.9%) (Table 2 and Chart 2).

CHART 2. ROAD MORTALITY RATE IN THE COUNTRIES OF THE EUROPEAN UNION (EU28) (a). Years 2010 and 2020



(a) Road mortality rate (deaths in road accidents per million inhabitants)  
 Source: European Transport Safety Council, Annual PIN report. Year 2021 - <https://etsc.eu/15th-annual-road-safety-performance-index-pin-report/>

**TABLE 2. KILLED PERSONS IN ROAD ACCIDENTS IN THE COUNTRIES OF THE EUROPEAN UNION (EU27).**

Years 2010, 2019 and 2020. Absolute values, percentage change and road mortality rate per 1,000,000 inhabitants (a)

EU27 Countries	Absolute values			Percentage change (b)		Road mortality rate	
	2010	2019	2020*	2020/2019*	2020/2010*	2010	2020*
Austria	552	416	344	-17.3	-37.7	65.9	38.6
Belgium	850	646	484	-25.1	-43.1	78.4	42.0
Bulgaria	776	628	463	-26.3	-40.3	104.6	66.6
Croatia	426	297	237	-20.2	-44.4	99.0	58.4
Cyprus	60	52	48	-7.7	-20.0	73.2	54.1
Czech Republic	802	617	517	-16.2	-35.5	76.7	48.3
Denmark	255	199	155	-22.1	-39.2	46.1	26.6
Estonia	79	52	60	15.4	-24.1	59.3	45.1
Finland	272	211	221	4.7	-18.8	50.8	40.0
France	3,992	3,244	2,541	-21.7	-36.3	63.6	39.0
Germany	3,651	3,059	2,724	-11	-25.4	44.6	32.8
Greece	1,258	688	579	-15.8	-54.0	112.5	54.0
Hungary	740	602	464	-22.9	-37.3	73.9	47.5
Ireland	212	140	149	6.4	-29.7	46.6	30.0
<b>Italy</b>	<b>4,114</b>	<b>3,173</b>	<b>2,395</b>	<b>-24.5</b>	<b>-41.8</b>	<b>69.5</b>	<b>40.3</b>
Latvia	218	132	139	5.3	-36.2	102.8	72.9
Lithuania	299	186	175	-5.9	-41.5	95.2	62.6
Luxembourg	32	22	26	18.2	-18.8	63.7	41.5
Malta	15	16	12	-25	-20.0	36.2	23.3
Poland	3,907	2,909	2,491	-14.4	-36.2	102.4	65.6
Portugal	937	626	495	-20.9	-47.2	88.6	46.5
Romania	2,377	1,864	1,646	-11.7	-30.8	117.1	85.2
Slovakia	345	245	224	-8.6	-35.1	64.0	41.0
Slovenia	138	102	80	-21.6	-42.0	67.4	38.2
Spain	2,478	1,755	1,366	-22.2	-44.9	53.3	28.9
Sweden	266	221	204	-7.7	-23.3	28.5	19.8
The Netherlands	640	661	610	-7.7	-4.7	38.6	35.0
<b>Ue27</b>	<b>29,691</b>	<b>22,763</b>	<b>18,849</b>	<b>-17.2</b>	<b>-36.5</b>	<b>67.6</b>	<b>42.3</b>

\* Preliminary estimate 2020: Austria, Belgium, Denmark, Finland, Germany, Greece, Ireland, Portugal, Spain (United Kingdom excluded)

(a) Source: European Transport Safety Council, Annual PIN report. Year 2021 - <https://etsc.eu/15th-annual-road-safety-performance-index-pin-report/>

European Commission 20/04/2021 [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_21\\_1767](https://ec.europa.eu/commission/presscorner/detail/en/IP_21_1767)

(b) The percentage changes of the number of deaths is calculated as:  $((M^{2020}/M^{2019 \text{ o } 2010}) - 1) * 100$

The European Commission strengthened the request to EU countries to intensify efforts and interventions to be implemented at national level. The next goal, also foreseen in the new National Road Safety Plan in preparation, is the 2030 goal of further decreasing victims and serious injuries. For the future, in addition to the objectives set for the next decade, the foundations have been laid for new and ambitious goals, in particular the Stockholm Declaration of February 2020 plans to reach a “zero victims” vision in 2050.

