



JAPAN

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Japan recorded 3 920 road fatalities in 2019, representing a 6% decrease when compared to 2018. In 2019, Japan reached the lowest level of road mortality since systematic records began in 1948. A priority area is the provision of a safer road transport system for senior citizens – a group that suffers more than half of all road deaths in Japan. The 10th Traffic Safety Programme was launched in March 2016 and covered the period 2016-20. Improving the safety of pedestrians and cyclists, including seniors, is an important focus of the programme. An evaluation of the current programme is underway.

Impact of Covid-19

In response to the Covid-19 pandemic, Japan introduced lockdown measures on 9 March 2020, which affected the movement of people and goods on the road and in turn the exposure to road crashes. A gradual lifting of lockdown measures started on 18 May 2020.

The number of road deaths decreased by 22% during the period March-September 2020, compared to the average for 2017-19, according to preliminary data for 2020. The largest drops were recorded in July (-31%) and August (-32%).

Table 1. Road fatalities by month

	Average 2017-2019	2020	% change
January	342	318	-7
February	296	298	0.7
March	331	283	-14.5
April	312	246	-21.2
May	304	237	-22
June	283	236	-16.6
July	327	225	-31.2
August	354	239	-32.5
September	351	296	-15.7

Trends

Japan registered an overall **decrease in the number of road deaths in 2019**. According to the latest available data, 3 920 persons lost their lives in traffic crashes in Japan in 2019. This represents a 6% decline on 2018, when 4 166 road deaths were reported, itself a 6% decline on 2017.

The **long-term trend for road deaths** in Japan shows significant progress. Between 2000 and 2019, the number of annual road fatalities fell by 62%.

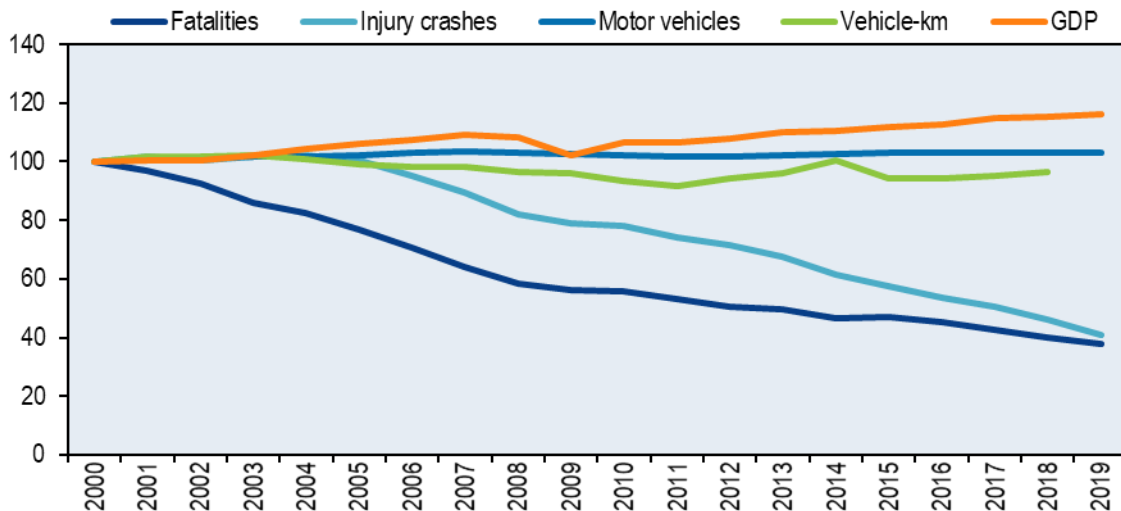
The number of **traffic deaths per 100 000 inhabitants** in Japan fell by 62% between 2000 and 2019. In 2019, 3.1 traffic deaths per 100 000 inhabitants were recorded, compared to 13.4 in 2000. By way of comparison, the average in the European Union was 5.1 deaths per 100 000 inhabitants in 2019.

