



CHILDREN AND ADOLESCENTS ROAD SAFETY ASSESSMENT FOR PUNE DISTRICT

March 2024



CEE

Centre for Environment Education



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for every child

Report on Assessment of Road Safety for Children and Adolescents in Pune District

Based on analysis of secondary data and reports, survey and interactions with key stakeholders

Conducted under the Child and Adolescent Road Safety project for Pune district by Centre for Environment Education, RISE Infinity Foundation and UNICEF

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Contact

UNICEF Maharashtra Office
215 Atrium, Andheri - Kurla Rd, Hanuman Nagar,
Andheri East, Mumbai 400059

RISE Infinity Foundation
121, East West Industrial Estate Center, Andheri - Kurla Rd,
Safed Pul, Mumbai 400072

Centre for Environment Education
1 Pinewood Apartment,
S.No. 233/1/2, Vidhate Colony, Aundh, Pune 411067

Abbreviations

| | |
|---------|---|
| ADGP | Additional Director General of Police |
| ADSI | Accidental Deaths and Suicides in India |
| AOP | adult occupant protection |
| BIS | Bureau of Indian Standards |
| BNCAP | Bharat New Car Assessment Programme |
| CEE | Centre for Environment Education |
| CEO | Chief Executive Officer |
| CIRT | Central Institute of Road Transport |
| CMVR | Central Motor Vehicles Rules, 1989 |
| COP | child occupant protection |
| CP / SP | Commissioner of Police / Superintendent of Police |
| CRS | Child Restraint System |
| CSR | Corporate Social Responsibility |
| DIET | District Institute of Education and Training |
| DRSC | District Road Safety Committee |
| DSSC | District School (Bus) Safety Committee |
| EMRI | Emergency Management and Research Institute |
| FIR | First Information Report |
| IRC | Indian Road Congress |
| ITC | Infant, Toddler and Caregiver |
| MEMS | Maharashtra Emergency and Medical Services |
| MMVR | Maharashtra Motor Vehicles Rules |
| MoRTH | Ministry of Road Transport and Highways |
| MoUD | Ministry of Urban Development |
| MSRDC | Maharashtra State Road Development Corporation |
| MSRTC | Maharashtra State Road Transport Corporation |
| MVA | Motor Vehicles Act, 1988 |
| MVAA | Motor Vehicles (Amendment) Act, 2019 |
| NCRB | National Crime Records Bureau |
| NGO | non government organisation |
| NHAI | National Highways Authority of India |
| NMT | non motorised transport |
| PBP | Pune Bicycle Plan |
| PCMC | Pimpri Chinchwad Municipal Corporation |
| PMC | Pune Municipal Corporation |
| PMPML | Pune Mahanagar Parivahan Mahamandal Limited |
| PMRDA | Pune Metropolitan Regional Development Authority |
| PTA | Parents Teachers Association |
| PUC | Pollution Under Control Certificate |

| | |
|---------|---|
| PWD | Public Works Department |
| RIF | RISE Infinity Foundation |
| RSA | Road Safety Audit |
| RSAP | Road Safety Action Plan |
| RTA/RTO | Road Transport Authority/ Road Transport Office |
| SAT | Safety assist technology |
| SCCRS | Supreme Court Committee on Road Safety |
| SDMA | State Disaster Management Authority |
| SMC | School Management Committee |
| SRSC | State Road Safety Council |
| STC | School Transport Committee |
| STIP | School Transport Improvement Plan |
| SUV | Sports Utility Vehicle |
| UN | United Nations |
| UNICEF | United Nations Children's Fund |
| USDG | Urban Street Design Guideline |
| UT | Union Territories |
| VRU | vulnerable road users |
| ZP | Zilla Parishad |

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Children and Adolescents Road Safety Assessment for Pune District

1. Introduction

Children and adolescents form the largest vulnerable road users (VRU) group with more than 31% of India's population i.e., 444 million in the age group of below 18 years and 253 million in the age group of 10 to 19 years (UNICEF, 2022). Although, age disaggregated data is not available for this group. According to the Ministry of Road Transport and Highways (MoRTH) Road Accidents in India reports 45,315 children lost life in such accidents in five years from 2017 to 2021 in India. Whereas, National Crime Records Bureau (NCRB) Accidental Deaths and Suicides in India (ADSI) reports 77,820 children age below 18 years were killed in road crash fatalities from 2017 to 2021. This means, about 40 children's lives are lost every day.

These deaths are avoidable. It is with the intent of addressing road safety concerns in the district of Pune and the municipal jurisdictions of Pune Municipal Corporation and the Pimpri Chinchwad Municipal Corporation that a pilot project has been undertaken in 2023-2024. The project aims to pilot road safety for children and adolescents with development of a road safety action plan for Pune district with the perspective of children and adolescents, demonstration of school road safety initiatives, sensitisation and capacity building within the concerned government stakeholders on the Safe Systems approach for Children and Adolescents Road Safety in Pune district and carry the learnings from the pilot to the state government level.

The project is being implemented by a unique collaboration with the State Disaster Management Authority (SDMA), Pune District Road Safety Committee (DRSC), District Collectorate of Pune, Pune Municipal Corporation (PMC), Pimpri Chinchwad Municipal Corporation (PCMC) and the team comprising of UNICEF Maharashtra, RISE Infinity Foundation and, knowledge partner Centre for Environment Education (CEE).

This assessment is undertaken as part of the project to develop and document the understanding of road safety for children, situation analysis for road safety in Pune district, identification of institutional stakeholders and their role, ongoing efforts and areas for interventions. The approach is to review available reports and data, interactions with stakeholders including government, civil society organizations and experts, learning about ongoing initiatives and analyzing gaps in road safety for children and adolescents with Safe Systems perspective.

Objectives

The objectives of this assessment are as follows:

- To develop an understanding of the road safety scenario in the district of Pune with the perspective of children and adolescents,
- To identify the areas of improvements in road safety for children and adolescents through institutional, behavioural and infrastructural measures,

- To know the governance of road safety for children and adolescents for district-wide implementation based on experiences of the pilot project,
- To know the key stakeholders engaged in road safety with their roles and the ongoing efforts by them, for building collaborations, and
- To explore the activities and measures to include in the district road safety action plan for children and adolescents and content for the resources developed for the project.

The learnings and outcomes of the assessment are used for designing the pilot and planning the activities of the project.

2. Review and assessment of reports and data

The National Crime Records Bureau (NCRB), Ministry of Home Affairs, Government of India gathers road crash related data from all the states and Union Territories (UTs) in India and publishes the Accidental Deaths and Suicides in India (ADSI) report annually. The Ministry of Road Transport and Highways (MoRTH), Government of India also publishes the report Road Accidents in India every year. The latest reports published by both the organisations are for the year 2022.

a. National status

The data from ADSI reports published by NCRB shows the total number of persons killed and injured in road crashes in India annually. It also mentions the fatalities and injuries as per the age and gender, nationally and state/Union Territory wise.

i. Children Killed in Road Crashes in India

The graph and Table a1 below show the total number of children below the age of 18 years killed in road crashes in India between 2017 to 2022, extracted from ADSI reports of respective years.

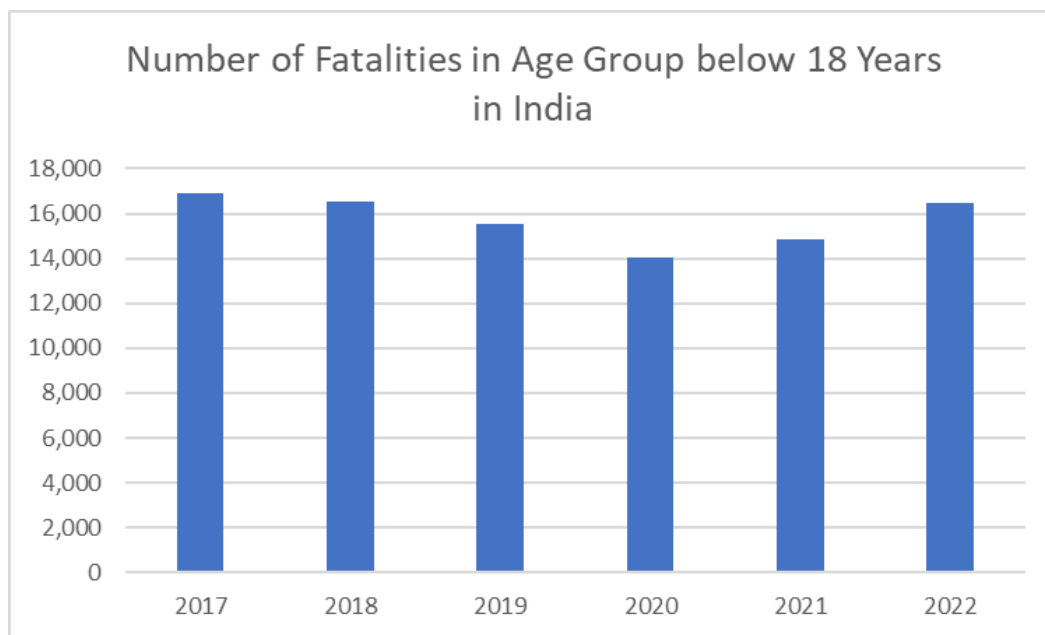


Figure a1: Total number of children killed in road crashes in India during 2017 to 2022

- According to the report, more than 40 children in the age group of below 18 years are killed per day in India due to road crashes.
- In India, 94,263 child lives are lost in road crashes in a six year period from 2017 to 2022.

- The number decreased from 2017 to 2020 but started to increase again from 2021 reaching a peak of 16,443.
- The number has increased by 10.54 per cent in a year from 14,875 in 2021 to 16,443 in 2022.

Table a1: Number of children killed in road crash in India during 2017 to 2022

| Year | Below 14 years | | | | 14 and above - below 18 years | | | | Total |
|------|----------------|--------|--------------|-------|-------------------------------|--------|--------------|--------|--------|
| | Male | Female | Trans-gender | Total | Male | Female | Trans-gender | Total | |
| 2017 | 3,009 | 1,097 | 1 | 4,107 | 10,666 | 2,104 | 0 | 12,770 | 16,877 |
| 2018 | 3,132 | 1,090 | 0 | 4,222 | 10,112 | 2,177 | 0 | 12,289 | 16,511 |
| 2019 | 2,945 | 1,134 | 0 | 4,079 | 9,312 | 2,142 | 0 | 11,454 | 15,533 |
| 2020 | 2,035 | 704 | 0 | 2,739 | 9,483 | 1,802 | 0 | 11,285 | 14,024 |
| 2021 | 2,666 | 968 | 0 | 3,634 | 9,402 | 1,839 | 0 | 11,241 | 14,875 |
| 2022 | 3,136 | 985 | 0 | 4,121 | 10,409 | 1,913 | 0 | 12,322 | 16,443 |

Sources: *Accidental Deaths & Suicides in India (ADSI) 2017, 2018, 2019 (Table 1.7), 2020, 2021, 2022 (Table 1.8), National Crime Records Bureau (NCRB)*

The data for children and adolescents is available in only two age groups - i.e., “below 14 years” and “14 and above to below 18 years.” Further age disaggregation of data is required to assess the policy measure needed for the age groups of - “0 to 5 years,” “5 to 10 years” and “10 to 14 years.” Furthermore, the United Nations (UN) considers the persons “below the age of 19 years” as children, the data for which is not available in disaggregated form. Hence, there is a need for age-disaggregated data, which will help to understand the effectiveness of the measures required for safety of children and inputs for policy making.

ii. Fatalities and injuries caused in road crash in India according to modes of mobility used

The graph below shows the number of fatalities and its proportion categorized as per the modes of mobility used by people of all ages.

Table a2 below shows the modes of mobility-wise fatalities and injuries caused to people. It also shows the total number of fatalities and injuries for motorised and non-motorised transport (NMT) modes.

- Two wheeler reports the highest number of fatalities (i.e. 68 per cent) and injuries making it a risky mode of mobility.

- The situation for pedestrians is quite unsafe and serious. With 9 per cent the number of pedestrian fatalities (24,742) is the second highest and needs sincere efforts to improve.
- Bicycles are a sustainable mode of mobility but unfortunately 3,435 deaths have been reported for bicyclists in 2022 which increases their mobility risks.

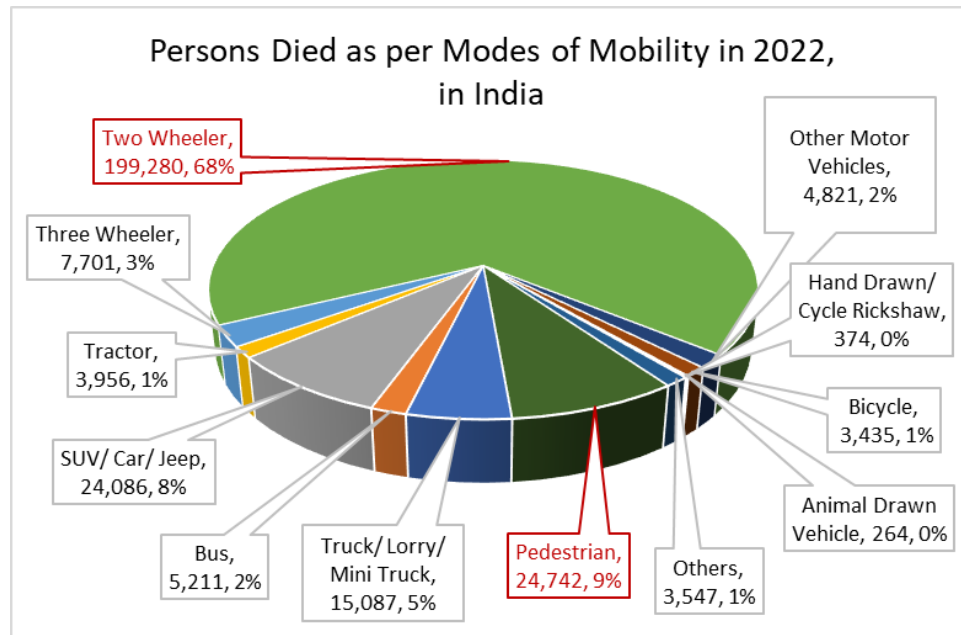


Figure a2: Number of Persons died as per the Modes of Mobility Used, in India, in 2022

The vulnerable road users (VRUs) like children, elderly and women commonly follow the pedestrian mode for their local commutes in cities and rural areas. Public transport users mainly use this mode of walking to access the public transportation systems.

Table a2: Modes of mobility-wise number of persons died and injured in road crash during 2022 in India

| Modes | Persons Died | Persons Injured |
|---|--------------|-----------------|
| Truck / Lorry / Mini Truck | 15,087 | 26,152 |
| Bus | 5,211 | 22,055 |
| SUV / Car / Jeep / etc. | 24,086 | 73,601 |
| Tractor | 3,956 | 6,278 |
| Three Wheeler / Auto Rickshaw (Passenger & goods) | 7,701 | 25,019 |

| | | |
|--|----------------|----------------|
| Two Wheeler | 199,280 | 77,876 |
| Other Motor Vehicles | 4,821 | 8,418 |
| Total (Motorized Transport) | 138,738 | 360,803 |
| Bicycle | 3,435 | 6,426 |
| Hand Drawn Vehicle / Cycle Rickshaw | 374 | 639 |
| Animal Drawn Vehicle | 264 | 383 |
| Others | 3,547 | 6,219 |
| Pedestrian | 24,742 | 48,688 |
| Total (Non-Motorized Transport) | 32,362 | 62,355 |
| Grand Total | 171,100 | 423,158 |

Source: Accidental Deaths & Suicides in India 2022 (Table 1A.3), NCRB

iii. Causes of road crashes, fatalities and injuries in India

The graph below presents the causes of road crashes resulting in fatalities of people in India, for the year 2022. Table a3 below shows the cause-wise numbers of road crashes, fatalities and injuries in India for 2022. It also shows the percentage of crashes according to the causes.

- “Speed” emerges to be the single largest cause or the risk factor resulting in over 62.6 per cent of road crashes causing deaths and injuries of road users in India, in 2022.
- The second highest cause with 24.7 per cent road crashes is dangerous driving, including distracted driving, rash driving, overtaking, signal jumping, etc.

Reducing the posted and operating Speed limits on roads and its effective enforcement can give quick results in terms of reduction in road crash related deaths and injuries.

Reducing the speed can further make the situation safer for the non-motorised modes of transport (NMT), including walking and cycling.

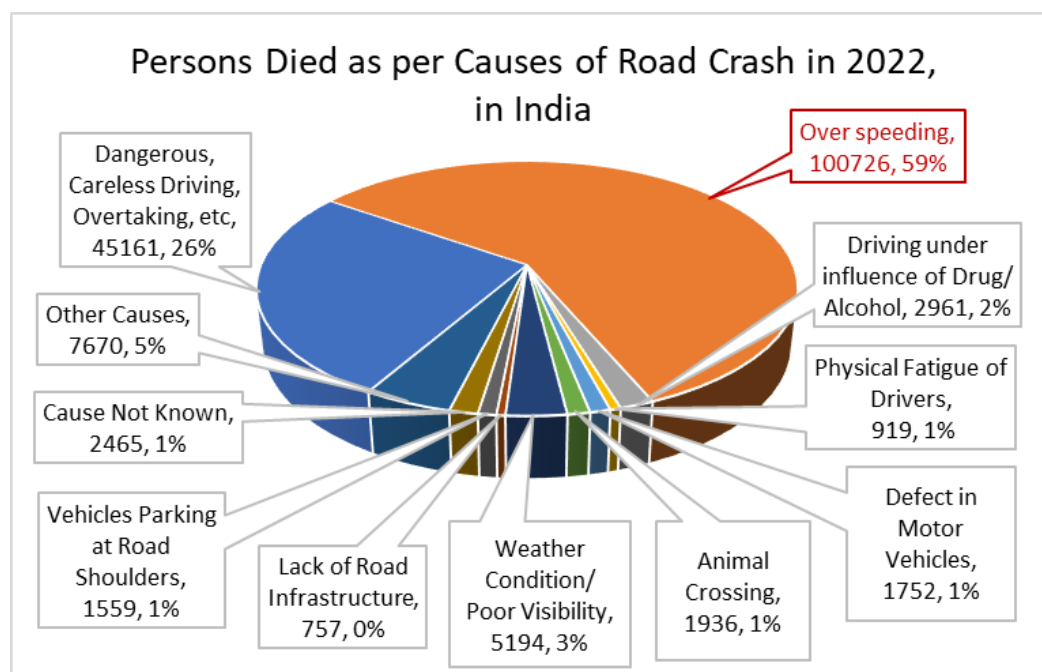


Figure a3: Cause-wise number of persons died in road crash in India, in 2022

Table a3: Cause-wise road crash, fatalities and injuries in India, in 2022

| Cause | Road Crash | Persons Died | | | | Persons Injured | | | | per centage of Crash |
|--|------------|--------------|--------|-------------|--------|-----------------|--------|-------------|--------|----------------------|
| | | Male | Female | Transgender | Total | Male | Female | Transgender | Total | |
| Dangerous or Careless Driving/ Overtaking, etc | 110440 | 38333 | 6827 | 1 | 45161 | 79201 | 21697 | 3 | 100901 | 24.7 |
| Over speeding | 279674 | 88086 | 12635 | 5 | 100726 | 215442 | 56215 | 4 | 271661 | 62.6 |
| Driving under influence of Drug/ Alcohol | 7130 | 2636 | 325 | 0 | 2961 | 5350 | 970 | 0 | 6320 | 1.6 |
| Physical Fatigue of Drivers | 1802 | 766 | 153 | 0 | 919 | 1405 | 413 | 0 | 1818 | 0.4 |
| Defect in Mechanical condition of Motor Vehicles | 3093 | 1514 | 238 | 0 | 1752 | 2326 | 528 | 1 | 2855 | 0.7 |
| Animal Crossing | 3342 | 1639 | 297 | 0 | 1936 | 1809 | 551 | 0 | 2360 | 0.7 |
| Weather Condition / | 9973 | 4278 | 916 | 0 | 5194 | 7144 | 1726 | 0 | 8870 | 2.2 |

| | | | | | | | | | | |
|------------------------------------|---------------|---------------|--------------|----------|---------------|---------------|--------------|----------|---------------|--------------|
| Poor Visibility | | | | | | | | | | |
| Lack of Road Infrastructure | 1593 | 616 | 141 | 0 | 757 | 1172 | 315 | 0 | 1487 | 0.4 |
| Vehicles Parking at Road Shoulders | 3893 | 1309 | 250 | 0 | 1559 | 3245 | 905 | 0 | 4150 | 0.9 |
| Cause Not Known | 5694 | 2074 | 391 | 0 | 2465 | 3789 | 921 | 0 | 4710 | 1.3 |
| Other Causes | 20134 | 6453 | 1217 | 0 | 7670 | 13857 | 4151 | 0 | 18026 | 4.5 |
| Total | 446768 | 143158 | 23390 | 6 | 171100 | 334758 | 88392 | 8 | 423158 | 100.0 |

Sources: Accidental Deaths & Suicides in India (ADSI) 2022 (Table 1A.8), National Crime Records Bureau (NCRB)

iv. Road crashes, fatalities and injuries near schools, colleges and educational institutions in India

The chart shows the number of road crashes, fatalities and injuries for all age groups near to schools, colleges and educational institutions in the rural and urban areas of India, from 2017 to 2022.

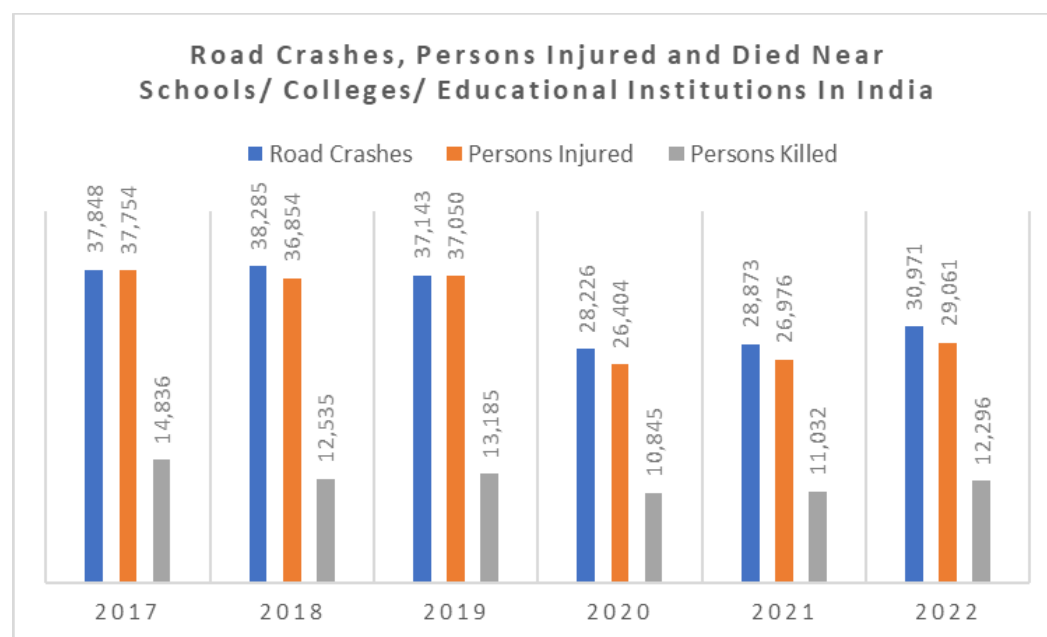


Figure a4: Number of road crashes, persons injured and died in all age group near schools/ colleges/ educational institutions in India
(Sources: ADSI 2017, 2018, 2019, 2020, 2021 and 2022, (Table 1A.10), NCRB)

Table a4 below shows the data of road crashes, fatalities and injuries for all age groups near schools, colleges, educational institutions and other places of occurrence in rural and urban areas of India, for 2022.

