



सड़क सुरक्षा प्रकोष्ठ

# Road Accident Data Analysis

## ROAD ACCIDENTS IN RAJASTHAN

# 2018

**TRANSPORT DEPARTMENT**  
Government of Rajasthan







सड़क सुरक्षा प्रकोष्ठ

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Transport Department  
Government of Rajasthan

State Road Safety Cell  
208, Parivahan Bhawan, Sahakar Marg, JAIPUR - 302005 (RAJ) IN

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### Disclaimer

Due care and diligence have been exercised in compiling and publishing this report. Omissions, if any, or suggestions regarding the content of this report may be brought into consideration to the State Road Safety Cell on email id [addl.rs.tdr@rajasthan.gov.in](mailto:addl.rs.tdr@rajasthan.gov.in).

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***Message***

Road Safety has always been a priority for the State Government. Transport Department, the nodal department for road safety, along with collaborative efforts of stakeholders is committed to save loss of precious lives due to road accidents.

Constitution of State Road Safety Cell (Lead Agency) within the Transport Department in 2016 and collective efforts of stakeholders have helped in stabilizing road safety scenario in the state to some extent. For the first time, a declining trend has been seen in road accident fatalities after 2016. But the reduction is too meagre to acclaim appreciation and there is still a long way to go.

It is quite imperative to state that despite decrease in number of road accidents and fatalities caused due to road accidents, the number of deaths occurring per hundred accidents is comparatively very high in Rajasthan. This requires a deeper intervention by automobile manufacturer, road engineers and enforcement agencies to find the prevailing gap in the transportation system. There is a dire need to work together to build a forgiving infrastructure that could help in alleviating severity.

Road accidents are predictable as well as preventable, and adopting preventive measures both at individual and institutional capacities can help in reducing accident fatalities to a desirable level. The little progress that we have made so far in past few years could be imbibed as potion of encouragement for moving ahead.

I appreciate the State Road Safety Cell and other stakeholders for taking initiative towards publishing road accident data analysis of Rajasthan in form of a comprehensive report. I trust this would support stakeholders, institutions and individuals in planning and strategizing next move towards building a safer community.

**(Pratap Singh Khachariyawas)**

## Foreword

Providing convenient, sustainable and safe transportation for movement of people and goods is the utmost priority of the Government. Road traffic crashes is an undesirable factor linked with transportation which cannot be overlooked at any cost. It is really heart wrenching to share that more than ten thousand lives are lost in road traffic crashes every year in the State.

Study of accident data reveals that 21743 accidents were reported in calendar year 2018 which claimed 10320 lives and 21547 injured in Rajasthan. This translates to an average of 28 deaths, 61 injuries and 60 accidents per day which indeed is a matter of serious concern for all of us. It is also very shocking to note that out of 10320 deaths reported in 2018, 81 percent people belonged to age group of 18-45 years which is the most productive age group in terms of contribution to the nation.

It is also relevant to quote here that severity of accidents is very high in the state and it is continuously rising. In 2018 the severity rate reported in the state was 47.5 in comparison to the severity rate (31.8) of India. This is undeniably very disturbing. Comparison of state's road accident data with national statistics reveals that Rajasthan lies at rank 6th in terms of number of fatalities, 8th in terms of road accidents and 9th in terms of number of injured in year 2018.

National Highways cover only 3.8 percent of the total road length but contribute to 31 percent of road accidents and 38 percent of fatalities which signifies that there is a dire need to implement accident prevention measures on National Highways.

Formation of dedicated State Road Safety Cell followed by District Road Safety Cells across the state has helped in taking measurable initiatives for improving road safety scenario in Rajasthan. Through collaborative approach of stakeholders, active participation of other agencies, Non-Governmental Organizations and community participation would pave way for achieving long and short-term targets.

I believe that this report containing road accident data and analysis for year 2018 will prove useful for policy makers, stakeholders, academic institutions, researchers, corporates, NGOs and other agencies towards planning an effective strategy for improving road safety scenario in the state.

  
(Rajeeva Swarup)





**Rajesh Yadav, I.A.S.**

**Secretary to Government  
Transport Department  
&  
Transport Commissioner  
Government of Rajasthan**

## *Preface*

The first volume of Road Accidents in Rajasthan – 2018 comprises detailed analysis of road crashes occurred in Rajasthan in calendar year 2018 along with other relevant trends of past ten years. The report consists of ten sections having information related to Scenario of Road Transport and Accidents, Profile and Trends of Road Accidents, Accidents by Road Category and Features, Accidents by Vehicle Type, Accidents by Road User Category, Causes of Road Accidents, Spatial and Intertemporal Distribution of Accidents and Initiatives Taken by the State Government.

The data and information related to road accidents occurred in the year 2018 has been obtained from Police Department, Rajasthan. Information about various road safety initiatives taken by different departments have been obtained from stakeholders including Transport Department, Police, Medical & Health, Education and Road Owning & Managing Agencies. I extend my heartiest gratitude to all stakeholders for providing required information in stipulated time.

I am also thankful to the officials of the State Road Safety Cell for putting in their joint endeavors for compiling and publishing this report. I believe that this report shall certainly be useful for all stakeholders, decision & policy makers, civil society organizations and community at large to have an insightful study of the road safety scenario of Rajasthan.

**(Rajesh Yadav)**

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## *Executive Summary*

1. Road traffic accidents and resulting injuries have been acknowledged as major public health issue worldwide. The excessive urbanization, increase in number of vehicles and expansion of road network has also augmented number of accidents, fatalities and injuries in Rajasthan. Road accidents are majorly responsible for unfortunate deaths of young people, disabilities and hospitalization in the state. Road and traffic accidents impose huge economic losses mostly in low-and middle-income group countries.
2. During the calendar year 2018, total number of road accidents reported in Rajasthan were 21,743 that caused 21,547 injuries and 10,320 deaths. These numbers translate to average of 61 accidents, 28 deaths, 60 injuries taking place on roads every day in the state.
3. The number of accidents has declined by 1.67 percent, persons killed by 1.19 percent and injuries by 2.37 percent in 2018 as compared to accident data of year 2017.
4. No significant change has been reported in terms of number of fatal accidents in 2018. In year 2017, total fatal accidents reported were 9,300 whereas in 2018, 9,295 fatal accidents have been reported, having decline of 0.05 percent only.
5. Accident Severity i.e. number of persons killed per hundred accidents in the state is continuously rising. The accident severity rate was 36.0 percent in year 2009 whereas in year 2018 it has increased up to 47.5 percent.
6. Age profile of road accident victims for the calendar year 2018 reveals that the youth of age group 18 - 25 years accounted for 26.90 percent deaths (2,776 persons), age group 25 - 35 accounted for 31.20 percent deaths (3,220 persons) and age group 35 - 45 accounted for 23.24 percent deaths (2,398 persons) in the total road accident fatalities.
7. The number of road accidents relative to population<sup>1</sup>, registered vehicles and road length are on a general declining trend from 2009. The number of persons killed per lac population shown a rising trend in 2014 and 2015, from 13.9 in 2013 to 14.5 in 2014 and 14.6 in 2015. It has declined to 13.7 in year 2018.
8. The National Highways constitute about 3.8 percent of the total road network of Rajasthan, but they accounted for 30.9 percent of total road accidents and 37.5 percent of total number of persons killed. The State Highways accounted for 16.1 per cent of total accidents and 18.6 percent of the total number of persons killed in road accident in 2018.

<sup>1</sup>Population Projections for India and States 2001-2026, Census of India has been referred for projected population of Rajasthan for evaluation of population-based indicators.



9. Traffic junctions are points of conflict and hence, are prone to road accidents. About 24 per cent of total accidents took place on junctions itself during the calendar year 2018. Within traffic junctions, uncontrolled ones contributed to a major portion (around 87 percent), road accidents underscoring the importance of traffic control mechanism at junctions.
10. Among the vehicle categories, cars, jeep accounted for the highest share in total number of road accidents (33 percent) in 2018, followed by two-wheelers (25 per cent), trucks, tempos, tractors and other articulated vehicles (25 percent), Buses (6 per cent), auto-rickshaws (2 per cent) and other motor vehicles (9 percent).
11. Out of total of 3,516 two-wheeler riders killed in road accidents during the calendar year 2018, around 1,563 two-wheeler riders were reported to be not wearing helmets. Non-wearing of seatbelts also reported 2,015 deaths during year 2018.
12. Road users on two-wheelers are the most vulnerable; constituting 34.0 percent of total persons killed in 2018. The other road users killed in road accidents belonged to cars, taxis, vans and other light and medium motor vehicles 22.8 percent; trucks 11.1 percent; pedestrian 14.0 percent; buses 4.7 percent; auto rickshaws 1.87 percent; and others motor vehicles 1.73 percent.
13. There could be multiple factors involved in a road accident. The evidences should be recorded to investigate all possible causes of road accidents. According to the data reporting system upon which this report has been generated reveals that fault of the driver caused 19,414 accidents which is around 89 percent. Number of persons killed according to involvement of human factor reveals death of 9,618 people caused due to over-speeding. This cause alone is responsible for 98 percent of deaths reported in year 2018.
14. Intake of alcohol/drugs by drivers resulted in 146 road accidents and 52 fatalities in 2018.
15. The act of talking on mobile phones while driving has become one of the causes of road accidents. It has resulted in 39 road accidents, 18 road accident deaths and 67 injuries during the calendar year 2018.
16. The total number of Hit and Run cases were reported as 5,750 (26.4 per cent), of the total road accidents in 2018. The total number of persons killed in Hit and Run cases in 2018 is reported were 2,718 which is 26.3 percent of total number of persons killed.
17. Highest number of accident deaths reported in Jaipur (1271) followed by Alwar (632), Udaipur (565), Ajmer (536) and Jodhpur (506). In 9 districts accident



deaths reported was under 200 and in 16 districts, number of deaths lies in range of 200 to 400.

18. Month-wise distribution of road accidents during the calendar year 2018 reveals that the highest number of deaths occurred in the month of April (948) followed by May (934). Higher accident rates are observed during the hours 15:00 to 18:00 (4,343) and 18:00 to 21:00 (4,392) of the day.
19. The Government of Rajasthan has taken multi sectoral initiatives for improving road safety scenario in the state. The initiatives taken could be categorized as Strengthening Institutional Framework for Road Safety, Enforcement of Traffic Laws, Implementing Engineering Measures on Road, Enhancing Emergency Care in the State, Educating Masses through Awareness Programs and Activities, and Conducting Capacity Building Programs for officers and executives of various stakeholders. Recent road safety initiatives taken by the State Level and measures adopted by stakeholders are described in Section 8 and 9 of this report.

## Section 1 - Road Transport and Accidents in Rajasthan

### 1.1 Introduction

Expansion of road network, growth in number of vehicles to meet the increasing transportation demand has become a dire necessity for development of the state. This phenomenon is ubiquitous across the country. The rapid urbanization has associated adverse effects such as increase in number of road traffic crashes and resulting fatalities. Today, road traffic injuries are one of the leading causes of death, disabilities and hospitalization which imposes huge socio-economic burden on the nation.

### 1.2 Overview of Road Length, Motor Vehicles and Road Accidents

A long-term trend of increase in road length and motor vehicles along with changes in total number of fatal accidents, total number of road accidents, number of persons killed in road accident and severity of accidents over the last decade (2009 - 2018) are given at **Table 1.1**.

**Table 1.1: Road Length, Motor Vehicles and Road Accidents (2009 - 2018)**

| Year | Road Length | Registered Vehicles | Accidents | Persons Killed | Persons Injured | Accident Severity* |
|------|-------------|---------------------|-----------|----------------|-----------------|--------------------|
| 2009 | 186806      | 6997531             | 25114     | 9045           | 32317           | 36.0               |
| 2010 | 188534      | 7787493             | 24302     | 9163           | 31033           | 37.7               |
| 2011 | 189402      | 8733560             | 23245     | 9232           | 28666           | 39.7               |
| 2012 | 190000      | 9803283             | 22969     | 9528           | 28135           | 41.5               |
| 2013 | 191694      | 10915452            | 23592     | 9724           | 27424           | 41.2               |
| 2014 | 201064      | 12102223            | 24628     | 10289          | 27453           | 41.8               |
| 2015 | 208341      | 13350646            | 24072     | 10510          | 26153           | 43.7               |
| 2016 | 217707      | 14586283            | 23066     | 10465          | 24103           | 45.4               |
| 2017 | 226853      | 15930643            | 22112     | 10444          | 22071           | 47.2               |
| 2018 | 236572      | 17342439            | 21743     | 10320          | 21547           | 47.5               |

\*Severity: Number of deaths per 100 accidents.

#### Sources of Data:

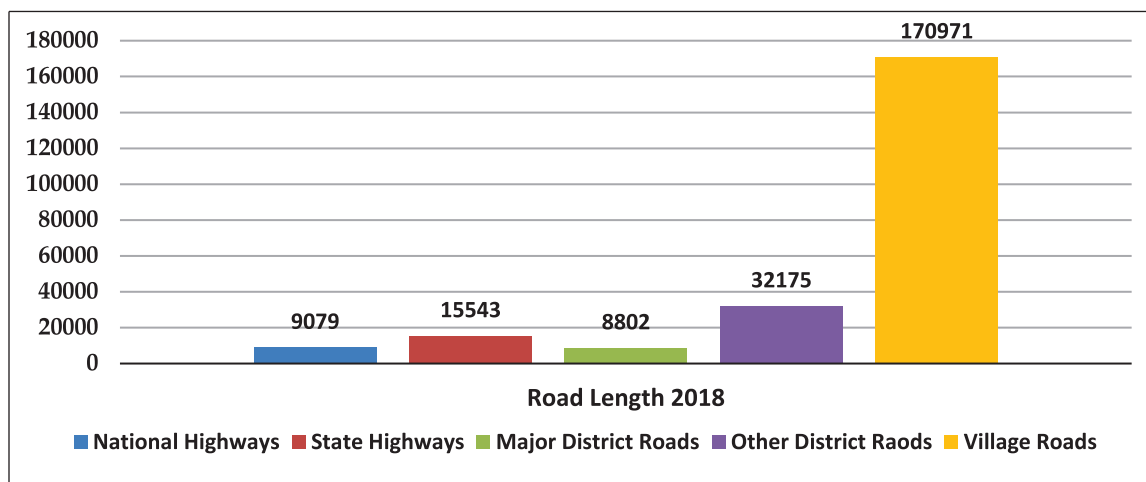
- **Accidents:** Rajasthan Police, Government of Rajasthan
- **Road Length:** Public Works Department, Government of Rajasthan
- **Vehicles:** Statistical Abstract 2016 - 17 and Administrative Report 2018 - 19, Transport Department, Government of Rajasthan

### 1.3 Road Length

Road network in Rajasthan as on March 2018 comprises total road length of 2,36,572 kilometers. The state's road network consists of National Highways, State Highways, Major Districts Roads (MDR), Other District Roads (ODR) and Village Roads (VR).

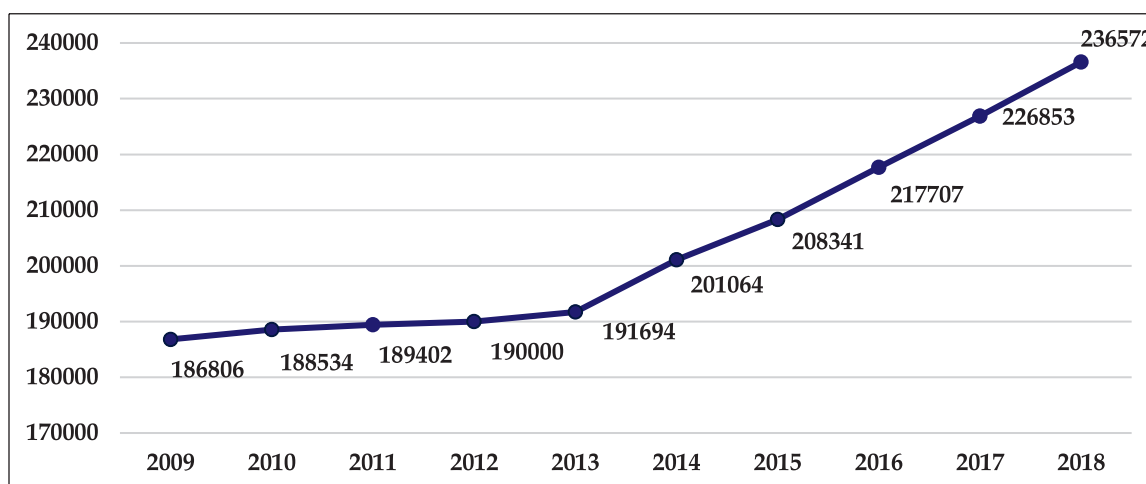
Over the years, there has been consistent improvement in accessibility and mobility of passengers and freight across the state through the construction of new roads and upgradation of the existing roads. The status of road length in Rajasthan as on March 2018 is depicted in **Chart 1.1**.

**Chart 1.1:** Road Length (Km) in Rajasthan in March 2018



The growth of road length in Rajasthan over past decade, from 2009 to 2018 is depicted in **Chart 1.2**.

**Chart 1.2:** Growth of Road Length (in Km) in Rajasthan (2009 – 2018)



## 1.4 Motor Vehicles

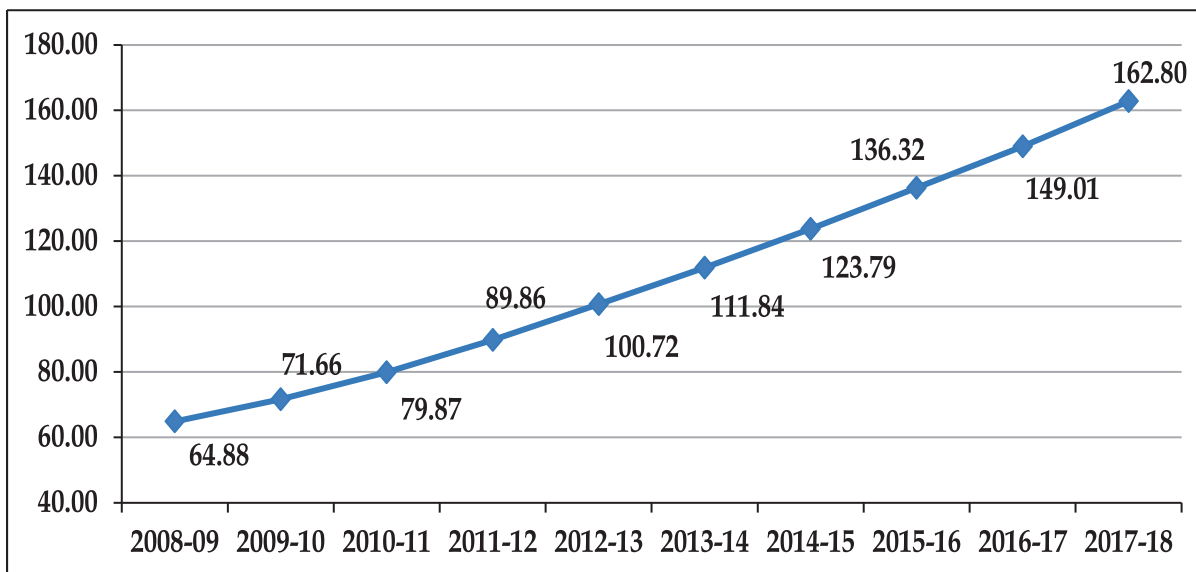
Sustained economic growth have led to rapidly increasing motorized vehicles in Rajasthan. There were 17342439 registered vehicles in the state as on 31 December 2018. The total number of registered motor vehicles in the state grew at CAGR of 9.26 percent in financial year 2017-18. There has been continuous increase in number of registered motor vehicles in Rajasthan.

Composition of vehicular population during 2017-18 shows the highest share of two wheelers (75.6%) followed by cars, jeeps and taxis (10.6%), Tractors (6.7%), Trucks (3.7%) and Buses (0.7%). The vehicular composition shows that preference of

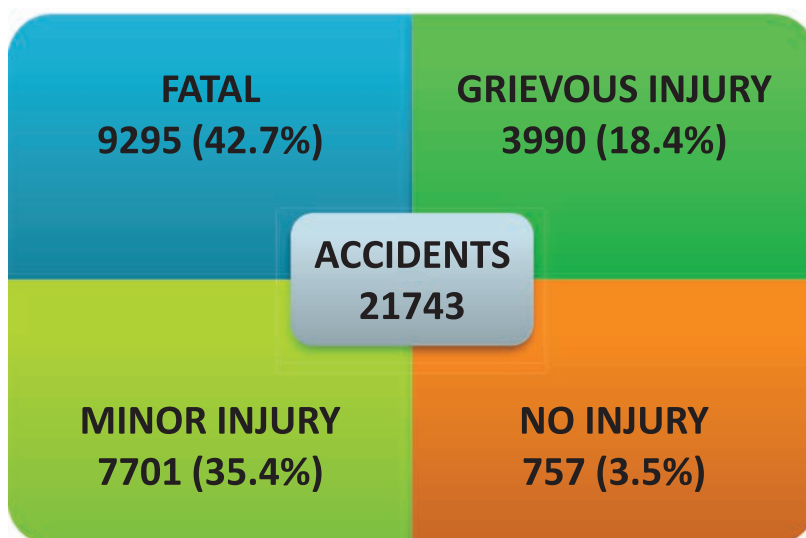


personalized means of transport (cars and two-wheelers) is higher than the public road transport. The composition also reveals that the share of public road transport in ratio of the total population below is very less. The increase in personalized means of transport and decline in share of public transport have significant implications on traffic congestion and safety. Growth of motor vehicles in Rajasthan from financial year 2008-09 to 2017-18 is depicted in **Chart 1.3**.

**Chart 1.3:** Growth in Number of Registered Motor Vehicles (in Lacs) (2009 - 2018)



## 1.5 Road Accidents



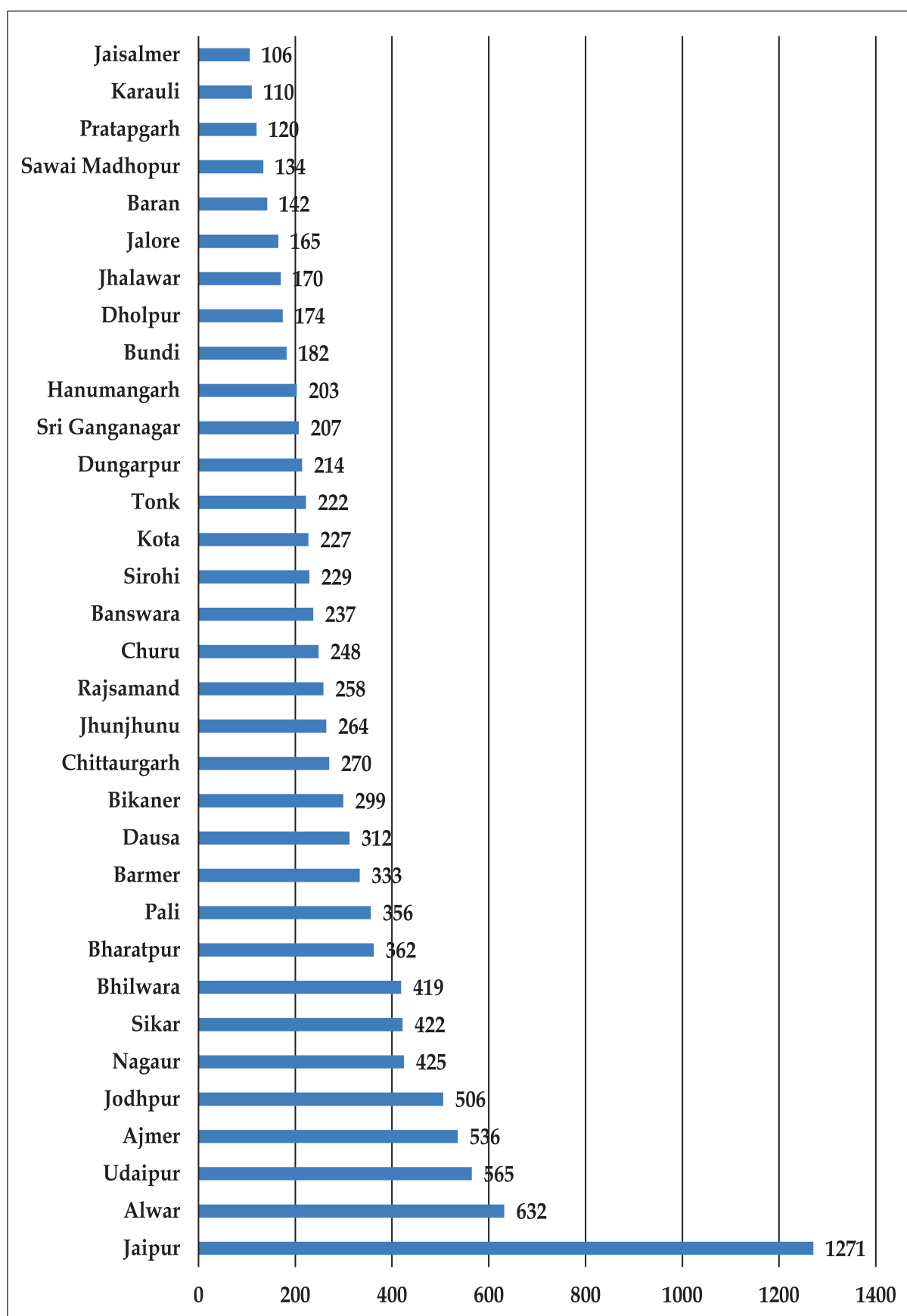
During year 2018, total 21,743 road accidents were reported in the State. Out of these 9,295 (42.7 percent) were fatal; 3,990 (18.4 percent) were grievous injury; 7,701 (35.4 percent) were minor injury and 757 (3.5 percent) were no injury accidents.