The 2030 agenda defines key performance indicators - Key Performance Indicators (KPI) - that Italy will have to prepare to provide and which concern: speed, use of protection systems (helmet, safety belts and child seats), use of alcohol and drugs, safety level of the vehicle fleet and the national road network, distraction while driving and the efficiency of the rescue systems in the event of an accident.

## Decrease of the seriously injured but fewer than victims

Following the targets set and to produce comparable and harmonized data, international guidelines have been issued for the classification of the severity of injuries in road accidents. Following a strategy, proposed by the European Commission, Italy defined the number of seriously injured in road accidents using the information on the Hospital Discharge Data (HDD), owned by the Ministry of Health.

The calculation of the seriously injured was carried out using the existing AIS (Abbreviated Injury Scale) trauma scale, in particular its MAIS (Maximum Abbreviated Injury Scale)<sup>4</sup> variant.

In 2020, 14,102 people were seriously injured<sup>5</sup> in a road accident, with a decrease of 20% compared to the previous year. The decline is smaller than the percentage change for victims, accidents and injuries overall. During the period 2016-2020, the ratio between serious injuries and deaths recorded several fluctuations, settling on values in a range between 5.1 and 5.6 serious injuries for each death before the Covid-19 era and 5.9 in 2020.

In the last year, the seriously injured represented approximately 9% of the total number of injuries reported by the detection bodies (7.3% in 2019); this percentage, which progressively increased over the last five years, is also accompanied by a gradual improvement in the quality and coverage of specific information. At the territorial level, some differences persist in 2020 too: the values of the ratio between serious injuries and deaths are between 5.3 in the North-East and 6.6 in the Center. The seriously injured decreased by almost 50% in the southern regions and by 14.2% in the North West (Table 3).

TABLE 3. NUMBER OF SERIOUS INJURIES IN ROAD ACCIDENTS AND RATIO BETWEEN SERIOUS INJURIES AND DEATHS, BY HOSPITAL DISCHARGE AREA (a). Years 2016-2020

HOSPITAL DISCHARGE AREA	Year 2016		Year 2017		Year 2018		Year 2019		Year 2020		% change 2020/2019
	Absolute values	Serious Injuries/Deaths*	Absolute values	Serious Injuries/Deaths*	Absolute values	Serious Injuries/Deaths*	Absolute values	Serious Injuries/Deaths*	Absolute values	Serious Injuries/Deaths*	
North-West	3,842	5.2	3,850	4.8	3,759	4.3	3,427	4.6	2,939	5.3	-14.2
North-Est	3,932	5.0	3,790	4.7	3,962	5.2	4,040	4.9	3,214	5.8	-20.4
Center	4,259	5.8	4,064	5.3	4,779	6.7	4,354	6.7	3,458	6.6	-20.6
South	3,833	5.3	3,927	5.6	4,291	6.4	5,779	6.1	3,057	6.1	-47.1
Islands	1,458	4.9	1,678	5.6	1,823	5.8	1,794	6.4	1,434	5.6	-20.1
<b>Total Italia</b>	<b>17,324</b>	<b>5.3</b>	<b>17,309</b>	<b>5.1</b>	<b>18,614</b>	<b>5.6</b>	<b>17,600</b>	<b>5.5</b>	<b>14,102</b>	<b>5.9</b>	<b>-19.9</b>

\* Fonte: Ministry of Health Istat – Survey on Road Accidents resulting in death or injury.