- Annually, there were about 12 to 14 thousand persons killed and another 30 to 38 thousand persons injured in similar number of road crashes near any school, college or educational institute in India between 2017 to 2022. This is the number of road crashes, fatalities and injuries for urban and rural areas across all age groups.
- The data emphasises the need for implementing “Safe School Zones” effectively near all schools to improve safety for children around and traveling to schools.
- Ironically, there were 5,896 fatalities and 10,429 injuries occurred at the pedestrian crossings.
- This highlights the need for better design, safe speed and much effective enforcement at the pedestrian crossings to protect pedestrians.
- There is a need for age-disaggregated data collection focusing on schools and its analysis for a better understanding of safety with children and caregivers’ perspective.

Table a4: Road crash, fatalities and injuries near Schools, Colleges and Education Institutions and other place of occurrence in rural and urban areas of India, in 2022

| Places of Occurrence | Road Crash | Persons Died | | | | Persons Injured | | | | per centage of Crash |
|---|------------|--------------|--------|-------------|-------|-----------------|--------|-------------|--------|----------------------|
| | | Male | Female | Transgender | Total | Male | Female | Transgender | Total | |
| In Rural | | | | | | | | | | |
| Near School, College, Education Institution | 16149 | 6197 | 1085 | 0 | 7282 | 12187 | 3296 | 0 | 15483 | 3.6 |
| Near Residential Area | 80536 | 26498 | 4264 | 0 | 30762 | 61515 | 16521 | 2 | 78038 | 18.0 |
| Near Religious Place | 13735 | 5179 | 1135 | 0 | 6314 | 9867 | 3001 | 1 | 12869 | 3.1 |
| Near Recreational Place/Cinema Hall | 12159 | 4834 | 782 | 0 | 5616 | 9837 | 2227 | 0 | 12064 | 2.7 |
| Near Factory | 11906 | 4379 | 669 | 0 | 5048 | 8633 | 2146 | 0 | 10779 | 2.7 |
| Others | 132222 | 48547 | 6536 | 2 | 55085 | 106040 | 26873 | 3 | 132916 | 29.6 |

| | | | | | | | | | | |
|---|---------------|---------------|--------------|----------|---------------|---------------|--------------|----------|---------------|--------------|
| Sub Total (Rural) | 266707 | 95634 | 14471 | 2 | 110107 | 208079 | 54064 | 6 | 262149 | 59.7 |
| In Urban | | | | | | | | | | |
| Near School, College, Education Institution | 14822 | 4175 | 839 | 0 | 5014 | 10577 | 3001 | 0 | 13578 | 3.3 |
| Near Residential Area | 51257 | 14359 | 2490 | 1 | 16850 | 35973 | 9780 | 0 | 45753 | 11.5 |
| Near Religious Place | 9370 | 2781 | 622 | 0 | 3403 | 6315 | 2066 | 1 | 8382 | 2.1 |
| Near Recreational Place/Cinema Hall | 13624 | 3785 | 676 | 1 | 4462 | 9805 | 2547 | 0 | 12352 | 3.0 |
| Near Factory/ Industrial area | 13482 | 3908 | 638 | 1 | 4547 | 9283 | 2501 | 0 | 11784 | 3.0 |
| At Pedestrian Crossing | 12515 | 4930 | 966 | 0 | 5896 | 8087 | 2342 | 0 | 10429 | 2.8 |
| Others | 64991 | 18132 | 2688 | 1 | 20821 | 46639 | 12091 | 1 | 58731 | 14.5 |
| Sub Total (Urban) | 180061 | 52070 | 8919 | 4 | 60993 | 126679 | 34328 | 2 | 161009 | 40.3 |
| Grand Total | 446768 | 147704 | 23390 | 6 | 171100 | 334758 | 88392 | 8 | 423158 | 100.0 |

Sources: *Accidental Deaths & Suicides in India (ADSI) 2022 (Table 1A.10), National Crime Records Bureau (NCRB)*

b. State status

The ADSI, NCRB report does not have road crash data for states and UTs disaggregated according to the age groups. The Road Accidents in India reports published by the Ministry of Road Transport and Highways (MoRTH), Government of India were referred for state specific data on road crashes.

i. Children Killed in Road Crash in Maharashtra

The chart below shows the total number of children killed in road crashes in Maharashtra from 2017 to 2022.

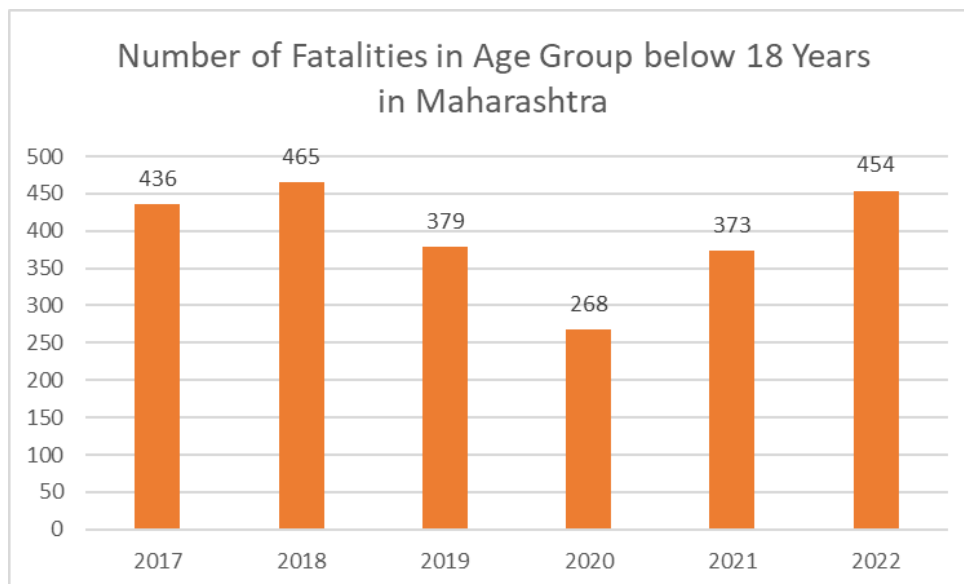


Figure b1: Number of children killed in road crash in Maharashtra from 2017 to 2022

- 2,375 children below the age of 18 years were killed in road crashes across Maharashtra in the period of 2017 to 2022.
- The trend decreased between 2018 to 2022. But more concerning is the increasing trend post 2020 reaching towards the peak of 454.
- This rising trend is a concern towards the safety of children on roads in Maharashtra and needs to be reduced by 10 per cent every year.

Table b1 shows the data of child fatalities as per gender over 2017 to 2022 in Maharashtra.

Table b1: Children killed in road crashes in Maharashtra between 2017 and 2022

| Year | Less than 18 years | | |
|------|--------------------|--------|-------|
| | Male | Female | Total |
| 2017 | 334 | 102 | 436 |
| 2018 | 366 | 99 | 465 |
| 2019 | 300 | 79 | 379 |
| 2020 | 205 | 63 | 268 |
| 2021 | 314 | 59 | 373 |
| 2022 | 370 | 84 | 454 |

Source: Road Accidents in India 2017, 2018, 2019, 2020, 2021 & 2022 (page 171), Ministry of Road Transport and Highways (MoRTH)

ii. **Age and gender profile of persons killed in road crashes in Maharashtra**

The chart shows the age group wise number of persons killed in road crashes in Maharashtra in 2022.

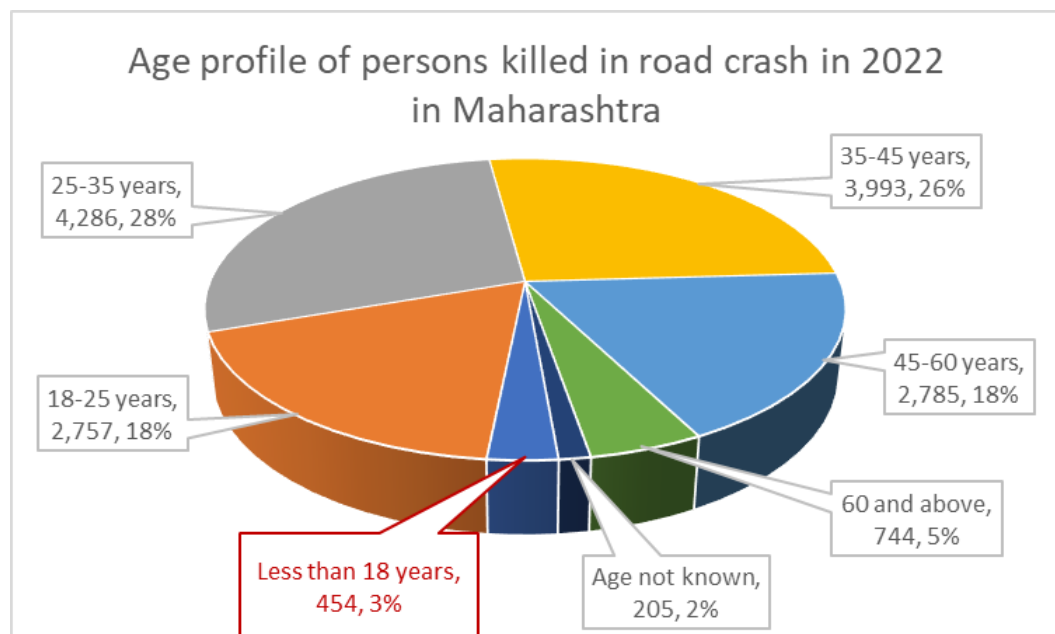


Figure b2: Age group wise number of persons killed in road crashes in Maharashtra

Table b2 shows the age group and gender wise number of persons killed in road crashes in Maharashtra in 2022.

- 75 per cent of the people who died in road crashes are up to the age of 45 years and are the bread earners or earning members of the family.
- Road crash fatalities impact the whole family and push them into a vicious cycle of poverty.
- Road crash related injuries causing temporary or permanent disabilities are even worse and puts the family into a lifetime economic burden apart from the trauma it causes.
- It also has negative impacts on the country's economy and loss to GDP and is considered a public health concern.

Table b2: Age and gender profile of persons killed in road crashes in Maharashtra in 2022

| Age | Persons Killed in Road Crash | | |
|--------------------|------------------------------|--------|-------|
| | Male | Female | Total |
| Less than 18 years | 370 | 84 | 454 |
| 18-25 years | 2,497 | 260 | 2,757 |

| | | | |
|---------------|---------------|--------------|---------------|
| 25-35 years | 3,898 | 388 | 4,286 |
| 35-45 years | 3,584 | 409 | 3,993 |
| 45-60 years | 2,440 | 345 | 2,785 |
| 60 and above | 614 | 130 | 744 |
| Age not known | 189 | 16 | 205 |
| Total | 13,592 | 1,632 | 15,224 |

Source: Road Accidents in India 2022 (page 171), Ministry of Road Transport and Highways (MoRTH)

iii. Children / underage drivers, passenger and pedestrians killed in road crash in Maharashtra

The chart shows the number of children below 18 years of age killed in road crashes as underage drivers, passengers and pedestrians in Maharashtra annually from 2018 to 2022. Table b3 has gender-wise data for child fatalities as underage drivers, passengers and pedestrians in Maharashtra in 2022.

- The minimum age of getting a driving license in India is 18 years. But still there are underage drivers, below the age of 18 years, who died in road crashes.
- The Motor Vehicles Act 1988 (MVA) mentions that a person above 16 years can get a driving license to drive a two-wheeler, of engine capacity not exceeding 50 cc or e-bike of top speed not more than 25 kmph. It is sometimes misinterpreted as a child above 16 years can drive a vehicle with automatic gear.
- Underage driving has become very rampant and needs to be stopped by strict enforcements and education among parents and adolescents.
- There is also a need to have a drivers training programme for new learning drivers for two-wheelers. Presently, training programmes for learning two-wheeler driving are not known to be available. However, the number of fatalities and injuries of two-wheeler users is the maximum.
- The cyclist fatalities age-disaggregated data was available only for 2018 in the Road Accidents in India 2018 report of MoRTH. It is not available for the later years of 2019 to 2022. Bicycle related data will help in providing safe cycling infrastructure.
- Pedestrian fatalities in this age group of below 18 years is another concern. It needs to be addressed by prioritising provision of safe walking and crossing infrastructure and facilities such as supervised crossings for school children especially at the busy crossings, during school timings, pedestrian signal phase with adequate time for crossing in school zones, and measures for traffic calming and speed enforcement.

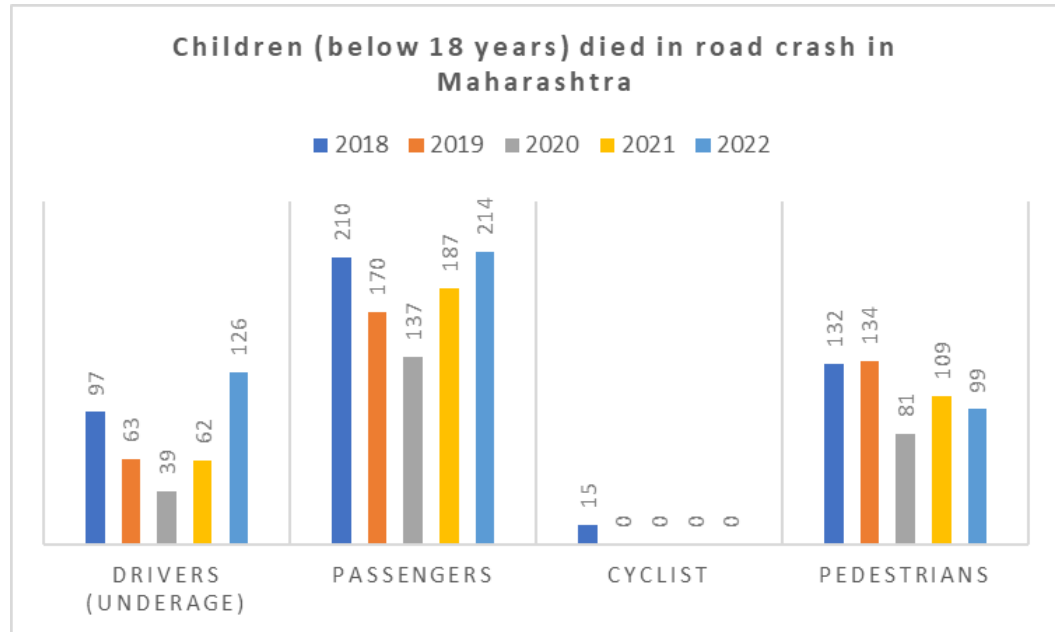


Figure b3: Number of children killed in road crash in Maharashtra as underage drivers, passengers and pedestrians

Table b3: Children below 18 years killed in road crash in Maharashtra in 2022

| Road users | Children (below 18 years) died in road crash | | |
|--------------------|--|--------|-------|
| | Male | Female | Total |
| Drivers (underage) | 122 | 4 | 126 |
| Passengers | 158 | 56 | 214 |
| Pedestrians | 78 | 21 | 99 |

Source: Road Accidents in India 2022 (Annexure 31-33), Ministry of Road Transport and Highways (MoRTH)

iv. Road crashes, fatalities and injuries in Maharashtra

The chart and Table b4 show the annual total numbers of road crashes, fatalities and injuries in Maharashtra with the trends for the period of 2017 to 2022. Table also shows the gender-wise numbers of persons killed and injured in road crashes in the state.

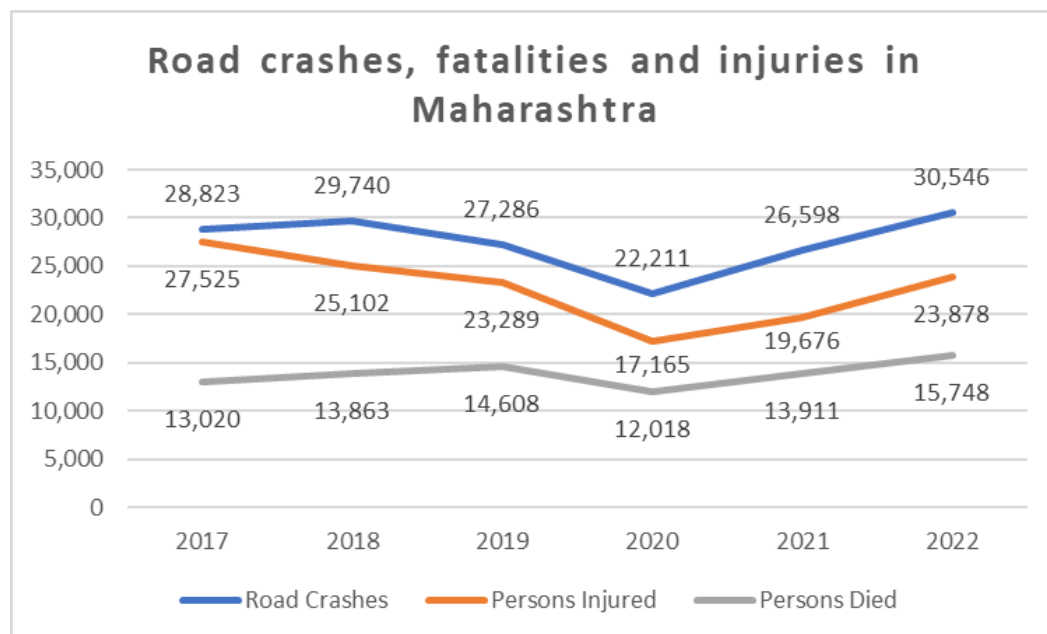


Figure b4: Total number of road crashes, fatalities and injuries for 2017 to 2022 in Maharashtra

- About 12 to 16 thousand persons died annually in road crash fatalities in Maharashtra during 2017 to 2022.
- The number of fatalities decreased in 2020 but likely to be because of the pandemic-induced lockdowns.
- The fatalities started to increase again and reached a new peak of 15,748.
- Additionally, 23,878 people were injured in 30,546 road crashes in the state, in 2022.
- The number of road crashes, fatalities and injuries has increased considerably in 2022 compared to 2021, raising the public health concern.

Table b4: Road crash, fatalities and injuries in Maharashtra

| Year | Road Crash | No of Persons Died | | | | No of Persons Injured | | | |
|------|------------|--------------------|--------|-------------|--------|-----------------------|--------|-------------|--------|
| | | Male | Female | Transgender | Total | Male | Female | Transgender | Total |
| 2017 | 28,823 | 11,302 | 1,718 | 0 | 13,020 | 21,149 | 6,376 | 0 | 27,525 |
| 2018 | 29,740 | 12,065 | 1,798 | 0 | 13,863 | 20,774 | 4,328 | 0 | 25,102 |
| 2019 | 27,286 | 12,306 | 2,301 | 1 | 14,608 | 18,729 | 4,560 | 0 | 23,289 |
| 2020 | 22,211 | 10,683 | 1,335 | 0 | 12,018 | 14,394 | 2,771 | 0 | 17,165 |
| 2021 | 26,598 | 12,407 | 1,504 | 0 | 13,911 | 16,402 | 3,274 | 0 | 19,676 |

| | | | | | | | | | |
|-------------|--------|--------|-------|---|--------|--------|-------|---|--------|
| 2022 | 30,546 | 13,940 | 1,806 | 2 | 15,748 | 18,934 | 4,944 | 0 | 23,878 |
|-------------|--------|--------|-------|---|--------|--------|-------|---|--------|

Sources: Accidental Deaths & Suicides in India (ADSI) 2017, 2018, 2019 (Table 1.9), 2020, 2021, 2022 (Table 1.10), National Crime Records Bureau (NCRB)

v. Modes of mobility and persons died in road crash in Maharashtra

The chart below shows the numbers of fatalities and its proportions categorized as per the modes of mobility used by people in Maharashtra in 2022.

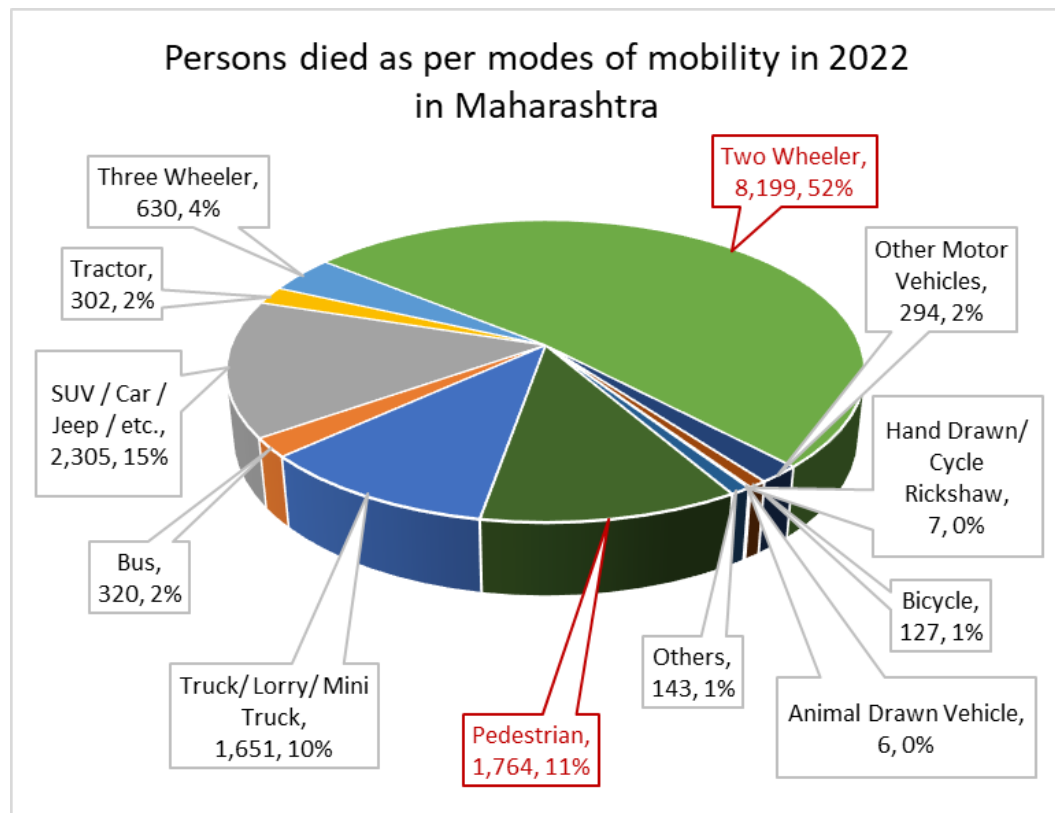


Figure b5: Road crash fatalities as per modes of mobility in Maharashtra, in 2022

- Two wheeler reports the highest number of fatalities (i.e., 52 per cent) and injuries in the state making it a risky mode of mobility.
- Maharashtra is the second highest in terms of number of two wheeler users fatalities among states in India.
- Pedestrians are another unsafe and vulnerable road user (VRU) group comprising 11 per cent of fatalities reported with the number 1,764, which is the third highest among mobility mode-wise road users' fatalities in Maharashtra.
- It requires serious steps to reduce the number of deaths and injuries of this vulnerable road user group.