The number of persons killed in road accidents in year 2018 were 10,320 and injured were 21,547. This translates to an average of 61 accidents, 28 fatalities and 60 injured per day. District-wise distribution of number of road accidents, number of persons killed and injured in 2018 are given in **Table 1.2**. Road accident severity, number of persons killed per 100 accident has increased to 47.5 in year 2018.

**Table 1.2: Number of Road Accidents, Persons Killed, Persons Injured and Severity of Accidents in Districts of Rajasthan in Year 2018**

| S. No.       | District       | Accidents    | Killed       | Injured      | Severity    |
|--------------|----------------|--------------|--------------|--------------|-------------|
| 1            | Ajmer          | 1057         | 536          | 969          | 50.7        |
| 2            | Alwar          | 1344         | 632          | 908          | 47.0        |
| 3            | Banswara       | 460          | 237          | 506          | 51.5        |
| 4            | Baran          | 392          | 142          | 504          | 36.2        |
| 5            | Barmer         | 524          | 333          | 594          | 63.5        |
| 6            | Bharatpur      | 649          | 362          | 477          | 55.8        |
| 7            | Bhilwara       | 892          | 419          | 824          | 47.0        |
| 8            | Bikaner        | 416          | 299          | 365          | 71.9        |
| 9            | Bundi          | 539          | 182          | 637          | 33.8        |
| 10           | Chittorgarh    | 542          | 270          | 569          | 49.8        |
| 11           | Churu          | 367          | 248          | 392          | 67.6        |
| 12           | Dausa          | 537          | 312          | 554          | 58.1        |
| 13           | Dholpur        | 343          | 174          | 331          | 50.7        |
| 14           | Dungarpur      | 455          | 214          | 479          | 47.0        |
| 15           | Hanumangarh    | 296          | 203          | 377          | 68.6        |
| 16           | Jaipur         | 3912         | 1271         | 3344         | 32.5        |
| 17           | Jaisalmer      | 169          | 106          | 250          | 62.7        |
| 18           | Jalore         | 271          | 165          | 269          | 60.9        |
| 19           | Jhalawar       | 498          | 170          | 765          | 34.1        |
| 20           | Jhunjhunu      | 570          | 264          | 491          | 46.3        |
| 21           | Jodhpur        | 926          | 506          | 718          | 54.6        |
| 22           | Karoli         | 250          | 110          | 238          | 44.0        |
| 23           | Kota           | 792          | 227          | 868          | 28.7        |
| 24           | Nagaur         | 626          | 425          | 610          | 67.9        |
| 25           | Pali           | 625          | 356          | 632          | 57.0        |
| 26           | Pratapgarh     | 193          | 120          | 210          | 62.2        |
| 27           | Rajsamand      | 544          | 258          | 733          | 47.4        |
| 28           | Sawai Madhopur | 327          | 134          | 375          | 41.0        |
| 29           | Sikar          | 837          | 422          | 846          | 50.4        |
| 30           | Sirohi         | 377          | 229          | 496          | 60.7        |
| 31           | Sri Ganganagar | 329          | 207          | 307          | 62.9        |
| 32           | Tonk           | 437          | 222          | 573          | 50.8        |
| 33           | Udaipur        | 1247         | 565          | 1336         | 45.3        |
| <b>TOTAL</b> |                | <b>21743</b> | <b>10320</b> | <b>21547</b> | <b>47.5</b> |

**Chart 1.4:** District-wise Number of Persons Killed in Road Accident in Rajasthan in 2018



## Comparative Analysis of Accidents, Persons Killed and Injured (2017 - 2018)

In comparison with accident statistics of 2017, total number of road accidents, killed and injured has been decreased by 369 (-1.67%), 124 (-1.19%) and 524 (-2.37%) respectively in year 2018. To address the road safety issues, the Lead Agency framed a comprehensive Road Safety Action Plan 2018-2020 incorporating objectives of Rajasthan State Road Safety Policy and Five Pillars of Road Safety viz. Road Safety Management, Safer Vehicles, Safer Roads & Mobility, Safer Road Users and Post-Crash Response. The district-wise comparative analysis of year 2017 and 2018 is given in **Table 1.3**.

**Table 1.3: Comparative Analysis of Number of Road Accidents, Persons Killed and Persons Injured (2017 - 2018)**

| S. N. | District       | Accidents |       | %age   | Injured |       | %age   | Killed |       | %age   |
|-------|----------------|-----------|-------|--------|---------|-------|--------|--------|-------|--------|
|       |                | 2017      | 2018  |        | 2017    | 2018  |        | 2017   | 2018  |        |
| 1     | Ajmer          | 1191      | 1057  | -11.25 | 1065    | 969   | -9.01  | 612    | 536   | -12.41 |
| 2     | Alwar          | 1237      | 1344  | 8.65   | 872     | 908   | 4.13   | 574    | 632   | 10.10  |
| 3     | Banswara       | 404       | 460   | 13.86  | 495     | 506   | 2.22   | 212    | 237   | 11.79  |
| 4     | Baran          | 441       | 392   | -11.11 | 581     | 504   | -13.25 | 156    | 142   | -8.97  |
| 5     | Barmer         | 502       | 524   | 4.38   | 586     | 594   | 1.37   | 296    | 333   | 12.50  |
| 6     | Bharatpur      | 669       | 649   | -2.99  | 492     | 477   | -3.05  | 382    | 362   | -5.24  |
| 7     | Bhilwara       | 909       | 892   | -1.87  | 895     | 824   | -7.93  | 430    | 419   | -2.56  |
| 8     | Bikaner        | 364       | 416   | 14.29  | 381     | 365   | -4.20  | 271    | 299   | 10.33  |
| 9     | Bundi          | 536       | 539   | 0.56   | 558     | 637   | 14.16  | 169    | 182   | 7.69   |
| 10    | Chittorgarh    | 602       | 542   | -9.97  | 651     | 569   | -12.60 | 288    | 270   | -6.25  |
| 11    | Churu          | 376       | 367   | -2.39  | 420     | 392   | -6.67  | 231    | 248   | 7.36   |
| 12    | Dausa          | 687       | 537   | -21.83 | 667     | 554   | -16.94 | 342    | 312   | -8.77  |
| 13    | Dholpur        | 354       | 343   | -3.11  | 411     | 331   | -19.46 | 188    | 174   | -7.45  |
| 14    | Dungarpur      | 388       | 455   | 17.27  | 417     | 479   | 14.87  | 183    | 214   | 16.94  |
| 15    | Hanumangarh    | 293       | 296   | 1.02   | 305     | 377   | 23.61  | 210    | 203   | -3.33  |
| 16    | Jaipur         | 4023      | 3912  | -2.76  | 3593    | 3344  | -6.93  | 1333   | 1271  | -4.65  |
| 17    | Jaisalmer      | 140       | 169   | 20.71  | 197     | 250   | 26.90  | 106    | 106   | 0.00   |
| 18    | Jalore         | 281       | 271   | -3.56  | 237     | 269   | 13.50  | 166    | 165   | -0.60  |
| 19    | Jhalawar       | 449       | 498   | 10.91  | 593     | 765   | 29.01  | 164    | 170   | 3.66   |
| 20    | Jhunjhunu      | 569       | 570   | 0.18   | 566     | 491   | -13.25 | 237    | 264   | 11.39  |
| 21    | Jodhpur        | 1054      | 926   | -12.14 | 854     | 718   | -15.92 | 606    | 506   | -16.50 |
| 22    | Karoli         | 260       | 250   | -3.85  | 240     | 238   | -0.83  | 123    | 110   | -10.57 |
| 23    | Kota           | 794       | 792   | -0.25  | 805     | 868   | 7.83   | 235    | 227   | -3.40  |
| 24    | Nagaur         | 668       | 626   | -6.29  | 653     | 610   | -6.58  | 434    | 425   | -2.07  |
| 25    | Pali           | 663       | 625   | -5.73  | 664     | 632   | -4.82  | 436    | 356   | -18.35 |
| 26    | Pratapgarh     | 172       | 193   | 12.21  | 218     | 210   | -3.67  | 85     | 120   | 41.18  |
| 27    | Rajsamand      | 489       | 544   | 11.25  | 590     | 733   | 24.24  | 238    | 258   | 8.40   |
| 28    | Sawai Madhopur | 374       | 327   | -12.57 | 434     | 375   | -13.59 | 176    | 134   | -23.86 |
| 29    | Sikar          | 857       | 837   | -2.33  | 849     | 846   | -0.35  | 464    | 422   | -9.05  |
| 30    | Sirohi         | 362       | 377   | 4.14   | 467     | 496   | 6.21   | 213    | 229   | 7.51   |
| 31    | Sri Ganganagar | 311       | 329   | 5.79   | 341     | 307   | -9.97  | 181    | 207   | 14.36  |
| 32    | Tonk           | 416       | 437   | 5.05   | 493     | 573   | 16.23  | 202    | 222   | 9.90   |
| 33    | Udaipur        | 1277      | 1247  | -2.35  | 1481    | 1336  | -9.79  | 501    | 565   | 12.77  |
| TOTAL |                | 22112     | 21743 | -1.67  | 22071   | 21547 | -2.37  | 10444  | 10320 | -1.19  |



## Top 10 Districts According to Number of Fatalities During Year 2018

The top 10 district in terms of number of fatalities reported in year 2018 is depicted in **Table 1.4**. State capital, Jaipur ranks on top with 1271 fatalities having 12.32 percent share followed by districts Alwar, Udaipur, Ajmer, Jodhpur, Nagaur, Sikar, Bhilwara, Bharatpur and Pali.

**Table 1.4: Top 10 Districts According to Number of Fatalities During the Year 2018**

| Rank | District  | Killed | %age Share |
|------|-----------|--------|------------|
| 1    | Jaipur    | 1271   | 12.32      |
| 2    | Alwar     | 632    | 6.12       |
| 3    | Udaipur   | 565    | 5.47       |
| 4    | Ajmer     | 536    | 5.19       |
| 5    | Jodhpur   | 506    | 4.90       |
| 6    | Nagaur    | 425    | 4.12       |
| 7    | Sikar     | 422    | 4.09       |
| 8    | Bhilwara  | 419    | 4.06       |
| 9    | Bharatpur | 362    | 3.51       |
| 10   | Pali      | 356    | 3.45       |

Top 10 Districts According to Increase in Number of Fatalities Based on Comparative Analysis (2017 – 2018)

Top 10 districts in terms of increase in number of fatalities in 2018 in comparison to fatalities reported in year 2017 is given in **Table 1.5**. According to the comparison Udaipur reported highest increase of 64 deaths.

**Table 1.5: Top 10 Districts According to Increase in Number of Fatalities Based on Comparative Analysis (2017 – 2018)**

| Rank | District       | Persons Killed 2017 | Persons Killed 2018 | Increase in Fatalities | %age Increase |
|------|----------------|---------------------|---------------------|------------------------|---------------|
| 1    | Udaipur        | 501                 | 565                 | 64                     | 12.77         |
| 2    | Alwar          | 574                 | 632                 | 58                     | 10.10         |
| 3    | Barmer         | 296                 | 333                 | 37                     | 12.50         |
| 4    | Pratapgarh     | 85                  | 120                 | 35                     | 41.18         |
| 5    | Dungarpur      | 183                 | 214                 | 31                     | 16.94         |
| 6    | Bikaner        | 271                 | 299                 | 28                     | 10.33         |
| 7    | Jhunjhunu      | 237                 | 264                 | 27                     | 11.39         |
| 8    | Sri Ganganagar | 181                 | 207                 | 26                     | 14.36         |
| 9    | Banswara       | 212                 | 237                 | 25                     | 11.79         |
| 10   | Tonk           | 202                 | 222                 | 20                     | 9.90          |
| 10   | Rajsamand      | 238                 | 258                 | 20                     | 8.40          |

Segregation of fatalities reported in Rajasthan in year 2018 is represented in the **Map 1.1** given below. The only district having fatalities count more than 1000 is Jaipur. No district lies in the range of 800 – 1000 fatalities. Four districts have fatalities in range of 500 – 800 and major share is in range of 200 – 500 fatalities and less than 200 fatalities.

## 1.6 Comparison with National Data (2018)

Underlying **Table 1.6** denotes percentage share of Rajasthan with respect to India for various parameters like area, road length, population, vehicle population, accidents, fatalities and injuries. Accident data of year 2018 has been used for the analysis.

| Parameter                  | India  | Rajasthan | %age Share                   |
|----------------------------|--------|-----------|------------------------------|
| Area (Lac Sq. Km.)         | 32.87  | 3.42      | 10.40                        |
| Road Length (Lac Km)       | 56.00  | 2.36      | 4.21                         |
| Population (Crore)         | 132.40 | 7.48      | 5.59                         |
| Vehicle Population (Crore) | 23.00* | 1.73      | 7.52                         |
| Accidents <sup>#</sup>     | 461334 | 21743     | 4.71<br>8 <sup>th</sup> Rank |
| Injuries <sup>#</sup>      | 466727 | 21547     | 4.62<br>9 <sup>th</sup> Rank |
| Fatalities <sup>#</sup>    | 149131 | 10320     | 6.92<br>6 <sup>th</sup> Rank |
| Severity                   | 31.8   | 47.5      | NA                           |

\*Approximate vehicle population of India in 2017

<sup>#</sup>According to interim data received from MoRTH

### Share in Total Number of Road Accidents (in %age) During Year 2018

**Table 1.7** depicts top ten states in terms of number of accidents reported in year 2018. The percentage share of Rajasthan is 4.71 and lies on 8<sup>th</sup> position. Tamil Nadu reported highest 63,920 accidents in 2018.

| Rank | State            | %age Share  | Accidents    |
|------|------------------|-------------|--------------|
| 1    | Tamil Nadu       | 13.86       | 63920        |
| 2    | Madhya Pradesh   | 11.14       | 51397        |
| 3    | Uttar Pradesh    | 9.23        | 42568        |
| 4    | Karnataka        | 9.04        | 41708        |
| 5    | Kerala           | 8.70        | 40124        |
| 6    | Maharashtra      | 7.80        | 35964        |
| 7    | Telangana        | 4.82        | 22218        |
| 8    | <b>Rajasthan</b> | <b>4.71</b> | <b>21743</b> |
| 9    | Andhra Pradesh   | 4.32        | 19928        |
| 10   | Gujarat          | 4.06        | 18745        |

### Share in Total Number of Fatalities (in %) During Year 2018

**Table 1.8** depicts top ten states in terms of number of fatalities reported in year 2018. The percentage share of Rajasthan is 6.92 and occupies 6<sup>th</sup> position. Uttar Pradesh reported highest number of road accident fatalities during year 2018.

| Table 1.8: Share in Total Number of Fatalities (in %) During Year 2018 |                |            |            |
|------------------------------------------------------------------------|----------------|------------|------------|
| Rank                                                                   | State          | %age Share | Fatalities |
| 1                                                                      | Uttar Pradesh  | 14.92      | 22256      |
| 2                                                                      | Maharashtra    | 8.77       | 13085      |
| 3                                                                      | Tamil Nadu     | 8.19       | 12216      |
| 4                                                                      | Madhya Pradesh | 7.18       | 10706      |
| 5                                                                      | Karnataka      | 7.14       | 10654      |
| 6                                                                      | Rajasthan      | 6.92       | 10320      |
| 7                                                                      | Gujarat        | 5.35       | 7974       |
| 8                                                                      | Andhra Pradesh | 4.97       | 7416       |
| 9                                                                      | Telangana      | 4.42       | 6599       |
| 10                                                                     | Bihar          | 3.96       | 5908       |

### Share in Total Number of Injured (in %) During Year 2018

**Table 1.9** shows top ten states in terms of number of persons injured in road accidents in year 2018. Rajasthan occupied 9<sup>th</sup> place with 21,547 injured persons having percentage share of 4.62. Tamil Nadu has highest share of 15.97 percent in terms of number of persons injured during year 2018.

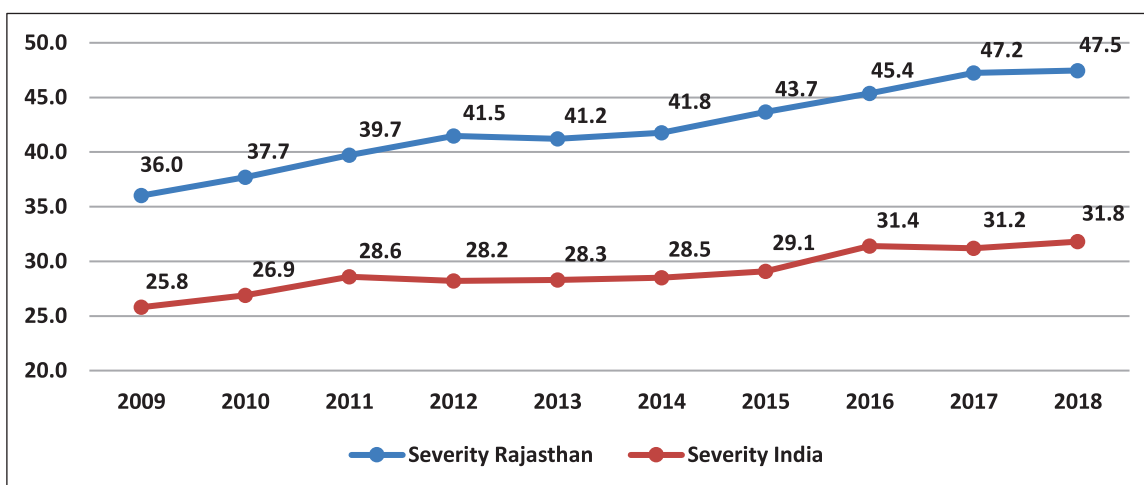
| Table 1.9: Share in Total Number of Injured (in %) During Year 2018 |                |            |         |
|---------------------------------------------------------------------|----------------|------------|---------|
| Rank                                                                | State          | %age Share | Injured |
| 1                                                                   | Tamil Nadu     | 15.97      | 74537   |
| 2                                                                   | Madhya Pradesh | 11.71      | 54662   |
| 3                                                                   | Karnataka      | 11.11      | 51847   |
| 4                                                                   | Kerala         | 9.68       | 45179   |
| 5                                                                   | Maharashtra    | 6.70       | 31255   |
| 6                                                                   | UP             | 6.36       | 29664   |
| 7                                                                   | Telangana      | 5.06       | 23614   |
| 8                                                                   | Andhra Pradesh | 5.03       | 23477   |
| 9                                                                   | Rajasthan      | 4.62       | 21547   |
| 10                                                                  | Gujarat        | 3.74       | 17477   |



## Comparison of Severity of Accidents – India and Rajasthan

Trend of severity of accidents in India and Rajasthan from year 2009 to 2018 reveals that the rate is continuously rising both in the country and the state. In India the severity rate reported in 2009 was 25.8 which increased to 31.8 in 2018. Similarly, in Rajasthan the severity has increase from 36.0 to 47.5 from 2009 to 2018. The comparison reveals that severity in Rajasthan is very high as compared to severity in India. **Chart 1.5** shows the trend of severity in India and Rajasthan over the last decade (2009 – 2018).

**Chart 1.5:** Comparison of Severity of Accidents in India and Rajasthan (2009 – 2018)



## Section 2 – Profile and Trends of Road Accidents

### 2.1 Current Profile

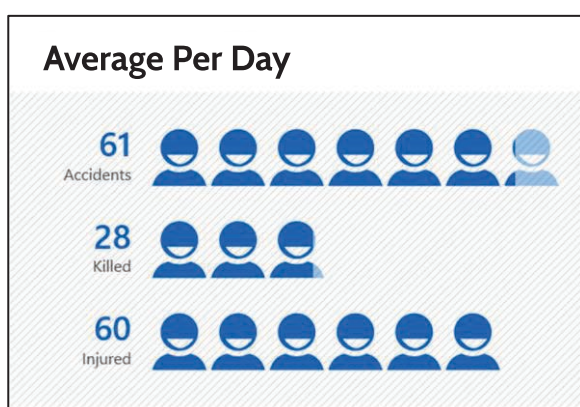
During the calendar year 2018, number of accidents reported at 21,743 is lower by 1.67 percent as compared with 22,112 in 2017. Number of persons injured as a result of road accidents at 21,547 in 2018 is also marginally lower by 2.37 percent from 22,071 in 2017. The total number of persons killed in accidents decreased by 1.19 percent from 10,444 in 2017 to 10,320 in 2018. However, accident severity (number of persons killed per 100 accidents) has increased from 47.2 in 2017 to 47.5 in 2018. A comparative scenario of 2017 and 2018 is depicted in **Table 2.1**.

**Table 2.1: Comparison of Road Accident Parameters of 2017 and 2018**

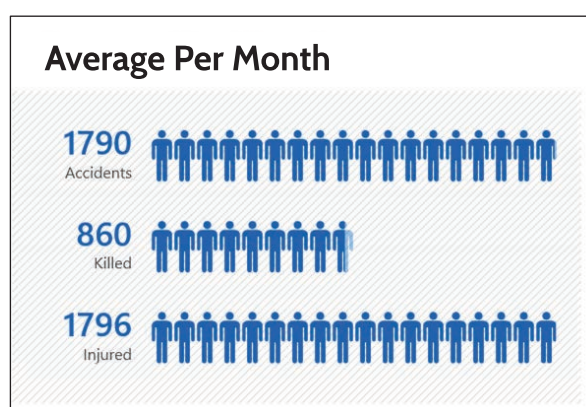
| Parameter | 2017  | 2018  | Increase/Decrease | % change Over Previous Year |
|-----------|-------|-------|-------------------|-----------------------------|
| Accidents | 22112 | 21743 | -369              | -1.67                       |
| Killed    | 10444 | 10320 | -124              | -1.19                       |
| Injured   | 22071 | 21547 | -524              | -2.37                       |
| Severity  | 47.2  | 47.5  | 0.30              | 0.64                        |

#### Average Road Crash Statistics in Rajasthan

**Figure 2.1** depicts average number of accidents, persons killed and injured per day which is 61 accidents, 28 killed and 60 injured. **Figure 2.2** depicts average number of accidents, persons killed and injured per month in state which equals 1790 accidents, 860 killed and 1796 injured according to total number of accidents, number of persons killed and number of persons injured reported in the year 2018 in Rajasthan.



**Figure 2.1**



**Figure 2.2**

### 2.2 Long Term Profile

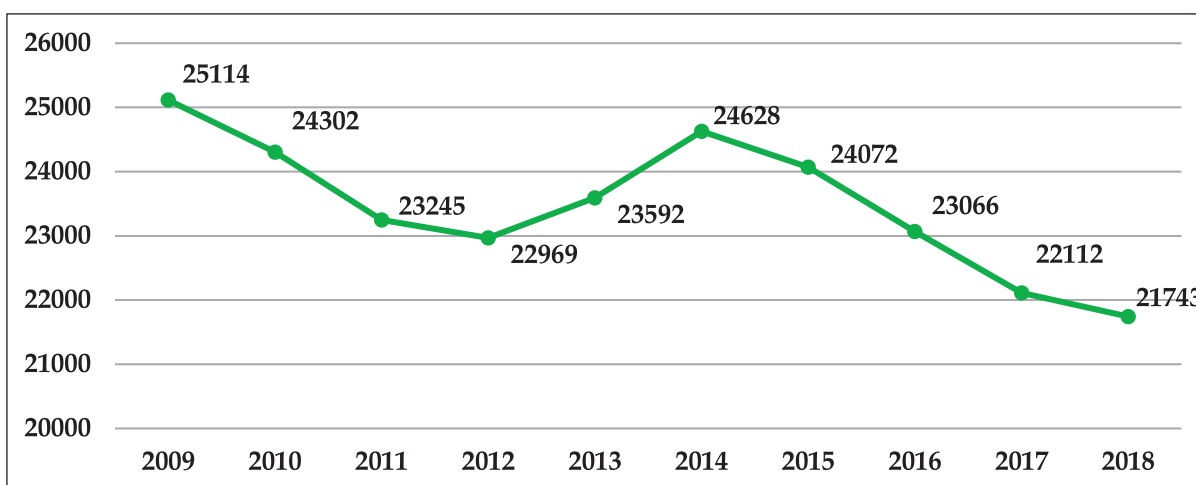
The long-term profile of road accidents, persons killed and persons injured for the period 2009 to 2018 in Rajasthan is shown in **Table 2.2**.