Measured as **traffic deaths per billion vehicle-kilometres (vkm)** driven, the fatality risk in Japan shows similar longer-term progress. In 2018, this metric stood at 5.6, 59% lower than in 2000.

Country Profile	
Population	in 2019: 126.1 million
GDP per capita	in 2019: USD 40 278
Cost of road crashes:	0.8% of GDP (2009)
Road network:	1.2 million kilometres (2019)
Registered motor vehicles	in 2019: 91.4 million (cars 68%; goods vehicles 16%; motorised two-wheelers 12%)
Volume of traffic:	-3.6% between 2000 and 2018
Speed limits:	40/50/60 km/h on urban roads; 50/60 km/h on rural roads; 100 km/h on motorways
Limits on Blood Alcohol Content (BAC):	0.3 g/l

Japan recorded 0.4 **road fatalities per 10 000 registered vehicles** in 2019. This represents a decrease of 64% compared to the year 2000, when the rate of deaths to registered vehicles stood at 1.2.

Figure 1. Road safety, vehicle stock, traffic and GDP trends
Index 2000 = 100



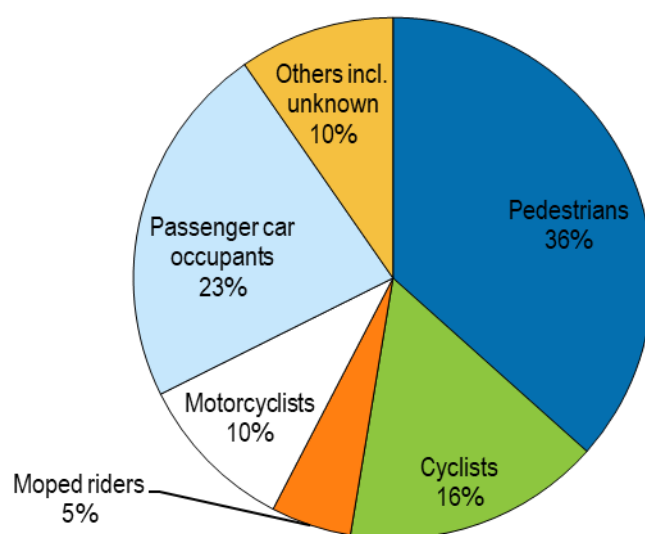
Data for **fatalities by road user group** show that pedestrians constitute the group most affected by road crashes. In 2019, pedestrians accounted for the largest share of road deaths, with 36% of the total. They were followed by passenger car occupants (23%), cyclists (16%), motorcyclists (10%) and moped riders (5%).

In 2019, 1 434 pedestrians were killed on Japanese roads. About 70% of all fatal pedestrian accidents in Japan occur while people are crossing the road, and a third of these crashes occur on a pedestrian crossing.

The largest decrease in fatalities in 2019 was registered among moped riders, who suffered 64 fewer fatalities (-24.5%) than in 2018. Likewise, motorcyclists had 46 fewer deaths (-10.5%) compared to 2018. Pedestrians had 3.2% less fatalities, cyclists 1.1% less and passenger car occupants 0.7% less year-on-year in 2019.

The long-term trend shows that traffic in Japan has become safer for all road user groups. Since 2000, road fatalities for each road user group have gone down 50% or more. Moped riders registered the strongest decline, with 79% fewer road deaths in 2019 than in 2000. Passenger car occupants strongly benefitted from road safety improvements, as well, with a reduction of 69% over this period.

Figure 2. Road fatalities by road user group, 2019



Road deaths by age group in 2019 showed some changes compared to 2018. Road deaths decreased 27.3% among 15-17-year-olds and 15.6% for 0-14-year-olds. People aged 65-74 experienced 10.8% fewer road fatalities in the same period and those 25-64 had 7.4% less. On the other hand, those aged 18-20 had 2.2% more road fatalities, and 21-24-year-olds had 9.3% more.