The vulnerable road users (VRU) groups like children, elderly and women commonly walk for their local commutes in both cities and rural areas. Public transport users mostly use mode of walking to access public transportation systems.

Table b5 shows the modes of mobility-wise fatalities and injuries caused to the people in Maharashtra in 2022. It also has the total number of fatalities and injuries for motorised and non-motorised transport (NMT) modes.

Table b5: Modes of mobility-wise number of persons died and injured in road crashes in Maharashtra, during 2022

| Mode | No of Persons Died | No of Persons Injured |
|---|--------------------|-----------------------|
| Truck / Lorry / Mini Truck | 1,651 | 2,213 |
| Bus | 320 | 1,462 |
| SUV / Car / Jeep / etc. | 2,305 | 4,818 |
| Tractor | 302 | 481 |
| Three Wheeler / Auto Rickshaw (Passenger & goods) | 630 | 1,257 |
| Two Wheeler | 8,199 | 11,243 |
| Other Motor Vehicles | 294 | 297 |
| Total (Motorized Transport) | 13,701 | 21,771 |
| Bicycle | 127 | 176 |
| Hand Drawn Vehicle / Cycle Rickshaw | 7 | 13 |
| Animal Drawn Vehicle | 6 | 7 |
| Others | 143 | 74 |
| Pedestrian | 1,764 | 1,827 |
| Total (Non-Motorized Transport) | 2,047 | 2,097 |
| Grand Total | 15,748 | 23,878 |

Source: Accidental Deaths & Suicides in India 2022 (Table 1A.4), NCRB

vi. Road classification-wise road crash, fatalities and injuries in Maharashtra

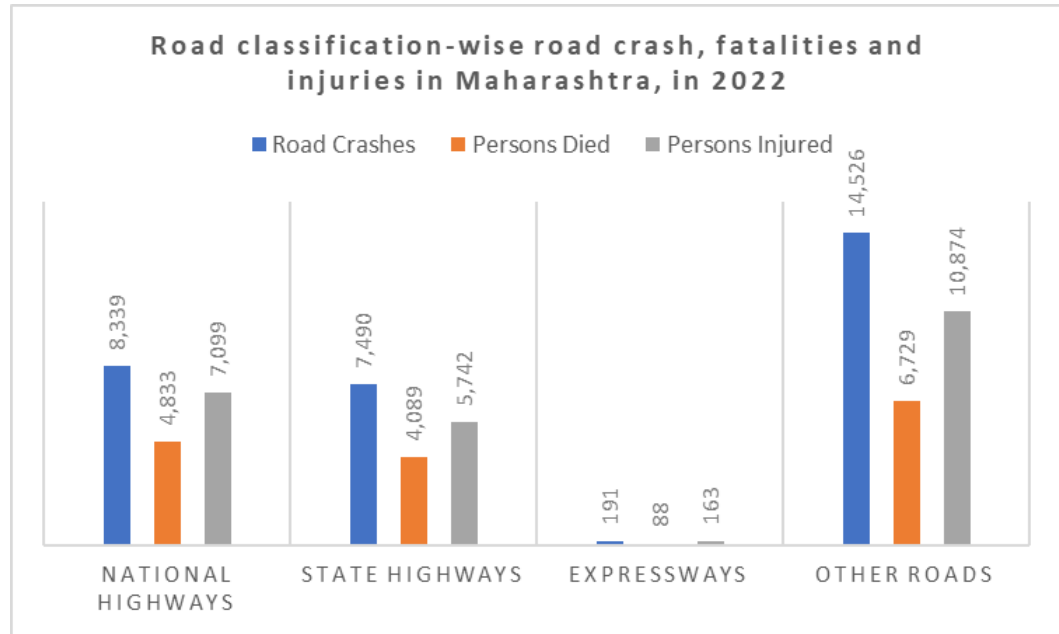


Figure b6: Road crashes, fatalities and injuries as per the road classification

The chart above and Table b6 shows the number of road crashes, fatalities and injuries as per the classification of roads in Maharashtra in 2022.

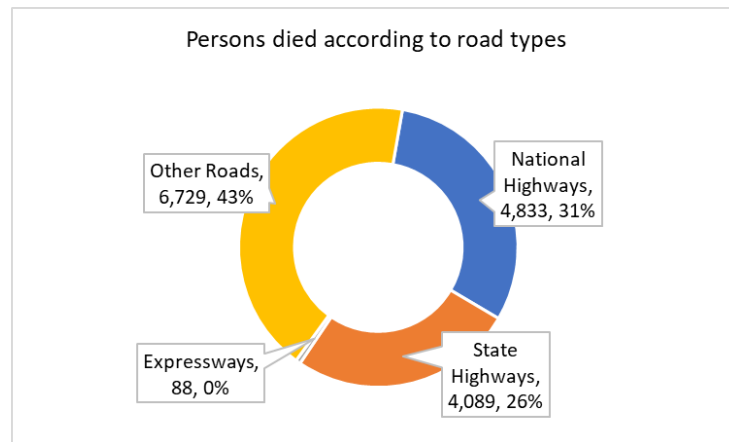


Figure b6 (i): Share of fatalities according to road types in Maharashtra, in 2022

- The proportion of National Highways and State Highways in terms of road lengths are about 2 per cent and 3 per cent, respectively. However, the share of fatalities in road crashes on National Highways is about 31 per cent and on State Highways is about 26 per cent, in Maharashtra, in 2022.
- Other roads accounted for 43 per cent of fatalities with about 95 per cent of road length. It includes district roads, rural roads, urban roads and project roads.

- Maharashtra state has 324,202 km of road network of which National Highway is 18,318 km, State Highways is 32,772 km and other roads are 273,049 km in 2022. (*Maharashtra Road Crash Report 2022*)
- Road safety measures on National and State Highways can help reduce road crashes and fatalities.
- However, other roads also need focus in terms of road safety due to higher numbers of child users.

Table b6: Road crash, fatalities and injuries in Maharashtra, as per road classification, in 2022

| Road Type | Road Crash | Persons Died | Persons Injured |
|-------------------|---------------|---------------|-----------------|
| National Highways | 8,339 | 4,833 | 7,099 |
| State Highways | 7,490 | 4,089 | 5,742 |
| Expressways | 191 | 88 | 163 |
| Other Roads | 14,526 | 6,729 | 10,874 |
| Total | 30,546 | 15,748 | 23,878 |

Source: *Accidental Deaths & Suicides in India 2022 (Table 1A.7), NCRB*

vii. Cause-wise road crashes, fatalities and injuries in Maharashtra

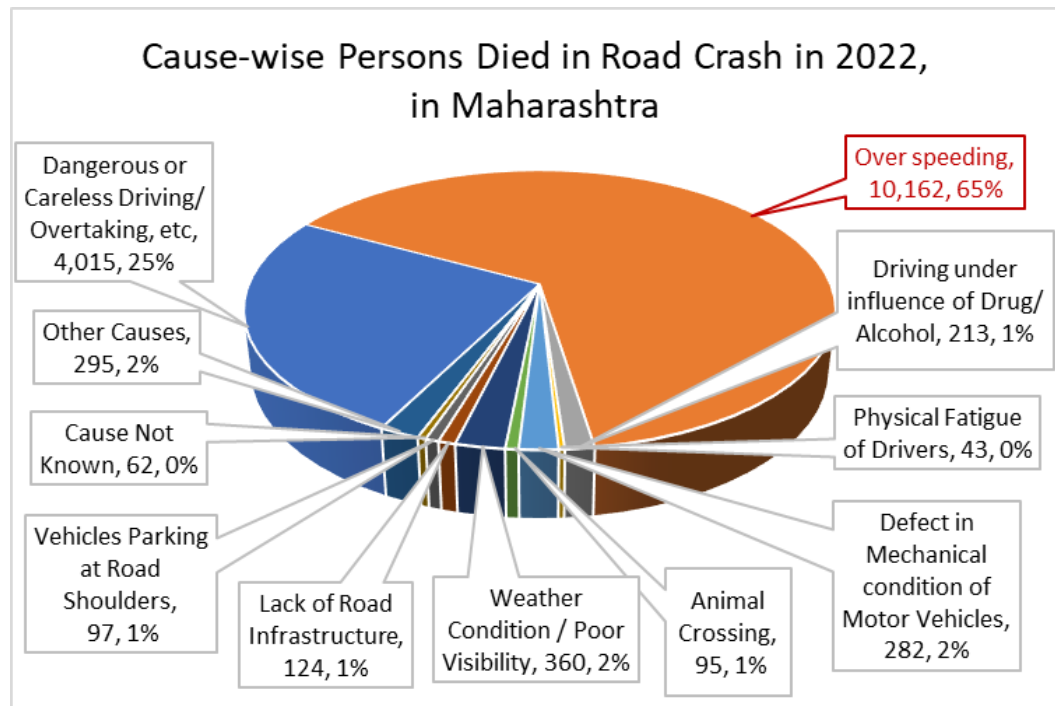


Figure b7: Cause-wise number of persons died in road crash in Maharashtra, in 2022

The chart shows the causes of road crashes resulting in fatalities among people in Maharashtra, in 2022. Table b7 below shows the cause-wise numbers of road crashes, fatalities and injuries in Maharashtra in 2022.

- “Speed” was the single most cause or risk factor resulting in the highest number of road crashes causing 10,162 deaths (which is 65 per cent) and 20,129 injuries among road users in Maharashtra in 2022.
- The second highest cause with 25 per cent road crash related deaths (4,015) and injuries (7,733) was dangerous driving, including distracted driving, rash driving, overtaking, signal jumping, etc.

Reducing the Speed limits on roads and its effective enforcement will help reduce the road crash related deaths and injuries immediately, in the state. It can further make the situation safer for children in school zones and for non-motorised transport (NMT) modes including walking and cycling, commonly used by them.

Table b7: Cause-wise road crashes, fatalities and injuries in Maharashtra, in 2022

| Cause | Road Crashes | Persons Died | Persons Injured |
|---|---------------|---------------|-----------------|
| Dangerous or Careless Driving/ Overtaking, etc | 7,733 | 4,015 | 6,021 |
| Over speeding | 20,129 | 10,162 | 15,704 |
| Driving under influence of Drug/ Alcohol | 396 | 213 | 286 |
| Physical Fatigue of Drivers | 85 | 43 | 52 |
| Defect in Mechanical condition of Motor Vehicles | 351 | 282 | 290 |
| Animal Crossing | 182 | 95 | 131 |
| Weather Condition / Poor Visibility | 552 | 360 | 488 |
| Lack of Road Infrastructure | 218 | 124 | 167 |
| Vehicles Parking at Road Shoulders | 180 | 97 | 142 |
| Cause Not Known | 143 | 62 | 57 |
| Other Causes | 577 | 295 | 540 |
| Total | 30,546 | 15,748 | 23,878 |

Source: Accidental Deaths & Suicides in India (ADSI) 2022 (Table 1A.9), National Crime Records Bureau (NCRB)

viii. Road crash fatalities near Schools, Colleges and Educational Institutions in Maharashtra

The chart shows the road crash fatalities in all age groups near schools, colleges and educational institutions in Maharashtra. Table b8 shows the persons who died in road crashes as per the places of occurrences in rural and urban areas of Maharashtra in 2022.

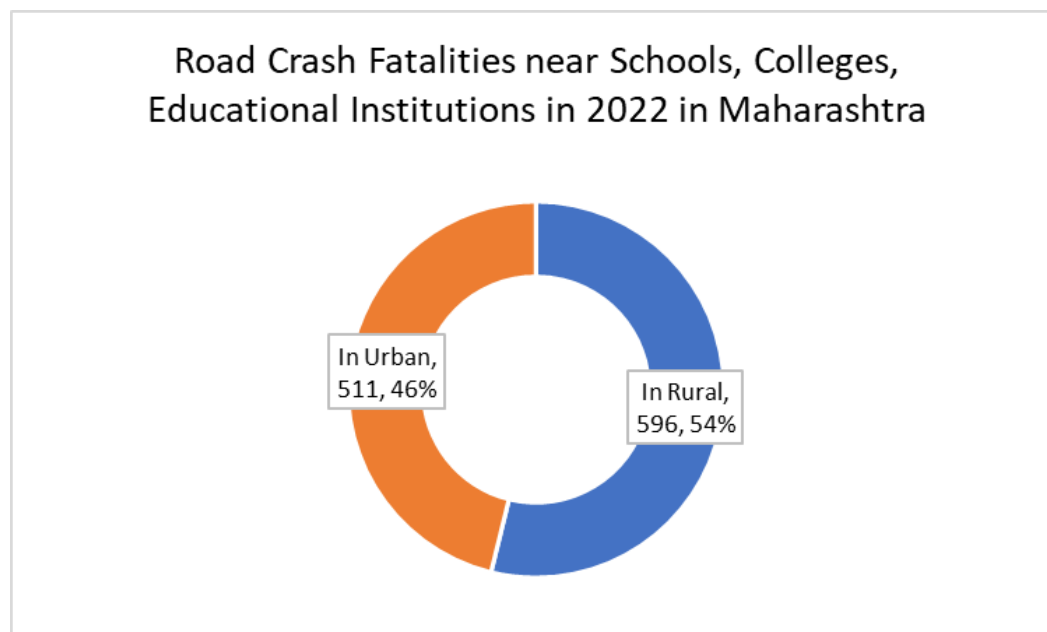


Figure b8: Road crash fatalities near schools, colleges and educational institutions in Maharashtra

- Rural areas and urban areas have almost similar numbers of fatalities, 54 per cent and 46 per cent respectively, reported near schools, colleges and education institutions in Maharashtra. Hence, it needs equal preferences for road safety measures in both rural and urban areas.
- In rural areas the emergency response system and medical or trauma care centers or facilities need to be strengthened for child care or pediatric emergencies. Paediatrics specialists' facilities in rural areas are not as good as in urban areas of Maharashtra.
- Rural areas have National and State Highways passing through, and it needs to make the School Zones near highways safer for children traveling to schools.
- The number of people who died on Pedestrian Crossing is 600. It needs to make pedestrian crossings safer by infrastructure design, strict enforcement, traffic calming and speed management.

Table b8: Road crash fatalities near Schools, Colleges and Education Institutions and other places of occurrence in rural and urban areas of Maharashtra, in 2022

| Places of Occurrence | Persons Died | | | |
|---|---------------|--------------|-------------|---------------|
| | Male | Female | Transgender | Total |
| In Rural | | | | |
| Near School, College, Educational Institution | 510 | 86 | 0 | 596 |
| Near Residential Area | 2,537 | 349 | 0 | 2,886 |
| Near Religious Place | 274 | 47 | 0 | 321 |
| Near Recreational Place/Cinema Hall | 256 | 23 | 0 | 279 |
| Near Factory | 512 | 57 | 0 | 569 |
| Others | 4,536 | 496 | 1 | 5,033 |
| Sub Total (Rural) | 8,625 | 1,058 | 1 | 9,684 |
| In Urban | | | | |
| Near School, College, Education Institution | 439 | 72 | 0 | 511 |
| Near Residential Area | 2,158 | 326 | 1 | 2,485 |
| Near Religious Place | 246 | 38 | 0 | 284 |
| Near Recreational Place/Cinema Hall | 170 | 18 | 0 | 188 |
| Near Factory/ Industrial area | 453 | 59 | 0 | 512 |
| At Pedestrian Crossing | 530 | 70 | 0 | 600 |
| Others | 1,319 | 165 | 0 | 1,484 |
| Sub Total (Urban) | 5,315 | 748 | 1 | 6,064 |
| Grand Total | 13,940 | 1,806 | 2 | 15,748 |

Source: Accidental Deaths & Suicides in India (ADSI) 2022 (Table 1A.11), National Crime Records Bureau (NCRB)

ix. Road crashes, fatalities and injuries in urban and rural parts of Maharashtra in 2022

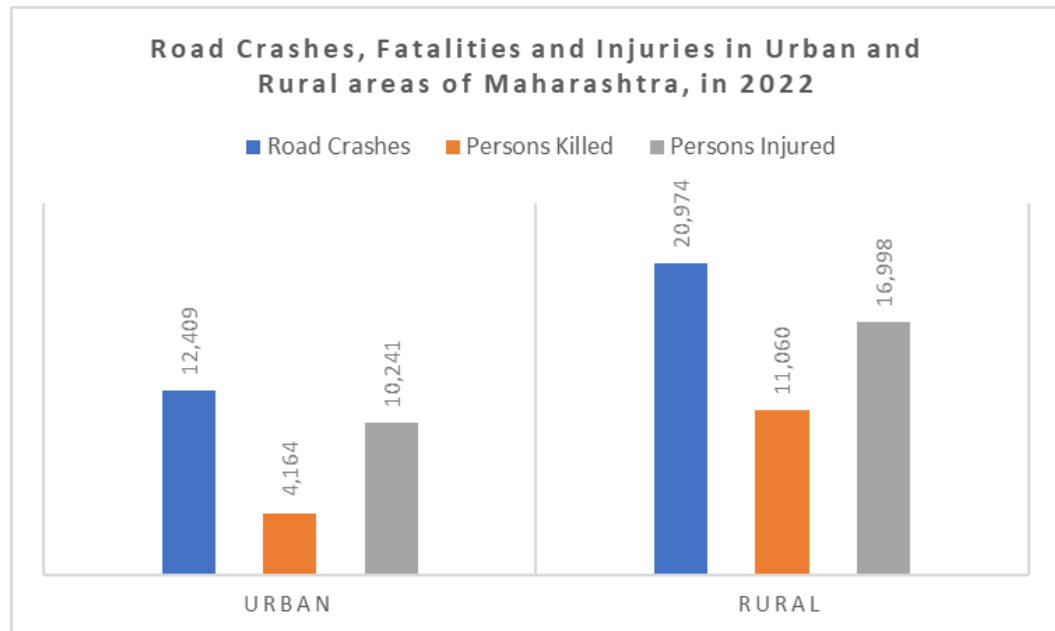


Figure b9: Road crashes, fatalities and injuries in urban and rural parts of Maharashtra

The chart and Table b9 show the urban and rural distribution of road crashes, fatalities and injuries in Maharashtra.

- Rural areas have higher proportions due to higher road length and more highways, more population and not so well equipped emergency response services and trauma care facilities. Hence, it needs equal importance in road safety initiatives for rural areas.

Table b9: Road crash, fatalities and injuries in urban and rural areas of Maharashtra, in 2022

| | Road Crashes | Persons Killed | Persons Injured |
|--------------|--------------|----------------|-----------------|
| Urban | 12,409 | 4,164 | 10,241 |
| Rural | 20,974 | 11,060 | 16,998 |
| Total | 33,383 | 15,224 | 27,239 |

Source: Road Accidents in India 2022 (page 181), MoRTH

X. Road crash victims according to non-use of safety devices

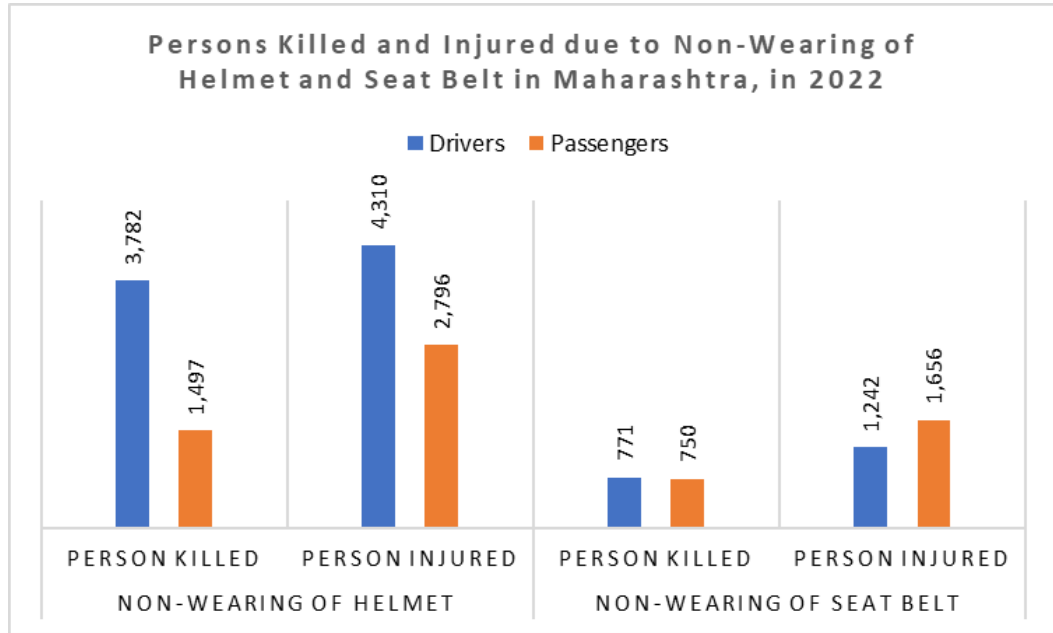


Figure b10: Drivers and passengers killed and injured due to non-wearing of helmet and seat belt in Maharashtra, 2022

The chart and Table b10 show the number of drivers and passengers killed and injured due to not wearing the helmets on two wheelers and seat belts in four wheelers in Maharashtra in 2022.