(a) Cases coded as road accidents injuries after a hospital discharge using the ICD-9-CM code referred to the injury (primary and secondary diagnoses and the information on the manner of accidents (external causes ICD-9-CM E ). Only the first admission of each subject is considered; individuals who died within 30 days of admission are excluded from selection.

## Day-to-day accidents: how pandemic and lockdowns changed mobility

The arrival of the Covid-19 pandemic has radically changed everyone's habits, with strong repercussions on mobility which, perhaps, will continue into the near future.

From the daily analysis of accident data, decreases are recorded, with peaks until 90%, during the month of April; the decrease in road accidents is on average about 72% in March and 83% in April. Fatalities decreased by 62% in March and 74% in April (Chart 3 and 4).

During the lockdown period, the mobility rate (percentage of persons with at least one commute in the day, with the exception of journeys on foot of less than 5 minutes) also passed from 85% to 32%, while the average length of journeys was decreased by 40% (source Isfort).

<sup>4</sup> AIS classification is a scale based on a scoring system to be attributed to the overall severity of the injury, established taking into account the seriousness of the injuries reported by region of the body affected. Severity is measured using a 6-point ordinal scale (1 = minimum; 6 = maximum). The classification of seriously injured is based on the rules for the reclassification of ICD-9-CM codes into AIS codes. Severe injuries are identified with the MAIS score of 3+, the maximum AIS value equal to or greater than 3. Copyright Association for the Advancement of Automotive Medicine (AAAM) and European Commission.

<sup>5</sup> Process by Istat, Ministry of Health, Ministry of Infrastructures and Sustainable Mobility

CHART 3. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY BY DAY AND MONTH IN 2019 AND 2020. *Absolute values*