In 2019, 2 258 elderly people died in road traffic crashes. Despite a downward trend in all traffic fatalities, the trend for people over 65 tends to be flatter than other age groups, as the population share of elderly people is increasing. However, the number of elderly deaths per 100 000 people continues to decline at the same rate as fatalities for all ages.

Seniors over 65 are the group at highest risk in Japanese road traffic; the risk is even greater for those over 75: in 2019, they had a mortality rate of 8.5 per 100 000 persons, when the national average was 3.1 per 100 000.

The alarming rates of traffic fatalities among the elderly prompt concern for the future. In 2018, 28% of the Japanese population was over 65, the highest rate among all OECD countries, for which the average rate was 17% (OECD, 2019a). As life expectancy

continues to rise and fertility rates remain low, the elderly share of the population is projected to grow in the coming decades (OECD, 2019b).

Figure 3. Road fatality rates by age group, 2010-19
Deaths per 100 000 inhabitants in a given age group

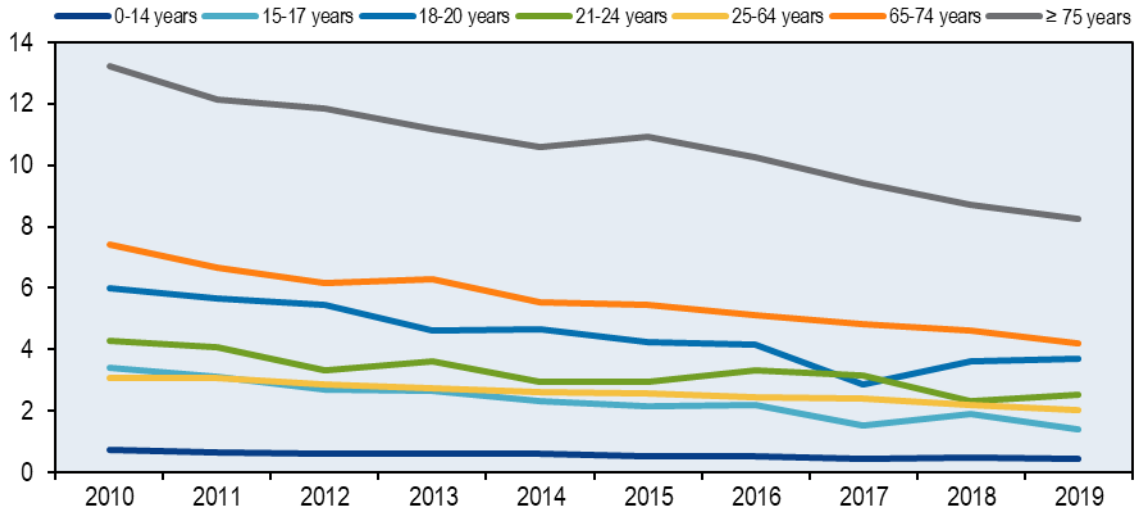
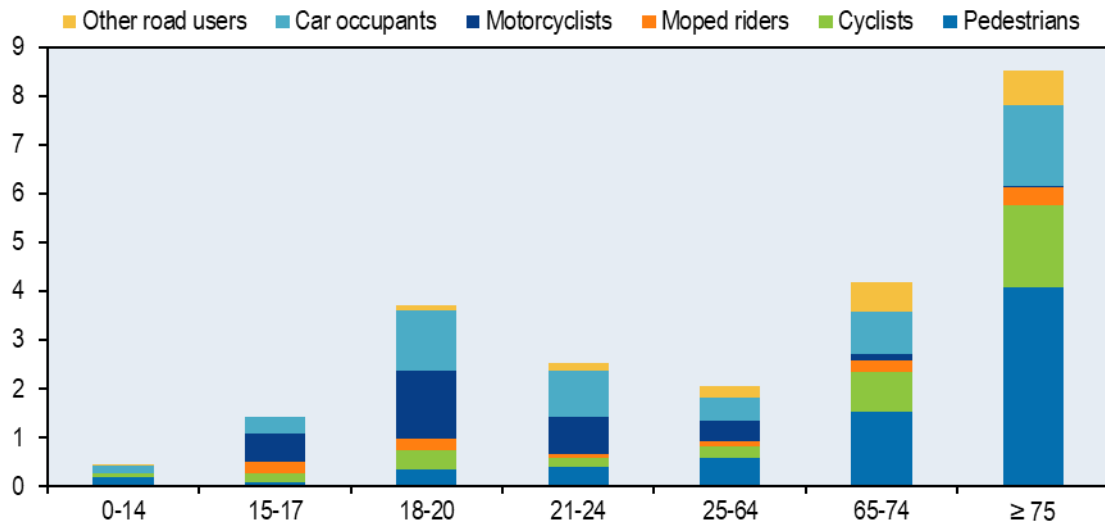