- Maharashtra is second among states in India in terms of the persons killed as two wheeler users in road crashes.
- The state is second in fatalities of passengers and third in fatalities of drivers of two wheelers for not using the helmets while riding on a two wheeler.
- In terms of the persons killed because of non wearing of seat belts, the state is third in fatalities of drivers and fourth in fatalities of passengers in India.
- Wearing a helmet is compulsory for both the riders including the driver and the passenger on a two wheeler by the Motor Vehicles Act 1988. It is the responsibility of the driver to ensure that all the riders wear their own safety helmet while riding on a two wheeler. There is a provision of penalty for violation of helmet rule with a fine of Rs 500 per person as per the act, for both driver and passenger, for not wearing the helmet while riding on a two wheeler. The act also has provision for impounding of driving license for three months for violation of helmet rule.
- Wearing of seat belts is mandatory for the driver and all the passengers traveling in a car or four wheeler. It is the responsibility of the driver or owner of the vehicle to ensure that all the passengers including the driver

and the passengers sitting on front and rear seats of the vehicle must wear the seat belt. If the passenger is a child below the age of fourteen years it must be secured by using a child restraint system or a child seat. There is a provision for a penalty with a fine of Rs 1000 per passenger for not wearing the seat belt.

- The total number of deaths for not wearing a helmet on two wheeler is 5,279 and injuries is 7,106 in the state for 2022.
- Similarly, the total deaths due to not wearing a seat belt is 1,521 and injuries is 2,898 in Maharashtra for 2022.
- These deaths and injuries could have been easily prevented by strict and effective enforcement of helmet and seat belt rules in the state.
- The state must ensure compliance with helmet and seatbelt laws for drivers and passengers for reducing the road crash fatalities in the state.

Table b10: Road crash victims according to non-use of safety device in Maharashtra in 2022

| | Non-wearing of Helmet | | | Non-wearing of Seat Belt | | |
|-------------------|-----------------------|------|-----------------|--------------------------|------|-----------------|
| | Persons Killed | Rank | Persons Injured | Persons Killed | Rank | Persons Injured |
| Drivers | 3,782 | 3rd | 4,310 | 771 | 3rd | 1,242 |
| Passengers | 1,497 | 2nd | 2,796 | 750 | 4th | 1,656 |
| Total | 5,279 | | 7,106 | 1,521 | | 2,898 |

Source: Road Accidents in India 2022 (page 179-180), MoRTH

c. Pune status

The ADSI report of NCRB and Road Accidents in India report by MoRTH publish aggregated data for the national and states level and do not mention detailed data for district level. They publish the data for the cities with a population of more than one million and have data for Pune city. The Accident Research Cell, Additional Director General of Police (ADGP), Traffic, Maharashtra publishes the Maharashtra Road Cash report which contains the data for the districts in the State. The report has data for Pune Rural, Pune City and Pimpri-Chinchwad City, covering the district of Pune. However, data sometimes may not match due to non-overlaps in the jurisdictions of police stations with municipal boundaries. Road crash data analysis is being done by different research organisations working in road safety in collaboration with DRSC and Traffic Police Department looking at the First Information Report (FIR) records. The data analysis done and presented by the Vital Strategies in a DRSC meeting held in October 2023 is mentioned in this report for reference purpose.

i. Road crashes, fatalities and injuries in Pune City

The chart below and Table c1 shows the data of road crashes, fatalities and injuries in the Pune City from 2017 to 2022, as per the NCRB reports.

- The fatalities decreased from 351 in 2017 to 145 in 2020, but again increased sharply in 2022 to 343.
- It shows the recent increasing trend in road crash fatalities in Pune City.
- The road crash and injuries also follow the same trend.

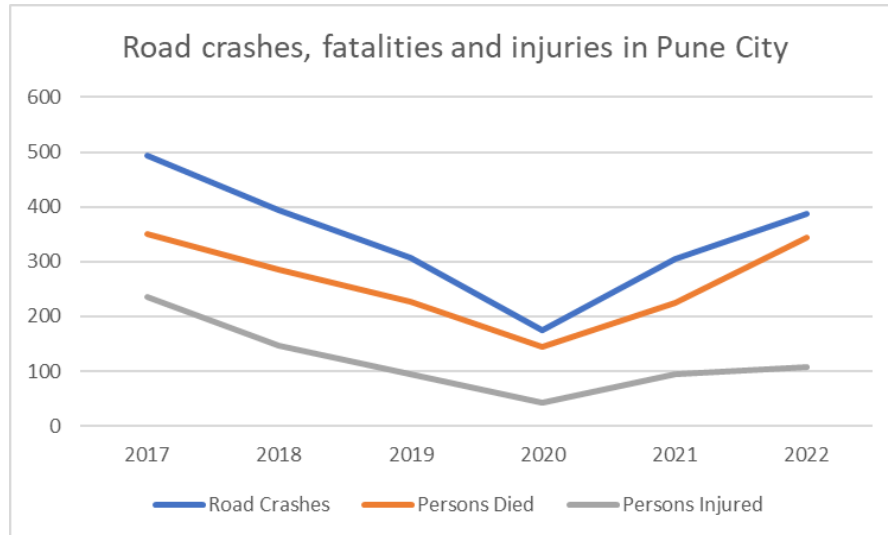


Figure c1: Road crashes, fatalities and injuries in Pune City from 2017 to 2022 (Source: ADSI reports, NCRB)

Table c1: Road crashes, fatalities and injuries in Pune City

| Year | Road Crashes | Persons Died | Persons Injured |
|-------------|--------------|--------------|-----------------|
| 2017 | 493 | 351 | 235 |
| 2018 | 394 | 286 | 146 |
| 2019 | 308 | 227 | 94 |
| 2020 | 174 | 145 | 42 |
| 2021 | 304 | 224 | 94 |
| 2022 | 387 | 343 | 107 |

Sources: Accidental Deaths & Suicides in India (ADSI) (Table 1A.2) 2017, 2018, 2019, 2020, 2021, 2022, National Crime Records Bureau (NCRB)

ii. Modes of mobility-wise fatalities and injuries in road crashes in Pune City

The chart and Table c2 show the road crash fatalities as per the modes of mobility in the Pune City in 2022, according to the NCRB report.

- The number of two wheeler users is highest with 58 per cent fatalities.
- Bicyclists and pedestrians are another vulnerable road user group involved in the road crash fatalities in Pune City.

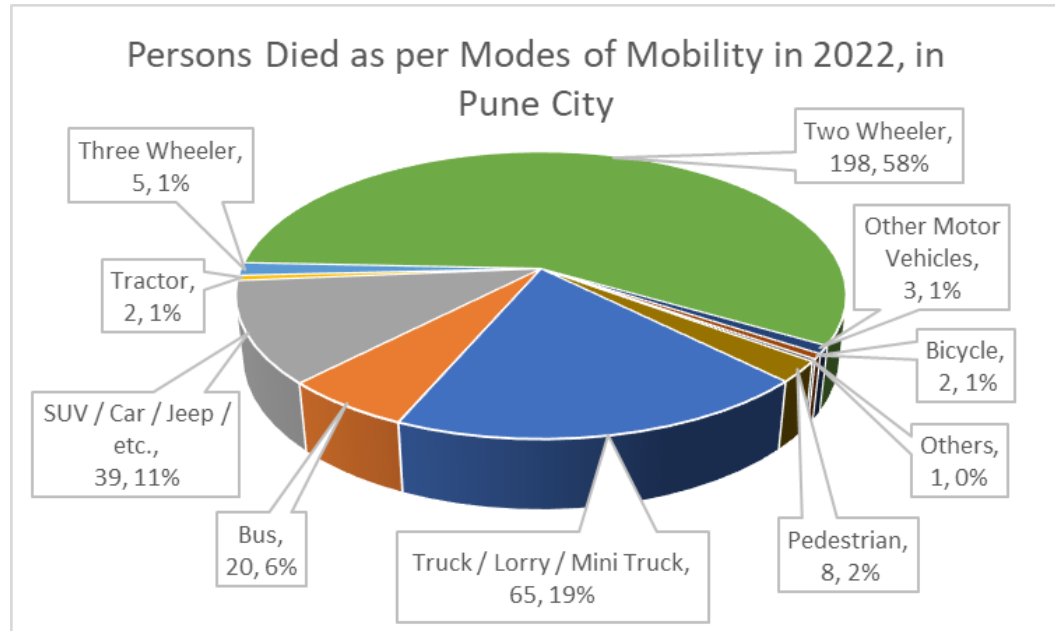


Figure c2: Persons died in road crash in Pune City in 2022 as per the modes of mobility (Source: ADSI reports, NCRB)

Table c2: Modes of mobility-wise number of persons died and injured in road crashed during 2022 in Pune City

| Mode | Persons Died | Persons Injured |
|---|--------------|-----------------|
| Truck / Lorry / Mini Truck | 65 | 29 |
| Bus | 20 | 4 |
| SUV / Car / Jeep / etc. | 39 | 30 |
| Tractor | 2 | 1 |
| Three Wheeler / Auto Rickshaw (Passenger & goods) | 5 | 1 |
| Two Wheeler | 198 | 38 |
| Other Motor Vehicles | 3 | 3 |
| Total (Motorized Transport) | 332 | 106 |
| Bicycle | 2 | 0 |
| Hand Drawn Vehicle / Cycle Rickshaw | 0 | 0 |

| | | |
|--|------------|------------|
| Animal Drawn Vehicle | 0 | 0 |
| Others | 1 | 0 |
| Pedestrian | 8 | 1 |
| Total (Non-Motorized Transport) | 11 | 1 |
| Grand Total | 343 | 107 |

Source: *Accidental Deaths & Suicides in India 2022 (Table 1A.4), NCRB*

iii. Road classification-wise crashes, fatalities and injuries in Pune City

The chart and Table c3 show the road crash fatalities as per the classification of roads, in Pune City for 2022.

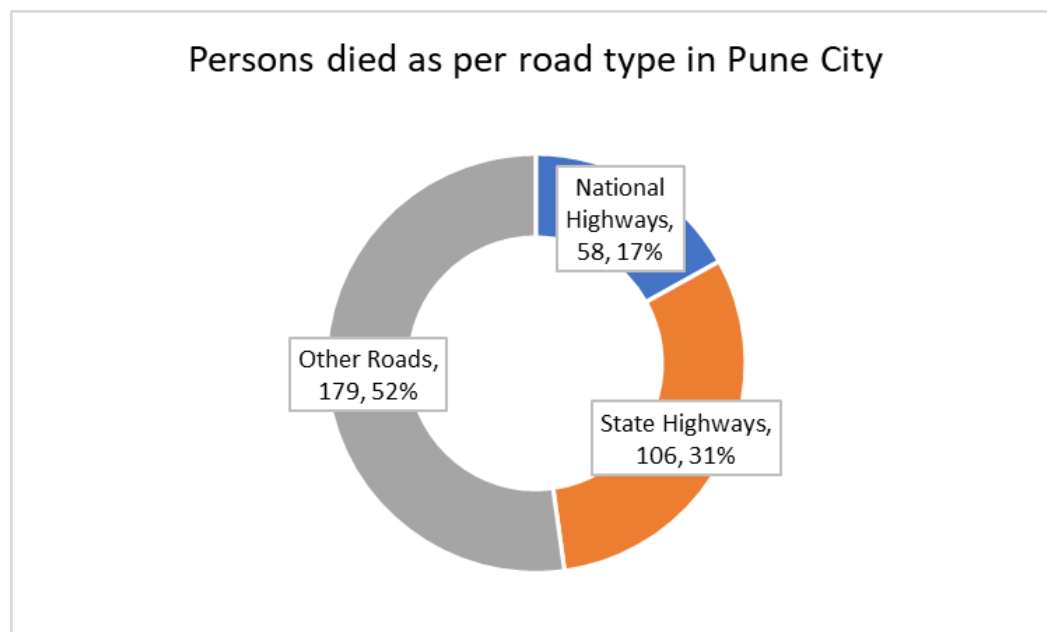


Figure c3: Number and proportion of road crash fatalities as per road types in Pune City (Source: ADSI reports, NCRB)

- National Highways have 17 per cent share whereas State Highways have 31 per cent share of road crash fatalities in Pune City for 2022.
- The National Highways and State Highways which constitute about 2 and 3 per cent of the road length, respectively, have in total about 48 per cent share of road crash fatalities in Pune City.
- The other roads comprising 95 per cent road length, including roads under Pune City, contribute 52 per cent of road crash fatalities in Pune City.

Table c3: Road crash, fatalities and injuries in Pune city for 2022, as per the road classification

| Road Type | Road Crashes | Persons Died | Persons Injured |
|-------------------|--------------|--------------|-----------------|
| National Highways | 60 | 58 | 4 |
| State Highways | 124 | 106 | 51 |
| Expressways | 0 | 0 | 0 |
| Other Roads | 203 | 179 | 52 |
| Total | 387 | 343 | 107 |

Source: Accidental Deaths & Suicides in India 2022 (Table 1A.7), NCRB

iv. Cause-wise road crashes, fatalities and injuries in Pune City

The chart and Table c4 show the number of persons who died in road crashes in Pune City in 2022 as per the causes of crash.

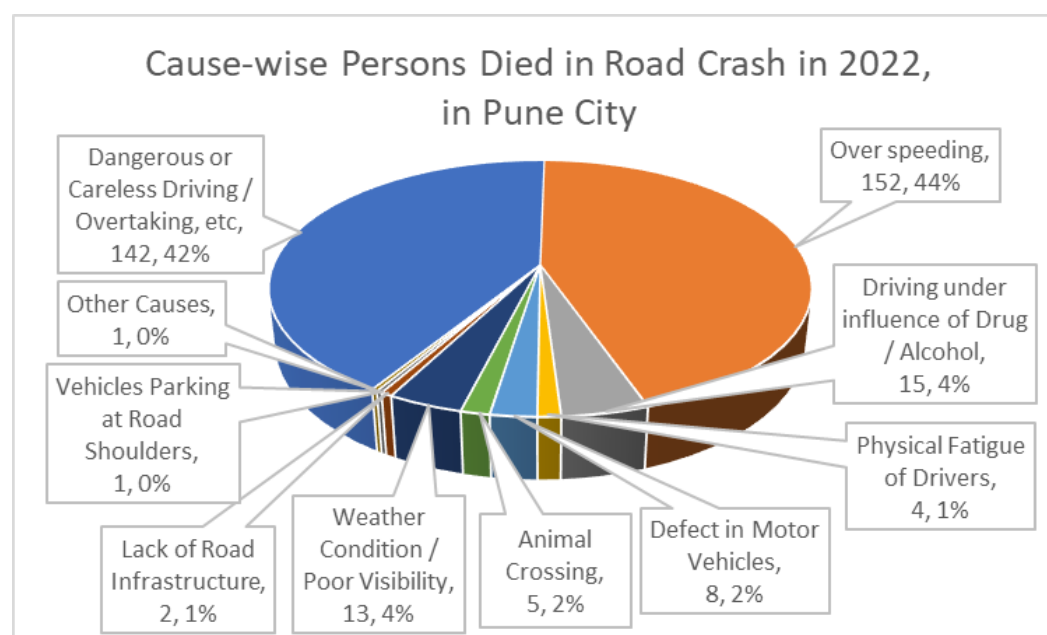


Figure c4: Cause-wise persons killed in road crash in Pune City in 2022
(Source: ADSI reports, NCRB)

- 'Speed' is the single most cause or risk factor for road crashes which resulted in 44 per cent of the fatalities in Pune City during 2022.
- Speed also caused the highest number of road crash injuries followed by dangerous driving.
- Dangerous driving which includes distracted driving, overtaking, wrong side driving, jumping signals, etc is the second highest which is responsible for 42 per cent fatalities due to road crash.

Table c4: Cause-wise road crashes, fatalities and injuries in Pune city, in 2022

| Cause | Road Crash | Persons Died | Persons Injured |
|--|------------|--------------|-----------------|
| Dangerous or Careless Driving / Overtaking, etc | 138 | 142 | 31 |
| Over speeding | 172 | 152 | 45 |
| Driving under influence of Drug / Alcohol | 22 | 15 | 10 |
| Physical Fatigue of Drivers | 6 | 4 | 2 |
| Defect in Mechanical condition of Motor Vehicles | 14 | 8 | 7 |
| Animal Crossing | 7 | 5 | 2 |
| Weather Condition / Poor Visibility | 17 | 13 | 5 |
| Lack of Road Infrastructure | 3 | 2 | 2 |
| Vehicles Parking at Road Shoulders | 2 | 1 | 1 |
| Cause Not Known | 3 | 0 | 0 |
| Other Causes | 3 | 1 | 2 |
| Total | 387 | 343 | 107 |

Source: Accidental Deaths & Suicides in India (ADSI) 2022 (Table 1A.9), National Crime Records Bureau (NCRB)

v. Road crash fatalities near Schools, Colleges and Educational Institutions in Pune City

The chart and Table c5 show the fatalities near Schools, Colleges and Educational Institutions and other places of occurrence due to road crashes in Pune City in 2022, as per ADSI report, NCRB.

- There were 33 fatalities near schools, colleges and educational institutions in Pune City in 2022.
- There were 42 fatalities at pedestrian crossings in Pune City.
- The data for the rural areas is low because only a small part of rural area comes under Pune City or municipal boundary.
- The report lacks age-disaggregated data for children and the places specific to only schools excluding the colleges and other educational institutions.
- This highlights the need to make School Zones and Pedestrian Crossings safer for children, caregivers, NMT users (pedestrians and cyclists) and other vulnerable road users in Pune City.

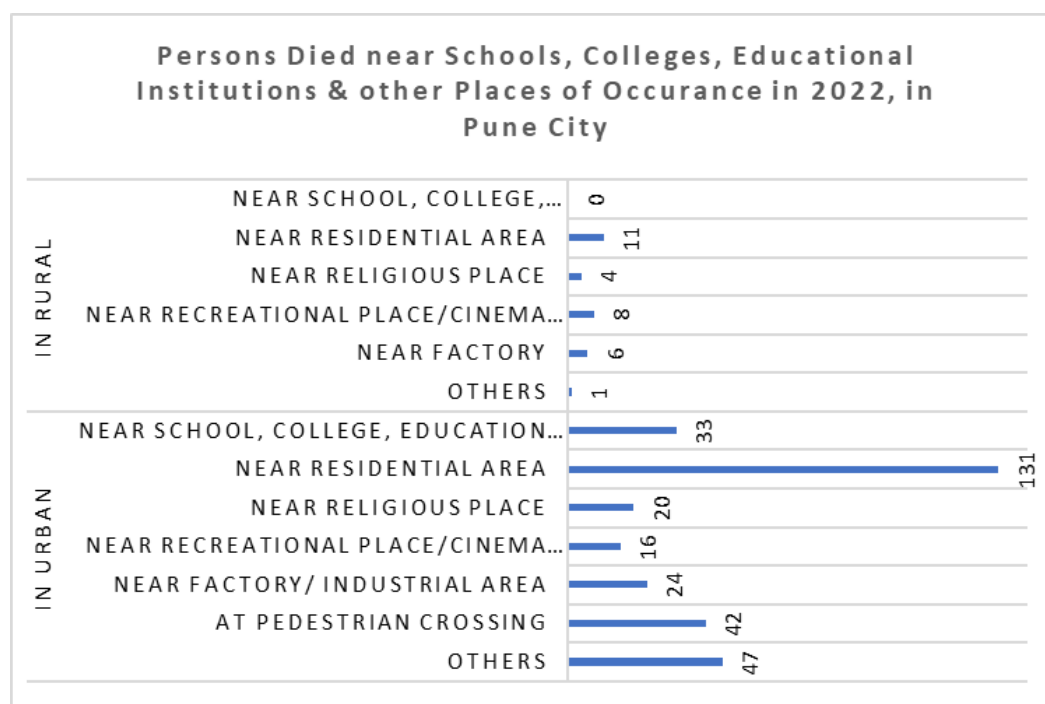


Figure c5: Road crash fatalities near schools, colleges and educational institutions and other places of occurrence in rural and urban areas of Pune City in 2022

(Source: ADSI reports, NCRB)

Table c5: Road crash fatalities near Schools, Colleges, Education Institutions and other places of occurrence in rural and urban areas of Pune City, in 2022

| Places of Occurrence | Persons Died | | | |
|---|--------------|----------|-------------|-----------|
| | Male | Female | Transgender | Total |
| In Rural | | | | |
| Near School, College, Educational Institution | 0 | 0 | 0 | 0 |
| Near Residential Area | 9 | 2 | 0 | 11 |
| Near Religious Place | 4 | 0 | 0 | 4 |
| Near Recreational Place/Cinema Hall | 8 | 0 | 0 | 8 |
| Near Factory | 5 | 1 | 0 | 6 |
| Others | 1 | 0 | 0 | 1 |
| Sub Total (Rural) | 27 | 3 | 0 | 30 |

| | | | | |
|---|------------|-----------|----------|------------|
| In Urban | | | | |
| Near School, College, Education Institution | 26 | 7 | 0 | 33 |
| Near Residential Area | 110 | 21 | 0 | 131 |
| Near Religious Place | 14 | 6 | 0 | 20 |
| Near Recreational Place/Cinema Hall | 13 | 3 | 0 | 16 |
| Near Factory/ Industrial area | 24 | 0 | 0 | 24 |
| At Pedestrian Crossing | 34 | 8 | 0 | 42 |
| Others | 38 | 9 | 0 | 47 |
| Sub Total (Urban) | 259 | 54 | 0 | 313 |
| Grand Total | 286 | 57 | 0 | 343 |

Source: *Accidental Deaths & Suicides in India (ADSI) 2022 (Table 1A.11), National Crime Records Bureau (NCRB)*

vi. Road crash and fatalities in Pune Rural

The Maharashtra Road Crash Report is published annually by the Accident Research Cell, Additional Director General of Police (Traffic), Highway Police, Maharashtra State. The report publishes the road crash data in Maharashtra according to the districts which are further categorized as per the jurisdictional areas under the offices of the Commissioner of Police or the Superintendent of Police. The Pune district falls under the jurisdictions of the Traffic Police departments for Pune Rural, Pune City, and Pimpri Chinchwad City. Thus, the report mentions the road crash data for Pune district sub-categorised as per Pune Rural, Pune City and Pimpri Chinchwad City.

Pune Rural is one of the jurisdiction areas that comes under the Pune district.

- In the Pune Rural, the total number of road crashes reported in 2022 was 1,634 of which 854 were fatal crashes.
- In 2022, the total numbers of road crash fatalities were 923 and injuries were 1,259 in the Pune Rural area.
- The fatal crashes occurred on different types of roads under Pune Rural in 2022 were - 16 on Expressway, 359 on National Highways, 185 on State Highways and 294 on other roads under Pune district.
- The total road crash fatalities in Pune Rural were 923 of which male accounted for 838 deaths and female accounted for 85 deaths.

- In 2022, the total fatalities in the age bracket of below 18 years was 50 and in the age group of 18 to 25 was 235, which is the highest.
- There was total 923 deaths in Pune Rural, out of which 458 (49 per cent) were two and three wheeler occupants, 120 (13 per cent) were pedestrians, 52 (6 per cent) were in others category, and 293 (32 per cent) were four wheeler occupants.

Table c6 (i) shows the age and gender-wise road crash fatalities in Pune Rural. Table c6 (ii) mentions the road crash deaths according to the road users' type, in Pune Rural during 2022.