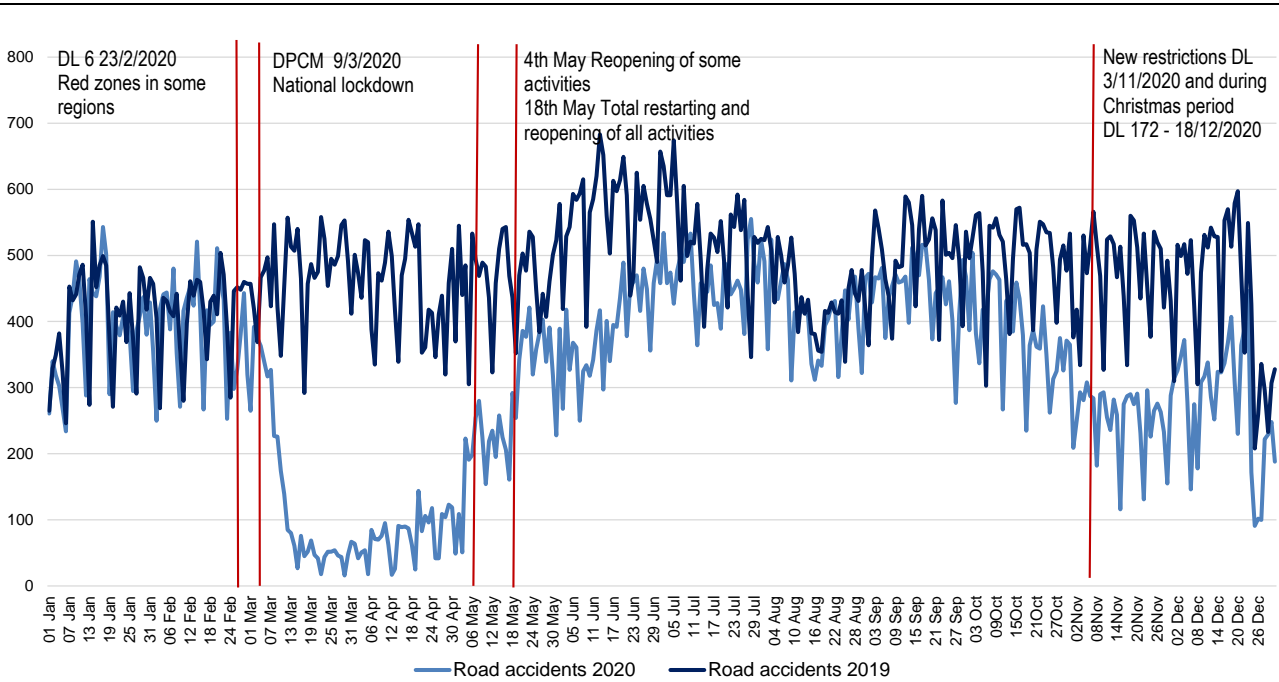
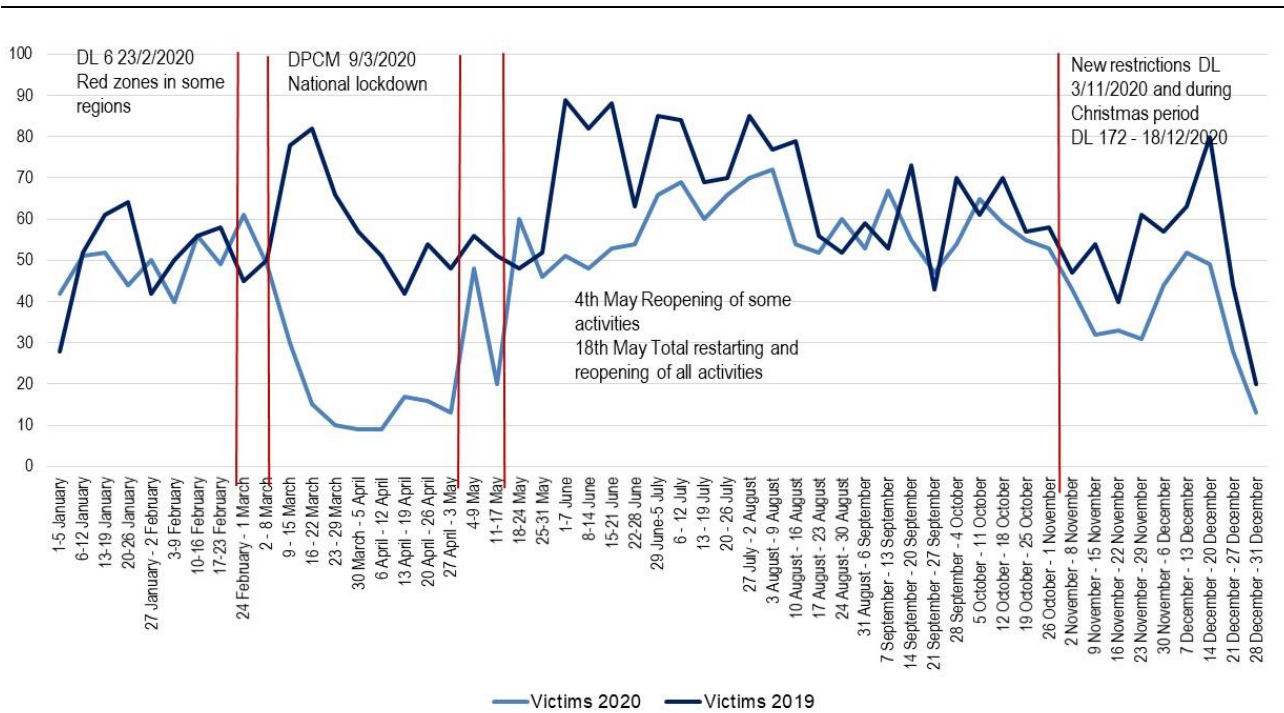
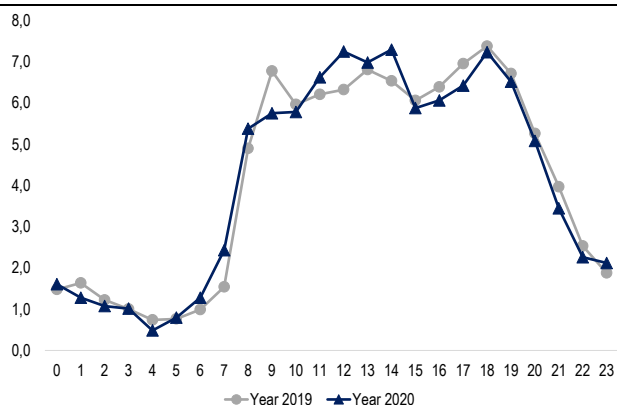