Figure 4. Road fatality rate by age and road user group, 2019
Fatalities per 100 000 inhabitants



Analysis of **fatalities by road type** shows that the urban network is the deadliest in Japan. In 2019, 60% of deaths occurred on urban roads, 37% on rural roads and 3% on motorways. This repartition has remained relatively stable in recent years.

In 2019, the number of road deaths decreased 3.4% year-on-year on urban roads and 10.3% on rural roads. On the other hand, the number of road deaths increased 0.8% on motorways in 2019.

Since 2000, fatalities have decreased 54% in urban areas, 71% on rural roads and 56% on motorways.

Figure 5. Road fatalities by road type

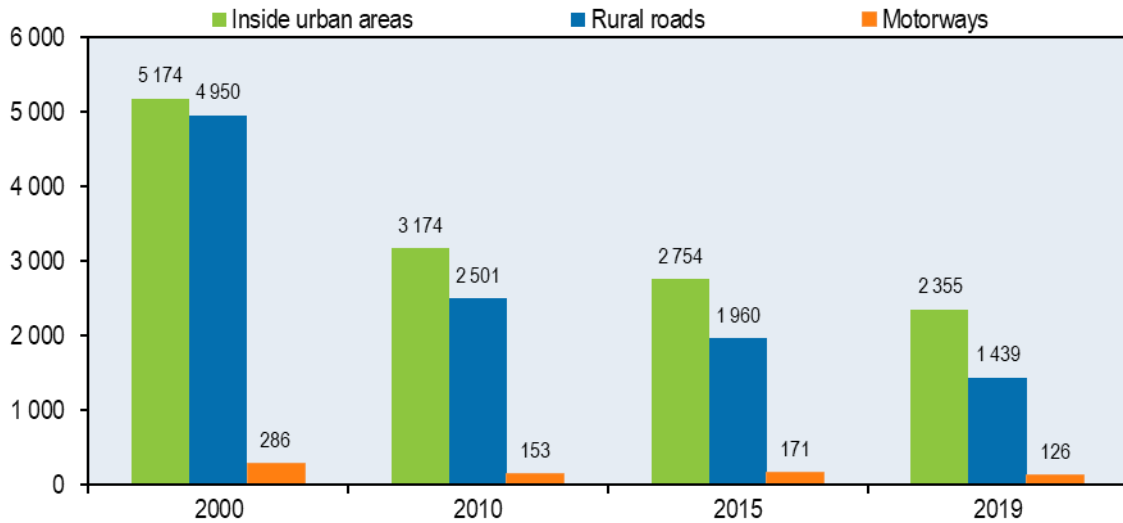
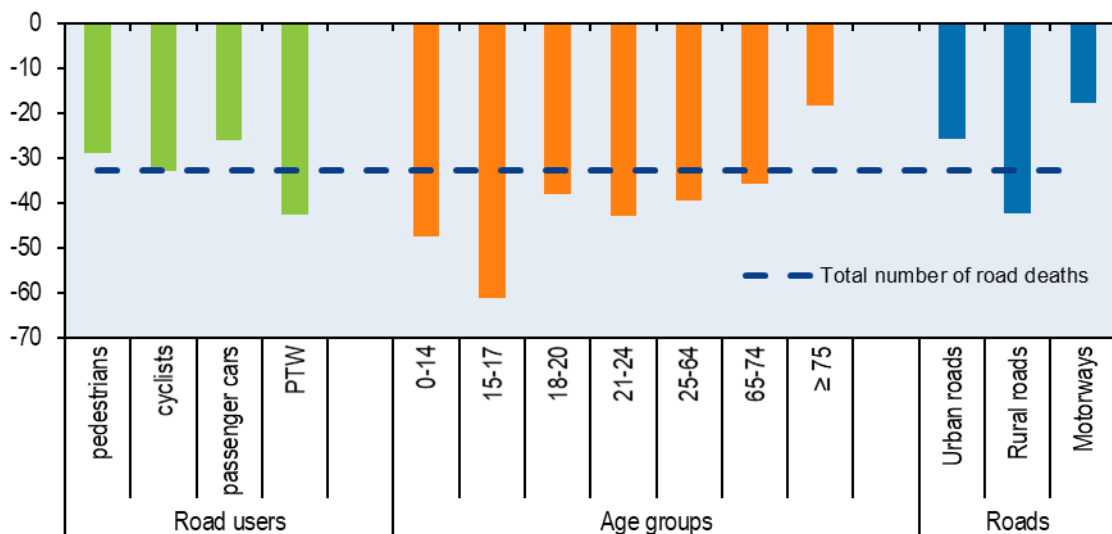