**Table 2.2: Profile of Road Accidents: 2009 – 2018**

| Year | Number of Accidents |       | Number of Persons |         |
|------|---------------------|-------|-------------------|---------|
|      | Total               | Fatal | Killed            | Injured |
| 2009 | 25114               | 8010  | 9045              | 32317   |
| 2010 | 24302               | 8143  | 9163              | 31033   |
| 2011 | 23245               | 8354  | 9232              | 28666   |
| 2012 | 22969               | 8550  | 9528              | 28135   |
| 2013 | 23592               | 8785  | 9724              | 27424   |
| 2014 | 24628               | 9334  | 10289             | 27453   |
| 2015 | 24072               | 9306  | 10510             | 26153   |
| 2016 | 23066               | 9282  | 10465             | 24103   |
| 2017 | 22112               | 9300  | 10444             | 22071   |
| 2018 | 21743               | 9295  | 10320             | 21547   |

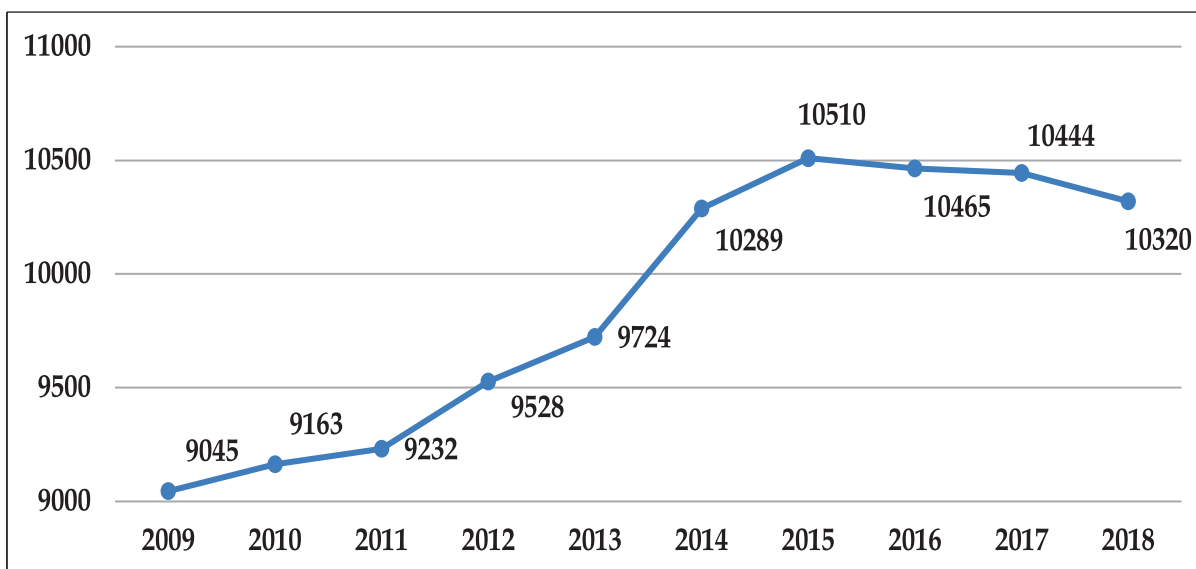
**a) Road Accidents in Rajasthan (2009 – 2018)**

The **Chart 2.1** depicts a declining trend in number of road accidents reported in Rajasthan over a period of 2009 to 2018. In year 2014, number of accidents increased and thereafter kept on reducing. On the other hand, it is important to note that despite decrease in number of accidents, the number of fatal accidents are continuously increasing which is a main reason for higher severity rate in the state. From 2009, number of fatal accidents have increased from 8,010 to 9,295 in 2018.

**Chart 2.1:** Road Accidents in Rajasthan (2009 – 2018)**b) Number of Persons Killed in Road Accidents (2009 – 2018)**

Number fatalities were on continuous rise since 2009 and for the first time the trend showed a decline in 2016. Since then fatalities are decreasing year by year. In year 2018 total 10,320 fatalities have been reported in Rajasthan. **Chart 2.2** depicts trend of number of persons killed in Rajasthan for period of 2009 to 2018.

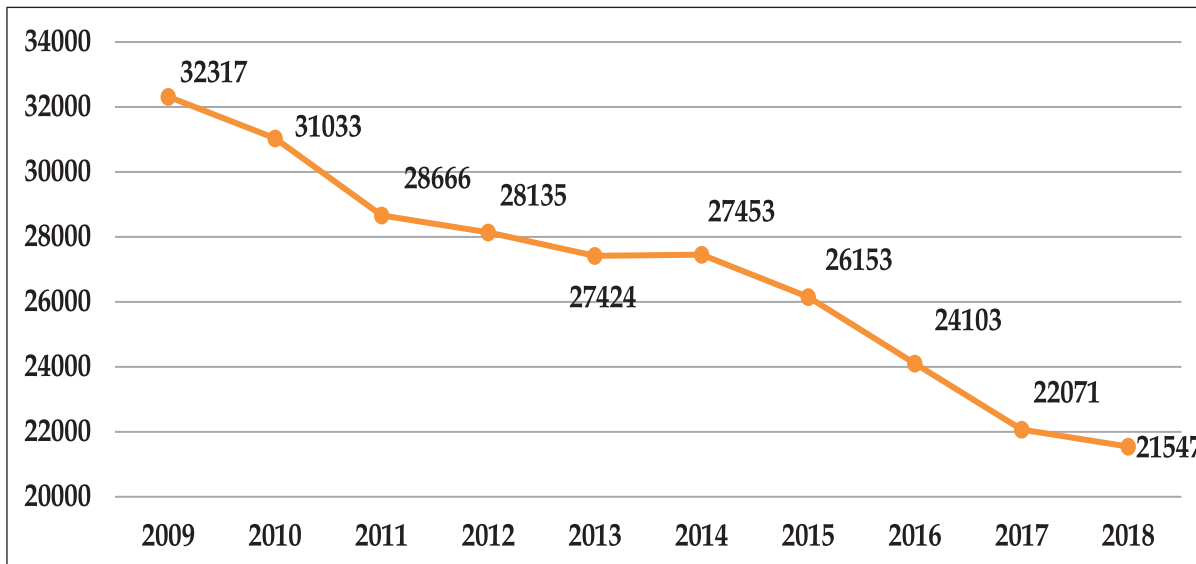
**Chart 2.2:** Number of Persons Killed in Road Accidents (2009 – 2018)



#### c) Number of Persons Injured in Road Accidents (2009 – 2018)

Number of persons injured in road accidents is also decreasing continuously. In 2009 total number of injured persons were 32,317 which has reduced down to 21,547 in year 2018. The same is depicted through **Chart 2.3** for period of 2009 to 2018.

**Chart 2.3:** Number of Persons Injured in Road Accidents (2009 – 2018)

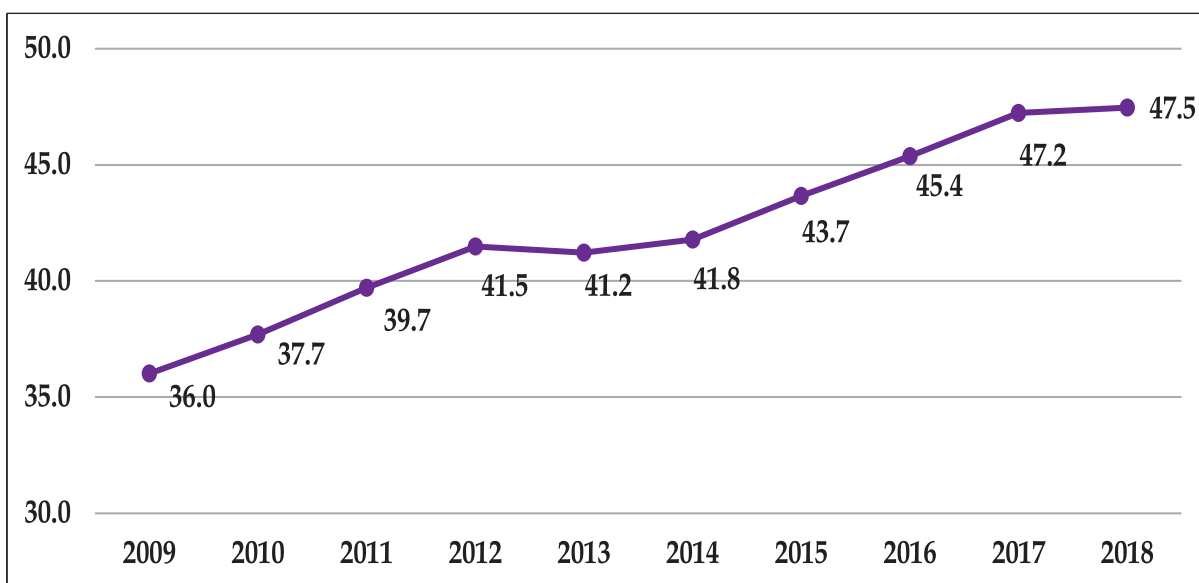


#### d) Severity of Road Accidents (2009 - 2018)

Constant increase in number of fatal road accidents could be deemed as one of the reasons of continuous rise in rate of severity in Rajasthan. The severity has increased from 36.0 in 2009 to 47.5 in 2018. **Chart 2.4** depicts the trend of increasing severity in Rajasthan for period of 2009 to 2018.



**Chart 2.4:** Severity of Road Accidents (2009 - 2018)



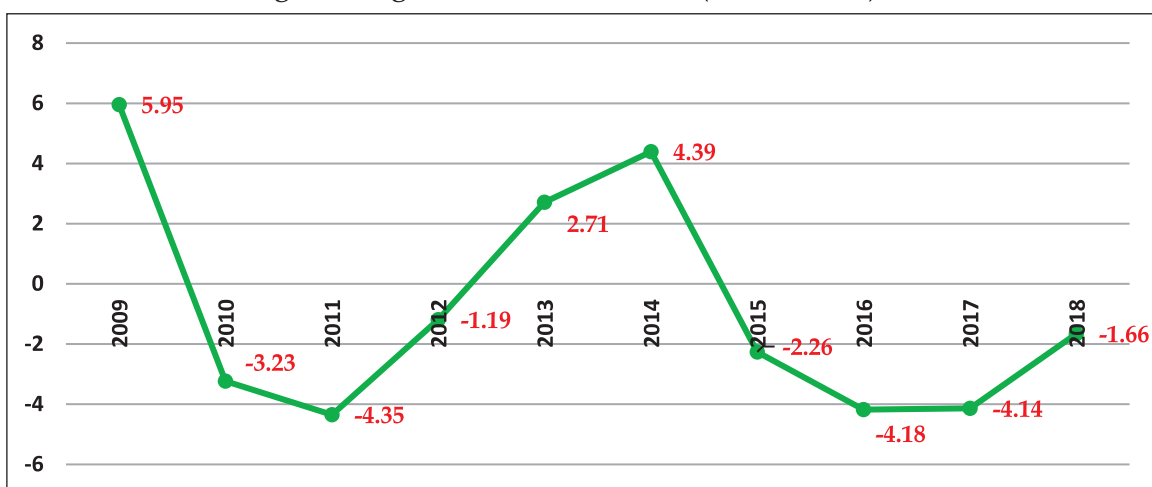
## 2.3 Long Run Trends

Year-wise percentage change in the total number of road accidents, total number of persons killed and injured over the previous year during the last decade (2009 to 2018) are depicted in **Table 2.3, Chart 2.5, Chart 2.6 and Chart 2.7.**

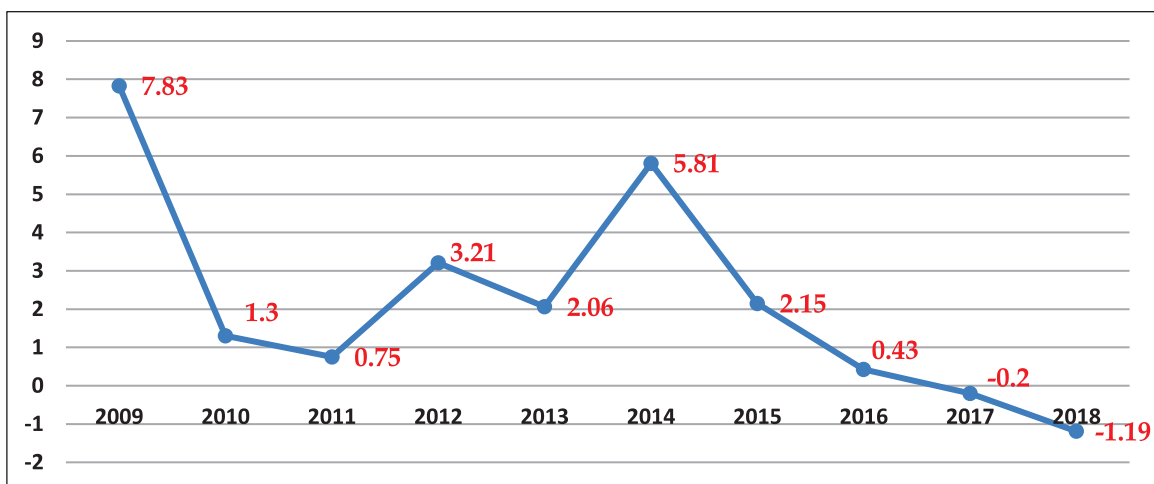
**Table 2.3 Annual Percentage Change of Total Number of Road Accidents, Persons Killed and Injured During 2009 - 2018**

| Year | Percentage Change in Road Accidents | Percentage Change in Persons Killed | Percentage Change in Persons Injured |
|------|-------------------------------------|-------------------------------------|--------------------------------------|
| 2009 | 5.95                                | 7.83                                | 4.73                                 |
| 2010 | -3.23                               | 1.30                                | -3.97                                |
| 2011 | -4.35                               | 0.75                                | -7.63                                |
| 2012 | -1.19                               | 3.21                                | -1.85                                |
| 2013 | 2.71                                | 2.06                                | -2.53                                |
| 2014 | 4.39                                | 5.81                                | 0.11                                 |
| 2015 | -2.26                               | 2.15                                | -4.74                                |
| 2016 | -4.18                               | 0.43                                | -7.84                                |
| 2017 | -4.14                               | -0.20                               | -8.43                                |
| 2018 | -1.66                               | -1.19                               | -2.37                                |

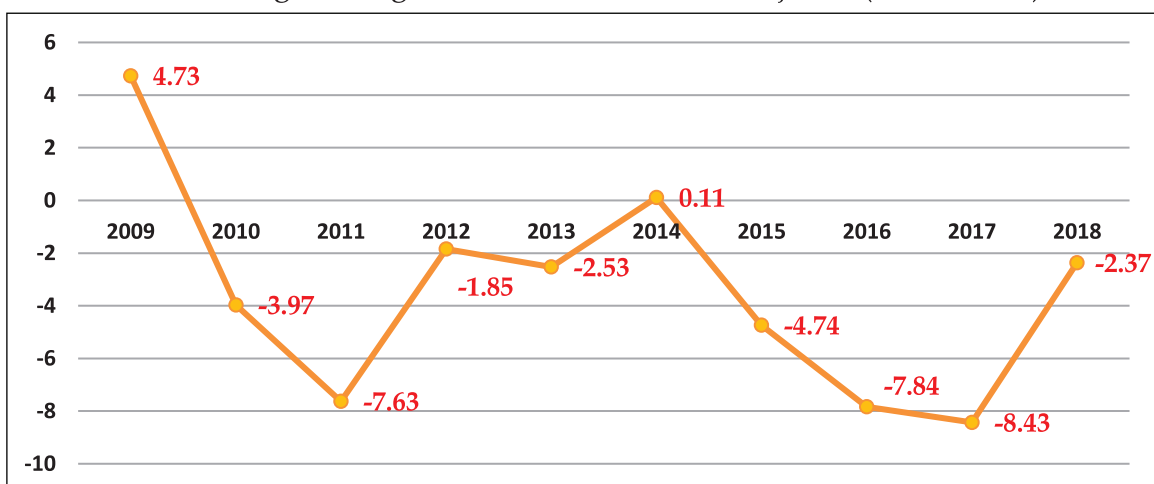
**Chart 2.5:** Percentage Change in Road Accidents (2009 – 2018)



**Chart 2.6:** Percentage Change in Number of Persons Killed (2009 - 2018)



**Chart 2.7:** Percentage Change in Number of Persons Injured (2009 – 2018)



## Accidents Classified According to Type of Injuries (2009 – 2018)

Road accident injuries are the leading causes of deaths and disabilities. The number of fatal accidents, grievously injured, minor injured, non-injured accidents and number of total accidents over the period 2009 to 2018 is shown in **Table 2.4**. It is a matter of serious concern that number of fatal accidents in the state are increasing. The share of fatal accidents in year 2009 was 31.9 which has increased to 42.7 percent in 2018. Number of grievous injury accidents has reduced whereas accidents involving minor injuries have come down to a significant level 47.4 in 2009 to 35.4 in 2018.

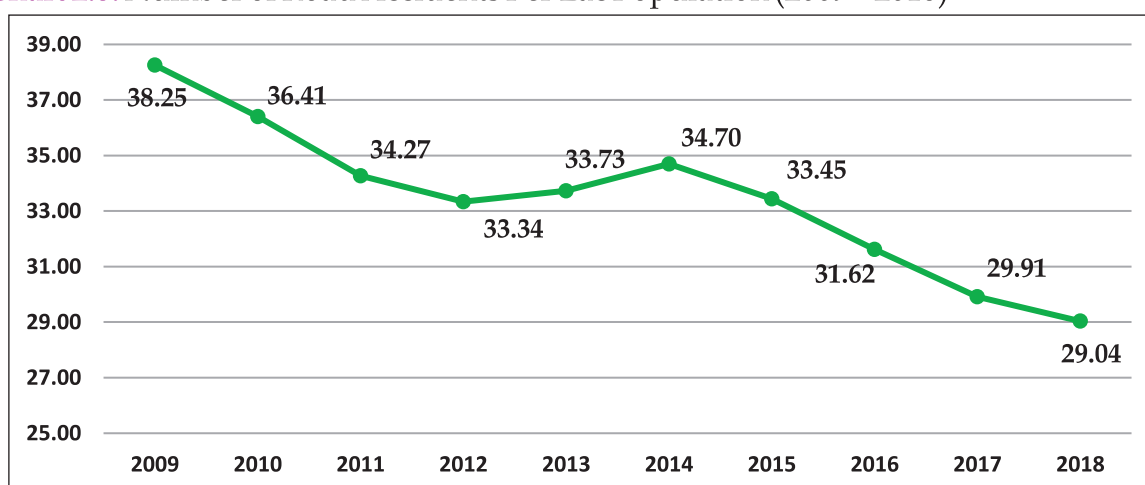
**Table 2.4: Accidents Classified According to Type of Injuries (2009 – 2018)**

| Year | Fatal | Grievously Injured | Minor Injured | Non-Injured | Total Accidents |
|------|-------|--------------------|---------------|-------------|-----------------|
| 2009 | 8010  | 4204               | 11910         | 990         | 25114           |
| 2010 | 8143  | 4169               | 10951         | 1039        | 24302           |
| 2011 | 8354  | 3913               | 10067         | 911         | 23245           |
| 2012 | 8550  | 4002               | 9502          | 915         | 22969           |
| 2013 | 8785  | 3751               | 10074         | 982         | 23592           |
| 2014 | 9334  | 3640               | 10732         | 922         | 24628           |
| 2015 | 9306  | 3758               | 10117         | 891         | 24072           |
| 2016 | 9282  | 3786               | 9260          | 738         | 23066           |
| 2017 | 9300  | 4017               | 8110          | 685         | 22112           |
| 2018 | 9295  | 3990               | 7701          | 757         | 21743           |

## 2.4 Normalized Indicators of Road Accidents, Injuries and Fatalities

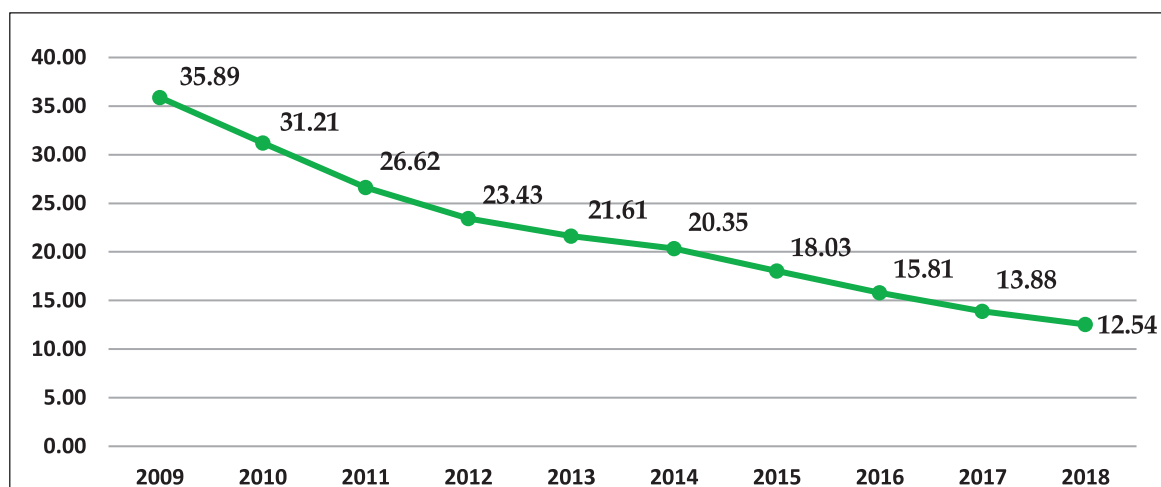
To get an appropriate measure of incidence of accidents, normalized accident rates for Rajasthan have been worked out in terms of number of road accidents, killings and injuries (a) per lakh persons, (b) per ten thousand motor vehicles and (c) per ten thousand kilometres of road length. Some of the broad trends at the state level are summarized below. **Chart 2.8** indicates the decrease in the number of accidents per lac population from 38.25 in 2009 to 29.04 in 2018.

**Chart 2.8:** Number of Road Accidents Per Lac Population (2009 – 2018)



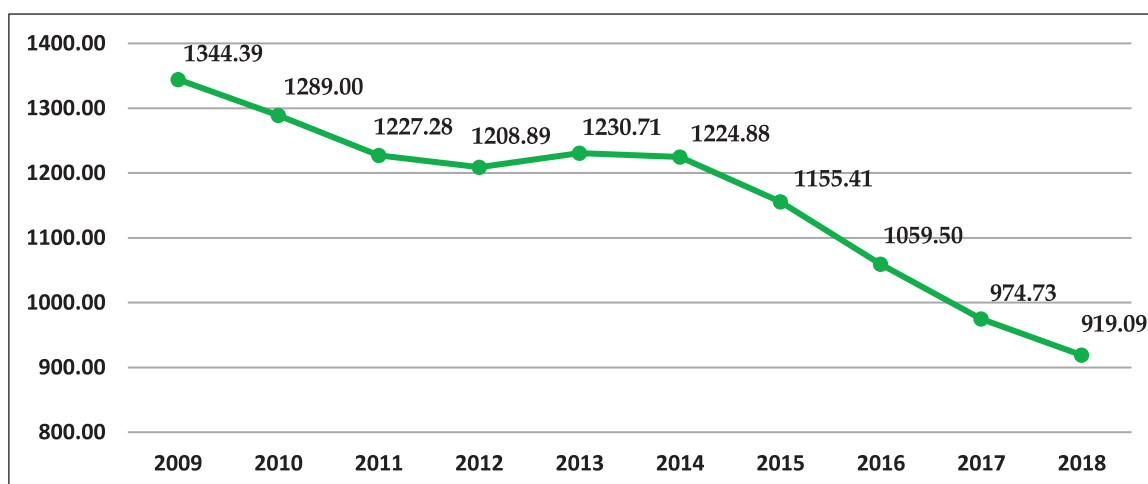
Number of road accidents per ten thousand vehicles are also declining. From 35.89 accidents per ten thousand vehicles in 2009, the rate has declined to 12.54 accidents per ten thousand vehicles in 2018.

**Chart 2.9:** Number of Road Accidents Per Ten Thousand Vehicles (2009 - 2018)



Number of road accidents per ten thousand kilometres of road length shows a declining trend from 2009 to 2018. From 1344 accidents per ten thousand kilometres of road in 2009, the rate has declined to 919 accidents in year 2018.

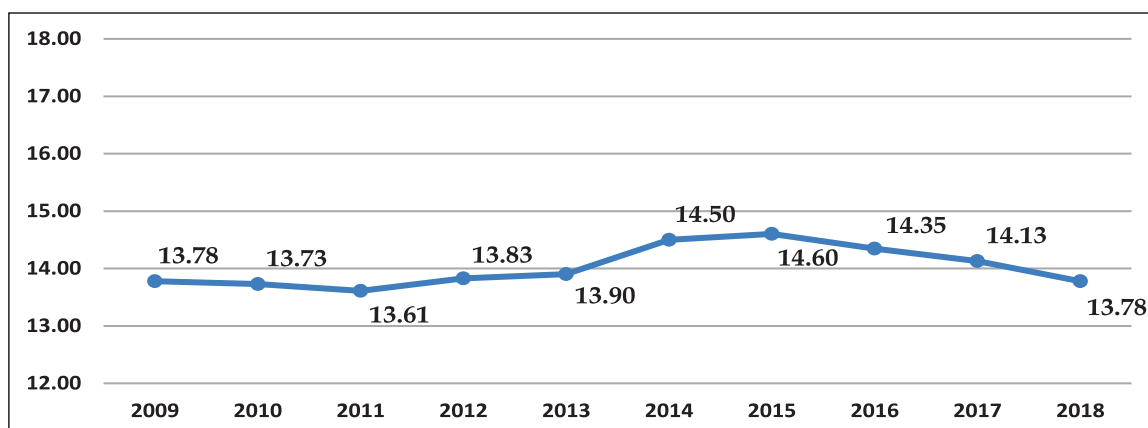
**Chart 2.10:** Number of Road Accidents Per Ten Thousand Km of Road Length (2009 - 2018)



Number of persons killed per lac population has not depicted any steep variation. It is fluctuating between 13 to 15 deaths per lac population in last ten years. Number of persons killed per lac population has been reported similar in year 2009 and 2018 i.e. 13.78 persons. The trend of the same is depicted in **Chart 2.11**.