CHART 4. VICTIMS IN ROAD ACCIDENTS PER WEEK IN 2019 AND 2020. *Absolute values*

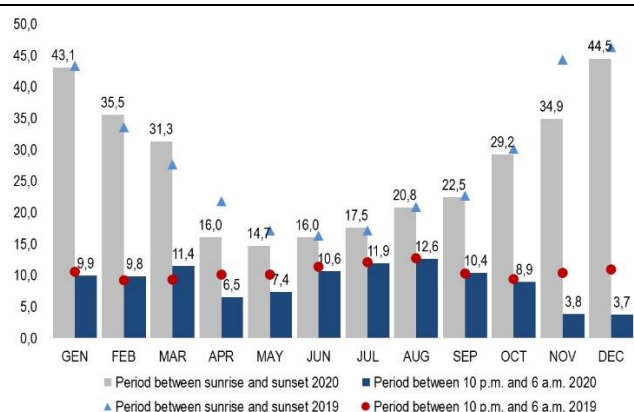


## Tables and charts collection:

**CHART 5. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY BY DAY TIME. Year 2020-2019. % values**



**CHART 6. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY BY DAY PERIOD AND MONTH Year 2020-2019.**



**TABLE 4. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY. KILLED AND INJURED BY ROAD TYPE. Years 2020, 2019 and 2018. Absolute values and percentage changes 2020/2019**

ROAD CATEGORY	Road accidents 2020	Road accidents 2019	Road accidents 2018	Killed 2020	Killed 2019	Killed 2018	Injured 2020	Injured 2019	Injured 2018	% Change accidents 2020/2019	% Change killed 2020/2019	% Change injured 2020/2019
Built up roads	86,682	127,000	126,744	1,061	1,331	1,401	111,532	168,794	169,607	-31.7	-20.3	-33.9
Motorways	5,451	9,076	9,437	195	310	330	8,465	15,009	15,545	-39.9	-37.1	-43.6
Non built up roads (a)	26,165	36,107	36,372	1,139	1,532	1,603	39,251	57,581	57,767	-27.5	-25.7	-31.8
<b>Total</b>	<b>118,298</b>	<b>172,183</b>	<b>172,553</b>	<b>2,395</b>	<b>3,173</b>	<b>3,334</b>	<b>159,248</b>	<b>241,384</b>	<b>242,919</b>	<b>-31.3</b>	<b>-24.5</b>	<b>-34.0</b>

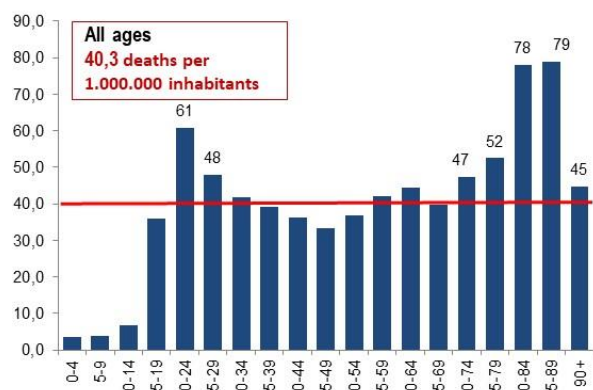
(a) Included rural or not built up roads called: Statali. Regionali and Provinciali. Comunalì out of urban area.