Figure 6. Evolution of road deaths by user category, age group and road type, 2010-19



Economic costs of road crashes

According to the latest research published by the cabinet office in Japan, economic loss due to traffic crashes in 2009 was estimated at JPY 3 979 billion, corresponding to 0.8% of GDP. This estimate includes medical costs, lost profit, funeral costs, compensation expenses, property costs and other costs.

Behaviour

The behaviour of road users is an important determinant of a country's road safety performance. **Inappropriate speed**, in particular, is one of the main causes of road crashes. Violation of the speed limit was recorded in police records in 3.8% of all road fatalities in 2019.

The table below summarises the main speed limits in Japan.

Table 2. Passenger car speed limits by road type, 2020

	General speed limit
Urban roads	40, 50, 60 km/h
Rural roads	50, 60 km/h
Motorways	100 km/h

Driving under the influence of alcohol is another cause of road crashes in Japan. In 2019, it was reported that 193 people were killed in alcohol-related crashes (4.9% of all road deaths) and that 0.8% of all crashes were due to a driver being under the influence of alcohol.

The share of alcohol-related crashes decreased due to more severe sanctions and more frequent controls. However, in recent years stagnation has been observed in the number of alcohol-related crashes.

In 2002, the maximum authorised blood alcohol content (BAC) level was lowered from 0.5 g/l to 0.3 g/l.

An increasing problem for traffic safety is **distraction**, especially through the use of mobile phones on the part of both drivers and pedestrians. In 2019, distraction due to the use of mobile phones was identified as the primary cause in about 0.5% of all road traffic crashes. It is forbidden in Japan to use a mobile phone while driving.

The share of **sleepiness and fatigue** as a causal factor in crashes is especially challenging to detect. Based on national traffic crash statistics produced by the National Police Agency, 0.1% of all injury crashes and 1.2% of all road fatalities in 2019 were caused by drowsiness. The actual number could, however, be higher.

Seat belt wearing has been compulsory in front seats since 1985 and in rear seats since 2008. Children under six years old must be seated in a dedicated child restraint system. While the seat belt wearing rate is high for front seat occupants, it is low in rear seats. In 2019, only 39% of rear seat passengers travelling on urban and rural roads and 74% of rear seat passengers travelling on motorways wore a seatbelt.

In 2019, 512 car occupants were fatally injured in a crash while not wearing a seatbelt.

Table 3. Seat belt wearing rate by car occupancy and road type
Percentages

	2002	2010	2019
Front seats			
Driver	88	97	99
Passenger	75	92	96
Motorways (driver)	97	99	100
Rear seats			
General	7	33	39, urban and rural roads 74, motorways
Children (use of child restraint)	52	57	..