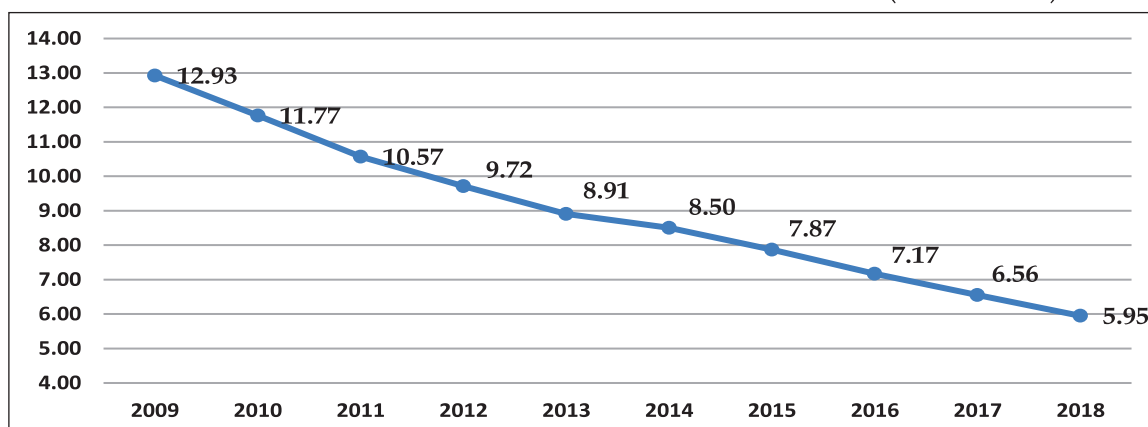


**Chart 2.11:** Number of Persons Killed Per Lac Population (2009 – 2018)



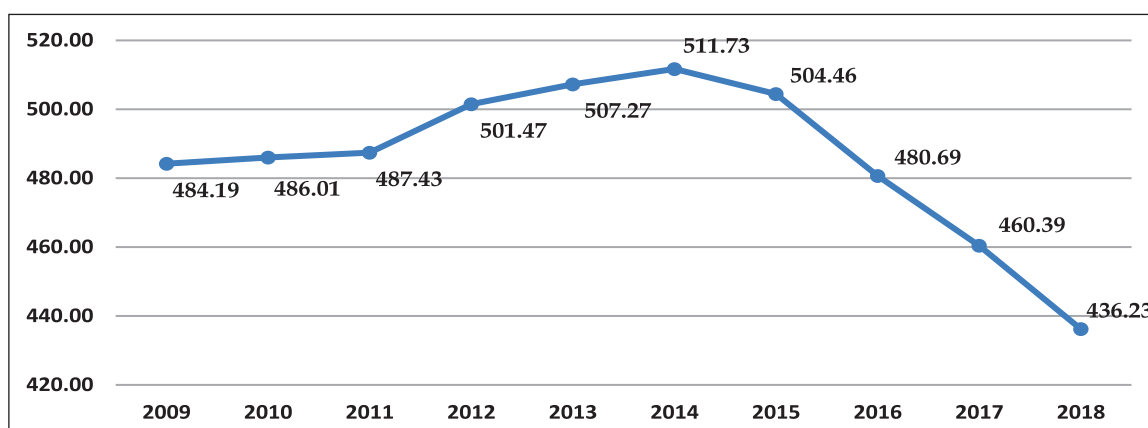
Number of persons killed per ten thousand vehicles has shown significant decline from 2009 to 2018. In year 2009, number of persons killed per ten thousand vehicles was 12.93 and the same has come down to 5.95 in 2018. The detailed trend is shown in **Chart 2.12**.

**Chart 2.12:** Number of Persons Killed Per Ten Thousand Vehicles (2009 – 2018)



Number of persons killed per ten thousand km of road has shown a mixed trend. Till 2014 the number of deaths kept on increasing and thereafter it started declining. From 511 deaths in 2014, the toll has come down to 436 deaths in 2018 per ten thousand km of roads. The trend from 2009 to 2018 is depicted in **Chart 2.13**.

**Chart 2.13:** Number of Persons Killed Per Ten Thousand Km of Road Length (2009-2018)



**Table 2.5: Districtwise Analysis of Accidents (2015-2018)**

| S. No. | District       | 2015         | 2016         | 2017         | 2018         | Trend |
|--------|----------------|--------------|--------------|--------------|--------------|-------|
| 1      | Jaipur         | 4288         | 4190         | 4023         | 3912         |       |
| 2      | Jhunjhnu       | 627          | 608          | 569          | 570          |       |
| 3      | Sikar          | 956          | 907          | 857          | 837          |       |
| 4      | Dausa          | 823          | 728          | 687          | 537          |       |
| 5      | Alwar          | 1367         | 1376         | 1237         | 1344         |       |
| 6      | Bikaner        | 465          | 467          | 364          | 416          |       |
| 7      | Sri Ganganagar | 381          | 324          | 311          | 329          |       |
| 8      | Churu          | 403          | 410          | 376          | 367          |       |
| 9      | Hanumangarh    | 302          | 313          | 293          | 296          |       |
| 10     | Bharatpur      | 576          | 611          | 669          | 649          |       |
| 11     | Dholpur        | 342          | 347          | 354          | 343          |       |
| 12     | Sawai Madhopur | 440          | 335          | 374          | 327          |       |
| 13     | Karoli         | 294          | 267          | 260          | 250          |       |
| 14     | Ajmer          | 1312         | 1239         | 1191         | 1057         |       |
| 15     | Bhilwara       | 974          | 953          | 909          | 892          |       |
| 16     | Nagaur         | 598          | 625          | 668          | 626          |       |
| 17     | Tonk           | 550          | 507          | 416          | 437          |       |
| 18     | Jodhpur        | 1075         | 1048         | 1054         | 926          |       |
| 19     | Jaisalmer      | 150          | 137          | 140          | 169          |       |
| 20     | Barmer         | 470          | 506          | 502          | 524          |       |
| 21     | Jalore         | 291          | 272          | 281          | 271          |       |
| 22     | Pali           | 721          | 632          | 663          | 625          |       |
| 23     | Sirohi         | 480          | 388          | 362          | 377          |       |
| 24     | Udaipur        | 1379         | 1324         | 1277         | 1247         |       |
| 25     | Chittorgarh    | 663          | 587          | 602          | 542          |       |
| 26     | Pratapgarh     | 232          | 198          | 172          | 193          |       |
| 27     | Dungarpur      | 384          | 418          | 388          | 455          |       |
| 28     | Banswara       | 368          | 382          | 404          | 460          |       |
| 29     | Rajsamand      | 494          | 540          | 489          | 544          |       |
| 30     | Kota           | 1073         | 951          | 794          | 792          |       |
| 31     | Bundi          | 644          | 581          | 536          | 539          |       |
| 32     | Jhalawar       | 514          | 420          | 449          | 498          |       |
| 33     | Baran          | 436          | 475          | 441          | 392          |       |
|        | <b>Total</b>   | <b>24072</b> | <b>23066</b> | <b>22112</b> | <b>21743</b> |       |

**Table 2.6: Districtwise Analysis of Fatalities (2015 -2018)**

| S. No. | District       | 2015         | 2016         | 2017         | 2018         | Trend |
|--------|----------------|--------------|--------------|--------------|--------------|-------|
| 1      | Jaipur         | 1446         | 1406         | 1333         | 1271         |       |
| 2      | Jhunjhnu       | 316          | 297          | 237          | 264          |       |
| 3      | Sikar          | 499          | 435          | 464          | 422          |       |
| 4      | Dausa          | 365          | 337          | 342          | 312          |       |
| 5      | Alwar          | 600          | 563          | 574          | 632          |       |
| 6      | Bikaner        | 301          | 278          | 271          | 299          |       |
| 7      | Sri Ganganagar | 244          | 196          | 181          | 207          |       |
| 8      | Churu          | 241          | 263          | 231          | 248          |       |
| 9      | Hanumangarh    | 178          | 199          | 210          | 203          |       |
| 10     | Bharatpur      | 294          | 338          | 382          | 362          |       |
| 11     | Dholpur        | 158          | 192          | 188          | 174          |       |
| 12     | Sawai Madhopur | 133          | 141          | 176          | 134          |       |
| 13     | Karoli         | 124          | 101          | 123          | 110          |       |
| 14     | Ajmer          | 582          | 602          | 612          | 536          |       |
| 15     | Bhilwara       | 369          | 451          | 430          | 419          |       |
| 16     | Nagaur         | 393          | 395          | 434          | 425          |       |
| 17     | Tonk           | 211          | 274          | 202          | 222          |       |
| 18     | Jodhpur        | 598          | 540          | 606          | 506          |       |
| 19     | Jaisalmer      | 99           | 107          | 106          | 106          |       |
| 20     | Barmer         | 284          | 299          | 296          | 333          |       |
| 21     | Jalore         | 177          | 171          | 166          | 165          |       |
| 22     | Pali           | 399          | 395          | 436          | 356          |       |
| 23     | Sirohi         | 257          | 251          | 213          | 229          |       |
| 24     | Udaipur        | 500          | 534          | 501          | 565          |       |
| 25     | Chittorgarh    | 261          | 224          | 288          | 270          |       |
| 26     | Pratapgarh     | 112          | 104          | 85           | 120          |       |
| 27     | Dungarpur      | 187          | 202          | 183          | 214          |       |
| 28     | Banswara       | 182          | 190          | 212          | 237          |       |
| 29     | Rajsamand      | 230          | 271          | 238          | 258          |       |
| 30     | Kota           | 256          | 232          | 235          | 227          |       |
| 31     | Bundi          | 175          | 123          | 169          | 182          |       |
| 32     | Jhalawar       | 170          | 179          | 164          | 170          |       |
| 33     | Baran          | 169          | 175          | 156          | 142          |       |
|        | <b>Total</b>   | <b>10510</b> | <b>10465</b> | <b>10444</b> | <b>10320</b> |       |

**Table 2.7: Districtwise Analysis of Injured (2015 -2018)**

| S. No. | District       | 2015         | 2016         | 2017         | 2018         | Trend |
|--------|----------------|--------------|--------------|--------------|--------------|-------|
| 1      | Jaipur         | 3925         | 3900         | 3593         | 3344         |       |
| 2      | Jhunjhnu       | 642          | 667          | 566          | 491          |       |
| 3      | Sikar          | 1006         | 978          | 849          | 846          |       |
| 4      | Dausa          | 918          | 722          | 667          | 554          |       |
| 5      | Alwar          | 938          | 971          | 872          | 908          |       |
| 6      | Bikaner        | 488          | 406          | 381          | 365          |       |
| 7      | Sri Ganganagar | 379          | 344          | 341          | 307          |       |
| 8      | Churu          | 542          | 564          | 420          | 392          |       |
| 9      | Hanumangarh    | 335          | 328          | 305          | 377          |       |
| 10     | Bharatpur      | 487          | 451          | 492          | 477          |       |
| 11     | Dholpur        | 321          | 370          | 411          | 331          |       |
| 12     | Sawai Madhopur | 534          | 375          | 434          | 375          |       |
| 13     | Karoli         | 324          | 270          | 240          | 238          |       |
| 14     | Ajmer          | 1282         | 1113         | 1065         | 969          |       |
| 15     | Bhilwara       | 1247         | 1047         | 895          | 824          |       |
| 16     | Nagaur         | 694          | 578          | 653          | 610          |       |
| 17     | Tonk           | 666          | 693          | 493          | 573          |       |
| 18     | Jodhpur        | 1046         | 906          | 854          | 718          |       |
| 19     | Jaisalmer      | 241          | 204          | 197          | 250          |       |
| 20     | Barmer         | 541          | 524          | 586          | 594          |       |
| 21     | Jalore         | 262          | 256          | 237          | 269          |       |
| 22     | Pali           | 938          | 638          | 664          | 632          |       |
| 23     | Sirohi         | 636          | 569          | 467          | 496          |       |
| 24     | Udaipur        | 1711         | 1525         | 1481         | 1336         |       |
| 25     | Chittorgarh    | 776          | 662          | 651          | 569          |       |
| 26     | Pratapgarh     | 336          | 362          | 218          | 210          |       |
| 27     | Dungarpur      | 525          | 454          | 417          | 479          |       |
| 28     | Banswara       | 496          | 462          | 495          | 506          |       |
| 29     | Rajsamand      | 613          | 661          | 590          | 733          |       |
| 30     | Kota           | 1116         | 1066         | 805          | 868          |       |
| 31     | Bundi          | 724          | 632          | 558          | 637          |       |
| 32     | Jhalawar       | 733          | 612          | 593          | 765          |       |
| 33     | Baran          | 731          | 793          | 581          | 504          |       |
|        | <b>Total</b>   | <b>26153</b> | <b>24103</b> | <b>22071</b> | <b>21547</b> |       |



## Section 3 – Accident by Road Category and Road Feature

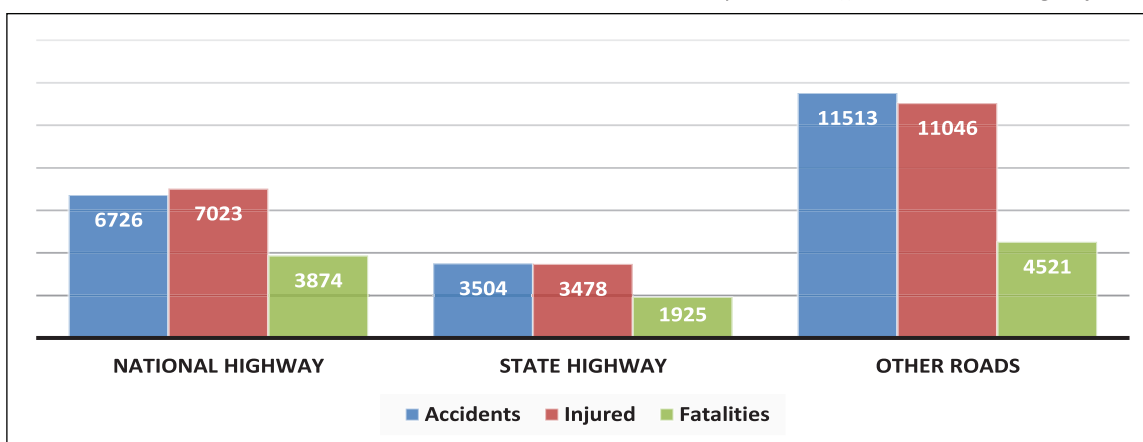
### 3.1 Current Scenario

Road accidents on National Highways accounted for a 30.93 percent of the total road accidents and 37.54 percent of the total number of persons killed during 2018. The State Highways accounted for 16.12 percent of total accidents and 18.65 percent in the total number of persons killed in road accidents during same period of time. Share of accidents on Other Roads was 52.95 percent and share of deaths were 43.81 percent. The detailed share of accidents, deaths and injuries by category of Roads are illustrated in **Table 3.1**, **Chart 3.1** and **Chart 3.2**.

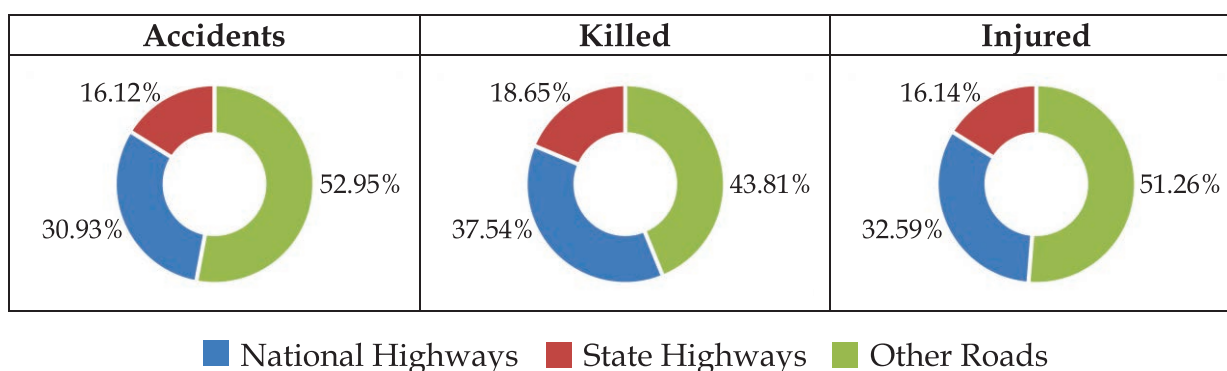
**Table 3.1 Number of Road Accidents, Persons Killed and Injured as Per Road Category During Year 2018**

| Road Classification   | National Highways | State Highways | Other Roads   |
|-----------------------|-------------------|----------------|---------------|
| No. of Accidents      | 6726 (30.93)      | 3504 (16.12)   | 11513 (52.95) |
| No. of Persons Killed | 3874 (37.54)      | 1925 (18.65)   | 4521 (43.81)  |
| No of Persons Injured | 7023 (32.59)      | 3478 (16.14)   | 11046 (51.26) |

**Chart 3.1:** Number of Accidents, Persons Killed and Injured as per Road Category



**Chart 3.2:** Percentage Share of Road Accidents, Number of Persons Killed and Injured as Per Road Category



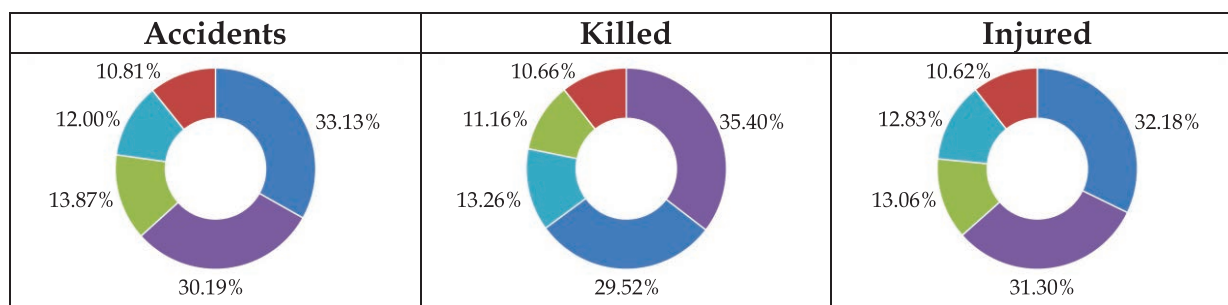
### 3.2 Accidents on Road Junctions

Road junctions are points of traffic merging and hence are prone to accidents. **Table 3.2** gives the number of accidents, persons killed and injured at different types of traffic junctions. Out of 21,743 accidents 5,243 accidents happened at various junctions which contributes share of 24 percent of total number of accidents. About 24 percent of total accidents took place on the junctions itself during the calendar year 2018. The highest number of accidents occurred at T Junctions during the calendar year 2018 causing 648 deaths. The details regarding total accidents, persons killed and injured at junctions are given in **Table 3.2**. The percentage wise distribution of accidents, number of persons killed and persons injured at junctions is depicted at **Chart 3.3**.

**Table 3.2: Total Number of Road Accidents, Number of Persons Killed and Injured Based on Junction Type During Year 2018**

| Junction Type        | Accidents   |               | Killed      |               | Injured     |               |
|----------------------|-------------|---------------|-------------|---------------|-------------|---------------|
|                      | Number      | %age          | Number      | %age          | Number      | %age          |
| T-Junction           | 1737        | 33.13         | 648         | 29.52         | 2302        | 32.18         |
| Y-Junction           | 567         | 10.81         | 234         | 10.66         | 760         | 10.62         |
| Four Arm Junction    | 727         | 13.87         | 245         | 11.16         | 934         | 13.06         |
| Staggered Junction   | 1583        | 30.19         | 777         | 35.40         | 2239        | 31.30         |
| Round About Junction | 629         | 12.00         | 291         | 13.26         | 918         | 12.83         |
| <b>TOTAL</b>         | <b>5243</b> | <b>100.00</b> | <b>2195</b> | <b>100.00</b> | <b>7153</b> | <b>100.00</b> |

**Chart 3.3:** Percentage Share of Road Accidents, Number of Persons Killed and Injured Based on Junction Type



### 3.3 Accidents at Police Controlled Junctions

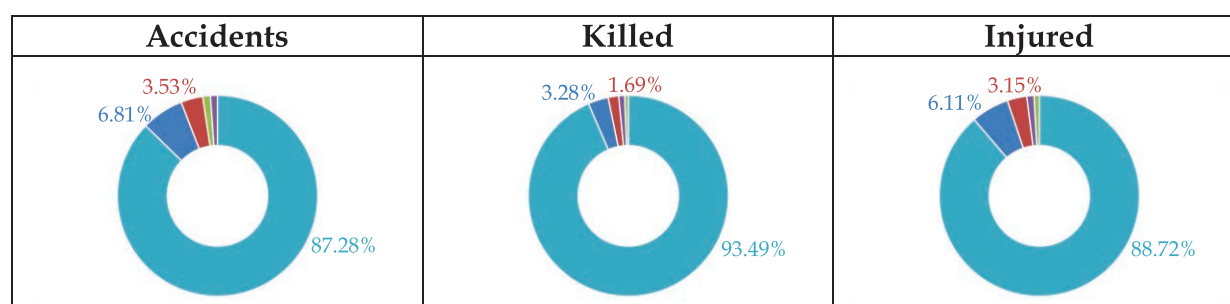
It may be seen that the maximum number of accidents occurred at uncontrolled areas during the calendar year 2018. Total 4,576 accidents occurred at uncontrolled junctions having share of 87.28 percent in road accidents at Traffic Controlled/Police Controlled areas. The details regarding road accidents at Traffic Controlled/Police Controlled areas indicating the number of accidents; persons killed and injured are given in **Table**

**3.3.** The **Chart 3.4** depicts the percentage distribution of accidents at various Traffic Controlled/Police Controlled areas.

**Table 3.3: Total Number of Road Accidents, Number of Persons Killed and Injured at Police Controlled Junctions During Year 2018**

| Junction Type        | Accidents   |               | Killed      |               | Injured     |               |
|----------------------|-------------|---------------|-------------|---------------|-------------|---------------|
|                      | Number      | %age          | Number      | %age          | Number      | %age          |
| Traffic Light Signal | 357         | 6.81          | 72          | 3.28          | 437         | 6.11          |
| Police Controlled    | 185         | 3.53          | 37          | 1.69          | 225         | 3.15          |
| Stop Sign            | 65          | 1.24          | 13          | 0.59          | 61          | 0.85          |
| Flashing Signal      | 60          | 1.14          | 21          | 0.96          | 84          | 1.17          |
| Uncontrolled         | 4576        | 87.28         | 2052        | 93.49         | 6346        | 88.72         |
| <b>TOTAL</b>         | <b>5243</b> | <b>100.00</b> | <b>2195</b> | <b>100.00</b> | <b>7153</b> | <b>100.00</b> |

**Chart 3.4:** Percentage Share of Road Accidents, Number of Persons Killed and Injured Based on Police Controlled Junction



■ Traffic Light Signal ■ Police Controlled ■ Uncontrolled ■ Flashing Signal ■ Stop Sign



## Section 4 – Road Accident by Vehicle Type

### 4.1 Accidents Classified According to Vehicle Type

Amongst the motorized vehicle categories, cars and jeep accounted for the highest share in total road accidents (33.45 per cent) in 2018 followed by two-wheelers (24.86 percent). Trucks, Tractors and Heavy Articulated Vehicles collectively accounted for (24.52 percent), Buses (6.0 percent), Auto-Rickshaws (1.67 percent) and Other motor vehicles (9.20 pe cent). Car/Jeep also accounted for the highest proportion of persons killed (29.33 percent) followed by two-wheelers (23.54 percent) in the state during calendar year 2018. Trucks, Tractors and Heavy Articulated Vehicles collectively accounted for (29.36 percent) fatalities. The total number of accidents, persons killed and persons injured during 2018 based on the involvement by vehicle type is indicated in **Table 4.1**.