**CHART 7. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY. KILLED AND INJURED BY ROAD TYPE (a). Year 2020 percentage values**

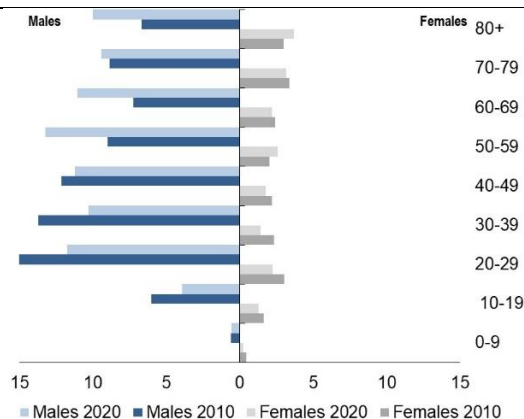


(a) Included rural or not built up roads called: Statali. Regionali and Provinciali. Comunalì out of urban area.

**CHART 8. ROAD MORTALITY RATE BY AGE CLASS. Year 2020 (per 1.000.000 inhabitants)**



**CHART 9. KILLED IN ROAD ACCIDENTS. AGE PYRAMID BY AGE CLASS. Year 2020. Percentage values**

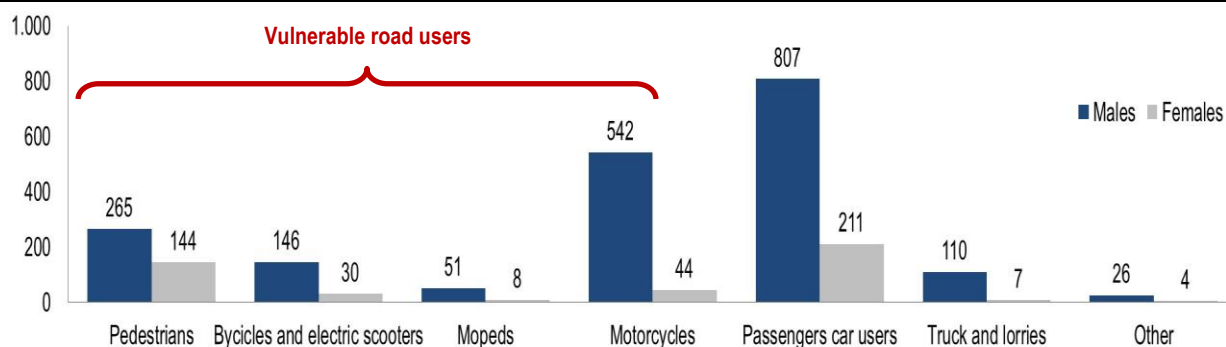


**TABLE 5. KILLED AND INJURED IN ROAD ACCIDENTS BY GENDER AND AGE CLASS.** Year 2020. Absolute values and % change 2020/2019

AGE CLASSES (a)	Killed			Injured			% change 2020/2019	
	Males	Females	Total	Males	Females	Total	Killed	Injured
0 - 4	6	2	8	773	573	1,346	..	-47.5
5 - 9	7	3	10	1,054	782	1,836	..	-46.4
10 -14	15	4	19	1,773	1,199	2,972	..	-41.7
15 -19	77	26	103	8,407	3,815	12,222	-34.8	-34.9
20 -24	149	31	180	11,475	5,676	17,151	-27.4	-33.5
25 -29	127	22	149	9,950	5,142	15,092	-31.7	-34.6
30 - 34	122	15	137	8,737	4,422	13,159	-19.4	-33.1
35 - 39	120	18	138	7,874	3,887	11,761	-24.6	-35.8
40 - 44	132	16	148	8,209	4,176	12,385	-27.1	-36.0
45 - 49	132	25	157	9,107	4,720	13,827	-33.2	-32.3
50 -54	155	24	179	8,674	4,715	13,389	-32.7	-31.8
55 -59	156	37	193	7,826	4,067	11,893	-12.7	-28.8
60 -64	148	26	174	5,587	2,834	8,421	-10.3	-30.2
65 -69	112	26	138	3,971	2,063	6,034	-23.8	-31.6
70 - 74	120	40	160	3,466	1,835	5,301	-16.2	-33.4
75 - 79	102	34	136	2,640	1,573	4,213	-32.0	-34.2
80 - 84	126	50	176	2,206	1,213	3,419	-17.4	-32.7
85 - 89	84	26	110	1,044	540	1,584	-30.4	-30.2
90 +	25	11	36	290	154	444	-29.4	-30.3
Non indicata	32	12	44	1,653	1,146	2,799	..	..
<b>Totale</b>	<b>1,947</b>	<b>448</b>	<b>2,395</b>	<b>104,716</b>	<b>54,532</b>	<b>159,248</b>	<b>-24.5</b>	<b>-34.0</b>