Table c6 (i): Road crash fatalities according to age and gender in Pune Rural, in 2022

| Age (in year) | Male | Female | Total |
|---------------|------------|-----------|------------|
| 0-18 | 42 | 8 | 50 |
| 18-25 | 229 | 6 | 235 |
| 25-35 | 215 | 14 | 229 |
| 35-45 | 180 | 21 | 201 |
| 45-60 | 98 | 23 | 121 |
| 60+ | 44 | 7 | 51 |
| Unknown | 30 | 6 | 36 |
| Total | 838 | 85 | 923 |

Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

Table c6 (ii): Road crash fatalities as per road user's category in Pune Rural, in 2022

| Road user type | Persons Died | Proportion (in per cent) |
|---------------------------------|--------------|--------------------------|
| Pedestrian | 120 | 13 |
| Two and three wheeler occupants | 458 | 49 |
| Four wheeler occupants | 293 | 32 |
| Others category | 52 | 6 |
| Total | 923 | 100 |

Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

vii. Road crash and fatalities in Pune City

The next jurisdiction area that comes under Pune district is Pune City.

- In 2022, the total number of road crashes reported in Pune City were 817 of which 315 were fatal crashes.
- The total road crash fatalities in Pune City were 325 and injuries were 608, in 2022.
- The number of fatal crashes that occurred on different types of roads under Pune City were - 93 on National Highways, 31 on State Highways and 191 on other roads under the Pune City, in 2022.
- The total road crash fatalities in Pune City were 325 of which male accounted for 268 deaths and female accounted for 57 deaths, in 2022.
- The total number of fatalities in the age bracket of below 18 years was 14 and in the age group of 18 to 25 was 51, in Pune City during 2022.
- There was total 325 road crash deaths in Pune City, out of which 191 (59 per cent) were two and three wheeler occupants, 111 (34 per cent) were pedestrians, 6 (2 per cent) were cyclists, and 17 (5 per cent) were four wheeler occupants.

Table c7 (i) shows the age and gender-wise road crash fatalities in Pune City. Table c7 (ii) mentions the road crash deaths according to the road users' type, in Pune City during 2022.

Table c7 (i): Road crash fatalities as per age and gender in Pune City, in 2022

| Age (in year) | Male | Female | Total |
|---------------|------------|-----------|------------|
| 0-18 | 8 | 6 | 14 |
| 18-25 | 47 | 4 | 51 |
| 25-35 | 48 | 8 | 56 |
| 35-45 | 53 | 8 | 61 |
| 45-60 | 35 | 11 | 46 |
| 60+ | 30 | 14 | 44 |
| Unknown | 47 | 6 | 53 |
| Total | 268 | 57 | 325 |

Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

Table c7 (ii): Road crash fatalities as per road user's category in Pune City, in 2022

| Road user type | Persons Died | Proportion (in per cent) |
|----------------|--------------|--------------------------|
| Pedestrian | 111 | 34 |

| | | |
|---------------------------------|-----|-----|
| Two and three wheeler occupants | 191 | 59 |
| Four wheeler occupants | 17 | 5 |
| Cyclist | 6 | 2 |
| Total | 325 | 100 |

Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

viii. Road crash and fatalities in Pimpri Chinchwad City

Another jurisdiction area that comes under Pune district is Pimpri Chinchwad City.

- In 2022, the total number of road crashes reported in Pimpri Chinchwad City were 1,054 of which 355 were fatal crashes.
- The total number of road crash fatalities in Pimpri Chinchwad City were 371 and injuries reported were 809, in 2022.
- The number of fatal crashes that occurred on different types of roads under Pimpri Chinchwad City were - 6 on Expressway, 126 on National Highways, 0 on State Highways and 223 on other roads under Pimpri Chinchwad City, in 2022.
- The total road crash fatalities in Pimpri Chinchwad City were 317 of which male accounted for 326 deaths and female accounted for 45 deaths, in 2022.
- The total fatalities in the age bracket of below 18 years was 19 and in the age group of 18 to 25 was 73, in Pimpri Chinchwad City during 2022.
- There was a total of 371 deaths in Pimpri Chinchwad City, out of which 220 (59 per cent) were two and three wheeler occupants, 118 (32 per cent) were pedestrians, 6 (2 per cent) were cyclists, and 27 (7 per cent) were four wheeler occupants.

Table c8 (i) shows the age and gender-wise road crash fatalities in Pimpri Chinchwad City. Table c7 (ii) mentions the road crash deaths according to the road users' type, in Pimpri Chinchwad City during 2022.

Table c8 (i): Road crash fatalities as per age and gender in Pimpri Chinchwad City, in 2022

| Age (in year) | Male | Female | Total |
|---------------|------|--------|-------|
| 0-18 | 16 | 3 | 19 |
| 18-25 | 65 | 8 | 73 |
| 25-35 | 98 | 11 | 109 |
| 35-45 | 70 | 8 | 78 |

| | | | |
|--------------|------------|-----------|------------|
| 45-60 | 48 | 9 | 57 |
| 60+ | 26 | 6 | 32 |
| Unknown | 3 | 0 | 3 |
| Total | 326 | 45 | 371 |

Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

Table c8 (ii): Road crash fatalities as per road user's category in Pimpri Chinchwad City, in 2022

| Road user type | Persons Died | Proportion (in per cent) |
|---------------------------------|--------------|--------------------------|
| Pedestrian | 118 | 32 |
| Two and three wheeler occupants | 220 | 59 |
| Four wheeler occupants | 27 | 7 |
| Cyclist | 6 | 2 |
| Total | 371 | 100 |

Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

ix. Road crash data analysis for Pune City

Vital Strategies undertook road crash data analysis for Pune City and presented the same in the Pune District Road Safety Committee meeting in October 2023. The analysis has some more insights regarding child road safety.

- In 2022, the road crash fatalities in the age group of 0 to 9 years were 3 and in the age group of 10 to 19 years was 24. So, the fatalities in the child and adolescent group due to road crashes in Pune City was 27, out of the total of 278.
- The number of pedestrians killed in road crashes in Pune City in the age group of 0 to 9 years was 2 and in the age group of 10 to 19 was 3, making a total of 6 persons. The total pedestrian fatalities in Pune City were 86 in 2022.
- The number of two wheeler riders died in road crashes in Pune City in the age group of 0 to 9 years was 1 and in the age group of 10 to 19 was 18, which adds up to 19. The total number of two wheeler riders fatalities in Pune City was 141 for 2022.
- A large number of two wheeler fatalities (39 out of 141) did not have age data mentioned.
- Table c9 (iv) shows the road crash victims by road users type and at-fault vehicles for Pune City in 2022. The number of drivers at-fault in fatal road crashes in the age group of 1 to 14 years is 1 and in the age group of 15 to 20 years is 8, in Pune City, in 2022.

Table c9 (i) to c9 (iii) below shows the data of road crash fatalities, fatalities of pedestrians, two wheeler users for Pune City by age and gender in 2022. Table c9 (iv) and c9 (v) shows the matrix of road crash victims by road users type and at-fault vehicles and age-disaggregated data of at-fault drivers in fatal road crashes in Pune city for 2022.

Table c9 (i): Road crash fatalities by age and gender in Pune City, in 2022

| Age (in year) | Male | Female | Total |
|----------------------|-------------|---------------|--------------|
| 0 to 9 | 1 | 2 | 3 |
| 10 to 19 | 20 | 4 | 24 |
| 20 to 29 | 48 | 8 | 56 |
| 30 to 39 | 39 | 6 | 45 |
| 40 to 49 | 34 | 6 | 40 |
| 50 to 59 | 21 | 7 | 28 |
| 60 to 69 | 16 | 5 | 21 |
| 70 to 79 | 6 | 3 | 9 |
| 80 to 89 | 4 | 0 | 4 |
| Age not mentioned | 43 | 5 | 48 |
| Total | 232 | 46 | 278 |

Source: Data presented by Vital Strategies at DRSC meeting, in Oct 2023

Table c9 (ii): Pedestrian fatalities by age and gender in Pune City, in 2022

| Age (in year) | Male | Female | Total |
|----------------------|-------------|---------------|--------------|
| 0 to 9 | 1 | 1 | 2 |
| 10 to 19 | 4 | 0 | 4 |
| 20 to 29 | 8 | 0 | 8 |
| 30 to 39 | 13 | 1 | 14 |
| 40 to 49 | 13 | 3 | 16 |
| 50 to 59 | 10 | 3 | 13 |
| 60 to 69 | 12 | 4 | 16 |
| 70 to 79 | 5 | 2 | 7 |

| | | | |
|-------------------|-----------|-----------|-----------|
| 80 to 89 | - | - | - |
| Age not mentioned | 4 | 2 | 6 |
| Total | 70 | 16 | 86 |

Source: Data presented by Vital Strategies at DRSC meeting, in Oct 2023

Table c9 (iii): Two wheeler users fatalities by age and gender in Pune City, in 2022

| Age (in year) | Male | Female | Total |
|----------------------|-------------|---------------|--------------|
| 0 to 9 | 0 | 1 | 1 |
| 10 to 19 | 15 | 3 | 18 |
| 20 to 29 | 36 | 8 | 44 |
| 30 to 39 | 27 | 5 | 32 |
| 40 to 49 | 19 | 4 | 23 |
| 50 to 59 | 7 | 4 | 11 |
| 60 to 69 | 2 | 1 | 3 |
| 70 to 79 | 4 | 1 | 5 |
| 80 to 89 | - | - | - |
| Age not mentioned | 35 | 4 | 39 |
| Total | 110 | 31 | 141 |

Source: Data presented by Vital Strategies at DRSC meeting, in Oct 2023

Table c9 (iv): Road crash victims and at-fault vehicles for Pune City, in 2022

| Road Crash Victims / At-fault Vehicle | Pedestrian | Bicyclist | Heavy Vehicle, Truck & Bus | Light Motor Vehicle | Two wheeler | Others / Single Vehicle Crash | Total Fatality by Mode |
|--|-------------------|------------------|---------------------------------------|----------------------------|--------------------|--------------------------------------|-------------------------------|
| Motorcycle | 15 | 0 | 3 | 4 | 8 | 33 | 63 |
| Auto Rickshaw | 3 | 0 | 1 | 0 | 2 | 0 | 6 |
| Car, Jeep, Taxi, Van, SUV | 13 | 1 | 0 | 2 | 15 | 0 | 31 |
| Moderate Heavy Vehicle | 11 | 2 | 2 | 1 | 37 | 1 | 54 |

| | | | | | | | |
|---|-----------|----------|----------|-----------|------------|-----------|------------|
| Bus | 12 | 0 | 1 | 0 | 9 | 1 | 23 |
| Heavy Articulated Vehicle, Truck | 4 | 1 | 1 | 2 | 23 | 2 | 33 |
| Unknown | 24 | 1 | 1 | 1 | 22 | 1 | 50 |
| Total Road Users Fatalities | 82 | 5 | 9 | 10 | 116 | 38 | 260 |

Source: Data presented by Vital Strategies at DRSC meeting, in Oct 2023

Table c9 (v): At-fault drivers in fatal road crashes in Pune City, in 2022

| Age (in years) | Number of drivers at fault in fatal crashes |
|-----------------------|--|
| 1-14 | 1 |
| 15-20 | 8 |
| 21-25 | 19 |
| 25-30 | 22 |
| 31-35 | 16 |
| 35-40 | 12 |
| 41-45 | 9 |
| 46-50 | 6 |
| 51-55 | 4 |
| 56-60 | 2 |
| 60+ | 1 |
| Total | 100 |

Source: Data presented by Vital Strategies at DRSC meeting, in Oct 2023

d. Black Spot

The black spots are defined as the short stretch of road of about 500 m length where five road crashes have happened involving fatalities or serious injuries or ten fatalities took place during the past three calendar years. Though not a proactive approach, it identifies such stretches to rectify the factors or faults in the road design and infrastructure to eliminate the risk factors responsible for causing road crashes, fatalities or injuries.

The road agencies and traffic police identify such black spots based on the data of road crash fatalities and injuries for the past three years and share them with concerned departments for rectification and elimination of risk factors in the road design and infrastructure. Table d1 shares the number of black spots identified as per the road classification in Pune City, Pimpri Chinchwad City and Pune Rural jurisdiction areas of Pune district, in 2022.

Table d1: Number of black spots identified according to road classification in Pune District, in 2022

| Pune District - CP / SP Jurisdiction Areas | National Highways | State Highways | Major District Road | Other Road | Expressway | Total |
|---|--------------------------|-----------------------|----------------------------|-------------------|-------------------|--------------|
| Pune City | 13 | 6 | 0 | 14 | 0 | 33 |
| Pimpri Chinchwad City | 17 | 0 | 0 | 2 | 0 | 19 |
| Pune Rural | 9 | 0 | 0 | 2 | 0 | 11 |

Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

i. List of Road Crash Black-Spots identified in Pune City (PMC)

6748

जा.क्र.पोउआ/वाह/ब्लॅक स्पॉट/ 12023
अपर पोलीस आयुक्त वाहतूक कार्यालय.
पुणे शहर, दिनांक - १८/०९/२०२३
20-9-23

प्रशासक व आयुक्त
पुणे महानगरपालिका

कुं. (प्र) / (५३)

प्रति,
मा. आयुक्त,
पुणे महानगरपालिका, पुणे

विषय - ब्लॅक स्पॉटमध्ये सुधारणा करणे बाबत.

संदर्भ - १) जा क्र अपोमसं(वा)/४५/नियोजन/ब्लॅक स्पॉट(सन २०२०-२०२२)/२९७०/२०२३ मुंबई
दिनांक २३/०८/२०२३ अन्वये

-----oo-----

उपरोक्त विषय व संदर्भान्वये कळविण्यात येते की, पुणे शहर पोलीस आयुक्तालयाच्या हद्दीत सन २०२० ते सन २०२२ या कालावधीत ५०० मीटर क्षेत्रामध्ये मागील सलग ३ वर्षांमध्ये एकूण ५ प्राणांतिक किंवा गंभीर अपघात अथवा एकूण १० व्यक्ती (१ किंवा एकापेक्षा जास्त अपघात मिळून) मयत झाले असतील अशा २१ अपघात ठिकाणांची वाहतूक शाखा पुणे शहर कडून नव्याने निश्चिती केली आहे.त्याची यादी यासोबत जोडली आहे.

तरी आपले विभागाशी संबंधित ब्लॅकस्पॉट ठिकाणांची पाहणी होऊन त्या ठिकाणी अपघात होऊ नये याकरीता सदर ठिकाणी सुधारणा/उपाययोजना करण्यात येऊन, आपले विभागामार्फत ब्लॅक स्पॉटच्या ठिकाणी केलेल्या सुधारणा/उपाययोजना बाबतचा अहवाल इकडील कार्यालयास पाठविण्यास विनंती आहे.

सोबत - ब्लॅक स्पॉटची यादी जोडलेली आहे.

(विजयकुमार मगर)
पोलीस उप- आयुक्त, वाहतूक
पुणे शहर

महानगरपालिका आयुक्त कार्यालय
पुणे महानगरपालिका
आवक क्र. 11630 20 SEP 2023
जावक क्र.

सन-२०२२ पुणे शहर पोलीस आयुक्त, कार्यक्षेत्रातील ब्लॉक स्पॉट

| अ.क्र | पोलीस स्टेशन | ब्लॉक स्पॉटचे ठिकाण | एकुण अपघात |
|-------|-----------------|----------------------|------------|
| १ | भारती विद्यापीठ | कात्रज चौक | १० |
| २ | भारती विद्यापीठ | दरी पुल | ०९ |
| ३ | भारती विद्यापीठ | नविन कात्रज बोगदा | १० |
| ४ | वारजे माळवाडी | माई मंगेशकर हॉस्पिटल | १२ |
| ५ | वारजे माळवाडी | मुठा नदी पुल | ७ |
| ६ | वारजे माळवाडी | डुक्कर खिंड | १० |
| ७ | सिंहगड रोड | नवले पुल | ३३ |
| ८ | सिंहगड रोड | सेल्फी पॉईंट | १३ |
| ९ | हडपसर | आय बी एम कंपनी | ०८ |
| १० | हडपसर | रविदर्शन चौक | १९ |
| ११ | लोणी काळभोर | कदम वाक वस्ती | ०८ |
| १२ | लोणी काळभोर | लोणी स्टेशन चौक | ०७ |
| १३ | लोणी काळभोर | थेऊर फाटा चौक | ०७ |
| १४ | विमानतळ | टाटा गार्डरूम चौक | ०८ |
| १५ | चंदननगर | खराडी बायपास चौक | १८ |
| १६ | चंदननगर | रिलायंस मार्ट | ०९ |
| १७ | विमानतळ | खराडी जकात नाका | १० |
| १८ | विमानतळ | विमाननगर चौक | १० |
| १९ | विमानतळ | ५०९ चौक | ०८ |
| २० | मुंडवा | मुंडवा रेल्वे ब्रीज | ०६ |
| २१ | लोणी काळभोर | पालखी विसावा वडकी | २४ |

| Name of the Location/Place | Starting from (km) | Ending to (km) | 2019 | 2020 | 2021 | Total of all Three Year = 5 | 2019 | 2020 | 2021 | Total of all Three Year = 5 |
|---|--------------------|----------------|------|------|------|-----------------------------|------|------|------|-----------------------------|
| Pune City (13) | | | | | | | | | | |
| Vaidyewadi Chowk (2019) | 00 mtr | 500 mtr | 6 | 7 | 2 | 15 | 2 | 1 | 0 | 3 |
| Fursingi Fata (2019) | 00 mtr | 500 mtr | 5 | 1 | 3 | 9 | 3 | 1 | 0 | 4 |
| Fursingi Railway Bridge, Saswad Road (2015) | 00 mtr | 500 mtr | 7 | 1 | 3 | 11 | 4 | 0 | 1 | 5 |
| IBM Company Saswad Road | 00 mtr | 500 mtr | 0 | 3 | 4 | 7 | 0 | 1 | 0 | 1 |
| Dari Pull (2015) (2019) | 00 mtr | 500 mtr | 3 | 4 | 4 | 11 | 1 | 4 | 3 | 8 |
| Mai Mangeshkar Hospital (2015) | 100 mtr | 500 mtr | 6 | 5 | 3 | 14 | 4 | 5 | 3 | 12 |
| Mutha River Bridge (2015) | 50 mtr | 100 mtr | 3 | 1 | 3 | 7 | 3 | 1 | 3 | 7 |
| Dukkar Khind (2015) | 100 mtr | 500 mtr | 5 | 2 | 2 | 9 | 2 | 1 | 2 | 5 |
| Navale Bridge (2020) | 00 mtr | 500 mtr | 5 | 13 | 12 | 30 | 2 | 8 | 7 | 17 |
| Bhumkar Pull (2020) | 00 mtr | 500 mtr | 4 | 3 | 8 | 15 | 0 | 4 | 5 | 9 |
| Katraj Chowk Satara Road (2015) | 00 mtr | 500 mtr | 12 | 4 | 0 | 16 | 0 | 2 | 0 | 8 |
| Dari Pool (2015) (2019) | 00 mtr | 500 mtr | 3 | 4 | 3 | 10 | 3 | 3 | 2 | 8 |
| New Katraj Tunnel (2019) | 00 mtr | 500 mtr | 5 | 1 | 1 | 7 | 3 | 0 | 0 | 3 |
| Pimpri Chinchwad (17) | | | | | | | | | | |
| Punawale (Mumbai- Benglore Highway) | 300M | 250M | 3 | 2 | 1 | 6 | 2 | 2 | 1 | 5 |
| Wakad bridge (Mumbai- Benglore Highway) | 200M | 300M | 10 | 7 | 7 | 24 | 6 | 4 | 5 | 15 |
| | 300M | 350M | 8 | 6 | 9 | 23 | 5 | 5 | 5 | 15 |

| Black Spot Series - 3 Report | | | | | | | | | | | |
|--|------------------------------------|--------------------|----------------|--------------------|------|------|-----------------------------|----------------------|------|------|------------------------------|
| Maharashtra State (State Highway - SH) | | | | | | | | | | | |
| Sl. No. | Name of the Location/Place | Limits of High | | Number of Accident | | | | Number of Fatalities | | | Total of all Three Year = 10 |
| | | Starting from (km) | Ending to (km) | 2019 | 2020 | 2021 | Total of all Three Year = 5 | 2019 | 2020 | 2021 | |
| SH | Vimari Nagar Chowk | | | 4 | 0 | 2 | 6 | 2 | 0 | 0 | 2 |
| SH | Kharadi Darga Chowk | | | 2 | 0 | 4 | 6 | 0 | 0 | 2 | 2 |
| SH | Ramwadi Jakat Naka | | | 2 | 0 | 6 | 8 | 1 | 0 | 2 | 3 |
| SH | Tata Guard Room (2019) | 00 mtr | 500 mtr | 2 | 2 | 2 | 6 | 1 | 0 | 2 | 3 |
| SH | Kharadi Bypass Chowk (2015) (2019) | 00 mtr | 300 mtr | 3 | 2 | 8 | 13 | 1 | 1 | 6 | 8 |
| SH | Kharadi Jakat Naka | 00 mtr | 200 mtr | 1 | 1 | 5 | 7 | 1 | 1 | 3 | 5 |
| Nil | | | | | | | | | | | |
| Nil | | | | | | | | | | | |