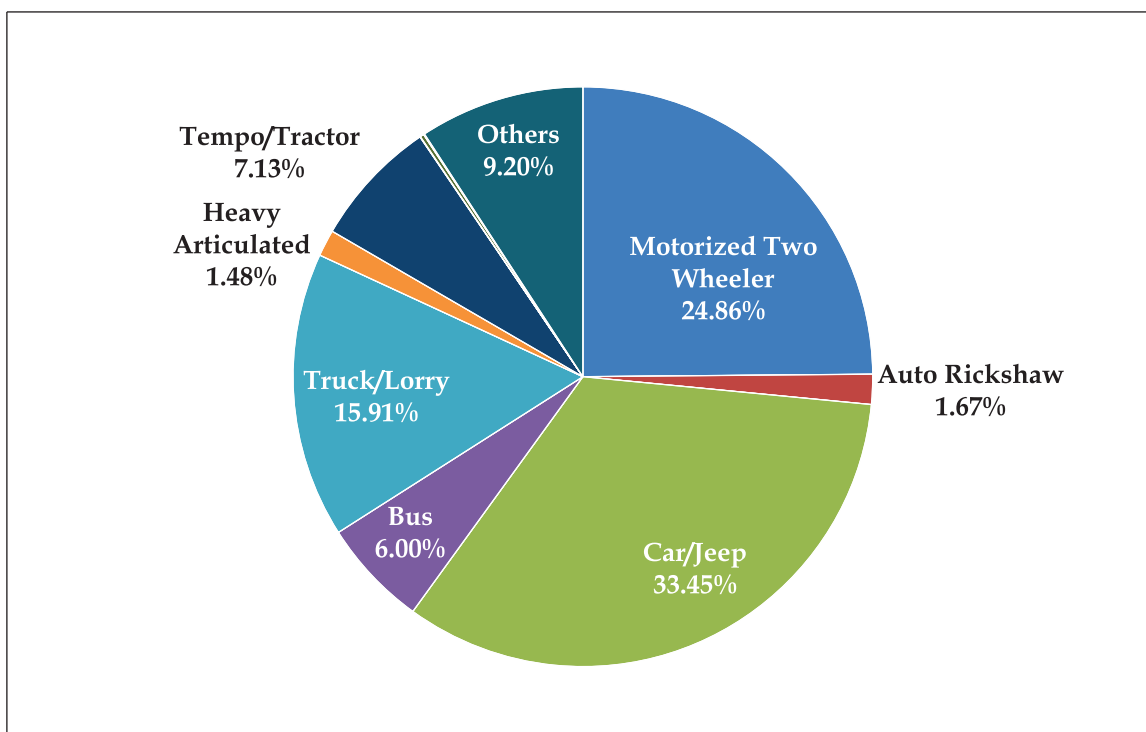
**Table 4.1: Total Number of Road Accidents, Number of Persons Killed and Injured According to Type of Vehicle During Year 2018**

| Type of Vehicle       | Fatal Accidents | Total Accidents | Killed       | Injured      |
|-----------------------|-----------------|-----------------|--------------|--------------|
| Motorized Two-Wheeler | 2110            | 5406            | 2429         | 4917         |
| Auto Rickshaw         | 105             | 363             | 100          | 388          |
| Car/Jeep              | 2778            | 7272            | 3027         | 7265         |
| Bus                   | 522             | 1304            | 645          | 2319         |
| Truck/Lory            | 1786            | 3460            | 2000         | 3170         |
| Heavy Articulated     | 188             | 322             | 195          | 241          |
| Tempo/Tractor         | 759             | 1551            | 835          | 1589         |
| E-Rickshaw            | 4               | 6               | 6            | 7            |
| Bicycle               | 23              | 46              | 22           | 32           |
| Animal Drawn Cart     | 7               | 12              | 6            | 7            |
| Others                | 1013            | 2001            | 1055         | 1612         |
| <b>TOTAL</b>          | <b>9295</b>     | <b>21743</b>    | <b>10320</b> | <b>21547</b> |

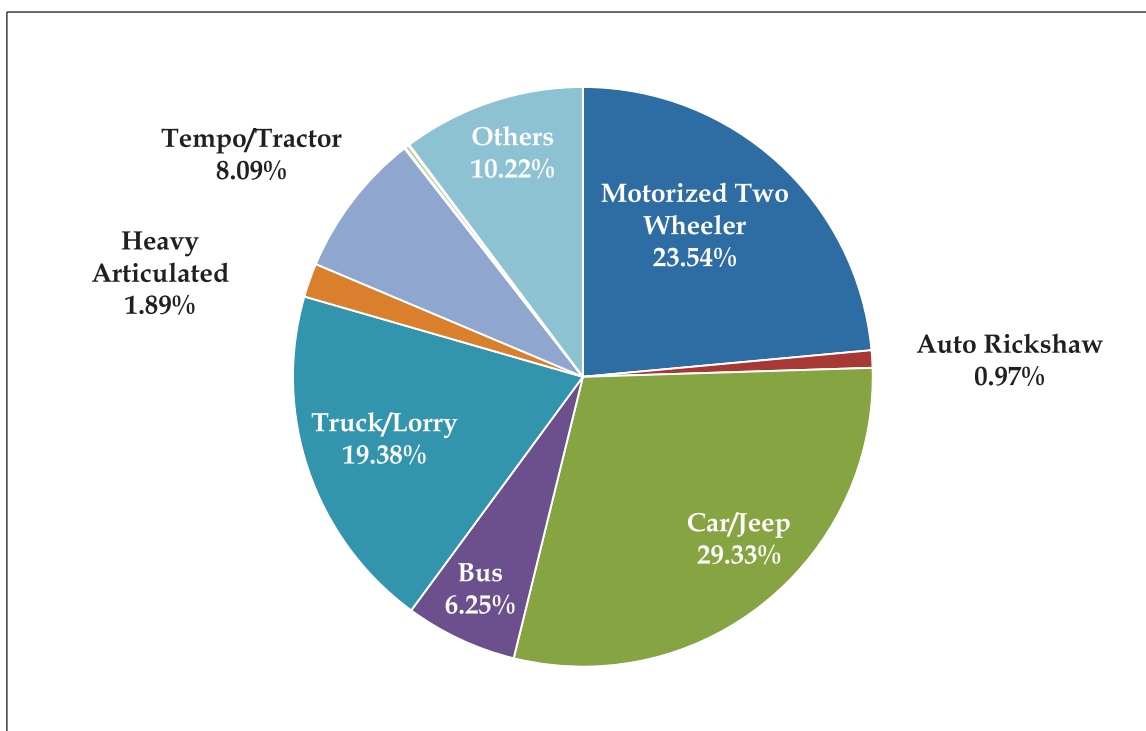
Percentage share of accidents according to the type of vehicle is depicted in **Chart 4.1** and percentage share of fatalities according to vehicle type is depicted in **Chart 4.2** for year 2018.



**Chart 4.1:** Share of Accidents According to Type of Vehicle in Year 2018



**Chart 4.2:** Share of Fatalities According to Type of Vehicle in Year 2018

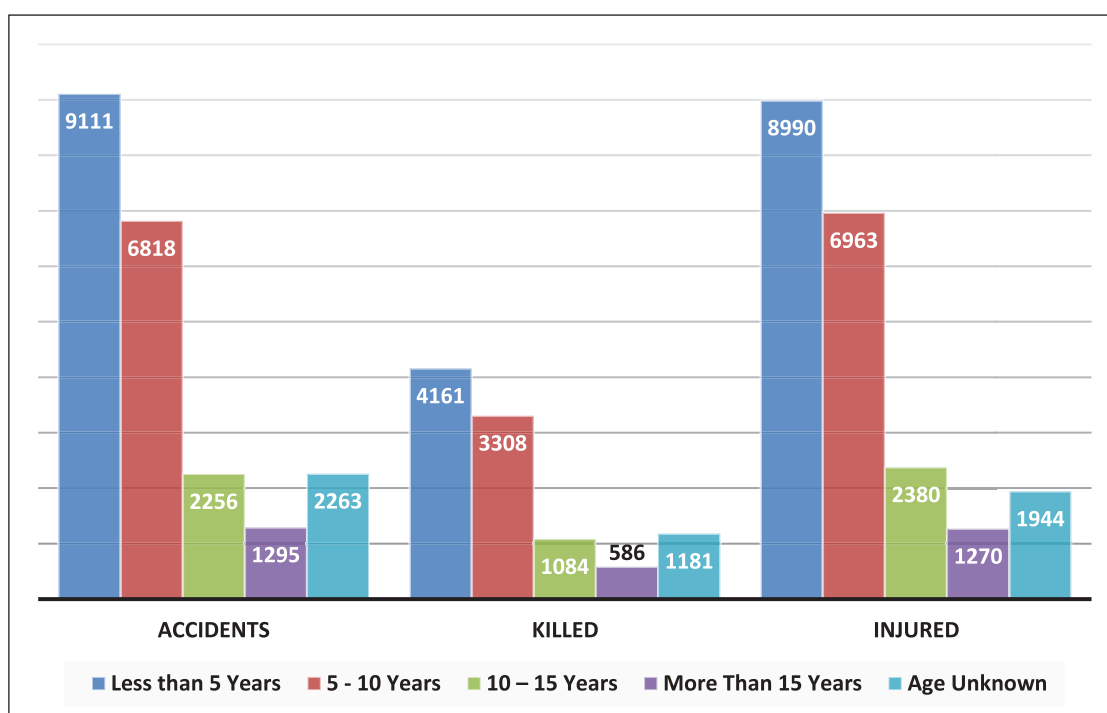


## 4.2 Accidents Based on Age of Vehicles

During the calendar year 2018, vehicles less than 5 years old recorded the highest number of Accidents (9,111) in the state, accounting for a share of 41.90 percent in total road accidents. **Table 4.2** indicates the total number of accidents, persons killed and injured in the state based on age of vehicle. The same is also depicted in **Chart 4.3**.

| Table 4.2: Number of Road Accidents, Persons Killed and Injured Based on Age of Vehicle During Year 2018 |             |                 |              |              |
|----------------------------------------------------------------------------------------------------------|-------------|-----------------|--------------|--------------|
| Age of Vehicle                                                                                           | Fatal       | Total Accidents | Killed       | Injured      |
| Less than 5 Years                                                                                        | 3720        | 9111            | 4161         | 8990         |
| 5 - 10 Years                                                                                             | 2965        | 6818            | 3308         | 6963         |
| 10 - 15 Years                                                                                            | 966         | 2256            | 1084         | 2380         |
| More Than 15 Years                                                                                       | 584         | 1295            | 586          | 1270         |
| Age Unknown                                                                                              | 1060        | 2263            | 1181         | 1944         |
| <b>TOTAL</b>                                                                                             | <b>9295</b> | <b>21743</b>    | <b>10320</b> | <b>21547</b> |

**Chart 4.3:** Number of Accidents, Persons Killed and Injured According to Age of Vehicle



## Section 5 – Road Accident by Road User Category

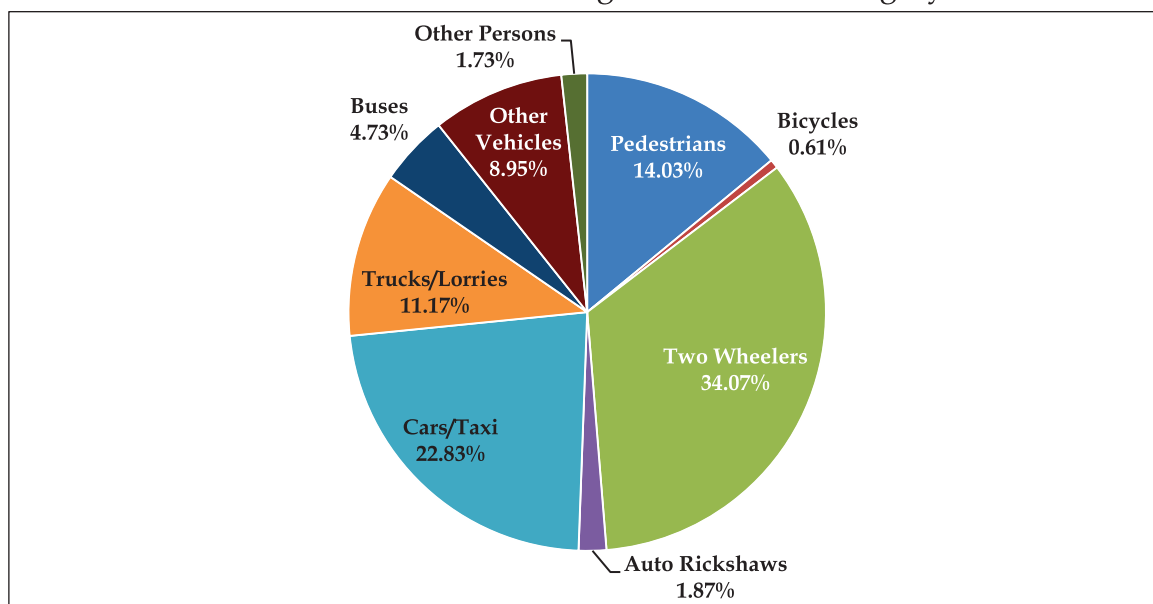
### 5.1 Accidents Classified According to Road User Category

Two-wheelers are the most vulnerable and unprotected road users killed in road accidents in the state every year. The share of Two-Wheeler user killed in accidents are (34.07 percent) in 2018. Other road users killed in road accidents are Cars/Taxis (22.83 percent), Trucks (11.17 percent), Buses (4.73 percent), Pedestrians (14.03 percent), Auto Rickshaws (1.87 percent) and Others Motor Vehicles (8.95 percent). Other persons killed in road accidents accounted for 1.73 percent during year 2018. **Table 5.1** depicts number of persons killed, injured and percentage share of killed and injured according to road user category in year 2018.

**Table 5.1: Number of Persons Killed and Injured According to Road User Category During Year 2018**

| Road User      | Killed       | %age          | Injured      | %age          |
|----------------|--------------|---------------|--------------|---------------|
| Pedestrians    | 1448         | 14.03         | 2167         | 10.06         |
| Bicycles       | 63           | 0.61          | 122          | 0.57          |
| Two Wheelers   | 3516         | 34.07         | 6430         | 29.84         |
| Auto Rickshaws | 193          | 1.87          | 651          | 3.02          |
| Cars/Taxi      | 2356         | 22.83         | 5947         | 27.60         |
| Trucks/Lorries | 1153         | 11.17         | 1994         | 9.25          |
| Buses          | 488          | 4.73          | 2028         | 9.41          |
| Other Vehicles | 924          | 8.95          | 1879         | 8.72          |
| Other Persons  | 179          | 1.73          | 329          | 1.53          |
| <b>TOTAL</b>   | <b>10320</b> | <b>100.00</b> | <b>21547</b> | <b>100.00</b> |

**Chart 5.1: Share of Persons Killed According to Road User Category**



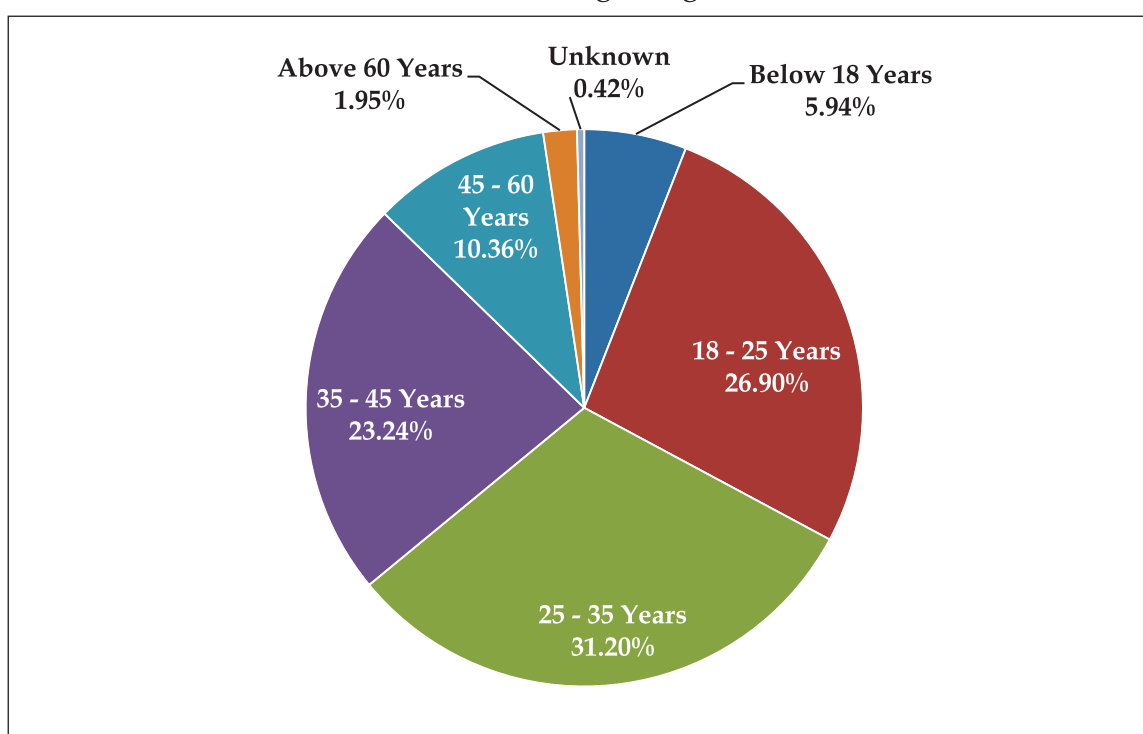
## 5.2 Age Profile of Road Accident Victims

Young people in the productive age group lose their lives in road accidents every year. Premature deaths of such young people cause substantial loss of productivity to the nation. The detailed age profile of road accidents victims for the calendar year 2018 reveals that the productive age group of 18 to 25 years accounted for 26.90 percent, 25 to 35 years 31.20 percent and 35 to 45 years 23.24 percent. Share of persons killed aged 45 to 60 years accounted for 10.36 percent. The details of victims according to age profiles are indicated in **Table 5.2** and **Chart 5.2** respectively.

**Table 5.2: Age Profile of Road Accident Victims During Year 2018**

| Age Group    | Number of Persons Killed | %age Share    | Number of Persons Injured | %age Share    |
|--------------|--------------------------|---------------|---------------------------|---------------|
| Less Than 18 | 613                      | 5.94          | 1298                      | 6.02          |
| 18 to 25     | 2776                     | 26.90         | 5648                      | 26.21         |
| 25 to 35     | 3220                     | 31.20         | 6752                      | 31.34         |
| 35 to 45     | 2398                     | 23.24         | 4986                      | 23.14         |
| 45 to 60     | 1069                     | 10.36         | 2346                      | 10.89         |
| 60 and Above | 201                      | 1.95          | 434                       | 2.01          |
| Age Unknown  | 43                       | 0.42          | 83                        | 0.39          |
| <b>TOTAL</b> | <b>10320</b>             | <b>100.00</b> | <b>21547</b>              | <b>100.00</b> |

**Chart 5.2:** Share of Persons Killed According to Age Profile of Road Accident Victims



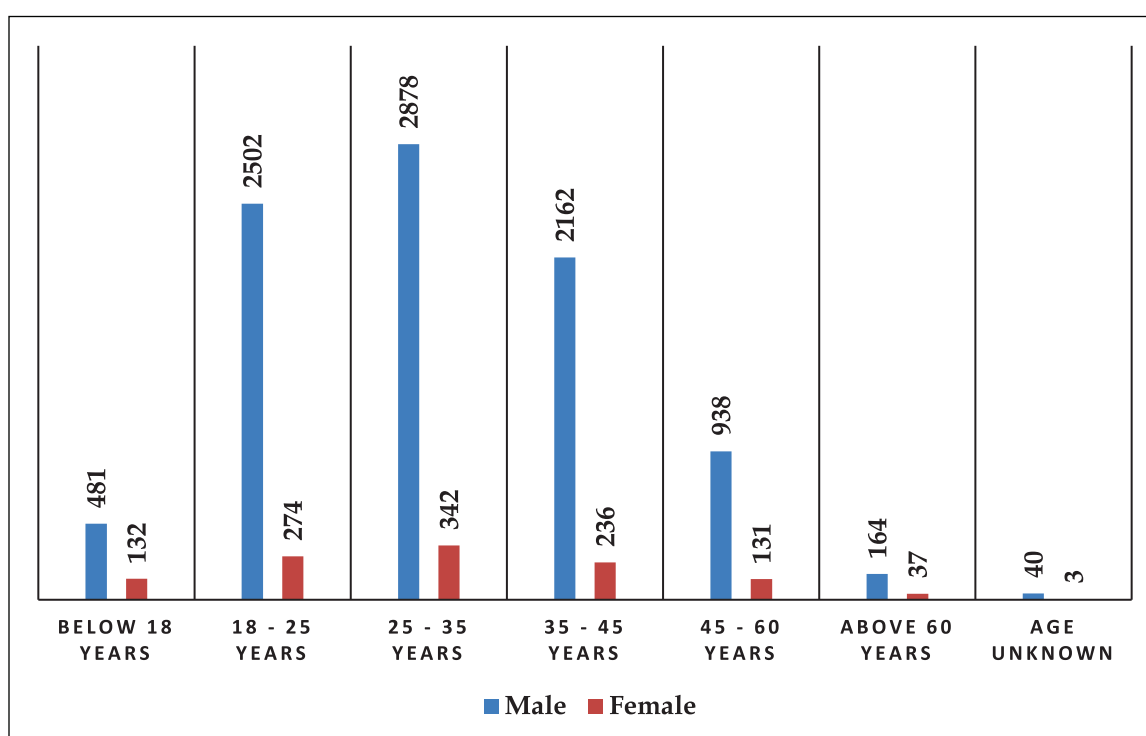


### 5.3 Gender-wise Age Profile of Road Accident Victims

The gender wise comparison in respect of male and female in road accident deaths revealed that the total number of males and females killed during the calendar year 2018 were 9,165 (88.81 percent) and 1,155 (11.19 percent) respectively in total road accidents. This is depicted in **Table 5.3** and **Chart 5.3**.

| Table 5.3: Gender-wise Age Profile of Road Accident Victims During Year 2018 |              |              |              |              |
|------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|
| Age Group                                                                    | Killed       |              | Injured      |              |
|                                                                              | Male         | Female       | Male         | Female       |
| Below 18 Years                                                               | 481          | 132          | 995          | 303          |
| 18 - 25 Years                                                                | 2502         | 274          | 4763         | 885          |
| 25 - 35 Years                                                                | 2878         | 342          | 5693         | 1059         |
| 35 - 45 Years                                                                | 2162         | 236          | 4219         | 767          |
| 45 - 60 Years                                                                | 938          | 131          | 1979         | 367          |
| Above 60 Years                                                               | 164          | 37           | 343          | 91           |
| Unknown                                                                      | 40           | 3            | 75           | 8            |
| <b>TOTAL</b>                                                                 | <b>9165</b>  | <b>1155</b>  | <b>18067</b> | <b>3480</b>  |
| <b>%age Share</b>                                                            | <b>88.81</b> | <b>11.19</b> | <b>83.85</b> | <b>16.15</b> |

**Chart 5.3:** Gender-wise Age Profile of Number of Persons Killed



## Section 6 – Causes of Road Accidents

### 6.1 Factors Responsible for Road Accidents

Road accidents are multi-causal and an accident is the result of combination of factors such as human error, road defects, engineering defects in vehicle, non-availability of pedestrian facility, cyclist facility, circumstantial factors such as weather condition and visibility etc.

Based on the existing data reporting system wherein the factor responsible for accidents are reported on the basis of subjective judgment of the reporter, drivers' fault is single most important factor responsible for road accidents (89.29 percent) followed by other reasons contributing for 7.66 percent accidents on all roads in the state during 2018. **Table 6.1.** depicts factors responsible for road accidents across the state.

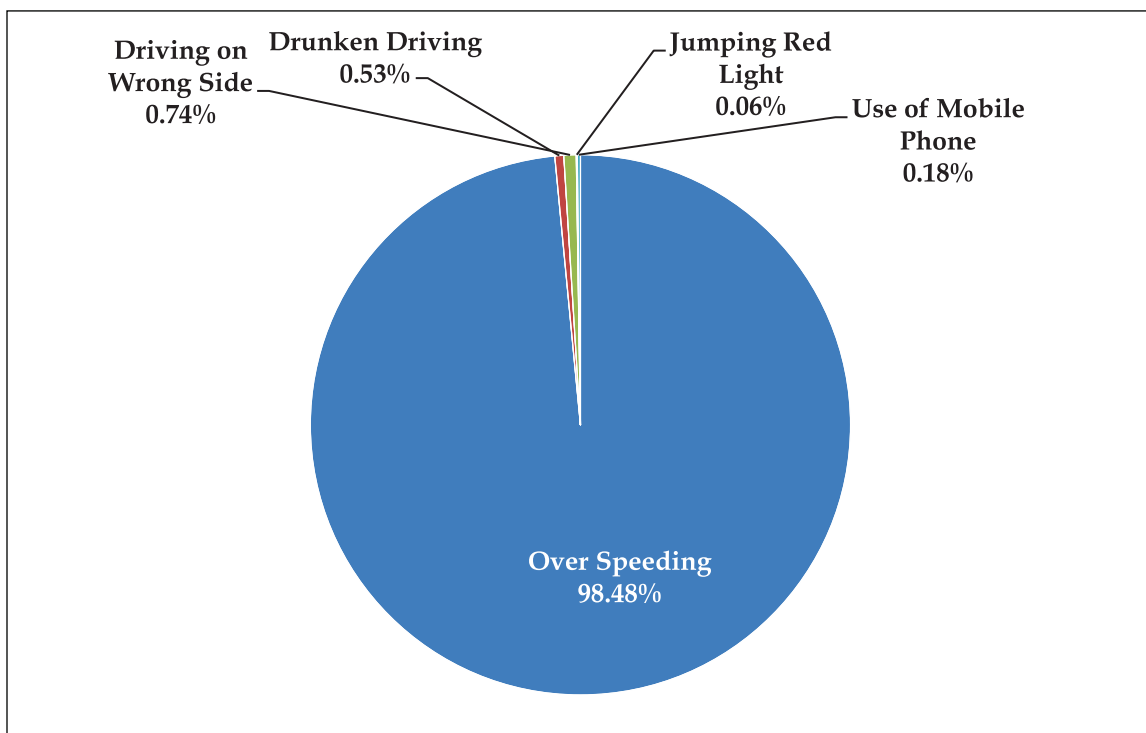
| Table 6.1: Factors Responsible for Road Accidents During Year 2018 |              |               |
|--------------------------------------------------------------------|--------------|---------------|
| Factor of Road Accident                                            | Accidents    | %age Share    |
| Fault of Driver                                                    | 19414        | 89.29         |
| Fault of Passenger                                                 | 33           | 0.15          |
| Bad Road Condition                                                 | 178          | 0.82          |
| Bad Weather                                                        | 156          | 0.72          |
| Mechanical Fault in Vehicle                                        | 112          | 0.52          |
| Cattle                                                             | 185          | 0.85          |
| Others                                                             | 1665         | 7.66          |
| <b>TOTAL</b>                                                       | <b>21743</b> | <b>100.00</b> |

### 6.2 Accidents, Number of Persons Killed and Injured According to Type of Violations

**Table 6.2** depicts the factors explaining the responsibility of drivers, which accounted for about 94 percent of total road accidents, 94 percent of killings and 94 percent of injuries occurred in the state during 2018.

| Table 6.2: Factors Responsible for Road Accidents, Number of Persons Killed and Injured Due to Driver's Fault During Year 2018 |              |             |              |
|--------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|--------------|
| Type of Violation                                                                                                              | Accidents    | Killed      | Injured      |
| Over Speeding                                                                                                                  | 20132        | 9618        | 19895        |
| Drunken Driving                                                                                                                | 146          | 52          | 129          |
| Driving on Wrong Side                                                                                                          | 196          | 72          | 172          |
| Jumping Red Light                                                                                                              | 12           | 6           | 11           |
| Use of Mobile Phone                                                                                                            | 39           | 18          | 67           |
| <b>TOTAL</b>                                                                                                                   | <b>20525</b> | <b>9766</b> | <b>20274</b> |

**Chart 6.1:** Share of Persons Killed According to Type of Violation in Year 2018



Most of the fatal accidents occur due to over speeding. A vehicle moving on high speed will have greater impact during the accident and hence may cause more injuries. During 2018 total 20,525 accidents were caused due to driver's fault out of which 20,132 accidents were caused due to over-speeding that accounted for 98.0 percent accidents claiming 98.4 percent lives. The act of driving after intake of alcohol accounted for 146 accidents and 52 deaths during year 2018.