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

**CHART 10. KILLED IN ROAD ACCIDENTS BY GENDER AND ROAD USER TYPE.** Year 2020. Absolute values, mortality and harmfulness index (a)





**TABLE 6. KILLED IN ROAD ACCIDENTS IN ITALIAN REGIONS (a).** Years 2010 and 2020. Absolute values, percentage changes, road mortality rate per 100.000 inhabitants

REGIONS	Killed (absolute values)			%changes 2020/2010 (b) (a)	Mortality rate 2010 (b)	Mortality rate 2020(b)
	2010	2019	2020			
Piemonte	327	232	182	-44.3	7.5	4.2
Valle d'Aosta/Vallée d'Aoste	11	4	0	-100.0	8.7	0.0
Lombardia	565	438	317	-43.9	5.9	3.2
Bolzano/Bozen	30	46	31	+3.3	6.0	5.8
Trento	29	25	25	-13.8	5.6	4.6
Veneto	396	336	229	-42.2	8.2	4.7
Friuli-Venezia Giulia	103	72	47	-54.4	8.4	3.9
Liguria	84	64	59	-29.8	5.3	3.9
Emilia-Romagna	401	352	223	-44.4	9.3	5.0
Toscana	306	209	152	-50.3	8.4	4.1
Umbria	79	51	45	-43.0	9.0	5.2
Marche	109	99	69	-36.7	7.1	4.6
Lazio	450	295	261	-42.0	8.2	4.5
Abruzzo	79	78	59	-25.3	6.0	4.6
Molise	28	28	25	-10.7	8.9	8.4
Campania	254	223	176	-30.7	4.4	3.1
Puglia	292	207	160	-45.2	7.2	4.1
Basilicata	48	29	18	-62.5	8.3	3.3
Calabria	138	104	61	-55.8	7.0	3.2
Sicilia	279	210	161	-42.3	5.6	3.3
Sardegna	106	71	95	-10.4	6.5	5.9
<b>Italy</b>	<b>4,114</b>	<b>3,173</b>	<b>2,395</b>	<b>-41.8</b>	<b>6.9</b>	<b>4.0</b>

(a) Percentage change:  $((M^t/M^{2010})-1)*100$  b) The number of deaths per 100.000 inhabitants is calculated by the ratio between the total deaths in the region and the resident population by the year 2019 (Source Istat)

**CHART 11. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY AND KILLED IN THE MAIN MUNICIPALITIES IN ITALY (IN TOTAL).** Years 2001-2020. Absolute values (a)