| NH/SH/MDR/OR No. | Name of the Location/Place | Limits of High | | Number of Accident | | | | Number of Fatalities | | | | | |
|------------------|----------------------------|--|----------------|--------------------|------|------|-----------------------------|----------------------|------|------|------------------------------|----|----|
| | | Starting from (km) | Ending to (km) | 2019 | 2020 | 2021 | Total of all Three Year = 5 | 2019 | 2020 | 2021 | Total of all Three Year = 10 | | |
| Other Road | OR | Hemant Karkare Chowk (Mahatma Gandhi Udyan) | | | | 3 | 1 | 1 | 5 | 3 | 1 | 0 | 4 |
| Other Road | OR | Council Hall Chowk | | | | 2 | 2 | 1 | 5 | 0 | 0 | 0 | 0 |
| Other Road | OR | Mundhawa Chowk | | | | 3 | 4 | 2 | 9 | 1 | 0 | 1 | 2 |
| Other Road | OR | B T kawade Road Railway Bridge | | | | 4 | 3 | 1 | 8 | 1 | 1 | 1 | 3 |
| Other Road | OR | 00 mtr | 500 mtr | 2 | 4 | 1 | 7 | 0 | 1 | 0 | 1 | 1 | 1 |
| Other Road | OR | 00 mtr | 300 mtr | 4 | 0 | 1 | 5 | 3 | 0 | 1 | 1 | 4 | 4 |
| Other Road | OR | 00 mtr | 500 mtr | 2 | 2 | 1 | 5 | 0 | 2 | 0 | 0 | 2 | 2 |
| Other Road | OR | 00 mtr | 500 mtr | 1 | 4 | 1 | 6 | 0 | 3 | 1 | 1 | 4 | 4 |
| Other Road | OR | 100 mtr | 500 mtr | 3 | 2 | 0 | 5 | 1 | 1 | 0 | 0 | 2 | 2 |
| Other Road | OR | - | - | 4 | 1 | 1 | 6 | 0 | 0 | 1 | 1 | 1 | 1 |
| Other Road | OR | - | - | 4 | 2 | 1 | 7 | 0 | 0 | 1 | 1 | 1 | 1 |
| Other Road | OR | 00 mtr | 500 mtr | 4 | 2 | 13 | 19 | 3 | 1 | 4 | 4 | 8 | 8 |
| Other Road | OR | 00 mtr | 300 mtr | 3 | 0 | 2 | 5 | 2 | 0 | 1 | 1 | 3 | 3 |
| Other Road | OR | 00 mtr | 200 mtr | 1 | 1 | 5 | 7 | 0 | 1 | 3 | 4 | 4 | 4 |
| Other Road | OR | 400M | 500M | 4 | 1 | 1 | 6 | 3 | 0 | 0 | 0 | 3 | 3 |
| Other Road | OR | 250M | 400M | 3 | 3 | 2 | 8 | 4 | 0 | 0 | 0 | 4 | 4 |
| Other Road | OR | | | 11 | 5 | 14 | 30 | 7 | 10 | 5 | 22 | 22 | 22 |
| Other Road | OR | | | 2 | 3 | 2 | 7 | 1 | 1 | 1 | 3 | 3 | 3 |

ii. List of Road Crash Black-Spots identified in Pimpri Chinchwad City (PCMC)

| BLACK SPOT | | | | | | | | | | | | | | | | |
|--|---------------------------------|------------------------|-------------|--|-------------------------|--------|--------------------|------|------|---------------------------|----------------------|------|------|----------------------------|-----------|-----------|
| District name-Pimpri-chinchwad For the Year-2020 to 2022 | | | | | | | | | | | | | | | | |
| Sr.No. | Name of District (Traffic Unit) | Name of Jurisdictional | NH/SH/MDR / | Name of the Location | Limits of High Accident | | Number of Accident | | | | Number of Fatalities | | | | Longitude | Latitude |
| | | | | | Starting from(km) | Ending | 2020 | 2021 | 2022 | Total of all three year=5 | 2020 | 2021 | 2022 | Total of all three Year=10 | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 1 | Chakan | Chakan P.S. | NH-60 | chimbli phata | 200M | 300M | 2 | 3 | 2 | 7 | 1 | 2 | 1 | 4 | 18.810242 | 73.087375 |
| 2 | Chakan | Chakan P.S. | NH-60 | Kuruli Phata | 100M | 350M | 6 | 3 | 4 | 13 | 4 | 1 | 4 | 9 | 18.715375 | 73.848288 |
| 3 | Chakan | Chakan P.S. | NH-60 | Chakan- Talegaon Chowk | 150M | 500M | 8 | 13 | 8 | 29 | 3 | 4 | 4 | 11 | 18.755603 | 73.858913 |
| 4 | Bhosari | Bhosari P.S. | NH-60 | Borade Vasti | 250M | 400M | 3 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 18.661449 | 73.849271 |
| 5 | Dehuraod | Talegaon Dabhadre P.S. | NH-48 | Somatane Fata | 400M | 300M | 5 | 0 | 1 | 6 | 3 | 0 | 1 | 4 | 18.402867 | 73.687597 |
| 6 | Wakad | Hinjwadi P.S. | NH-48 | Punawale (Mumbai-Benglore Highway) | 300M | 250M | 1 | 1 | 7 | 9 | 1 | 1 | 6 | 8 | 18.644608 | 73.736746 |
| 7 | Hinjwadi | Hinjwadi P.S. | NH-48 | Wakad bridge (Mumbai-Benglore Highway) | 200M | 300M | 7 | 4 | 10 | 21 | 5 | 1 | 6 | 12 | 18.594193 | 73.730166 |
| 8 | Bavdhan | Hinjwadi P.S. | NH-48 | Bavdhan (Mumbai-Benglore Highway) | 300M | 350M | 9 | 11 | 8 | 28 | 5 | 8 | 4 | 17 | 18.507409 | 73.786634 |
| 9 | Chakan | Chakan P.S. | NH-548D | Sabalewadi | 200M | 450M | 2 | 1 | 2 | 5 | 0 | 1 | 1 | 2 | 18.723324 | 74.023023 |
| 10 | Mhalunge | mhalunge P.S. | NH-548D | Khalumbre | 150M | 300M | 2 | 2 | 3 | 7 | 0 | 2 | 2 | 4 | 18.742202 | 73.774819 |

3. Child and Adolescent Road Safety in Legislation

The road safety legislation in India comes under the central Motor Vehicles Act (MVA), 1988 and the amendment in 2019 through the Motor Vehicles (Amendment) Act (MVAA), 2019. The Act is further detailed in the sub-legislation the Central Motor Vehicles Rules (CMVR), 1989 and amendments thereunder. The Ministry of Road Transport and Highways (MoRTH), Government of India is the nodal ministry for the implementation of the Motor Vehicles Act and CMVR.

The Maharashtra Motor Vehicles Rules is the state sub-legislation for the implementation and enforcement of the Motor Vehicles Act in the State. The state Motor Vehicles Rules draws power from the central Motor Vehicles Act, 1988, the Motor Vehicles (Amendment) Act, 2019 and the Central Motor Vehicles Rules, 1989.

a. National Legislation

i. Safe Child and Adolescent Users

| Legislation | Provisions for Road Safety |
|---|--|
| The Motor Vehicles Act (MVA), 1988 and the Motor Vehicles (Amendment) Act (MVAA), 2019, under Section 129, provides for wearing of protective headgear / helmet, | <p>Specifies for use of helmet,</p> <ul style="list-style-type: none"> • Every person, above 4 years of age, driving or riding or being carried on a two wheeler of any class or description shall wear a helmet, • Helmet must conform to BIS Standards, • Straps of the helmet must be fastened properly, • Penalty for non-compliance with this rule is a fine of Rs 1000 and suspension of licence for 3 months. |
| The Central Motor Vehicles Rules (CMVR), 1989, under Rule 138 (7) A (ii), (<i>drawing the power from Section 129 and Section 137 of MVA / MVAA</i>), provides for helmet for child below 4 years riding on a two wheeler, | <p>Specifies for use of child helmet,</p> <ul style="list-style-type: none"> • A child between the age of 9 months and 4 years carried on a two-wheeler must wear his own crash helmet, • It is the responsibility of the two-wheeler driver to follow this rule and secure the child, • The helmet should fit the head of the child with the straps fastened properly, • The child should wear a standard crash helmet. |
| MVA 1988 / MVAA 2019, under Section 194B <i>Clause (2)</i> , provides for | <p>Specifies for use of child restraint system (CRS),</p> <ul style="list-style-type: none"> • A child below 14 years of age carried on a four-wheeler should be secured by a safety belt or a child restraint system, |

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| <p>use of safety belts and seating of children,</p> | <ul style="list-style-type: none"> • The driver of the motor vehicle is responsible to comply with this rule, • There is a fine of Rs 1000 for not complying with this act. <p>Experts advise using a child restraint system, a child car seat or a booster-seat for a young child below 145 cm height, as seat belts are designed for persons with height more than 145 cm.</p> <p>Although not mentioned in the act, a child should not be carried in the lap of an adult, as it is unsafe for the child. They should not even be allowed to travel sitting in the front seats of a car, an inflating airbag may harm them. Children below 12 years should be carried on rear seats of a four wheeler.</p> |
| <p>MVA 1988, under Section 3, provides for necessity for driving licence,</p> | <p>Specifies necessity for driving licence,</p> <ul style="list-style-type: none"> • No person shall drive a motor vehicle unless he holds an effective driving licence issued to him authorising him to drive that specific class of vehicle, |
| <p>MVA 1988, under Section 4, provides for age limit for driving of motor vehicles,</p> | <p>Specifies age limit for driving,</p> <ul style="list-style-type: none"> • No person under the age of 18 years shall drive a motor vehicle, • A two wheeler with engine capacity not exceeding 50 cc or electric bike of top speed not more than 25 kmph may be driven by a person after attaining the age of 16 years. • However, they must have a valid driving license for the same. |
| <p>MVA 1988, under Section 128, provides for safety measures for drivers and pillion riders,</p> | <p>Specifies sitting capacity for two-wheeler,</p> <ul style="list-style-type: none"> • It is illegal for more than two people including driver and pillion rider to ride on a two-wheeler, • It is illegal to carry the pillion rider or passenger other than sitting on a proper seat securely fixed to the two-wheeler behind the driver's seat, without appropriate safety measures, • Penalty for the same is a fine of Rs 1000 and suspension of license for 3 months. |
| <p>MVA 1988 and MVAA 2019, under Section 199A, provides for offenses by juveniles,</p> | <p>Specifies for offense by a juvenile,</p> <ul style="list-style-type: none"> • If an offense under MVA committed by a juvenile, the guardian of such juvenile or the owner of the motor vehicle shall be deemed to be guilty of the |

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| | <p>contravention and shall be liable to be proceeded against and punished accordingly,</p> <ul style="list-style-type: none"> • In addition to the penalty, such guardian or owner shall be punishable with an imprisonment for a term which may extend to 3 years and with a fine of Rs 25,000. |
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ii. Safe Roads and Mobility for Children and Adolescents

| Legislation | Provisions for Road Safety |
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| MVA 1988 and MVAA 2019, under Section 198A, provides for compliance of standards for road design, construction and maintenance, | <p>Specifies to comply with safety standards in road design, construction and maintenance,</p> <ul style="list-style-type: none"> • Fixes the responsibility to comply with the safety standards for road design, construction and maintenance, • An authority, contractor, consultant or concessionaire is responsible for design, construction or maintenance of safety standards of the road and shall follow such design, construction and maintenance standards, as prescribed by the Central Government. |
| The Indian Road Congress (IRC), under IRC: 103 2012, on Guidelines for Pedestrian Facilities, provides standards for school travel safety, | <p>Specifies Guidelines for Pedestrian Facilities on roads,</p> <ul style="list-style-type: none"> • Suggests Standards for School Zones, • Schools should design 'Safe Routes to School,' • Placement of marshals or traffic wardens for safety of students at entrance, while crossing, boarding vehicles, etc, • Drop-off Zones designated for school transport vehicles. <p>Section 6.15, pages 54-56, IRC: 103 2012, on Guidelines for Pedestrian Facilities, Available at: https://law.resource.org/pub/in/bis/irc/irc.gov.in.103.2012.pdf</p> |
| The Code of Practice (Part 4) on Signages, by Ministry of Urban Development (MoUD) and IRC: 67-2012 (2001), provides for School Zone Signages, | <p>Specifies signs to be displayed for,</p> <ul style="list-style-type: none"> • School Zones, and • Playgrounds. |

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| <p>IRC SP: 32, on Road Safety Manual for Schools, provides standards for School Zones,</p> | <p>Specifies standards and guidelines for School Zones, Draft to be notified.</p> <p>Available at: http://www.irc.nic.in/admnis/admin/showimg.aspx?ID=398.</p> |
| <p>Road Safety Action Plan for Road Engineering Interventions on National Highways, directive by the Road Safety Cell, MoRTH, provides for road safety audit of highways and road projects,</p> | <p>Directs for road safety audits,</p> <ul style="list-style-type: none"> ● Road Safety Audits (RSA) to be done for the highways and other roads where development work is in process, ● Road Safety Audits to be part of road development projects as a prerequisite. |
| <p>Action plan to undertake Pedestrian Count Study and reduce pedestrian deaths, office memorandum by Road Safety Engineering Zone, MoRTH, provides for pedestrian safety,</p> | <p>Directs for Pedestrian Counts Study and taking safety measures,</p> <ul style="list-style-type: none"> ● Implement action plan to undertake Pedestrian Counts Study to reduce pedestrian fatalities on National Highways, ● Develop pedestrian safety facilities and its proper implementation at all stages of road project including design, construction and O&M, for safety of road users, while planning and designing of pedestrian facilities with objectives of continuity, comfort, and safety of pedestrians for reducing pedestrian fatalities, while ensuring obstruction free mobility of traffic, ● Pedestrian facilities to be planned in an integrated manner, reduce conflict with vehicles, for ensuring pedestrian safety, ● Implement sidewalks, guardrails, pedestrian crossings, street lighting, FOB or underpass, elevator or lift, as per IRC 103:2012, IRC 35, IRC 67, and manual for 2/4/6 laning, based on the Pedestrian Counts Survey. |
| <p>Guidelines for Signages on Expressway and National Highways, directive by Road Safety Cell, MoRTH, provides for signages,</p> | <p>Directs for signages on Expressways and National Highways,</p> <ul style="list-style-type: none"> ● Road signages and markings to ensure safety of all road users, ● Signages to provide guidance, warnings, notice and regulatory information to road users, |

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| | <ul style="list-style-type: none"> • Use designated formats to ensure comfortable, safe, uniform and effective operation, as per relevant IRC Codes and Guidelines. |
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iii. Safe Speed for Children

| Legislation | Provisions for Road Safety |
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| The Motor Vehicles (Driving) Regulations, 2017 (Clause 16(5) on Speed), notified by MoRTH under Section 118 of MVA 1988, provide regulation for driving motor vehicles, | <p>Specifies speed limit for School Zone,</p> <ul style="list-style-type: none"> • The speed limit for driving while passing by a school or a hospital or a construction site is 25 kmph or such lower speed as may be specified by posting on road signage wherever indicated by signage, or on roads without footpaths and soft shoulders where pedestrians use a part of the carriageway to walk, • Vehicles shall not overtake in School Zones, wherever indicated by signage, or on roads without footpaths where pedestrians use part of it to walk. |
| CMVR 1989, under Rule 138 (7) (iii), (<i>drawing the power from Clause (aa), Section 137 of MVA / MVAA</i>), provide measures for safety of child below 4 years riding on a two wheeler, | <p>Specifies speed limit for two wheelers carrying a child upto 4 years of age,</p> <ul style="list-style-type: none"> • The speed limit for a two-wheeler while carrying a child up to the age of 4 years is 40 kmph. • Driver of the two-wheeler is responsible to comply with this rule. |
| The Supreme Court of India, directive on school bus safety, provides for speed of school bus and other school transport vehicles, | <p>Specifies speed for school bus and other school transport vehicles,</p> <ul style="list-style-type: none"> • The speed limit for school bus or other school transport vehicles is 40 kmph, • The vehicles should be fitted with tamper-proof speed governors with a maximum speed limit of 40 kmph. <p>Available at: https://www.trackschoolbus.com/school-bus-rules-and-regulations/india/</p> |

iv. Safe Vehicles for Children

| Legislation | Provisions for Road Safety |
|---|--|
| <p>The Supreme Court of India, directive on school bus safety, and Automotive Industry Standard (AIS-063:2005), Requirements for School Buses, under CMVR, provides for speed and standards for safety of school bus and other school transport vehicles,</p> | <p>Specifies guideline and standards for safety in school bus and other school transport vehicles,</p> <ul style="list-style-type: none"> ● Specification and standards for safety of school buses carrying children for identification and safety purposes including the colour, design, specifications for safety equipment, window grills, seating capacity, speed and tamper-proof speed governor, annual fitness test, attendant, driver qualification, etc. and state transport authority is made responsible for issuing the permits. ● The sitting capacity for school transport vehicles carrying children below 12 years is 1.5 times of the allowed passing setting capacity of the vehicle for the adults. ● The sitting capacity for the school transport vehicles carrying children above 12 years of age is equal to the allowed passing setting capacity of the vehicle for the adults. |
| <p>Bharat New Car Safety Assessment Programme (BNCAP), provides for testing of new cars for safety,</p> | <p>Provides for safety assessment of cars,</p> <ul style="list-style-type: none"> ● Guidelines and standards for crash testing of cars and conduct performance assessments on safety features and technologies, ● Publish safety performance as a simple star rating to indicate relative safety performance for adult occupant protection (AOP) and child occupant protection (COP) and safety assist technologies (SAT). ● Child occupant protection rating is done with child restraint systems and other standard protection measures. |

v. Emergency Response

| Legislation | Provisions for Road Safety |
|---|--|
| <p>The Good Samaritan law, under Section 134A of the MVA and MVAA, provides</p> | <p>Specifies for protection of Good Samaritan,</p> |

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| for protection of Good Samaritan, | <ul style="list-style-type: none"> • A person who helps any road traffic victim to save their life will be considered a Good Samaritan and should be treated respectfully, • A Good Samaritan who informed police of any crash or transported a victim to hospital will not be subjected to any requirements by police or hospital, and be permitted to leave immediately, • They are not required to disclose personal details and can not be compelled to become an eye-witness by police or hospital unless they voluntarily choose to do so, • Every hospital has to publish a charter stating the rights of Good Samaritans, • Provides guidelines for examination of a Good Samaritan if they wished to be examined or be an eye-witness, protecting their right and preventing any harassment and inconvenience to such Good Samaritans. |
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b. State Legislation

The provisions of the national legislation are applicable to the states. Additionally, the state has promulgated rules under the Maharashtra State Motor Vehicles Rules, as per the powers given to the states for making rules, under specific sections of the Motor Vehicles Act. These are the corresponding rules for implementation of MVA in the state and interpreted in the spirit of the parent act.

| Legislation | Provisions for Road Safety |
|--|---|
| The State Road Safety Council (SRSC), by the notification of the Government of Maharashtra, as per Section 215 <i>Clause (2)</i> of MVA / MVAA, on Road Safety Councils and Committees | <ul style="list-style-type: none"> • A State Road Safety Council is constituted under the Chair of the Transport Minister, Government of Maharashtra by the notification of Government of Maharashtra. • The Council is to meet every six months to review the plans of road safety measures, implementation strategy and implementation measures. |
| The State Lead Agency, as per MoRTH notification, as per | <ul style="list-style-type: none"> • The State Transport Department, Government of Maharashtra through the Transport Commissioner has been designated as the State Lead Agency on road safety at the state level with the resources and |

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| <p>Section 215A <i>Clause (b)</i> of MVA</p> | <p>authority for planning and leading the implementation of all the works related to road safety in the State of Maharashtra.</p> |
| <p>The District Road Safety Committee (DRSC), by the notification of the Government of Maharashtra, as per Section 215 Clouse (3) of MVA / MVAA on Road Safety Councils and Committees</p> | <ul style="list-style-type: none"> ● The District Road Safety Committee (DRSC) is constituted under the Chair of the District Collector, as per the Motor Vehicles Act, 1988 in all the districts of India. The Government of Maharashtra has constituted the DRSCs in all the districts through a notification. ● The role of the DRSC is to spearhead, facilitate, implement and overview the plans of road safety measures, implementation strategy and the monitoring mechanism and shall meet every three months. ● DRSC constitutes - Collector/Commissioner of Police as Chair, CEO of Zilla Parishad, SP/ DySP, Civil Surgeon, Executive Engineer of PWD, Divisional Collector of MSRTC, Deputy Municipal Commissioner of Municipal Corporation/s, RTO/ DyRTO, road safety experts and civil society groups, as members. ● In Pune, the committee is chaired by the District Collector and Superintending Engineer/Executive Engineer of PWD is the Member Secretary. It has the concerned departments, road safety experts, NGOs, and civil society organisations as its members. |
| <p>The District School Safety Committee, under the Maharashtra Motor Vehicles (Regulations for School Buses) Rule, 2011, following Section 67 of MVA</p> | <ul style="list-style-type: none"> ● A District School Bus Safety Committee is to be constituted at each district to discuss, decide and recommend on issues pertaining to safety of children and their transportation under the chair of the Commissioner of Police or Deputy Superintendent of Police. ● The Committee shall meet every six months to review and monitor the issues related to safety of transportation of school children. <p>Available at: https://schoolbussafetypune.org/index.php https://vlex.in/vid/maharashtra-motor-vehicles-regulations-545662458</p> |
| <p>The School Transport Committee, under the Maharashtra Motor</p> | <ul style="list-style-type: none"> ● Every school shall have a transport committee to look into the matters pertaining to safe transportation of school children, transportation |

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| <p>Vehicles (Regulations for School Buses) Rule, 2011, following Section 67 of MVA</p> | <p>fees, identification of bus stops and the committee shall verify the documents of the vehicles viz. Registration Certificate, Certificate of Fitness, Certificate of Insurance, Permit, PUC, Driving Licence, Fire Extinguisher and First Aid Kit.</p> <ul style="list-style-type: none"> ● The committee is headed by the principal of the school and has one PTA representative, Traffic Police Inspector of the respective area, Inspector of Motor Vehicles or Assistant Inspector of Motor Vehicles of the area, Education Inspector, representative of bus contractors and representative of the local authority. ● The committee shall meet at least once in three months prior to commencement of each semester. ● The Regional Transport Authority in consultation with the School Authorities, Traffic Police and Municipal Corporation or Council specify the parking and halting places at appropriate locations exclusively for the school buses having regard to school timing and safety of the children. <p>Available at: https://schoolbussafetypune.org/index.php/committee-structure</p> |
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c. International Declaration or Soft Law

The international treaty, declaration or agreement signed by the government are generally considered as the soft law as these are not legally binding and enforceable. However, these are the commitments made by the nation at the international forum. It further provides the government power to enact a law in order to fulfill the commitment made by the nation internationally.

India is a signatory to the Brasilia Declaration on Road Safety and committed internationally to halve the road crash fatalities and injuries by 2030.

4. Case Studies from Pune, PCMC, and Pune Rural

a. Generic status of institutional, and physical infrastructure, and the range of needs

In January and February 2024, the project team visited a few schools in Pune, Pimpri Chinchwad and Pune rural in the district, suggested by the respective Education Departments for a preliminary assessment of the road safety issues faced in different situations.

Common issues include:

1. Lack of or inadequate footpaths and cycle tracks for safe travel of students, segregated from motorized traffic, even when the school is located at a high speed road like a highway or major district road.
2. Parking or other obstructions on footpaths in the vicinity of schools.
3. Lack of or inadequate junction management, including pedestrian phase at signalized junctions, for enabling safe crossing of students.
4. Absent or inadequate signage indicating the school zone, speed limit, and pedestrian crossings.
5. No usage of helmets for students.
6. Overcrowding and wrong side driving near the school gate at the start and end times of the school.
7. Overloading of school transport vehicles.

The school-wise observations are presented here, which give an insight into the common concerns and opportunities to strengthen road safety.