Distraction while driving is also responsible for road accidents. Act of talking over mobile phones while driving has become a cause of road accidents. This has resulted in 39 road accidents, deaths of 18 persons and 67 number of persons injured during the calendar year 2018.

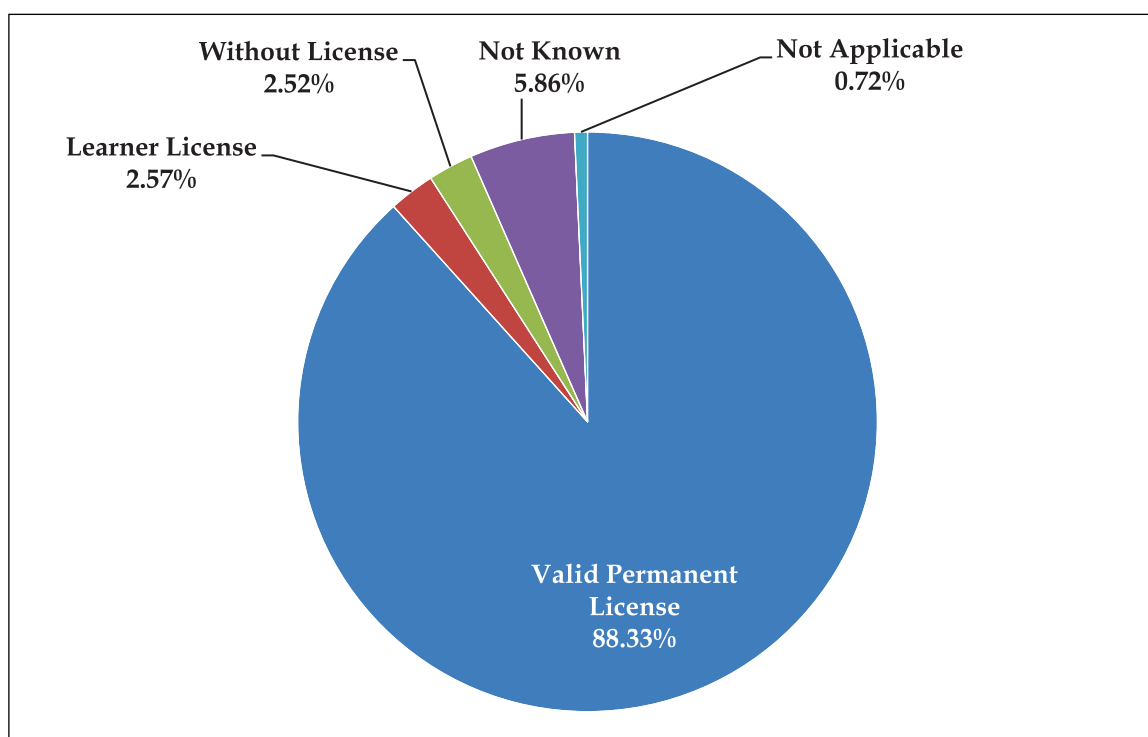
### 6.3 Number of Accidents Classified According to License of Drivers

During 2018, regular licence holder was involved in 19,206 accidents contributing a share of 88.33 percent in total road accidents. This implies requirement of proper evaluation/testing of driving skill before the issue the permanent licence. Number of accidents and percentage share of accidents according to type of license is depicted in **Table 6.3** and **Chart 6.2**.

**Table 6.3: Number of Accidents Classified According to License of Drivers During Year 2018**

| Type of License         | Accidents    | %age Share    |
|-------------------------|--------------|---------------|
| Valid Permanent License | 19206        | 88.33         |
| Learner License         | 558          | 2.57          |
| Without License         | 548          | 2.52          |
| Not Known               | 1275         | 5.86          |
| Not Applicable          | 156          | 0.72          |
| <b>TOTAL</b>            | <b>21743</b> | <b>100.00</b> |

**Chart 6.2:** Share of Accidents According to License of Drivers During Year 2018



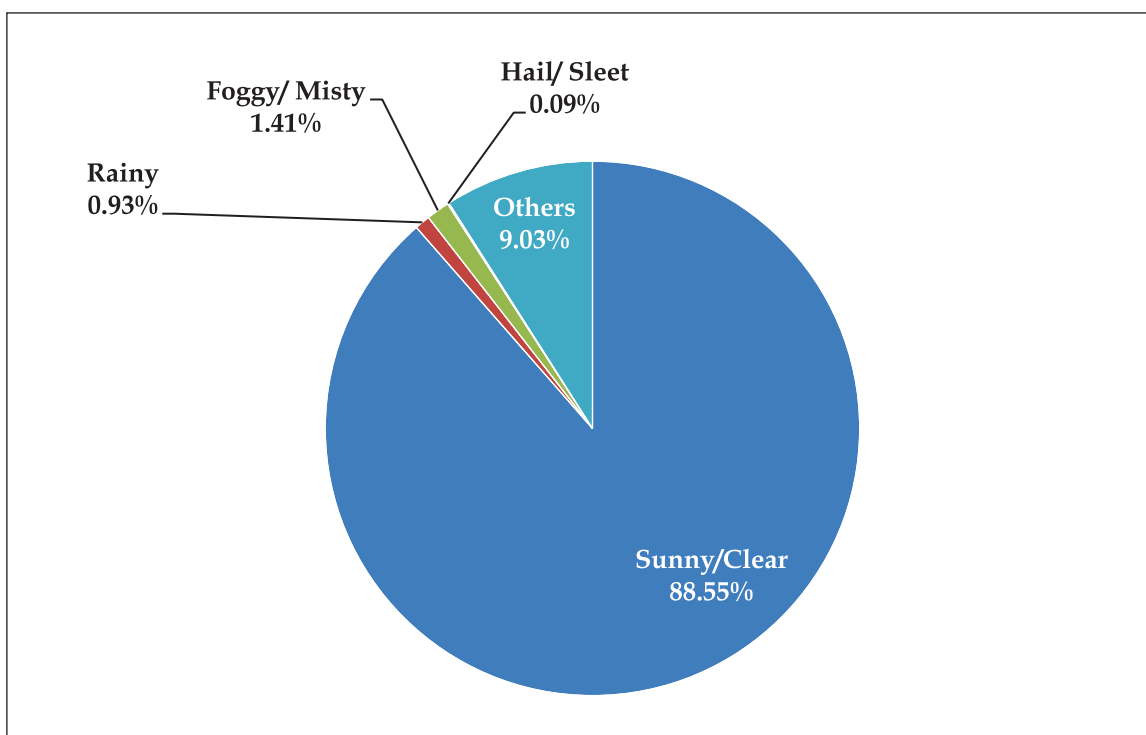
## 6.4 Other Parameters of Road Accidents

### a) Persons Killed According to Weather Condition During Year 2018

It has been observed that most of the accidents occurred during clear weather conditions responsible for 88.55 percent of total deaths in year 2018. Other reasons contributed for 9.03 percent of deaths which is depicted in **Chart 6.3**.



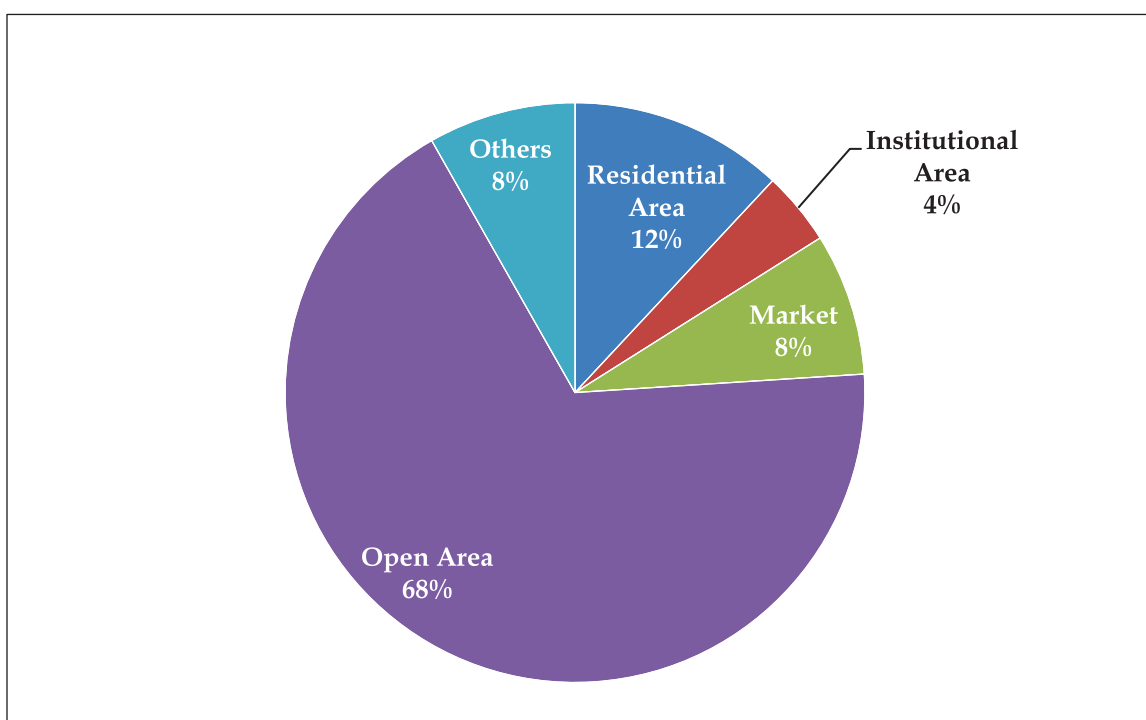
**Chart 6.3:** Share of Persons Killed According to Weather Condition in 2018



**b) Persons Killed According to Spot of Accident During Year 2018**

Some of the factors responsible for road accidents are also based on locations. Maximum number of road accident deaths (68 percent) occurred in open area followed by residential area (12 percent). Market and Other Area each contributed for 8 percent of total deaths that is depicted in **Chart 6.4**.

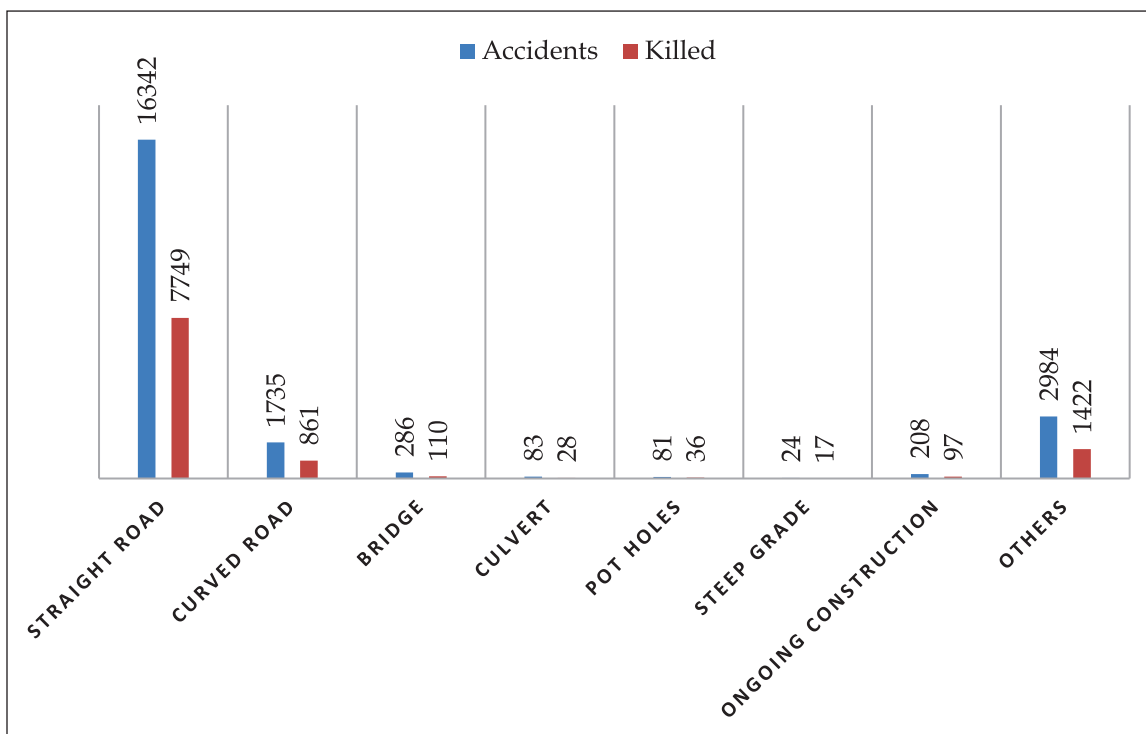
**Chart 6.4:** Share of Persons Killed According to Spot of Accident During Year 2018



### c) Accidents & Persons Killed According to Road Feature During Year 2018

Road accidents according to road feature reveals that 16,342 accidents (75.15 percent) occurred on straight road responsible for 7,749 (75.08 percent) deaths. 1,735 accidents (7.97 percent) and 861 deaths (8.34 percent) occurred on curved roads. Other road feature involved 2,984 accidents (13.72 percent) and 1,422 (13.77 percent) deaths which is depicted in **Chart 6.5**.

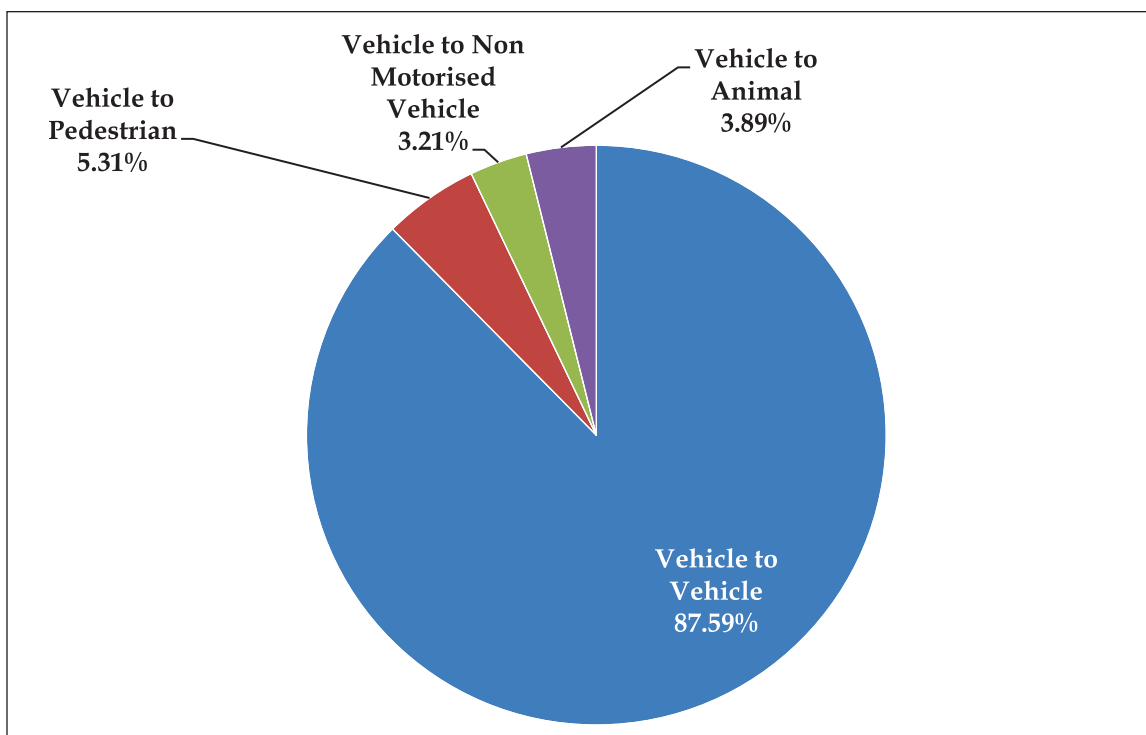
**Chart 6.5:** Number of Accidents & Persons Killed According to Road Feature in 2018



### d) Persons Killed According to Type of Collision During Year 2018

Vehicle to vehicle collision accounted for 87.59 percent deaths, vehicle to pedestrian 5.31 percent, vehicle to animal 3.89 percent and vehicle to non-motorized 3.21 percent deaths in calendar year 2018, the same is depicted in **Chart 6.6**.

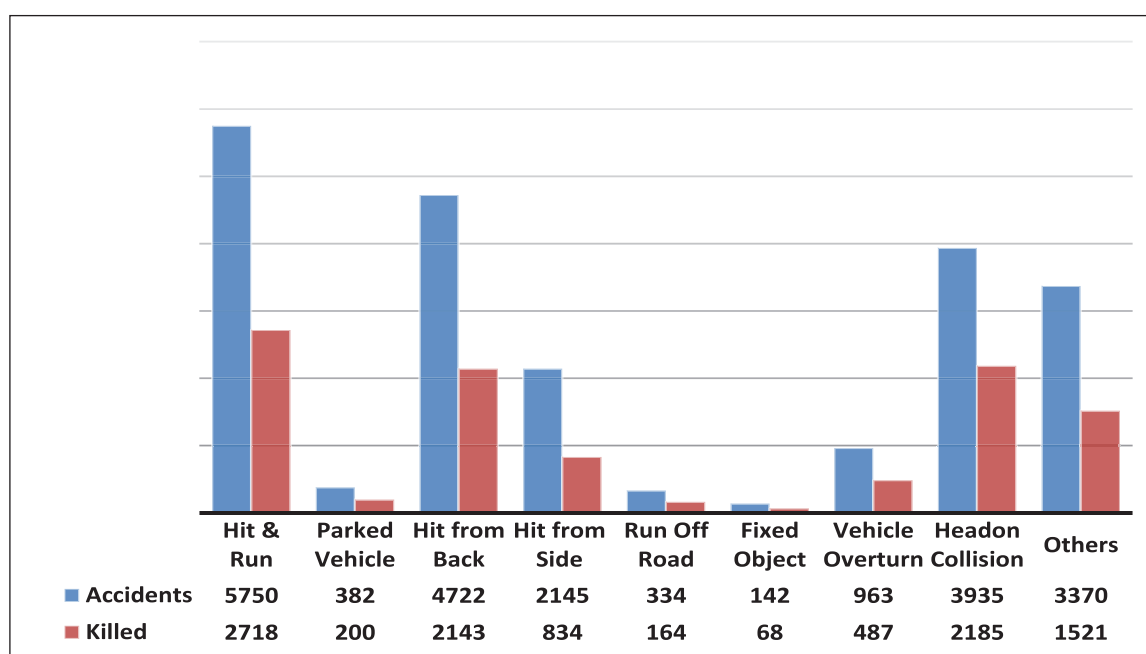
**Chart 6.6:** Share of Persons Killed According to Type of Collision in Year 2018



#### e) Accidents & Persons Killed According to Nature of Accident During Year 2018

Classification of accidents according to nature of accidents involved 5,750 Hit and Run Accidents (26.44 percent) resulting in 2,718 (26.33 percent) deaths followed by Head on Collisions including 3,935 accidents (18.09 percent) claiming 2,185 deaths (21.17 percent). Hit from Back accounted for 4,722 accidents (21.71 percent) and 2,143 deaths (20.76 percent). Number of accidents and persons killed according to Nature of Accident is depicted in **Chart 6.7**.

**Chart 6.7:** Number of Accidents and Persons Killed According to Nature of Accident



#### f) Persons Killed and Injured Due to Not Using Safety Gear During Year 2018

Not using safety gears were also responsible for several deaths and injuries. Not wearing helmet accounted for 1,563 deaths (15.14 percent) and 2,872 injured (13.32 percent). Not using seat belt killed 2,015 persons (19.52 percent) and injured 4,742 persons (22.00 percent) which is depicted in **Chart 6.8**.

**Chart 6.8:** Number Persons Killed and Injured Due to Not Using Safety Gears





## Section 7 – Spatial & Intertemporal Distribution of Accidents

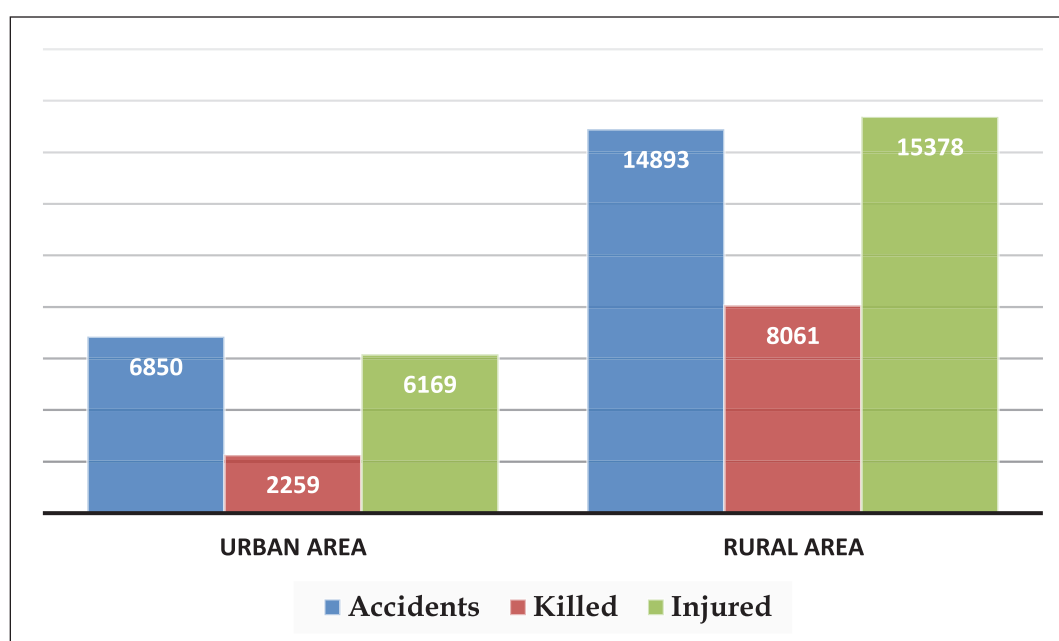
### 7.1 Road Accidents in Urban and Rural Areas

An analysis of road accidents in urban and rural areas for the calendar year 2018 reveals that rural areas are more prone to road accidents. The total number of road accidents in urban areas were lower (6,850) as compared to number of accidents in rural areas (14,893). The percentage share of accidents in rural areas and urban areas were 68.50 and 31.50 respectively. A comparison of percentage share of fatal accidents, total accidents, persons killed and injured in rural vis-à-vis urban is illustrated in **Table 7.1**. Comparative picture of road accidents, persons killed and injured in urban and rural areas is illustrated in **Chart 7.1**.