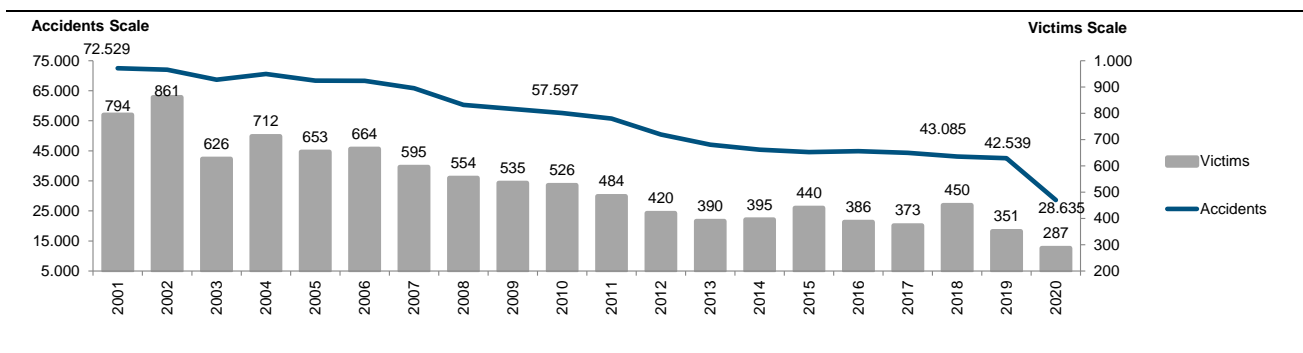


TABLE 7. ROAD ACCIDENTS RESULTING IN DEATH OR INJURY AND KILLED BY ROAD CATEGORY IN LARGE MUNICIPALITIES IN ITALY. Years 2020 and 2019 (a). Absolute values. Road mortality rate per 100.000 inhabitants, percentage change 2020/2010

MAIN CITIES	Built up roads				Not built up roads (b)				Road mortality rate Year 2020 (per 100.000)	Road mortality rate Year 2019 (per 100.000)	% Change killed (total) 2020/2010 (d)
	Road accidents 2020	Road accidents 2019	Killed 2020	Killed 2019	Road accidents 2020	Road accidents 2019	Killed 2020	Killed 2019			
Torino	2.059	2.920	14	26	29	53	-	-	1,6	3,0	-51,7
Milano	4.726	7.974	26	29	130	289	2	5	2,0	2,5	-51,7
Verona	796	1.194	5	10	72	113	2	6	2,7	6,2	-74,1
Venezia	369	469	5	1	107	163	3	3	3,1	1,5	-27,3
Trieste	569	779	2	6	56	64	1	2	1,5	3,9	-72,7
Genova	2.724	3.705	23	18	116	216	1	5	4,3	4,0	-25,0
Bologna	1.172	1.766	11	11	146	179	3	7	3,5	4,6	-50,0
Firenze	1.456	2.361	7	6	37	37	-	-	1,9	1,6	-72,0
Roma	7.276	10.908	78	108	956	1.363	26	23	3,7	4,6	-42,9
Napoli	1.658	2.317	27	20	138	209	3	2	3,2	2,3	-14,3
Bari	959	1.360	8	7	134	223	4	5	3,8	3,7	20,0
Palermo	1.332	1.836	18	26	27	44	1	-	2,9	3,9	-51,3
Messina	528	669	3	9	96	133	3	1	2,6	4,3	-62,5
Catania	898	1.116	10	11	69	79	1	4	3,7	4,8	-52,2
<b>Total</b>	<b>26.522</b>	<b>39.374</b>	<b>237</b>	<b>288</b>	<b>2.113</b>	<b>3.165</b>	<b>50</b>	<b>63</b>	<b>3,0</b>	<b>3,6</b>	<b>- 45,4</b>

(a) Included rural or not built up roads called: Statali. Regionali and Provinciali. Comunali out of urban area and motorways.

(b) Percentage change:  $((M^{2020}/M^{2019})-1)*100$  ; the symbol "-" means "no changes".

## Glossary:

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

**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:** the percentage change is calculated by means the difference between data at **t** time and data **t-1** (or t-x) time, divided by data at **t-1**(or t-x) time. per 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.

## 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 I.stat: <http://dati.istat.it/> (Health Statistics/Road Accidents)
- 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](http://ec.europa.eu/transport/road_safety/specialist/statistics/index_en.htm)