Zilla Parishad Primary School, Chakan

The Zilla Parishad Primary Boys School in Chakan operates from 10 am to 5 pm for students from 1st to 7th standards, totalling 737 students. Most students (50-60%) walk to school, with others using cycles, private vehicles or public transportation. The School Zone is not marked and there is inadequate safety infrastructure like footpaths, safe crossings, cycle tracks and speed management. Nearby major highways pose risks, with concerns about speeding, helmet-less and underage driving. The campus, which houses three schools, is close to Chakan-Shikrapur road (400 meters) and Pune-Nashik highway (600 meters) but lacks safety interventions.

PMC NDA Road School, Warje

The Shamrao Shripati Bharate PMC School 161B in Warje operates in two shifts from 7 am to 12 pm in English medium and 12:10 to 5:30 pm in Marathi, catering to 650 students, including 482 in standard 1st to 7th and 165 in the Balwadi. In the afternoon shift, the school has 700 students. Modes of travel include walking

(30%), biking with parents (40%) and van (30%), with no school-provided transport facilities. Students cross NDA Road (50-100 meters), Mumbai-Bangalore Highway (1 km) and Warje Chowk (within 1 km) on their way to school. The school has a School Management Committee (SMC) and a School Transport Committee (STC). There are 4-5 schools nearby, including a college and a private school. However, the school zone is not marked and footpaths, safe crossings, cycle tracks and speed management measures are inadequate. The road in front of the school has a slope and there are no speed reduction measures like rumble strips or signage outside the school. The nearest bus stops are Malwadi (500 meters) and Dnyaneshwar (200-300 meters). Some markings have been done outside the school and the school has two gates where teachers park inside. Unsafe situations at the school gate include vehicle speeding, parents not wearing helmets when dropping off or picking up students, unsafe junctions nearby and underage driving. Road crossing at NDA road is particularly unsafe due to high speed heavy vehicle movements. Additionally, NDA Road about 50-100 meters is difficult to cross and the Mumbai-Bangalore Highway, located 1 km away, has continuous heavy traffic, posing risks for students while crossing. Warje Chowk is approximately 1 km from the school. The internal road leading to the school's entrance has traffic from nearby offices and the open area outside the school building is utilized as parking for nearby offices.

Zilla Parishad Primary Girls School in Loni Kalbhor

The Zilla Parishad Primary Girls School in Loni Kalbhor operates from 10:30 am to 5 pm, the school caters to students from 1st to 7th standard, with 605 girl students enrolled and approximately 4500 students studying within the school campus. The primary modes of travel for students are walking (50%), biking with guardians (25%), vans (25%) and school buses (10%), with no school-provided transport available. The school campus includes three different schools and an adjoining high school with a junior college. However, crossing the junction at Solapur highway, which is just 600-700 meters away, is very unsafe due to high-speed, heavy vehicle traffic and wrong-side driving. A few years back, a school girl died in a road crash. There is heavy congestion on the main highway and passing vehicles are at high speed, causing risks for parents dropping and picking up kids and students crossing the road. The school zone is not marked and footpaths, safe crossings, cycle tracks and speed management measures are inadequate. It lacks planned infrastructure. Incidents of unsafe situations and underage driving have been observed, including the fatal crash involving a 4th Standard girl about two years ago. The school has insurance for all students and has attempted to claim insurance for the girl who died in a road crash.

Zilha Parishad Prathmik and Madhyamik Shala, Alle Phata

The Zilha Parishad Prathmik and Madhyamik Shala operates from 10:30 am to 5 pm, and has 538 students from 1st to 7th standard. Within the school building, both a primary and a higher secondary school are functional, with a total student strength of 845 attending daily. The primary modes of travel for students are walking (50%), cycling (5-10%) and using private auto rickshaws (10%). Parents drop off students, with 20% using two-wheelers and 10% using four-wheelers. The school does not provide transport facilities, so arrangements are made privately.

The school is located 2.3 km from the Nashik-Pune Highway and is connected via a *Kuccha Road*. Despite the lack of heavy traffic on the road, its uneven surface and many bumps cause minor injuries to students. The road is now under construction for the first time, with vehicles not traveling at high speeds due to its current condition. However, during the rainy season, the road becomes slippery and full of mud, posing additional risks to students.

Safety infrastructure like footpaths, safe crossings, cycle tracks and speed management measures are absent. Despite the ongoing road construction, safety measures for students walking or cycling to school are not in place. The school gate has vehicles passing throughout the day, mainly two-wheelers due to the poor road conditions. There is sufficient parking and open space inside and outside the school, but there is a concern about underage driving in the area.

The Rajaram Bhiku Pathare PMC School, Kharadi

The Rajaram Bhiku Pathare PMC School in Kharadi operates in two shifts, the morning shift for girls from 7:15 a.m. to 12:15 p.m. and the afternoon shift for boys from 12:15 p.m. to 5:30 p.m. It caters to students from 1st to 8th standards, with a total strength of 1200 students. Most students (70%) walk to school, while 28% use vans and less than 1% bicycle. Parent drop-offs by two-wheelers are less than 1%. The school is near two junctions, with one major junction, Kharadi South Main Road, within 500 meters. There is also a nearby bus depot where buses overspeed, contributing to road safety concerns. However, the school lacks safety infrastructure such as footpaths, safe crossings, cycle tracks and speed management measures. The nearest public transport bus stop is about 50 meters away.

There have been no reported cases of underage driving and the school provides parking space for two-wheelers for teachers and bicycle parking for students. While there have been no reported accidents involving students, minor accidents involving the general population have occurred. The school is willing to participate in interventions as long as additional work for teachers is not required.

Zilla Parishad Primary School in Shikrapur (01)

The Zilla Parishad Primary School in Shikrapur operates from 10:30 am to 5:30 pm and caters to students from 1st to 4th grade, with a total of 61 students. Most students walk (20-25%) or are dropped off by guardians using bikes and cars (20-25%), while around 20% use auto rickshaws or vans. There is one private auto rickshaw available for school transport. The school is located beside the Chakan-Shikrapur highway and is 2 km from the Pune-Ahmednagar (MH SH 27) highway. It is in close proximity to 4-5 other schools and lacks safety infrastructure such as safe crossings and cycle tracks. Although the school has fencing and a gate, there are concerns about high-speed traffic and heavy transport vehicles in the vicinity. The nearest public transport bus stop is about 100 meters away and there are no current infrastructure projects planned for the school neighbourhood.

Unsafe situations prevail at the school entrance during the start or end of school timings, with high-speed vehicles passing by and parents and children not using helmets. There are no reported cases of underage driving and the parking situation for bicycles and vehicles is not specified. The school is located adjacent to the Chakan-Shikrapur highway and is representative of rural schools near highways, with minimal student strength.

Zilla Parishad Primary School in Shikrapur (02)

The Zilla Parishad Primary School Shikrapur operates in two shifts, 07:00 A.M. - 12:00 P.M. and 12:30 P.M. - 05:30 P.M. The school caters to a total of 1838 students from class 1st to 7th and is close to the Gram Panchayat office.

About 500 students from senior classes come walking to the school, 200 students have private pick-up and drop facility whereas most of the junior students are being dropped off on two wheelers by parents. It was observed that most of the parents and students were not using helmets. The private van drops students inside the school premises and parents who come to drop off have to keep watch on their children until they reach inside the school campus. The school main gate is mostly closed and only opened when students are coming and leaving the school premises.

The school is located at a distance of about 200 meters from the main road. However, there is no signage, speed breakers or rumble strips or zebra crossing near the school area. The main road comes under NHAI therefore school authorities have not been able to take any action directly. The nearby Police Station used to conduct an awareness programme for students on road safety, but it is not conducted this year. The road outside the school building usually has two-wheelers and four wheelers passing by and traffic congestion is there due to close proximity of residential areas, temples and Gram Panchayat Office.

Zilla Parishad Primary School, Wagholi

The Zilla Parishad Primary School in Wagholi is currently managed by the Zilla Parishad but soon going to be transferred to PMC. It operates in two shifts, the morning shift for girls from 7:15 a.m. to 12:15 p.m. and the afternoon shift for boys from 12:15 p.m. to 5:30 p.m. The school caters to students from 1st to 4th standard, with 750 boys and 750 girls enrolled. Most students (75%) walk to school, while 25% are dropped off by guardians on bikes.

The school is located near two major highway junctions, Lohegaon-Wagholi Road and Pune-Ahmednagar (MH SH 27). There are 3-4 other schools nearby. However, the school lacks safety infrastructure such as safe crossings and speed management measures. There is no school transport facility and the nearest public transport bus stop is about 100 meters away.

Observationally, the school gate experiences an unsafe situation at the start or end of school timings due to its proximity to other government offices such as the post office, MSEB office, bank and ward office. The school has joint parking with these offices. There are no reported cases of underage driving and no infrastructure projects are planned in the school's neighbourhood.

Two major crossing junctions are nearby, with one major highway, Pune-Ahmednagar (MH SH 27) just 200 meters away and the other being Lohegaon-Wagholi road. The school is in a transition from ZP administration to PMC administration and runs in two shifts. The narrow width of the market road in front of the school could pose a challenge for any intervention efforts.

Zilla Parishad Primary School, Lahegaon

The Zilla Parishad Prarthamik Shala in Harantale Wasti, Lohegaon operates from 10:00 a.m. to 5:00 p.m. The school serves students from 1st to 4th standard, with a total of 68 students. Most students (69%) walk to school, while a small percentage use auto rickshaws for transportation.

Located near a highway within a 500 meters radius, the school faces significant safety concerns, especially following a fatal accident involving a girl from a nearby school who was cycling. The lack of safety infrastructure like footpaths, safe crossings, cycle tracks and speed management measures are major issues. Additionally, the poor frequency of public transport buses at the nearby bus stop further complicates transportation for students.

Observationally, the school gate experiences unsafe situations due to speeding vehicles on the nearby highway. Instances of parents riding two-wheelers without helmets have been noted. While there are no cases of underage driving, the

school lacks a parking facility. The presence of other nearby institutions, including Sant Tukaram School, Lohegaon and MIT College, underscores the importance of road safety in the area.

Sant Tukaram School, Lohegaon

The Sant Tukaram School in Lohegaon, is managed by the Pune District Education Dept and has students from 5th to 12th grade, with a strength of 1700 students, including the college section. The majority of students (70%) walk to school, while 10% cycle and a small per cent use vans (5%) and buses (10%).

In terms of road safety, there is no clearly marked school zone and specific safety infrastructure like footpaths, safe crossings, cycle tracks and speed management measures within the zone. Dhanori, a locality from where students travel to school, has been reported as an accident-prone area. The nearest public transport bus stop has a low frequency of buses. Observationally, the school experiences unsafe situations due to its proximity to a nearby highway, which poses risks for students traveling to and from school. There are reported cases of underage driving and while there is parking available for teachers inside the college campus, there is no designated parking area. The school is surrounded by other educational institutions and the area lacks infrastructure projects planned by the local authorities. The school is located near an unsafe highway and the accident-prone locality of Dhanori are key concerns for the safety of students traveling to and from the school.

Rajiv Gandhi eLearning School, PMC

The Rajiv Gandhi E-Learning School, located at Anurag Society, Sivadarshan Poorgrasta Vasahat, Parvati Paytha, Pune is managed by PMC and affiliated with the CBSE Board. The school serves a large student population with 1600 students in standards 1 to 10 and 600 students in standards 11 and 12.

A significant portion of students (30-35%) walk or cycle to school, while 30% are dropped off by guardians using bikes and cars. Additionally, 150-200 students use auto rickshaws or vans and 250 students use PMPML buses. The school is situated 500 meters from Pune-Satara Road and is surrounded by private schools. It follows an English medium curriculum in the CBSE pattern. Regarding road safety, the school lacks identified School Zones and specific infrastructure. While there are good footpaths and parking facilities, there are no safety measures such as safe crossings, cycle tracks and speed management measures. The nearest public transport bus stop is adjacent to the school and there are no known infrastructure projects planned in the school's neighbourhood. Observationally, there are concerns about unsafe situations at the school gate during school timings, with underage driving, hardly any student uses a helmet and parking available inside the school campus. The school is

located in an area with high traffic flow and is surrounded by residential and commercial areas, as well as a garden in front of it.

Documentation for reference

- [Photo Documentation](#)
- [Assessment survey forms](#)

b. Status of institutions in Pradhikaran area Pimpri Chinchwad

The team also assessed the educational institutions in the Nigdi Pradhikaran, the pilot area for Harit Setu in Pimpri Chinchwad City. There are 18 schools and 6 higher education campuses in the area. The needs of students were assessed based on the scenario, user groups and existing infrastructure.

The main observations in visits and interactions with schools and colleges are:

1. About 10 per cent of students use walking and bicycles as modes of transport, 40 per cent use buses and about 50 to 60 per cent are dropped by parents.
2. About 600 to 700 children may be using bicycles to travel to schools in the area. About 30 to 50 children might be cycling in each school and most schools have bicycle parking spaces. Jnana Prabodhini Navanagar Vidyalaya (JPNV), Nigadi had about 250 bicycles parked in its parking lot.
3. Some of the schools have their own school buses. Except 3 to 4 schools, most have space for parking school buses inside. But after dropping students inside the school campuses buses are parked outside.
4. Generally, the pedestrian crossings are marked at the entrances of schools, but it may not be present on connecting or approaching roads to schools or marked improperly.
5. Speed management is done at some of the schools with speed breakers placed near to school entrances.
6. Footpaths and cycling infrastructure outside the schools need improvements. Footpaths are encroached at some of the times and lanes for safe cycling need to be made.
7. Some schools have “No Parking” marked upto 100 meters. But “School Zone” signs are not visibly located at many of these schools.
8. Two of the schools are located on wide roads or near busy junctions namely, Shri Mhalsakant Vidyalaya and Junior College and DIC’s Kids World Pre-primary and English Medium Schools.
9. Most schools have School Transport Committees, some of them have appointed people for gate management and assist students during arrival and departure timings.
10. There are cases of underage driving. Schools with standard 9th and above have a rule to not allow students on their own private vehicles to discourage underage driving.

11. Colleges in the area have rules for helmet use, and they provide free parking for students and staff vehicles. But if students wish to leave between the classes, park their two wheelers outside of college campus.
12. Two wheeler partings are done on streets outside of colleges or schools in the area.
13. No usage of helmets is observed among students. Though colleges have a rule for no entry without wearing a helmet.
14. Rash driving and risk taking behaviour was reported by colleges and schools among the youth in the area.
15. No major accident involving children was mentioned, but no documentation is maintained.
16. Congestion during start and end of school timings were reported. Many parents usually park their vehicles on the street at the start and end time of schools.
17. RTO representatives have conducted sessions on road safety rules and behaviour in some of the colleges.

A consultation with representatives from the schools and colleges in the areas was done in the presence of PCMC officials. They shared their concern regarding road safety of children and adolescents coming to their institutions and are willing to participate and cooperate with the initiative for improving road safety in the area.

Table 4bi: List of schools in Nigdi Pradhikaran

| Sl No | Name | Categories | Students Count |
|-------|---|--|----------------|
| 1. | Prerna High School | Pre-primary, Primary + Secondary, Higher Secondary | 1,662 |
| 2. | Shri Mhalsakant Vidyalaya and Mahavidyalaya | Primary + Secondary, Higher Secondary | 4,600 |
| 3. | CMS English Medium Higher Secondary School | Pre-primary, Primary + Secondary | 2,863 |
| 4. | Judson High School | Primary + Secondary | 175 |
| 5. | Orchids The International School | Pre-primary, Primary + Secondary | 1,800 |
| 6. | Dr D Y Patil School, New Pune Public School | Pre-primary, Primary + Secondary | |
| 7. | Chinchwad Deaf School | Primary + Secondary, Higher Secondary | 174 |
| 8. | Jnana Prabodhini Navanagar Vidyalaya | Pre-primary, Primary + Secondary, Higher Secondary | 2,500 |

| | | | |
|-----|--|--|--------|
| 9. | Vidyanand Bhavan Primary & High School | Pre-primary, Primary + Secondary, Higher Secondary | 630 |
| 10. | Kamayani School | Primary + Secondary, Higher Secondary | 100 |
| 11. | Guruganesh Vidya Mandir | Pre-primary, Primary + Secondary | 658 |
| 12. | Kirti Vidyalaya | Primary + Secondary | 250 |
| 13. | DIC's Kids World Pre-primary & English Medium School | Pre-primary, Primary + Secondary | 1,221 |
| 14. | City Pride School | Pre-primary, Primary + Secondary, Higher Secondary | 1,440 |
| 15. | PCMC Vidyaniketan Boy's & Girl's School | Pre-primary, Primary + Secondary | |
| 16. | Christeria High School | Primary + Secondary | 75 |
| 17. | Brahmadatta Vidyalaya | Primary + Secondary | 30 |
| 18. | English Medium School | Pre-primary | 960 |
| | Total | | 19,138 |

Table 4bii: List of higher educational institutions in Nigdi Pradhikaran

| Sl No | Name | Categories | Students Count |
|-------|---|-----------------------|----------------|
| 1. | Pimpri Chinchwad College of Engineering (PCCOE Campus) | 9 no Compus | 9,000 |
| 2. | PDEA's College of Ayurved and Research Centre | UG + PG | 670 |
| 3. | Dr D Y Patil Arts, Commerce and Science College | UG + PG | 3,232 |
| 4. | Dr Arvind Telang Senior College (CAMP) | UG + Higher Secondary | 1,500 |
| 5. | Prof. Ramkrishna More Arts, Commerce and Science College + MBA + Architecture | UG | 5,580 |
| 6. | City Pride Junior College | MBA and MCA | 880 |
| | Total | | 17,630 |

5. Ongoing efforts towards improving road safety for children and adolescents

Several initiatives are already being implemented in Pune for improving road safety for children and making their travel to school safer by the district authority and municipal corporations, concerned departments, research organisations, NGOs and civil society groups. These include development of policies and design guidelines, orientation of municipal staff and traffic police personnels, street improvement projects, school zone improvement and school travel safety related initiatives, educational programmes on road safety, etc.

The Pune District Road Safety Committee (DRSC) has taken initiatives engaging with multi-stakeholder to mitigate road crashes and fatalities in the district.

The Pune Municipal Corporation (PMC) has developed various plans and design guidelines, such as the Urban Street Design Guidelines (USDG), School Travel Improvement Plan (STIP) and Comprehensive Bicycle Master Plan (PBP), which when implemented, would greatly contribute towards enhancing road safety. PMC has prepared a school priority zone guideline. It includes a school zone template having measures for identification of school entrance, junction designs for safe crossings, etc as design guideline criteria. Institutional guidelines included training of bus drivers for children' safety, and training for students about road traffic rules, etc. There are some pilots implemented on different sections of roads in the city to try out its effectiveness such as cycle tracks on the Jangali Maharaj Road and University Road, school zone at Rajiv Gandhi E-Learning School, etc which will be scaled up at the city level.

Street design improvement by Pune Municipal Corporation (PMC) and Pimpri Chinchwad Municipal Corporation (PCMC) under various programmes and schemes, including Smart City Mission, and own initiatives such as Pune Streets Programme, and PCMC Harit Setu. A master plan is being prepared for PCMC for Nigdi Pradhikaran as pilot area which can then be replicated in other areas of Pimpri Chinchwad City, in association with Prasanna Desai Architects.

Road safety for young children (0 to 6 years) and caregivers' friendly mobility, considering the child and caregiver as a unit in Pune, is the focus of an initiative by PMC, with WRI, Bernard van Leer Foundation and Parisar. The aim is to improve walking facilities and footpaths in Pune; and prepare a policy for Infant, Toddler and Caregiver (ITC) mobility in Pune City. The work includes a GIS-based analysis and safety improvement of areas visited by children, including 25 sites in Pune City. The initiative is implemented with anganwadi centres, education centres, schools, primary health care centres, health care centres, maternity homes, etc.

Development of a Mobility Action Plan for Pune city in which 19 areas are identified with accessibility issues for pedestrians, such as inadequate footpaths, inappropriate placement of bus stops; the infrastructure is not yet developed in many areas newly

added to municipal limits; lists have been prepared of the works to be taken up, considering the Pune Urban Street Design Guidelines (USDG) and Pedestrian Policy.

Cycle to School project for school students to understand problems they face by interactions and experience sharing and applying the approach of Safe by Design, using infrastructure design to address road safety issues by Parisar.

Surveillance and strengthening surveillance systems by Bloomberg Philanthropy Initiative for Global Road Safety (BIGRS), including creation of intelligence for identification of road safety management interventions through scientific data collection, analysis, and digitisation of FIRs; crash data analysis includes risk factor related data, time specific data, location specificity, etc and observational studies. For example, in Pune, over-speeding is observed at night-time and such fatalities are higher at night.

Identification and elimination of black spots by DRSC with road departments including NHA, PWD, PMC and PCMC, under the Safer Street and Safer Mobility program.

Enforcement related capacity building for police department and RTO officials on speed enforcement through training and orientation in Pune with partners of BIGRS including International Police Organisation (IPO), Red Cross and Global Road Safety Partnership (GRSP).

An initiative is taken for schools called “Samwad - Road Safety Starts with You!” to have behavioural aspects by creating responsibility among students about road safety and safe behaviour. In PCMC, RTO officials conduct road safety awareness sessions visiting various schools and colleges. Earlier RTO used to conduct this programme during Road Safety Week but now it is being implemented throughout the year. Drivers’ trainings are conducted by RTO officials for the school bus drivers. Educational programmes such as teacher orientation, road safety training for students, and driver training are conducted by Safe Kids Foundation, reaching over 1600 schools in Pune. RTO is checking school buses operating in the district for their fitness compliance.

Stakeholder Mapping

The institutions and departments concerned with the road safety which can have a role in improving the situation for the children and adolescents in the Pune district, Pune and Pimpri Chinchwad are mapped with their roles. These include government and non government organizations of the district and the state.