**Table 7.1: Total Number of Accidents, Persons Killed and Persons Injured in Urban and Rural Areas During Year 2018**

| Category   | Fatal Accidents | Total Accidents  | Persons Killed  | Persons Injured  |
|------------|-----------------|------------------|-----------------|------------------|
| Urban Area | 2202<br>(22.39) | 6850<br>(31.50)  | 2259<br>(21.89) | 6169<br>(28.63)  |
| Rural Area | 7093<br>(76.31) | 14893<br>(68.50) | 8061<br>(78.11) | 15378<br>(71.37) |
| TOTAL      | 9295            | 21743            | 10320           | 21547            |

**Chart 7.1:** Number of Accidents, Persons Killed and Persons Injured in Urban and Rural Areas



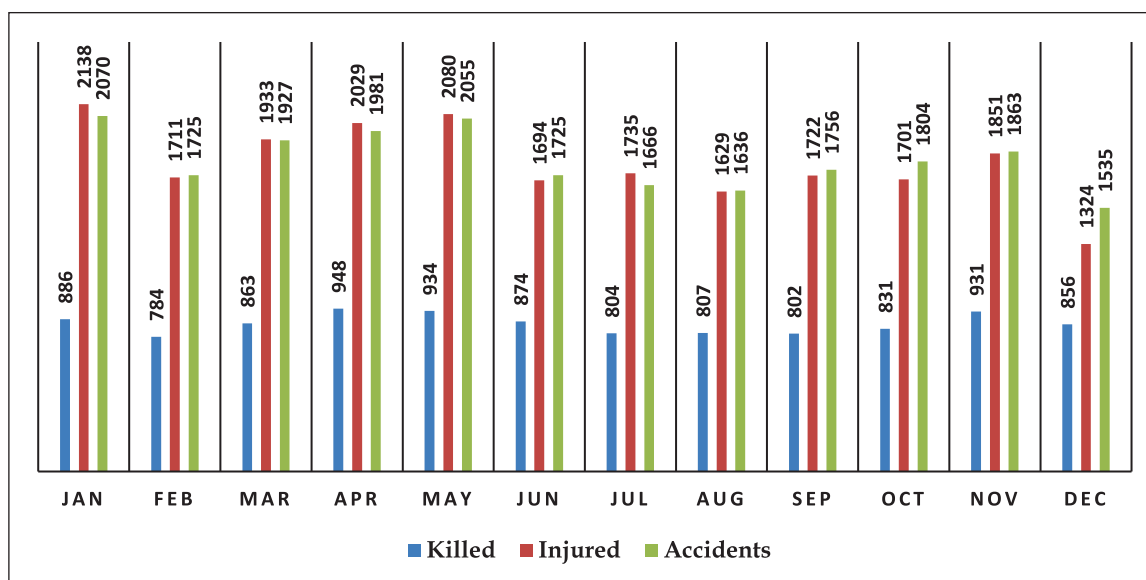
## 7.2 Month-wise Occurrences of Road Accidents

The month wise details of road accidents, persons killed and injured in the state during 2018 are given below at **Table 7.2**.

| Month            | Jan  | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct  | Nov  | Dec  |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Killed</b>    | 886  | 784  | 863  | 948  | 934  | 874  | 804  | 807  | 802  | 831  | 931  | 856  |
| <b>Injured</b>   | 2138 | 1711 | 1933 | 2029 | 2080 | 1694 | 1735 | 1629 | 1722 | 1701 | 1851 | 1324 |
| <b>Accidents</b> | 2070 | 1725 | 1927 | 1981 | 2055 | 1725 | 1666 | 1636 | 1756 | 1804 | 1863 | 1535 |

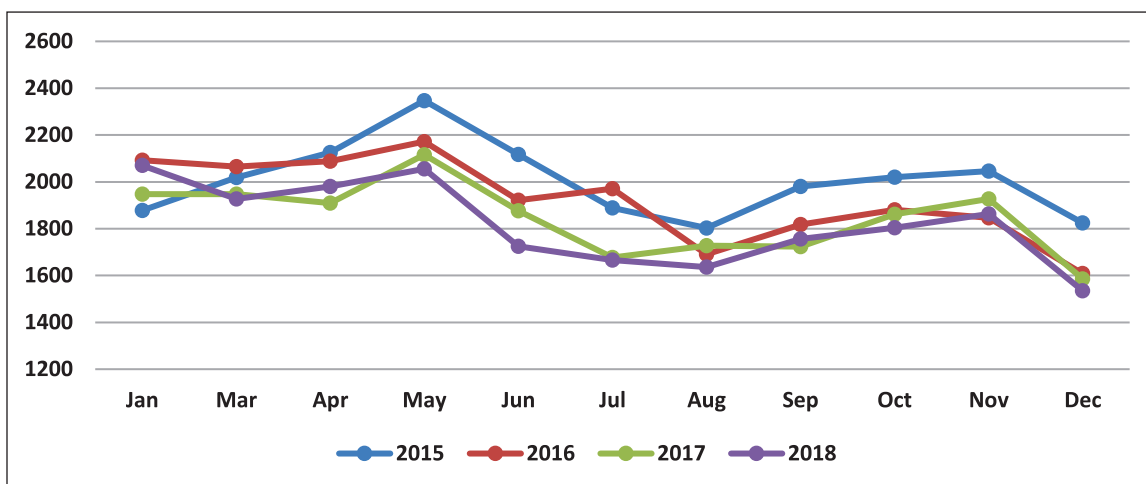
It is seen from **Chart 7.2** that the total number of accidents during 2018 were highest in the month of January (2,070) and followed by the month of May (2,055) and April (1,981). Similarly, the total number of persons killed were highest in the month of April (948) followed by month of May (934). The number of persons injured were highest in the month of January (2,138) followed by the month of May (2,080).

**Chart 7.2:** Month-wise Occurrences of Road Accidents, Persons Killed and Persons Injured



A comparative trend of road accidents in Rajasthan month-wise for year 2015 to 2018 is depicted in **Chart 7.3**.

**Chart 7.3:** Trend of Month-wise Occurrences of Road Accidents (2015 – 2018)



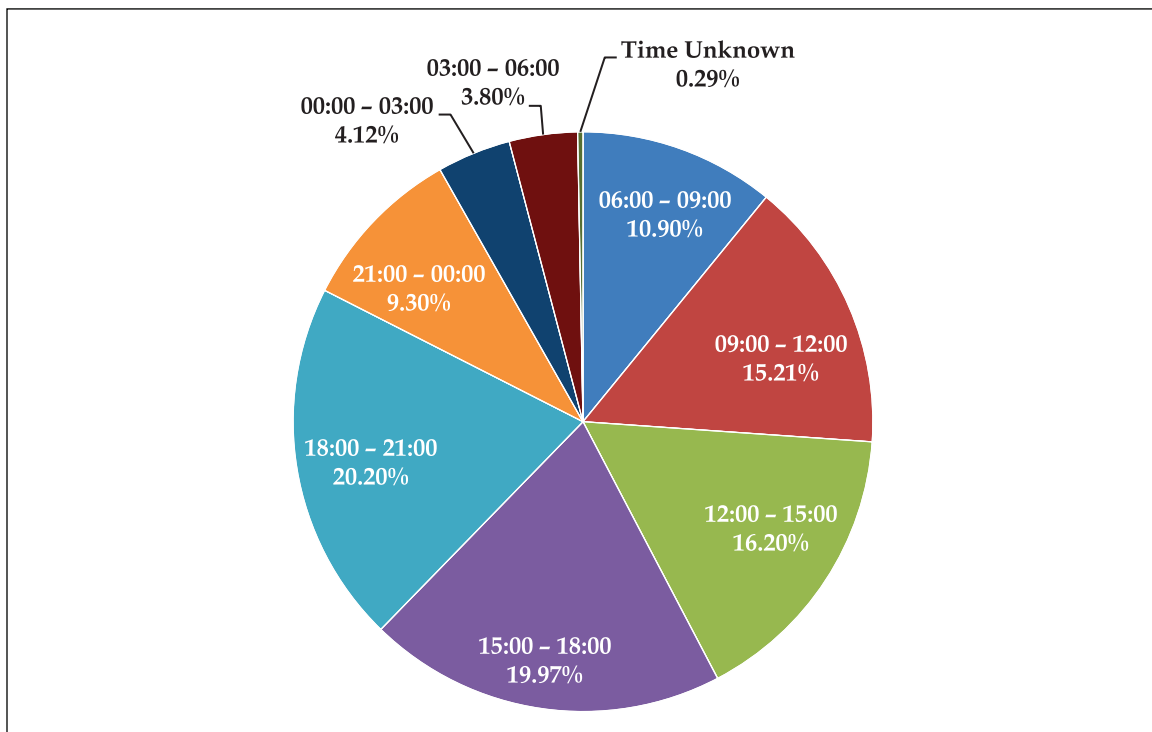
### 7.3 Time-wise Occurrences of Road Accidents

For framing strategies for prevention and provision of medical care for accident victims, timing of accidents is a relevant factor. During 2018 high rate of accidents took place between 18:00 to 21:00 (20.20 percent) and 15:00 to 18:00 hours (19.97 percent). This is depicted in [Table 7.3](#) and [Chart 7.4](#).

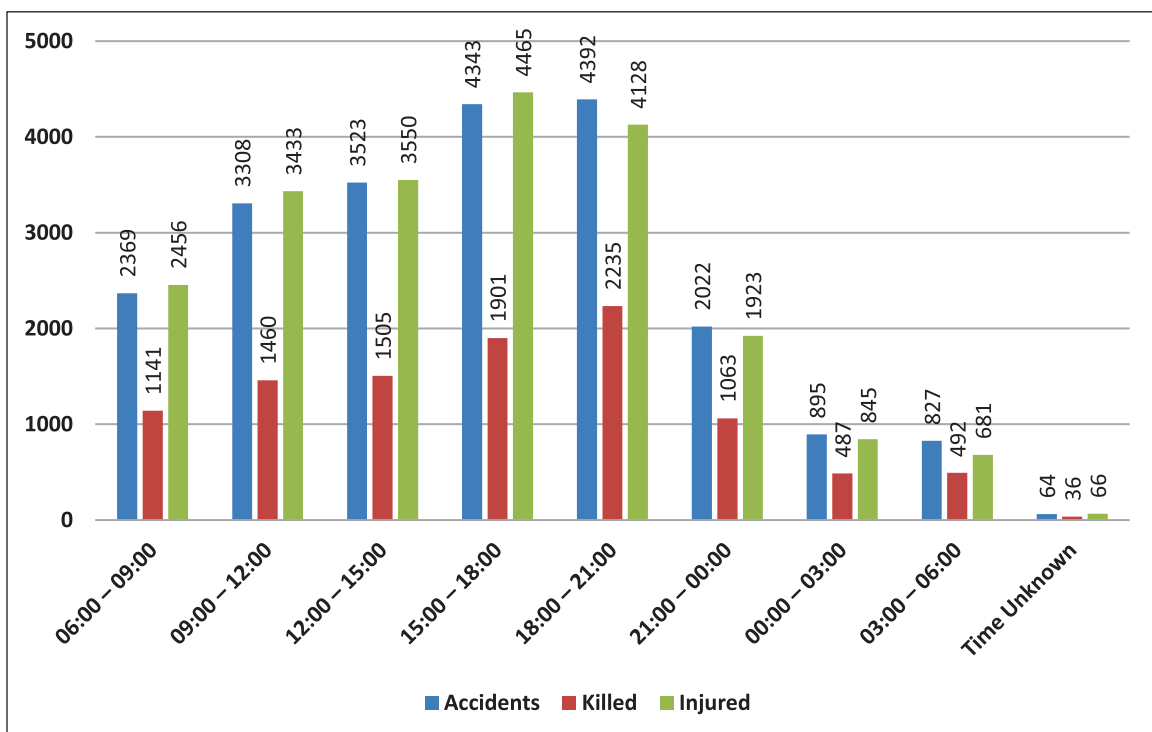
**Table 7.3: Time-wise Occurrences of Road Accidents During Year 2018**

| Time Slab     | Accidents    | Persons Killed | Persons Injured |
|---------------|--------------|----------------|-----------------|
| 06:00 – 09:00 | 2369         | 1141           | 2456            |
| 09:00 – 12:00 | 3308         | 1460           | 3433            |
| 12:00 – 15:00 | 3523         | 1505           | 3550            |
| 15:00 – 18:00 | 4343         | 1901           | 4465            |
| 18:00 – 21:00 | 4392         | 2235           | 4128            |
| 21:00 – 00:00 | 2022         | 1063           | 1923            |
| 00:00 – 03:00 | 895          | 487            | 845             |
| 03:00 – 06:00 | 827          | 492            | 681             |
| Time Unknown  | 64           | 36             | 66              |
| <b>TOTAL</b>  | <b>21743</b> | <b>10320</b>   | <b>21547</b>    |

**Chart 7.4:** Time-wise Share of Occurrences of Road Accidents



**Chart 7.5:** Time-wise Occurrences of Road Accidents, Persons Killed and Persons Injured





## Section 8 – State Level Road Safety Initiatives

### 8.1 Lead Agency

In compliance of directions of Hon'ble Supreme Court Committee on Road Safety, the Lead Agency (Inter-departmental State Road Safety Cell) was constituted vide Order No 13002 dated 29.06.2016. Posts have been created for road safety cell by Finance Department from the existing cadre strengths of different stakeholder departments. Presently officers from various stakeholder departments such as Additional Transport Commissioner, Dy. Transport Commissioner, Superintending Engineer (LSG), Executive Engineer (PWD), Medical Officer (Medical & Health), Dy. S.P. (Police Department), Consultant, Motor Vehicle Inspectors (2), Assistant Accounts Officer Grade II, and Junior Assistant are posted and dedicatedly working for road safety, directly under directions of Transport Commissioner & Secretary in the State.

Currently the State Road Safety Cell is headed by Additional Transport Commissioner. The Lead Agency acts as Secretariat to the State Level Road Safety Committees like Cabinet Sub Committee, State Road Safety Council, Transport Management Committee and also coordinates with all stakeholder departments/agencies.

**Table: 8.1: Officers and Executives in State Road Safety Cell**

| S. N. | Name                    | Designation                                      | Department              |
|-------|-------------------------|--------------------------------------------------|-------------------------|
| 1     | Mr. Harish Kumar Sharma | Addl. Transport Commissioner                     | Transport Department    |
| 2     | Ms. Nidhi Singh         | Dy. Transport Commissioner and Officer In-charge | Transport Department    |
| 3     | Mr. Mahesh Kumar Sharma | Superintending Engineer                          | Local Self Government   |
| 4     | Mr. Bhopal Singh Bhati  | Dy. Superintendent of Police                     | Police                  |
| 5     | Mr. L. N. Pandey        | State Nodal Officer                              | Medical & Health        |
| 6     | Mr. Gopal Lal Arora     | Executive Engineer                               | Public Works Department |
| 7     | Mr. Prakash Thawani     | Assistant Accounts Officer II                    | Transport Department    |
| 8     | Mr. Ashwini Bagga       | Consultant                                       | Transport Department    |
| 9     | Ms. Swati Dixit         | Motor Vehicle Inspector                          | Transport Department    |
| 10    | Mr. Ghanshyam Singh     | Motor Vehicle Inspector                          | Transport Department    |
| 11    | Mr. Nand Kishore        | Constable                                        | Police                  |
| 12    | Mr. Shyam Singh         | Junior Assistant                                 | Transport Department    |

## 8.2 Functions of Lead Agency

Functions of the Lead Agency (State Road Safety Cell) are as follows:

- It works as secretariat to the State Road Safety Council headed by Hon'ble Transport Minister.
- It works as secretariat to the Cabinet Sub Committee on Road Safety and the State Level Transport Management Committee.
- It ensures time bound compliance of directions issued by the Hon'ble Supreme Court Committee on Road Safety.
- It coordinates with all stakeholder department/agencies concerned with road safety.
- It ensures compliance of provisions of State Road Safety Policy through formulation and implementation of target-oriented Road Safety Action Plan.
- It prepares proposal for budget allocation and judicious expenditure on road safety measures.
- It ensures holding of regular meetings of District and Sub Divisional Level Road Safety Committees and compliance of decisions taken at State Level through them.
- It monitors and ensure implementation of all other activities related to road safety in the state.

## 8.3 Dedicated Road Safety Fund

Dedicated Road Safety Fund guidelines were issued vide Order No 8 dated 03.04.2017. The fund is created from 25% of compounding fee received by the State under Central Motor Vehicle Act/Rules every year. It is a non-lapsable public account fund operated through budgetary provisions and managed by inter departmental Road Safety Fund Sanchalan Samiti under the Chairmanship of Additional Chief Secretary (Transport). The decisions of the Sanchalan Samiti are implemented by Fund Kriyanvayan Samiti headed by the Transport Commissioner. Budget provision for road safety fund in 2017-18 was Rs. 8,942.25 lacs and in 2018-19 it is Rs. 9,939.00 lacs.

## 8.4 Rajasthan State Road Safety Policy

In compliance of directions of Hon'ble Supreme Court Committee on Road Safety and decision taken in the State Level Transport Management Committee, the State Cabinet vide its order no D.146/Cabinet/2016 dated 07.12.2016 approved State Road Safety Policy. The State Road Safety Policy outlines the policy initiatives to be framed/taken by the Government at all levels to improve the road safety scenario in the state. The detailed policy document is placed at **Annexure 01**.

## 8.5 District Road Safety Cells

District Road Safety Cells have been constituted in all districts of the state to achieve Rajasthan State Road Safety Policy objectives and to formulate Action Plan for the districts in compliance to the directions of Hon'ble Supreme Court Committee on Road Safety. The District Road Safety Cells headed by Regional/District Transport Officer have been constituted vide order number 37173 dated 06.06.2017 and it acts as secretariat to the District Transport Management Committee chaired by the District Collector.

## 8.6 State Level Road Safety Action Plan (2018 – 2020)

In compliance to the directions of Hon'ble Supreme Court Committee on Road Safety, State Road Safety Cell, Transport Department prepared a comprehensive State Level Road Safety Action Plan (2018-2020) in close coordination with stakeholder departments such as Police, Medical & Health, Road Owning Agencies and Education Department. After obtaining approval from the Transport Minister, the Action Plan was submitted to the committee and all stakeholder departments in the state.

## 8.7 Bal Vahini Norms

In order to provide safe, convenient and accessible transport system to the students of educational institutions, Bal Vahini Yojna was implemented by Transport Department vide Order No 19/98 dated 21.07.1998. Guidelines are issued from time to time to ensure safety of students. A revised and amended order has been issued vide order no 23/2017 dated 29.06.2017 by the Transport Department.

## 8.8 Sustainable Development Goals and Road Safety

The Sustainable Development Goals (SDGs) are a collection of 17 global goals set by the United Nations General Assembly in 2015 for the year 2030. The SDGs are part of Resolution 70/1 of the United Nations General Assembly, the 2030 Agenda. The 17 goals defined under SDG 2030 are:





Various departments of Government of Rajasthan are actively participating in planning various activities, finalization of indicators and setting up targets to be achieved under 17 goals defined in SDG 2030.

For purpose of enhancing road safety in the state, the Lead Agency is working for the following targets defined in SDG 2030:

- 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents.
- 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.



## Section 9 – Road Safety Initiatives by Stakeholders

### 9.1 Transport Department

#### Institutional Setup of Transport Department

At the state level, the Transport Department is headed by Additional Chief Secretary to the Government as Head of the Department followed by Transport Commissioner. They are assisted by 6 Additional Transport Commissioners, 5 Joint Transport Commissioners, 4 Deputy Transport Commissioners, 1 Assistant Transport Commissioner, 1 Financial Adviser, 1 Deputy Financial Adviser, 1 Senior Accounts Officer, 4 Assistant Accounts Officer, 1 System Analyst, 1 Assistant Director (Statistics), 1 Analyst cum Programmer, ALR and 2 DTOs along with other supporting staff.

At Regional and District Level, the department is divided into 12 Regions and 52 Vehicle Registration Authorities, 36 Tax Collection Centers and 27 Sub Transport Offices. Transport Regions and Transport Districts in Rajasthan is depicted in **Table 9.1**.

**Table 9.1: Transport Regions and Transport Districts in Rajasthan**

| S. No.       | Transport Region | Number of Transport Districts | Transport Districts                                     |
|--------------|------------------|-------------------------------|---------------------------------------------------------|
| 1            | Jaipur           | 5                             | Jaipur, Dudu, Kotputli, Chomu, Shahpura                 |
| 2            | Dausa            | 3                             | Dausa, Sawai Madhopur, Karoli                           |
| 3            | Sikar            | 5                             | Sikar, Jhunjhunu, Churu, Sujargarh, Khetri              |
| 4            | Ajmer            | 7                             | Ajmer, Tonk, Nagaur, Beawar, Didwana, Kishangarh, Kekdi |
| 5            | Alwar            | 3                             | Alwar, Bhiwadi, Shahjahanpur (TCC)                      |
| 6            | Bharatpur        | 2                             | Bharatpur, Dholpur                                      |
| 7            | Jodhpur          | 5                             | Jodhpur, Barmer, Jaisalmer, Balotara, Phalodi           |
| 8            | Pali             | 5                             | Pali, Sirohi, Jalore, Abu Road, Bheenmal                |
| 9            | Udaipur          | 5                             | Udaipur, Banswara, Dungarpur, Rajsamand, Ratanpur (TCC) |
| 10           | Chittaurgarh     | 4                             | Chittaurgarh, Pratapgarh, Bhilwara, Shahpura            |
| 11           | Kota             | 5                             | Kota, Bundi, Jhalawar, Baran, Ramganj Mandi             |
| 12           | Bikaner          | 5                             | Bikaner, Ganganagar, Hanumangarh, Nohar, Nokha          |
| <b>TOTAL</b> |                  | <b>54</b>                     |                                                         |

Sub Offices Under Regional/District Transport Offices in Rajasthan is depicted in **Table 9.2.**

**Table 9.2: Sub Offices Under Regional and District Transport Offices**

| S. No. | Region    | District Office | Sub Office                           | No of Sub Offices |
|--------|-----------|-----------------|--------------------------------------|-------------------|
| 1      | Dausa     | Dausa           | Mahua                                | 1                 |
|        |           | Karauli         | Hindaun                              | 1                 |
|        |           | Sawai Madhopur  | Gangapur City                        | 1                 |
| 2      | Sikar     | Sikar           | Reengus<br>Neem Ka Thana<br>Fatehpur | 3                 |
|        |           | Churu           | Rajgarh                              | 1                 |
| 3      | Alwar     | Alwar           | Behror                               | 1                 |
| 4      | Bharatpur | Bharatpur       | Deeg                                 | 1                 |
| 5      | Ajmer     | Nagaur          | Merta                                | 1                 |
|        |           | Didwana         | Makrana<br>Nawa                      | 2                 |
|        |           | Tonk            | Niwai<br>Uniyara<br>Deoli            | 3                 |
| 6      | Jodhpur   | Jodhpur         | Pipad City                           | 1                 |
|        |           | Jaisalmer       | Pokaran                              | 1                 |
| 7      | Pali      | Pali            | Sumerpur<br>Sojat                    | 2                 |
|        |           | Jalore          | Sanchor                              | 1                 |
| 8      | Udaipur   | Udaipur         | Salumber                             | 1                 |
|        |           | Rajsamand       | Nathdwara<br>Bhim<br>Railmagra       | 3                 |
| 9      | Kota      | Jhalawar        | Bhawani Mandi                        | 1                 |
| 10     | Bikaner   | Bikaner         | Lunkaransar                          | 1                 |
|        |           | Ganganagar      | Suratgarh                            | 1                 |
| TOTAL  |           |                 |                                      | 27                |

## 9.2 Activities Done by Transport Department

Various activities performed by Transport Department during the year 2018 for improving road safety scenario in the state are described below.

### a) Suspension of Driving Licenses in Four Quarters During the Year 2018

**Table 9.3: Suspension of Driving Licenses in 2018**

| Quarter      | Total Challans  | Recommendations for Suspension | %age of Recommendations | No. of Licenses Suspended | %age of Licenses Suspend |
|--------------|-----------------|--------------------------------|-------------------------|---------------------------|--------------------------|
| Jan to Mar   | 1,20,427        | 15,431                         | 12.81                   | 7,887                     | 6.55                     |
| Apr to Jun   | 23,137          | 13,292                         | 57.45                   | 10,578                    | 45.72                    |
| Jul to Sep   | 16,537          | 8,423                          | 50.94                   | 7,745                     | 46.83                    |
| Oct to Dec   | 13,227          | 5,645                          | 42.68                   | 4,063                     | 30.72                    |
| <b>TOTAL</b> | <b>1,73,328</b> | <b>42,791</b>                  | <b>24.69</b>            | <b>30,273</b>             | <b>17.47</b>             |

### b) Third Party Insurance in Four Quarters During the Year 2018

**Table 9.4: Third Party Insurance in 2018**

| Quarter      | Vehicles Checked | Detained      |
|--------------|------------------|---------------|
| Jan to Mar   | 6,33,846         | 19,214        |
| Apr to Jun   | 6,62,405         | 19,581        |
| Jul to Sep   | 6,81,701         | 26,263        |
| Oct to Dec   | 6,45,062         | 19,758        |
| <b>TOTAL</b> | <b>26,23,014</b> | <b>84,816</b> |

### c) Speed Governors in Four Quarters During the Year 2018

**Table 9.5: Status of Compliance of Speed Governors in 2018**

| Quarter      | Vehicles Coming for Fitness or Re-registration | Vehicles Complying | Vehicles Rejected |
|--------------|------------------------------------------------|--------------------|-------------------|
| Jan to Mar   | 96,076                                         | 84,926             | 1,276             |
| Apr to Jun   | 83,342                                         | 73,352             | 3,218             |
| Jul to Sep   | 72,727                                         | 59,123             | 977               |
| Oct to Dec   | 84,230                                         | 58,463             | 2,277             |
| <b>TOTAL</b> | <b>3,36,375</b>                                | <b>2,75,864</b>    | <b>7,748</b>      |

### d) Checking of School Bus (Bal Vahini) During the Year 2018

**Table 9.6: Checking of School Buses (Bal Vahini) in 2018**

| No. of School Buses | No. of Buses Checked | No. of Challans | Compounding Fee (in Lacs) |
|---------------------|----------------------|-----------------|---------------------------|
| 20,794              | 10,895               | 3,931           | 81.90                     |

#### e) Cheking of Ambulances in During the Year 2018

| Table 9.7: Checking of Ambulances in 2018 |                           |                 |                           |
|-------------------------------------------|---------------------------|-----------------|---------------------------|
| No. of Ambulances                         | No. of Ambulances Checked | No. of Challans | Compounding Fee (in Lacs) |
| 6,177                                     | 1,479                     | 244             | 9.66                      |

#### f) Checking of Lok Parivahan Buses During the Year 2018

| Table 9.8: Checking of Lok Parivahan Buses in 2018 |                      |                 |                           |
|----------------------------------------------------|----------------------|-----------------|---------------------------|
| No. of Buses                                       | No. of Buses Checked | No. of Challans | Compounding Fee (in Lacs) |
| 1,309                                              | 1604                 | 739             | 45.20                     |

#### g) Inspection of Motor Driving Schools During the Year 2018

| Table 9.9: Inspection of Motor Driving Schools in 2018 |                                        |
|--------------------------------------------------------|----------------------------------------|
| No. of Motor Driving Schools                           | No. of Motor Driving Schools Inspected |
| 333                                                    | 250                                    |

### 9.3 Medical & Health Department

#### Government Healthcare Infrastructure in Rajasthan

The public healthcare delivery system is mainly a three-tiered system comprising of a vast network of 14,408 Sub Centres and 2080 Primary Health Centres, 571 Community Health Centres, 19 Sub District Hospitals and 34 District Hospitals at the Secondary Level, and 8 Teaching Hospitals and Healthcare Institutions at the tertiary level (Rural Health Statistics, 2016 and National Health Profile, 2016). The average population served per government hospital bed is 1521 for Rajasthan as compared to 1678 for India (National Health Profile, 2016). The private healthcare delivery system comprises of individual practitioners, small clinics and hospitals and is highly fragmented, with a vast majority of it being serviced by the unorganized sector.

| Table 9.10: Medical & Health Facilities in Rajasthan |                                |       |
|------------------------------------------------------|--------------------------------|-------|
| S. N.                                                | Health Facility                | Nos.  |
| 1                                                    | District Hospitals             | 34    |
| 2                                                    | Satellite Hospitals            | 5     |
| 3                                                    | Sub-Divisional Hospitals (SDH) | 19    |
| 4                                                    | Community Health Centres (CHC) | 571   |
| 5                                                    | Primary Health Centres         | 2080  |
| 6                                                    | Sub Centres (SC)               | 14408 |
| 7                                                    | City Dispensaries              | 195   |
| 8                                                    | Government Blood Bank          | 44    |
| 9                                                    | Trauma Centres                 | 57    |



## Trauma Care Facilities in Rajasthan

There are 57 Trauma Centers in Rajasthan. Number of Trauma Centers in different district is depicted in **Table 9.11**.

| Table 9.11: Trauma Centers in Rajasthan |                  |                          |
|-----------------------------------------|------------------|--------------------------|
| S. No.                                  | Name of District | Number of Trauma Centers |
| 1                                       | Ajmer            | 3                        |
| 2                                       | Alwar            | 2                        |
| 3                                       | Baran            | 1                        |
| 4                                       | Banswara         | 1                        |
| 5                                       | Barmer           | 1                        |
| 6                                       | Bharatpur        | 1                        |
| 7                                       | Bhilwara         | 1                        |
| 8                                       | Bikaner          | 1                        |
| 9                                       | Bundi            | 2                        |
| 10                                      | Chittaurgarh     | 1                        |
| 11                                      | Churu            | 3                        |
| 12                                      | Dausa            | 3                        |
| 13                                      | Dholpur          | 1                        |
| 14                                      | Dungarpur        | 1                        |
| 15                                      | Sri Ganganagar   | 2                        |
| 16                                      | Hanumangarh      | 2                        |
| 17                                      | Jaipur           | 7                        |
| 18                                      | Jaisalmer        | 1                        |
| 19                                      | Jalore           | 1                        |
| 20                                      | Jhunjhunu        | 1                        |
| 21                                      | Jodhpur          | 2                        |
| 22                                      | Karoli           | 1                        |
| 23                                      | Kota             | 1                        |
| 24                                      | Nagaur           | 2                        |
| 25                                      | Pali             | 2                        |
| 26                                      | Pratapgarh       | 1                        |
| 27                                      | Rajsamand        | 3                        |
| 28                                      | Sawai Madhopur   | 1                        |
| 29                                      | Sikar            | 2                        |
| 30                                      | Sirohi           | 1                        |
| 31                                      | Tonk             | 2                        |
| 32                                      | Udaipur          | 3                        |
| TOTAL                                   |                  | 57                       |

## Ambulances in Rajasthan

There are 1377 Ambulances operating in the state. List of ambulances according to type is depicted in **Table 9.12**.

| Table 9.12: Number of Ambulances in Rajasthan |                   |                     |
|-----------------------------------------------|-------------------|---------------------|
| S. No.                                        | Type of Ambulance | Number of Ambulance |
| 1                                             | 108 Ambulance     | 701                 |
| 2                                             | 104 Ambulance     | 587                 |
| 3                                             | Base Ambulance    | 189                 |
| 4                                             | Private Ambulance | 4300                |
| 5                                             | NHAI Ambulance    | 68                  |
|                                               | <b>TOTAL</b>      | <b>5845</b>         |

## 9.4 Activities Done by Medical & Health Department

Various activities performed by Medical & Health Department through budget provisions of Dedicated Road Safety Fund are given below.