For motorcyclists, **helmet wearing** is the most effective passive safety habit. In Japan, helmets have been compulsory for users of all powered two-wheelers on all road types since 1986.

There is no mandatory helmet use law for cyclists.

Road safety management and strategies

There are several **factors of influence on Japan's road safety performance**, as captured by the above indicators. From the early 1950s to around 1970, Japan suffered from a significant increase in the number of road-traffic crash casualties. As a result, traffic safety emerged as an important social issue. In June 1970, the government of Japan enacted the Traffic Safety Policies Act with the aim of promoting traffic safety measures nationwide in a systematic manner. Under this act, the government co-ordinated with local governments and the relevant private organisations to implement traffic safety measures. Since 2000, the number of road fatalities decreased every year until 2015, when a small increase was observed. The improved safety record in the past decade is related to an increase in the seat belt wearing rate, progress in the safety of vehicles and continuous improvement of the traffic environment.

Responsibility for the organisation of road safety in Japan primarily lies with the National Police Agency. Together with the prefectural police, it is charged with traffic enforcement, traffic regulation, safety facilities management, driving licence administration, etc. The Ministry of Land, Infrastructure, Transport and Tourism is in charge of building and maintaining safe road structures and road environments and managing safety standards for vehicles. The Ministry of Education, Culture, Sports, Science and Technology is in charge of traffic safety education in schools and traffic safety on the way to and from school. The Cabinet Office oversees the entirety of traffic safety measures in Japan.

The 10th Traffic Safety Programme was launched in March 2016 and covered the period 2016-20. It was based on two strategic objectives and eight pillars. The two strategic objectives were reducing the consequences of crashes, in particular for seniors and children,

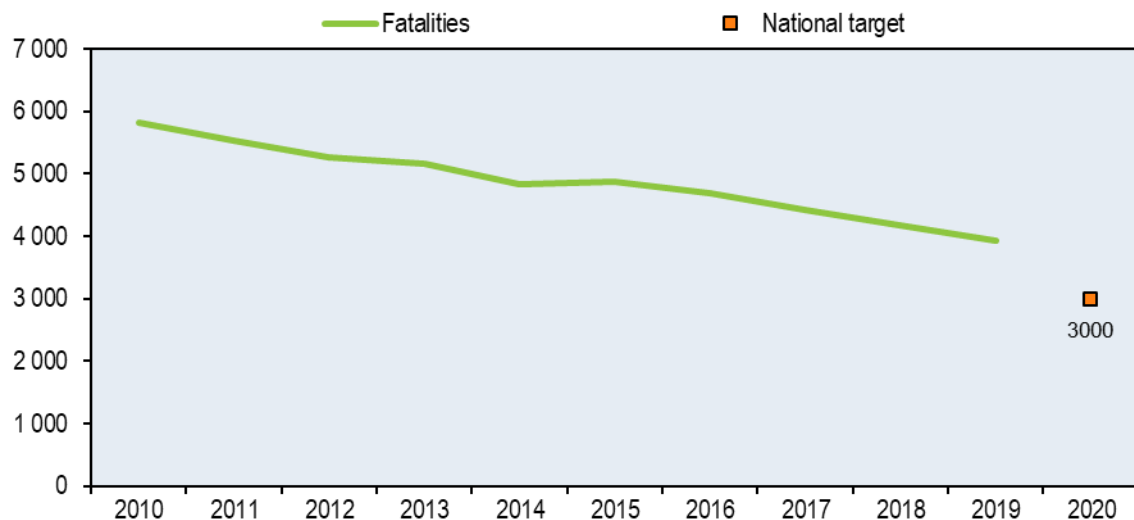
and preventing crashes for pedestrians and cyclists through the use of new technologies, in-depth analysis of traffic and crash data, and the involvement of the community.