The institutions for child and adolescent road safety in Pune district are:

| Pillar | Stakeholder | Role |
|---|--|---|
| Road Safety Management - Institutional and Technical Capacity Building | State Transport Department, Pune District Road Safety Committee, Pune District Collectorate, PMC, PCMC, Zilla Parishad, Education Dept, Health Dept, Road Dept, Traffic Police Dept | Local authority, governance in road safety, implementation and monitoring, institution setting, role assigning and capacity building |
| Safer Road and Mobility | NHAI, PWD, MSRDC, Road Depts of PMC and PCMC. Zilla Parishad, Ward Office, Block Office, Gram Panchayat, MSRTC, PMPML, School Transport Committee | Road infrastructure and School Zone safety, and transport service provision |
| Safe Vehicles | State Transport Department, RTA/RTO, School Transport Committee, school mobility service providers and school transport vehicle operators, drivers, attendants, parents | Regulation and monitoring of vehicles/ school transport, service provision and management, availability of safer modes choices |
| Safer Road Users, through improvement in enforcement of traffic regulations, and better availability of protective gear | Traffic Police, Automobile dealers, product dealers, parents, caregiver, teachers and other adults, drivers training schools, service centres, fitters | Enforcement of Rules, compliance with rules, product availability and accessibility, training and promotion |
| Education and Training | State Transport Dept, District Road Safety Committee, Training Unit/ Institute (CIRT/ Yashada), Education Depts of Zilla Parishad, PMC and PCMC, DIETs, SCERT, School Transport Committee, Medical/ Public Health Depts, Directorate of Medical Training, Medical Colleges, Civil Society Organisations, NGOs, parents, caregiver, teachers, road safety and sustainable transport experts, consultants, designers, CSRs | Anchor road safety for school children, training of depts and stakeholders, Knowledge support, engagement, and communication, resources |
| Emergency Care | Directorate of Medical Services, District Civil Hospital, Medical / Public Health Depts of State, PMC and PCMC, Family Welfare Dept, EMRI/ MEMS, hospitals, trauma care centres, paediatrics, ambulance service providers, traffic police | Health, Emergency and Trauma Care, green channel for ambulance to access crash spots |

6. Analysis and Recommendations

At the state level, the data analysis shows that:

- Vulnerable road users, including pedestrians, cyclists and motorcycle riders, continue to be the most affected by road crash fatalities in Maharashtra. In 2022, they accounted for 74% of all road deaths in Maharashtra.
- Two and three wheelers occupants accounted for over 50% of the road crash fatalities.
- Speeding continued to be the leading cause of fatal crashes in the state. Of the 15,224 road deaths in the state, speeding accounted for 11,493 deaths.

Similarly, according to the Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra, at the level of Pune district,

- There is one-fifth, or more than 20 per cent, increase in road deaths in Pune district in one year, from 1,345 in 2001 to 1,619 in 2022.
- In 2022, road crash fatalities in the age group below 18 years was 83 and in the age group of 18 to 25 was 359 for Pune district, which together is 27.3 per cent.

| Pune district (CP/SP jurisdiction) | Persons died (in 2022) |
|---------------------------------------|---------------------------|
| Pune Rural | 923 |
| Pune City | 325 |
| Pimpri Chinchwad City | 371 |
| Pune District Total | 1,619 |

- Two and three wheeler occupants accounted for 53.68 per cent road crash fatalities in the district.
- The vulnerable road users including pedestrians, cyclists and motorcycle riders combined constitute 79 per cent of all road deaths in Pune district.

| Road Users | Persons dies |
|---------------------------------|--------------|
| Pedestrians | 349 |
| Two and three wheeler occupants | 869 |
| Four wheeler occupants | 337 |
| Others category/Cyclists | 64 |

Pune district, and the municipal areas of Pune and Pimpri Chinchwad are among the most urbanized regions of the country. The region has an exceptionally high level of

motorization due to multifarious reasons, including a lag in the development of public transport services, the macro economic conditions favouring automotive sector growth, and income levels sustaining private vehicle ownership. The preference of private modes of mobility, the relative inadequacy of behaviour management through surveillance and enforcement for such high levels of private vehicle use, and the road environment itself present wide-ranging risks to children and adolescents as road users. These include:

1. Risks to children as pedestrians and cyclists, who are inherently vulnerable, and for whom the risk is vastly increased when with the absence of proper footpaths and cycleways, they are directly exposed to moving vehicles, especially those at high speed.
2. Risks arising due to highly inadequate surveillance and control/ prohibition of underage driving, especially by male adolescents, without any protective gear, posing grave risks to themselves and others.
3. Risks to children and adolescents as vehicle occupants when they are not provided proper safety gear (helmets, car child restraints) due to the lack of awareness among adult riders and drivers, and lack of enforcement for the same.
4. Risks to children and adolescents from riders/ drivers (including, of vehicles with child or adolescent occupants) who are speeding, drink driving, distracted driving or driving on the wrong side.
5. Risks arising from overseating of children or adolescent passengers, especially on two-wheelers, and private school transport vehicles, making vehicle control difficult.

National and state policy and legislation has a clear intent and several provisions for safety of children and adolescents as road users, addressing all the risks mentioned above. There are high quality local initiatives in Pune and Pimpri Chinchwad in the form of local plans, design codes, pilot projects, and outreach. These provide a strong foundation for further strengthening road safety for children and adolescents.

The scale of implementation of road safety initiatives needs to be extended to the entire jurisdictions of the Pune district and the Pune and Pimpri Chinchwad municipal corporations, prioritizing high risk situations and behaviours. This is possible by comprehensively adopting and institutionalizing the safe systems approach to road safety, which is within the mandate of the Pune District Road Safety Committee and its constituent members and stakeholders.

Based on the discussions and inputs from the Visioning Workshop for Road Safety of Children and Adolescents held under the aegis of the Pune DRSC in November 2023, stakeholder inputs, and the institutional analysis, the following recommendations are presented for implementing the safe systems approach. These may be discussed further for development into an action plan that is on point to achieve the target of halving road crash fatalities by 2030

| Risk | Institutional arrangements and capacity | Safe Road Users and mobility options | Safe Roads | Enforcement | Emergency |
|--|---|---|---|---|-----------|
| <p>Reducing risks to children as pedestrians and cyclists.</p> | <p>Strengthen the district level school transport committee and school transport committees to take on the mandate of school zone implementation with concerned departments/ agencies responsible for development of road infrastructure, management of school generated traffic with the Traffic Police, and promote understanding about road safety for children and adolescents among parents and the community.</p> <p>Implement safety measures based on the audits to create school zones.</p> <p>Promote innovations such as “walking and cycling school bus” based on the needs</p> | <p>Develop affordable options to increase school public transport and shared school transport, to mitigate the risks to children, both as passengers and as pedestrians or cyclists, arising from large numbers of private vehicles at the school gate.</p> | <p>Road safety audits</p> <p>Implementation of safety measures</p> <p>Implement safety measures based on the audits to create school zones, including traffic calming, signage, junction and signal management for pedestrians, and managing school drop-offs, parking, and other street uses which impede the safe movement of children and adolescents.</p> <p>Promote innovations such as “walking and cycling school bus” based on the needs of different schools in partnership with interested civil society organizations, schools and volunteers.</p> | <p>Ensuring footpaths and cycleways are kept free of parking and other obstructions</p> | |

| | | | | | |
|---|---|---|---|--|---|
| | of different schools in partnership with interested civil society organizations, schools and volunteers. | | | | |
| Risks arising due to inadequate surveillance and control/ prohibition of underage driving, especially by male adolescents, without any protective gear. | Training to traffic police about role of enforcement in road safety for adolescents and children, especially to understand non-modifiable risk factors and to deal with behaviour risk factors that could be mitigated. | Develop innovations for mitigation of risk-taking behaviour of youth in partnership with behaviour science experts. | | Set priorities in enforcement, for more effective and evidence-based use of scarce resources of Traffic Police to save lives, by addressing the most risk-prone and vulnerable segment of male youth two-wheeler riders. | |
| Risks to children and adolescents as vehicle occupants when they are not provided proper safety gear (helmets, car child restraints) due to the lack of awareness among adult riders and drivers, and lack of enforcement for the same. | Instruction to automotive dealers to compulsory inform about child helmet and CRS. | Awareness drives for parents and care givers about the necessity of child helmet and CRS use, through paediatric health care system, schools and automotive dealers (at point of purchase). | | Strengthen enforcement planning and implementation focusing on child and youth road safety, especially enforcement of use of child helmet and CRS. | Strengthen traffic management to support timeliness of emergency response and medical assistance. |
| Risks to children and adolescents from riders/ drivers (including, of vehicles | Adopt speed management guidelines at district/ state level ^[1] as | Publicise through mass media and other means about revisions (lowering) | Sign post the appropriate speed limits. | Enforce the appropriate speed limits. | |

| | | | | | |
|---|---|--|--|--|--|
| with child or adolescent occupants) who are speeding, drink driving, distracted driving or driving on the wrong side. | developed by IIT Kharagpur and the IRC code for speed management (under development). | of speed limits as per the design of different categories of roads. | | | |
| Risks arising from unsafe vehicles, and over-seating of children or adolescent passengers, especially on two-wheelers, and private school transport vehicles. | RTO to enhance capacity and set up systems for registration and checking of all school transport vehicles (not only buses managed by schools or public transport services). | Health checks of drivers of school transport vehicles and orientation on child road safety and safe driving with children as passengers. | | RTO to undertake checking of fitness of vehicles. Traffic Police to check for over-seating. | |
| Risks arising out of inadequacy of post-crash response | Training in first response to road crashes for school staff, strengthening the network of Apada Mitra and their linkage with schools | | | | Strengthen personnel, equipment ambulance services and trauma care centres to deal with road crash emergencies involving children and timely access to these services in all blocks. |

[1] <https://www.thestatesman.com/bengal/iit-kgp-roadmap-on-max-speed-limits-for-vehicles-1503257683.html>

a. Institutional structures and capacity building

1. Strengthen the district level school transport committee and school transport committees to take on the mandate of school zone implementation with the agencies responsible for development of road infrastructure, management of school generated traffic with the Traffic Police, and for promoting understanding about road safety for children and adolescents among parents and the community.
2. Conduct orientation on the safe systems approach, with a focus on the safety of children and adolescents, and departmental roles and responsibilities in the safe systems approach, to the staff of all relevant departments, especially, education, road (including Road, PWD, national and state highway authorities), traffic police, health, RTO, and development planning agencies.
3. Training to traffic police about the role of enforcement in road safety for adolescents and children, especially to understand non-modifiable risk factors and to deal with behaviour risk factors that could be mitigated.
4. Instruction to automotive dealers to compulsorily inform about child helmets and CRS.
5. Adopt speed management guidelines at district/ state level as developed by IIT Kharagpur and the IRC code for speed management (under development).
6. RTO to enhance capacity and set up systems for registration and checking of all school transport vehicles (not only buses managed by schools or public transport services).
7. Training in first response to road crashes for school staff, strengthening the network of Apada Mitra and their linkage with schools

b. Safe roads and mobility

1. Conduct road safety audits for all schools and educational establishments, prioritizing those at high risk locations such as highways and busy intersections.
2. Implement safety measures based on the audits to create school zones, including traffic calming, signage, junction and signal management for pedestrians, and managing school drop-offs, parking, and other street uses which impede the safe movement of children and adolescents.
3. Promote innovations such as “walking and cycling school bus” based on the needs of different schools in partnership with interested civil society organizations, schools and volunteers.
4. Develop affordable options to increase school public transport and shared school transport, to mitigate the risks to children both as passengers and as pedestrians or cyclists, arising from large numbers of private vehicles at the school gate.

c. **Safe users**

Strengthen surveillance and enforcement of traffic rules, including through innovations in effective management of enforcement resources, and strategic communication about enforcement

d. **Safe vehicles**

1. Continue safety audit of school buses by RTO for the fitness certificate to operate as a school bus for mechanical and other specifications.
2. Set up a system for registration of school mobility services by auto rickshaws, vans, and buses operated privately (not directly associated or contracted by schools)
3. Conduct health check ups and orientation for drivers of school transport vehicles on child road safety aspects, road behaviours, safe driving practices and First Aid and First Respondent.

e. **Safe speed**

Address the lack or inadequacy of institutional systems for deciding and managing vehicle speeds on the different typologies of roads in the urban environment, as well as highways passing through rural habitations.

f. **Emergency Response**

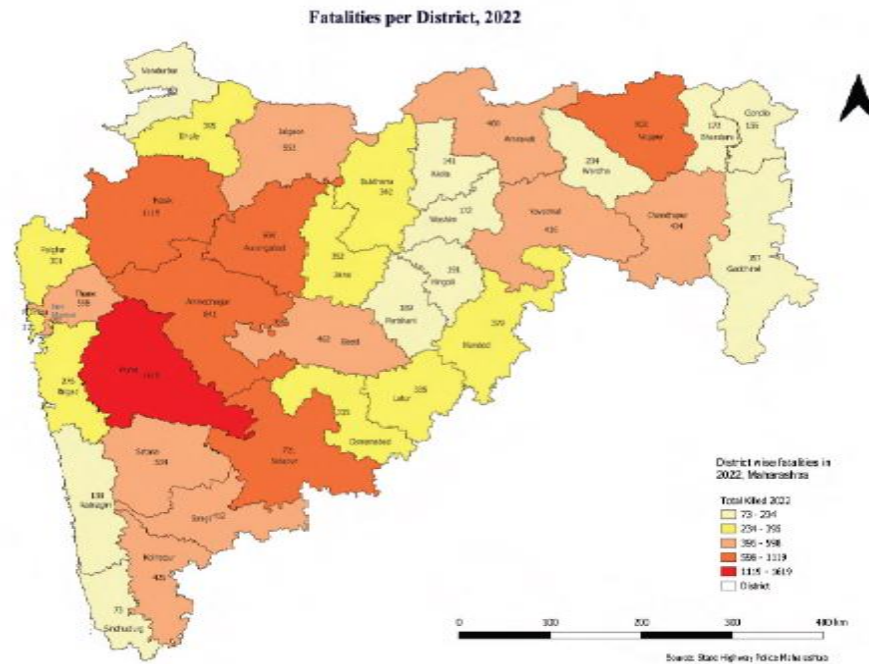
1. Strengthen traffic management to support timeliness of emergency response and medical assistance.
2. Strengthen personnel, equipment ambulance services and trauma care centres to deal with road crash emergencies involving children and timely access to these services in all blocks.

Reference

1. Accidental Deaths and Suicides in India (ADSI), reports 2022, 2021, 2020, 2019, 2018, 2017, National Crime Records Bureau (NCRB), Ministry of Home Affairs, Government of India
<https://ncrb.gov.in/accidental-deaths-suicides-in-india-ads.html>
2. Road Accidents in India, reports 2022, 2021, 2020, 2019, 2018, 2017, Ministry of Road Transport and Highways (MoRTH), Government of India
<https://morth.nic.in/road-accident-in-india>
3. Maharashtra Road Crash Report 2022, Accident Research Cell, Additional Director General of Police (Traffic), Highway Police Maharashtra State
<https://highwaypolice.maharashtra.gov.in/en/>
<https://highwaypolice.maharashtra.gov.in/wp-content/uploads/2023/10/mh-highwaytraffic-book-2022.pdf>
4. The Motor Vehicles (Driving) Regulations 2017
<https://morth.nic.in/sites/default/files/Motor-Vehicle-Driving-Regulation-2017.pdf>
5. Maharashtra Motor Vehicles (Regulations for School Buses), Rules, 2011
<https://schoolbussafetypune.org/index.php>
<https://vlex.in/vid/maharashtra-motor-vehicles-regulations-545662458>
6. Section 6.15, pages 54-56, IRC: 103 2012, Guidelines for Pedestrian Facilities,
<https://law.resource.org/pub/in/bis/irc/irc.gov.in.103.2012.pdf>
7. IRC SP: 32, Road Safety Manual for Schools,
<http://www.irc.nic.in/admnis/admin/showimg.aspx?ID=398>
8. Office Memorandum on action plan to undertake pedestrian count study and reduce pedestrian deaths, (RW/NH / RSCE/SCCORS/ 2023 Dated: 14th March 2023), Road Safety Engineering Zone, MoRTH
https://morth.nic.in/sites/default/files/circulars_document/Office%20Memorandum-Road-safety.pdf
9. Office Memorandum on Road Safety Action Plan for road engineering interventions on National Highways, (Dated: 13th January 2023), Road Safety Cell, MoRTH
https://morth.nic.in/sites/default/files/circulars_document/13%20Jan%202023%20Road%20Safety%20Action%20Plan.pdf
10. The Supreme Court of India, Directive on school bus safety,
<https://www.trackschoolbus.com/school-bus-rules-and-regulations/india/>
11. Pune District School Safety Committee
<https://schoolbussafetypune.org/index.php/committee-structure>

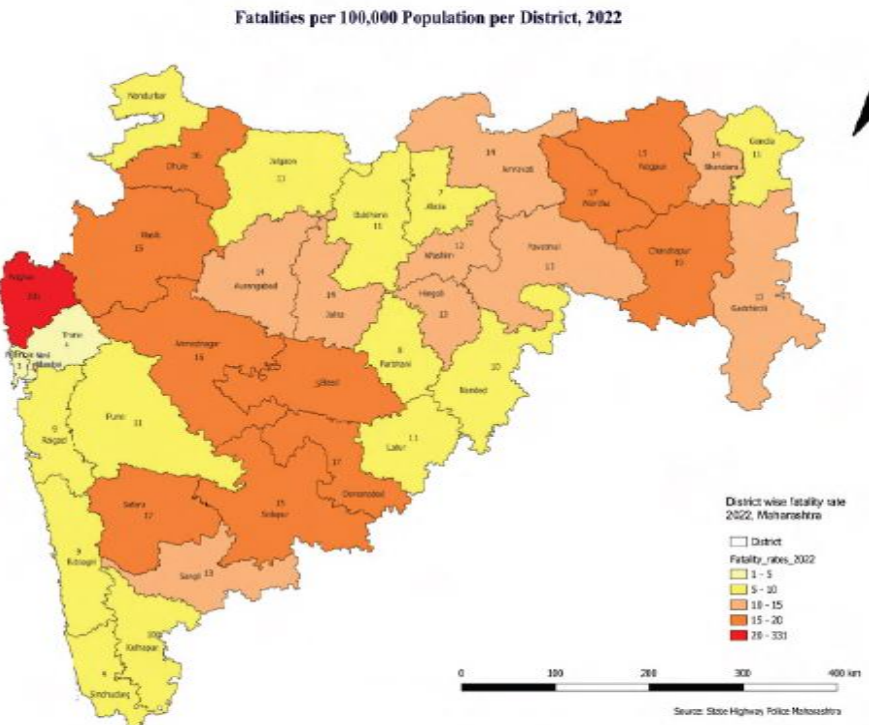
Annexure

1. Fatalities per district in Maharashtra, 2022



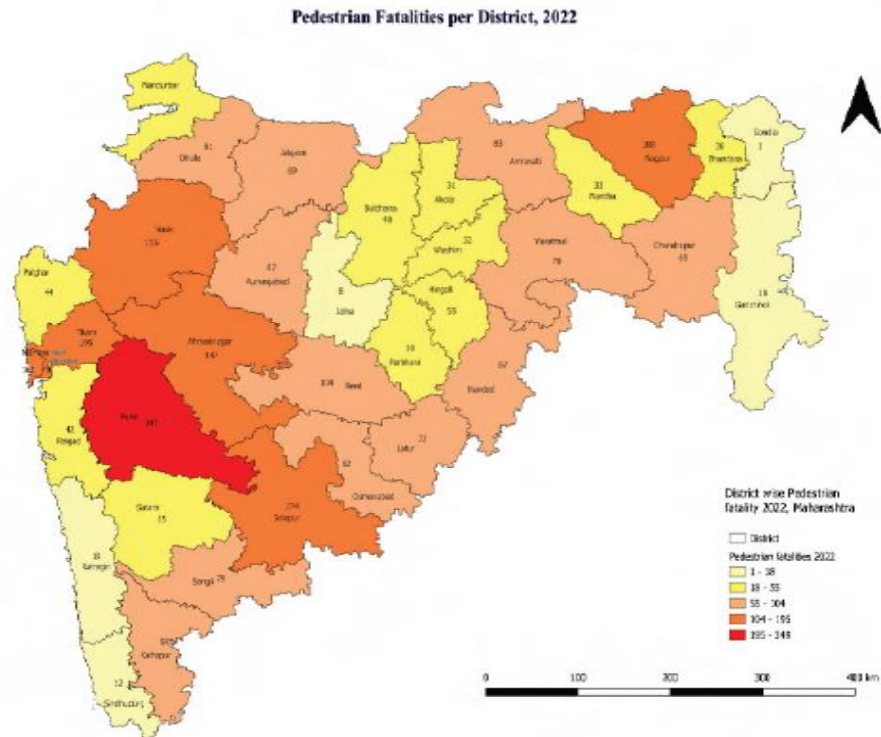
Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

2. Fatalities per 100,000 population per district in Maharashtra, 2022



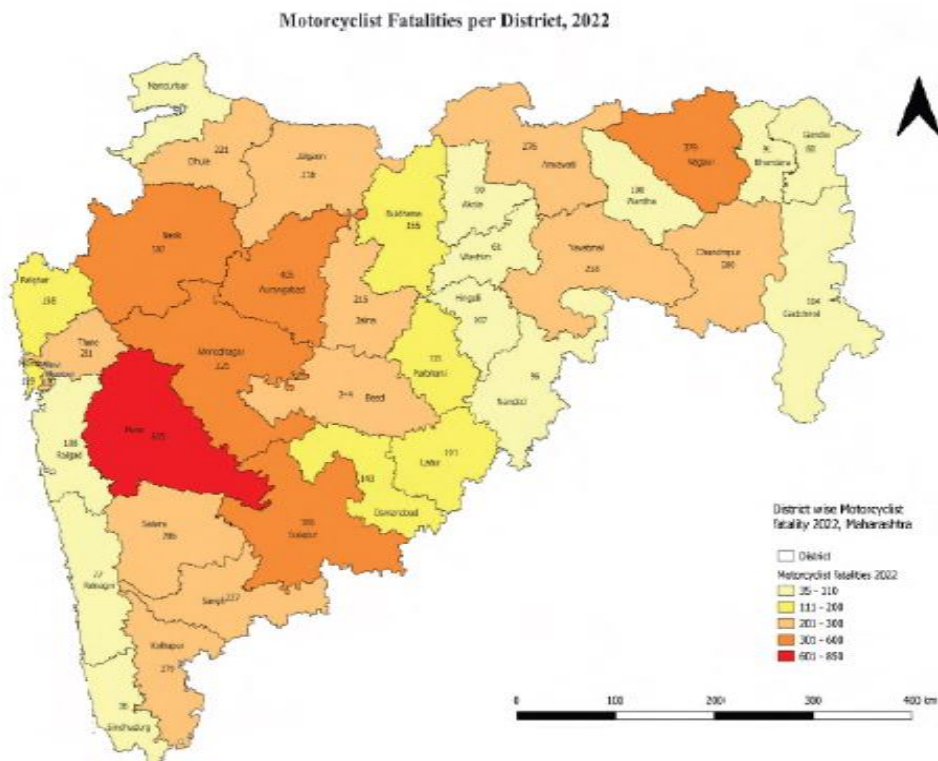
Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

3. Pedestrian fatalities per district in Maharashtra, 2022



Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

4. Two wheeler user fatalities per district in Maharashtra, 2022



Source: Maharashtra Road Crash Report 2022, Accident Research Cell, ADGP (Traffic), Maharashtra

UNICEF Maharashtra Office

215 Atrium, Andheri - Kurla Rd, Hanuman Nagar,
Andheri East, Mumbai 400059

RISE Infinity Foundation

121, East West Industrial Estate Center,
Andheri - Kurla Rd, Safed Pul, Mumbai 400072

Centre for Environment Education

1 Pinewood Apartment,
S.No. 233/1/2, Vidhate Colony, Aundh, Pune 411067