The eight pillars were as follows:

1. maintenance of the road environment
2. dissemination and reinforcement of traffic safety messages
3. safe driving
4. vehicle safety
5. enforcement
6. an improved rescue and emergency medical system
7. victim support, including an appropriate damage compensation system
8. research and development.

This plan included the target of fewer than 2 500 deaths within 24 hours of a crash (equivalent to approximately 3 000 deaths within 30 days) and fewer than 500 000 casualties (people killed or injured in a traffic crash) by 2020. The ultimate goal was to make Japanese road traffic the safest in the world by 2020.

Figure 7. Trends in road fatalities towards national target



Measures

Several measures to improve road safety management have recently been put in place.

Road safety management

The 2019 Public-Private ITS (Intelligent Transport Systems) Initiative/Roadmap was released in June 2019. The updated roadmap emphasises the importance of co-operation between state ministries, the public sector and the private sector to achieve the dual goals of building the safest traffic system in the world and maintaining Japan's status as a leading innovator in the technology and automotive industries.

The Comprehensive Safety Plan for Business Vehicles 2020, released in June 2017, set a new goal for reducing the number of fatalities from crashes involving business vehicles to 235 or less and the number of crashes in general to 23 100 or less by 2032.

The National Police Agency believes that the spread of automated driving (AD) technology will become essential in the future to reducing traffic crashes and to alleviating congestion. It has therefore established an environment for conducting public road tests for AD systems by preparing guidelines and criteria for public road testing. It also amended the Road Traffic Act in 2019 to establish regulations concerning definitions of AD apparatuses (SAE level 3), driver responsibilities when driving a motor vehicle with an AD apparatus and recording with an operation status recording device (provisional name).

Road users

Since March 2017, under the revised Road Traffic Act drivers aged 75 and over who have committed certain traffic violations are required to take a cognitive test. Drivers suspected of having dementia must undergo a medical examination. Based on the results of this examination, their licence may be revoked.

The 30 km/h zones, which were introduced in 2011 to ensure the safe passage of pedestrians and others using community roads in residential areas, are being continuously expanded.

To reduce mobile phone use while driving, which is increasing due to the spread of smartphones, the National Police Agency decided to significantly increase the fines and penalties for using mobile phones while driving as of 1 December 2019 by amending the Road Traffic Act and related government ordinances.

In June 2020, the Japanese government revised the Road Traffic Law. The police are now able to revoke the licence from a malicious driver and put them in prison (defined as a driver who puts other drivers at risk without killing or injuring them).

Infrastructure

Recent measures to improve infrastructure include renewing traffic lights, installing new traffic lights and building roundabouts.

The police are promoting the development and implementation of the Universal Traffic Management Systems (UTMS). These are designed to create a safe, comfortable and environmentally-friendly motorised society, provide real time traffic information to road

users and control traffic flow via infrared beacons (www.utms.or.jp/english). Police information on traffic regulation and flows have been published on the website.

Vehicles: The government is promoting the development of Safety Support Cars equipped with automatic brakes and a system to prevent sudden, unintended acceleration (an increasing concern in Japan, especially among older drivers).

Post-crash response: To improve post-crash response time and the application of life-saving medical treatment on the way to hospital, the use of helicopters for emergency medical treatment is currently conducted based on the Act on Special Measures Concerning the Securing of Emergency Medical Care Using Helicopters (Act No. 103 of 2007). As of March 2018, 42 doctor helicopters are deployed in 52 prefectures.

Definition, methodology, data collection

A road fatality is defined as a person who dies within 24 hours of a crash or within 30 days of a crash. Two sets of records are kept. The data in this report and the IRTAD database are based on the 30-day definition.

A serious injury is an injury which requires medical treatment for 30 days or more.

A slight injury is one which requires medical treatment for less than 30 days.

There is no plan to adopt a definition of serious injuries based on the Abbreviated Injury Scale.

In Japan, road crash data are collected by the police. The National Police Agency has been collecting crash data since 1948. In 1966, an online database system was created, and in 1993 the 30-day definition for a crash fatality was added.

Hospital data are not used to complete police data. They may be used on an ad hoc basis for research.

Resources

Websites

National Police Agency: <http://www.npa.go.jp/>.

Institute for Traffic Accident Research and Analysis (ITARDA): <http://www.itarda.or.jp/>.

National Research Institute of Police Science (NRIPS):
<http://www.npa.go.jp/nrips/en/index.html>.

White Paper on Traffic Safety in Japan: <https://www8.cao.go.jp/koutu/taisaku/kou-wp.html>.

Public-Private ITS Initiative/Roadmaps 2019: https://japan.kantei.go.jp/policy/it/2019/2019_roadmaps.pdf.

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OECD (2019b), *Fertility rate (indicator)*: <https://doi.org/10.1787/8272fb01-en>.

Road safety and traffic data

	1990	2000	2010	2017	2018	2019	2019 % change over			
							2018	2010	2000	1990
Reported safety data										
Fatalities	14 595	10 410	5 828	4 431	4 166	3 920	-5.9%	-32.7%	-62.3%	-73.1%
Injury crashes	643 097	931 950	725 924	472 165	430 601	381 237	-11.5%	-47.5%	-59.1%	-40.7%
Injured persons hospitalised							..	..	..	..
Deaths per 100,000 population	11.8	8.2	4.6	3.5	3.3	3.1	-5.7%	-31.7%	-62.1%	-73.7%
Deaths per 10,000 registered vehicles	1.9	1.2	0.6	0.5	0.5	0.4	-5.9%	-33.5%	-63.5%	-77.7%
Deaths per billion vehicle kilometres	23.2	13.4	8.0	6.0	5.6	..	..	..	..	..
Fatalities by road user										
Pedestrians	3 955	2 955	2 016	1 637	1 482	1 434	-3.2%	-28.9%	-51.5%	-63.7%
Cyclists	1 509	1 278	938	676	636	629	-1.1%	-32.9%	-50.8%	-58.3%
Moped riders	1 320	944	459	227	261	197	-24.5%	-57.1%	-79.1%	-85.1%
Motorcyclists	1 920	903	570	494	438	392	-10.5%	-31.2%	-56.6%	-79.6%
Passenger car occupants	3 887	2 903	1 201	928	894	888	-0.7%	-26.1%	-69.4%	-77.2%
Other road users	2 005	1 427	644	469	455	380	-16.5%	-41.0%	-73.4%	-81.0%
Fatalities by age group										
0-14 years	653	239	124	71	77	65	-15.6%	-47.6%	-72.8%	-90.0%
15-17 years	1 006	327	124	54	66	48	-27.3%	-61.3%	-85.3%	-95.2%
18-20 years	1 820	690	221	107	134	137	2.2%	-38.0%	-80.1%	-92.5%
21-24 years	1 381	772	226	158	118	129	9.3%	-42.9%	-83.3%	-90.7%
25-64 years	6 261	4 641	2 123	1 535	1 385	1 283	-7.4%	-39.6%	-72.4%	-79.5%
65-74 years	..	1 744	1 135	856	816	728	-10.8%	-35.9%	-58.3%	..
≥ 75 years	..	1 997	1 875	1 650	1 570	1 530	-2.5%	-18.4%	-23.4%	..
Fatalities by road type										
Urban roads	6 921	5 174	3 174	2 542	2 437	2 355	-3.4%	-25.8%	-54.5%	-66.0%
Rural roads	7 189	4 950	2 501	1 759	1 604	1 439	-10.3%	-42.5%	-70.9%	-80.0%
Motorways	485	286	153	130	125	126	0.8%	-17.6%	-55.9%	-74.0%
Traffic data										
Registered vehicles (thousands)	75 960	88 602	90 464	91 404	91 468	91 458	0.0%	1.1%	3.2%	20.4%
Vehicle kilometres (millions)	628 581	775 723	726 256	739 898	747 930	..	..	..	..	..
Registered vehicles per 1,000 population	614.5	698.1	706.4	721.4	723.4	724.9	0.2%	2.6%	3.8%	18.0%