### a) Capacity Building Training/Workshops

To strengthen road safety, following Capacity Building Training / Workshops have been organized for professionals of Medical and Health Department, Government of Rajasthan.

| Table 9.13: Capacity Building Training/Workshops for Medical & Health |                                                                                       |              |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------|
| S. No.                                                                | Name of Workshop                                                                      | Participants |
| 1                                                                     | Capacity Building Program for Doctors and Nursing Staff                               | 120          |
| 2                                                                     | Workshop on TRIAGE Protocol at SMS Hospital                                           | 150          |
| 3                                                                     | Workshop on Trauma Care Management and TRIAGE Protocol at SP Medical College, Bikaner | 250          |
| 4                                                                     | TOT / Instructor Training in Trauma Care for Doctors and Nursing Staff                | 17           |
| 5                                                                     | Capacity Building Program for Doctors and Nursing Staff                               | 30           |

### b) Display of Sun-boards of Good Samaritan Guidelines

Sun-boards of Good Samaritan Guidelines have been displayed through Regional Transport Offices in their underlying districts. Name of Region and Number of sun-boards displayed are depicted in **Table 9.14**.

**Table 9.14: Good Samaritan Sun-boards Displayed in Different Transport Regions**

| S. No.       | Name of Region | No of Sun-boards |
|--------------|----------------|------------------|
| 1            | Dausa          | 250              |
| 2            | Sikar          | 1173             |
| 3            | Ajmer          | 757              |
| 4            | Alwar          | 162              |
| 5            | Jodhpur        | 104              |
| 6            | Pali           | 90               |
| 7            | Udaipur        | 857              |
| 8            | Chittaurgarh   | 825              |
| 9            | Bharatpur      | 500              |
| <b>TOTAL</b> |                | <b>4718</b>      |

**c) Activities Approved in FY 2017 – 18 from Dedicated Road Safety Fund**

- Establish ICU in Trauma Center in Sawai Man Singh Hospital, Jaipur
- Establish Trauma Center in Didwana
- Preparation of BLS Manual by JPN Apex Trauma Center, AIIMS, New Delhi

**d) Activities Approved in FY 2018 – 19 from Dedicated Road Safety Fund**

- Establish BLS Training Center in Jaipur
- Establish Skill Lab in SMS Hospital, Jaipur
- Upgrade Community Health Centers as Trauma Stabilization Unit
- Develop Practical and Working Manual for Nurses for Capacity Building

## 9.5 Police Department

### Institutional Setup Police Department

The state is divided into ten Police Range / Commissionerate which are further classified as circles having a cluster of police stations within its jurisdiction. Detail of Range, Police Circles and number of underlying Police Stations is depicted in **Table 9.15**. At present Traffic Cadre Strength in the state is 6,712 out of which 3,499 posts are occupied and 3,213 are lying vacant.

| Table: 9.15 Number of Police Circles and Police Station in Range in Rajasthan |                            |                |                 |
|-------------------------------------------------------------------------------|----------------------------|----------------|-----------------|
| S. No.                                                                        | Range /<br>Commissionerate | Police Circles | Police Stations |
| 1                                                                             | Jaipur Commissionerate     | 20             | 64              |
| 2                                                                             | Jaipur Range               | 33             | 123             |
| 3                                                                             | Bikaner Range              | 26             | 90              |
| 4                                                                             | Bharatpur Range            | 20             | 79              |
| 5                                                                             | Ajmer Range                | 34             | 124             |
| 6                                                                             | Jodhpur Commissionerate    | 6              | 26              |
| 7                                                                             | Jodhpur Range              | 29             | 122             |
| 8                                                                             | Udaipur Range              | 33             | 133             |
| 9                                                                             | Kota Range                 | 26             | 101             |
| 10                                                                            | GRP Range                  | 6              | 25              |
| TOTAL                                                                         |                            | 233            | 887             |

## 9.6 Activities Done by Police Department

### a) Challans Made by Police for Different Offences During Year 2018

| Table 9.16: Number of Challans Made by Police in 2018 |                |                  |               |                                |            |                 |                |             |           |
|-------------------------------------------------------|----------------|------------------|---------------|--------------------------------|------------|-----------------|----------------|-------------|-----------|
| Range /<br>Commissionerate                            | Without Helmet | Without Seatbelt | Over Speeding | Use of Mobile<br>While Driving | No Parking | Drunken Driving | Red Light Jump | Overloading | High Beam |
| Jaipur Commissionerate                                | 124819         | 17177            | 71213         | 11361                          | 107941     | 33729           | 94934          | 11135       | 3955      |
| Jaipur Range                                          | 78250          | 35435            | 37393         | 2811                           | 7595       | 11237           | 367            | 4929        | 4         |
| Bikaner Range                                         | 100744         | 48532            | 20293         | 1209                           | 12536      | 7898            | 2183           | 3585        | 847       |
| Bharatpur Range                                       | 37868          | 11738            | 4734          | 885                            | 3563       | 2503            | 5369           | 19930       | 0         |
| Ajmer Range                                           | 79046          | 32236            | 11311         | 1186                           | 16417      | 10347           | 176            | 13972       | 77        |
| Jodhpur Commissionerate                               | 74021          | 8561             | 21623         | 4086                           | 31396      | 2403            | 18             | 2486        | 0         |
| Jodhpur Range                                         | 42866          | 30739            | 9148          | 5682                           | 1802       | 4638            | 1193           | 23776       | 6         |
| Udaipur Range                                         | 17218          | 2974             | 5372          | 371                            | 9142       | 2962            | 3594           | 15326       | 0         |
| Kota Range                                            | 52833          | 4878             | 7779          | 715                            | 564        | 9836            | 6117           | 33405       | 3         |
| TOTAL                                                 | 607665         | 192270           | 188866        | 28306                          | 190956     | 85553           | 113951         | 128544      | 4892      |



## b) Counseling of Helmet and Seatbelt Offenders During Year 2018

| Table 9.17: Counseling of Helmet and Seatbelt Offenders in 2018 |                 |                 |                 |
|-----------------------------------------------------------------|-----------------|-----------------|-----------------|
| Quarter                                                         | Total Challans  | Counseling Done | %age Counseling |
| Jan to Mar                                                      | 1,88,522        | 60,699          | 32.20           |
| Apr to Jun                                                      | 1,92,367        | 63,802          | 33.17           |
| Jul to Sep                                                      | 1,80,171        | 76,923          | 42.69           |
| Oct to Dec                                                      | 1,55,143        | 72,172          | 46.52           |
| <b>TOTAL</b>                                                    | <b>7,16,203</b> | <b>2,73,596</b> | <b>38.20</b>    |

## 9.7 Road Owning/Managing Agencies

Road Owning / Managing Agencies include stakeholders comprising Public Works Department (PWD), PWD NH, National Highways Authority of India (NHAI), Ministry of Road Transport & Highways (MoRTH), Road Infrastructure Development Company of Rajasthan (RIDCOR), Rajasthan State Road Development and Construction Corporation Limited (RSRDCC), Local Self Government (LSG) and Urban Development and Housing (UDH) etc. The activities done by these agencies are described below from **Table 9.18** to **Table 9.22**.

### a) Road Safety Audit up to Year 2018

| Table 9.18: Road Safety Audit up to Year 2018 |            |                   |                              |
|-----------------------------------------------|------------|-------------------|------------------------------|
| S. No.                                        | Department | Total Length (Km) | Audited (Km)                 |
| 1                                             | RIDCOR     | 1,450             | 1,450                        |
| 2                                             | PWD        | 1,46,170          | 1,470                        |
| 3                                             | PWD NH     |                   | 511 (2 Lane)<br>151 (4 Lane) |
| 4                                             | RSRDCC     | 2,803             | 2,000                        |
| 5                                             | NHAI       | 4,696             | 1,826                        |
| 6                                             | LSG/UDH    | 59,104            | 59 (LSG)                     |
|                                               |            |                   | 227(UDH)                     |
| <b>TOTAL</b>                                  |            | <b>2,14,223</b>   | <b>7,694</b>                 |

### b) Status of Black Spots in Rajasthan up to Year 2018

| Table 9.19: Status of Blackspots in Rajasthan up to Year 2018 |              |                                |                        |              |              |                  |
|---------------------------------------------------------------|--------------|--------------------------------|------------------------|--------------|--------------|------------------|
| Year                                                          | Black Spots  | As per Joint Inspection Report | Spots Not as per MoRTH | Remaining    | Rectified    | Work in Progress |
| 2016                                                          | 892          | 126                            | 39                     | 853          | 747          | 37               |
| 2017                                                          | 963          | 155                            | 24                     | 941          | 704          | 68               |
| 2018                                                          | 805          | -                              | -                      | 805          | -            | -                |
| <b>TOTAL</b>                                                  | <b>2,660</b> | <b>281</b>                     | <b>63</b>              | <b>2,599</b> | <b>1,451</b> | <b>105</b>       |

c) Number of Speed Limit Sign Board Installed up to Year 2018

| Table 9.20: Number of Speed Limit Sign Boards Installed up to Year 2018 |                    |             |
|-------------------------------------------------------------------------|--------------------|-------------|
| S. No.                                                                  | Name of Department | Sign Boards |
| 1                                                                       | NHAI               | 2,209       |
| 2                                                                       | RIDCOR             | 428         |
| 3                                                                       | RSRDC              | 591         |
| 4                                                                       | PWD                | 1,130       |
| 5                                                                       | NH PWD             | 6,160       |
| 6                                                                       | UDH                | 317         |
| 7                                                                       | LSG                | 336         |
| TOTAL                                                                   |                    | 11,171      |

d) Training and Capacity Building Workshop (Road Safety Audit) up to 2018

| Table 9.21: Number of Engineers Trained as Road Safety Auditor up to Year 2018 |            |         |         |         |             |
|--------------------------------------------------------------------------------|------------|---------|---------|---------|-------------|
| S. No                                                                          | Department | 2016-17 | 2017-18 | 2018-19 | Dept. Total |
| 1                                                                              | NHAI       | 2       | 0       | 1       | 3           |
| 2                                                                              | RIDCOR     | 0       | 5       | 10      | 15          |
| 3                                                                              | RSRDC      | 0       | 5       | 5       | 10          |
| 4                                                                              | PWD        | 53      | 9       | 169     | 231         |
| 5                                                                              | UDH        | 0       | 9       | 33      | 42          |
| 6                                                                              | LSG        | 0       | 31      | 60      | 91          |
| 7                                                                              | BRO        | 0       | 0       | 1       | 1           |
| TOTAL                                                                          |            | 55      | 59      | 279     | 393         |

e) Development of Bus Bay / Shelter and Truck Lay Bay up to Year 2018

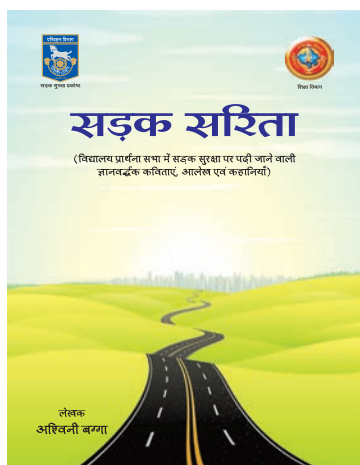
| Table 9.22: Bus Bay / Shelter Developed up to Year 2018 |                                                                                                         |                        |                                                                |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------|
| Stakeholder Department                                  | Target up to Dec. 2018                                                                                  | Bus Bays / Bus Shelter | Truck Lay Bay                                                  |
| NHAI                                                    | 500 Km. Road length to be covered<br><br>Bus shelter and bus bays are to be developed on NH as per IRC. | 1,782 Km covered       | Truck lay bays/ rest area are established as per IRC standards |
| RIDCOR                                                  | NA                                                                                                      | 49                     | 10                                                             |
| RSRDCC                                                  | Truck lay bay/rest area to be developed as per PWD policy depending upon land availability.             | 0                      | 1                                                              |
| PWD                                                     | Nil                                                                                                     | 135                    | 5                                                              |
| PWD (NH)                                                | 17 truck lay bays<br>134 bus shelters                                                                   | 144                    | 19<br>3 (Rest Area)                                            |

## 9.8 Education Department

The state government paid special attention to education sector and in order to organize the structure, the headquarters of Primary and Secondary Education, Rajasthan was established in Bikaner in 1950. In order to bring quality in education, separate Directorates of Elementary Education and Secondary Education were established in the year 1997, which are presently functioning as separate departments. Subsequently, this office was divided into several sections to keep the work of the Secondary Education Department organized and the different tasks of each section were determined.

## 9.9 Activities Done by Education Department

### a) Sadak Sarita - Book on Road Safety



Education Department has developed a book on road safety titled “Sadak Sarita” which will be used to educate school children about road safety. Two copies of book shall be distributed in 65,883 government schools (middle, secondary and senior secondary) of Rajasthan. The content of the book has been developed in form of interesting short stories using rural and urban settings covering various aspects of road safety such as Pedestrian Safety, Cycling, Use of Helmet & Seatbelt, Drunken Driving, Underage Driving and Use of Mobile While Driving etc.

These stories given in the book shall be recited during the morning assembly organized in the school. At the end of each story separate activities pertaining to the chapter has been added at the end of the chapter. The activities have been categorized such that they may implemented through (a) Class Teacher (b) Road Safety Club and (c) Individual Student. At present the book is under publication.

In the first phase, the book shall be distributed in government schools in Rajasthan. In second phase, copies shall be distributed in all private (middle, secondary and senior secondary) schools in the state.

### b) Road Safety in School Curriculum

Road Safety has been included in regular school curriculum for classes 6 to 10 in government schools of Rajasthan. Content related to road safety has been incorporated within the text books of various subjects such as English, Hindi, Science, Social Science and Mathematics.

### c) Formation of Road Safety Clubs in Schools

Guidelines have also been issued and repeated orders are circulated by Education Department from time to time regarding formation of Road Safety Clubs in schools and conducting road safety activities through the clubs.



## Section 10 - Annexures

### 10.1 Annexure 1 – Rajasthan State Road Safety Policy

#### 1. Preamble

The growing number of road accidents and resultant injuries and fatalities is a matter of serious concern. Road accidents are mainly man-made unfortunate mishaps causing immeasurable social and economic loss to the society. In recent years road accidents have become a major contributor of accidental deaths by unnatural causes. The Government of Rajasthan is deeply concerned of safety situation within the state and through this road safety policy framed on the lines of National Road Safety Policy, states its firm commitment to reduce the road accident fatalities in the state by 50% of the base line figure of 2015, by 2020. This will require well-coordinated, dedicated and concerted efforts from all stakeholder departments and other agencies.

#### 2. Policy Statement

To fulfil the objective of reducing mortality and morbidity due to road accidents, the Government of Rajasthan is committed to take the following measures: -

##### (i) Strengthening Institutional & Legal Environment

The Government will take steps to ensure that the required Institutional & Legal Environment for Road Safety is further strengthened and a mechanism for effective coordination for various stake holders is put in place with active and extensive participation of the community at large, of the private sector, academia and civil society.

##### (ii) Strengthening Financial Environment

The Government shall strive to create a regular dedicated road safety fund for the state from various possible sources like part of fines & compounding fees from traffic offences etc.

##### (iii) Ensure Safer and Efficient Road Infrastructure

The Government will take conscious measures to introduce, review, improve and maintain standards pertaining to safety in the design of rural and urban roads and bring them in consonance with international best practices keeping in view the local traffic conditions of the State. The planning, design, construction and management of road development projects and improvement and maintenance of existing roads should invariably consist of road safety component. Continuous identification,



survey, budget allotment, rectification and monitoring of accident-prone spots shall be done regularly in a time bound manner. Continuing application of Intelligent Transport System (ITS) and regular road safety audits to establish a safe and efficient transport system will be encouraged. Way side amenities/ facilities will be developed.

**(iv) Improving Quality of Drivers**

The Government recognizes the fact that improving the man power and driving skills both qualitatively and quantitatively will go a long way in improving road safety. The Government will provide and strengthen efficient and effective driver training and testing infrastructure aiming at transparency and objectivity through automation and modernization. Countermeasures against defaulters will be ensured to promote road discipline among drivers.

**(v) Safer Vehicles**

The Government will take steps to promote safety standard in vehicles through statutory periodic and qualitative inspection as an essential check on road worthiness of all vehicles, phasing out old vehicles and ensuring compliance of provisions of Motor Vehicle laws as well as pollution and safety norms. The aim of the Government will be to bring transparency and objectivity through automation and modernization.

**(vi) Safety for Vulnerable Road Users**

The design and construction of all road facilities (rural and urban) will take into account the needs of non-motorized transport and the vulnerable and physically challenged in an appropriate manner. The Government will seek to disseminate 'best practices' in this regard to town planners, architects and highway and traffic engineers. Steps shall be taken to strengthen public transport system. Comprehensive town planning with specific parking policy keeping in mind all important aspects related to road safety shall be strived for.

**(vii) Enforcement of Safety Laws**

The Government will endeavour to establish permanent, exclusive, dedicated and well-equipped teams involving officials of stakeholder departments to strengthen and improve the quality of enforcement for effective and uniform implementation of road safety laws. The Government will work in coordination with Government of India for establishment and strengthening of Highway patrolling on National, State and Express highways. System of toll-free help lines and social networking connectivity

for assistance of public will be ensured

**(viii) Road Safety Education and Training**

Road Safety knowledge and awareness will be created amongst the population through education, training and publicity campaigns. Road Safety education will also focus on school children and college going students, while road safety publicity campaigns will be used to propagate good road safety practices among the community. The Government will encourage training of all professionals associated with road design, road construction, road network management, road safety audit, traffic management, law enforcement etc. to attain adequate knowledge of road safety issues through extensive capacity building programs. First aid training to help road accident victims and training of trainers in road safety will be made an integral part of capacity building.

**(ix) Emergency Care and Medical Services for Road Accident Victims**

The Government will make sincere efforts to ensure that all persons involved in road accidents benefit from speedy, sufficient and effective trauma care and management. Both pre-hospital care and hospital-based injury management shall be provided to crash victims through a comprehensive Trauma Care Policy. The Government will strive to provide and improve sufficient emergency medical service response. The Government will also implement the clause of Right of Way for ambulances. Steps shall be taken for training of human resources and creating facilities.

**(x) HRD and Research for Road Safety**

The Government will encourage increased activity in programmes of road safety research by identifying priority areas, funding research in those areas adequately and establishing centre of excellence in research and academic institution. The State Government will facilitate dissemination of the result of the research and identifying examples of good practices through publication, training, conferences, workshops and websites. The Government will also encourage research by establishing a research system to leverage latest technology in improving enforcement, engineering and emergency care.

**(xi) Establish a Road Safety Information Database**

The Government will establish state level road safety information system by having a state-wide Road Accident Database Management System connecting all trauma centres, hospitals and ambulances and integrating the database of Medical and Health, Traffic Police, Transport Departments and

Insurance companies into the information system. Scientific investigation, restructuring and analysis of road accident shall be ensured for providing actual and accurate database for further research and analysis.

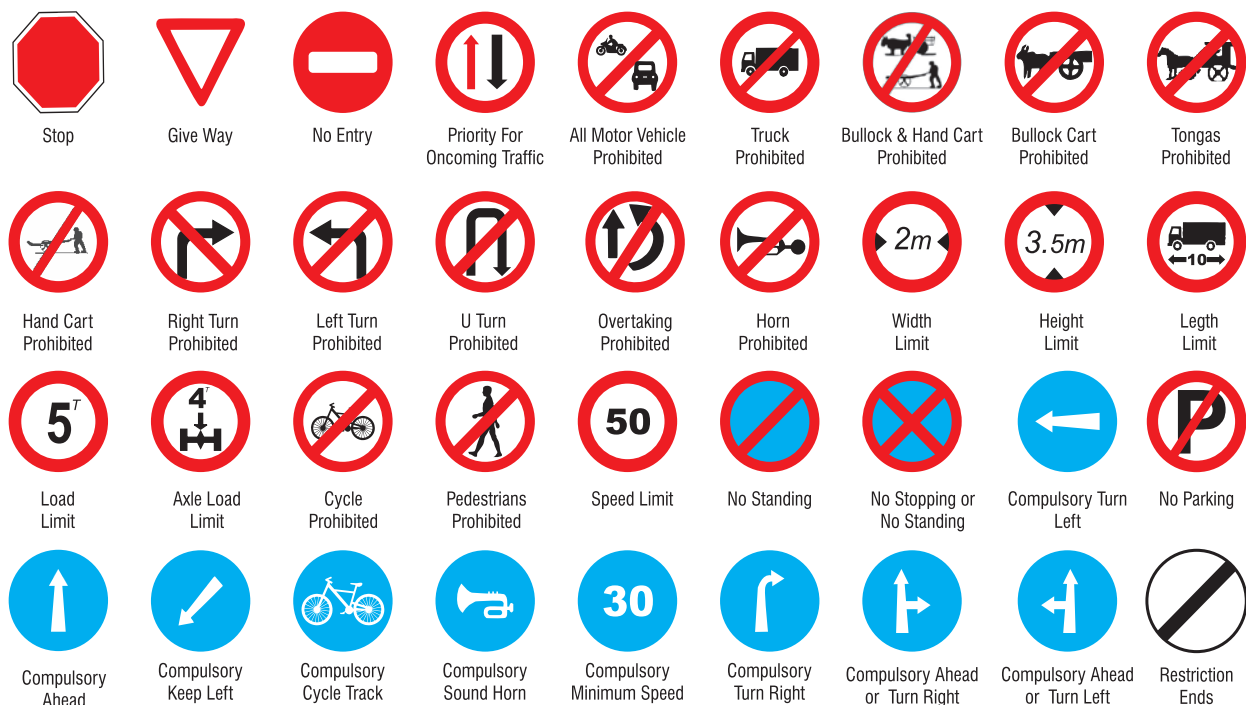
### **3. Implementation Strategy**

The Government will take appropriate measures to implement and oversee the issues related to Road Safety through an exclusive, adequate and dedicated road safety cell (lead agency) which may include representatives of stake holder departments like Transport, PWD, Medical & Health, Police, UDH, LSG, Law, Education along with other members. The lead agency will be provided with the authority and resources to evolve effective strategies for implementation of the State Road Safety Policy. The Government will also provide dedicated, adequate and regular fund to finance and implement road safety activities through the lead agency.



## 10.2 Annexure 2 – Road Signs

### Mandatory Road Signs

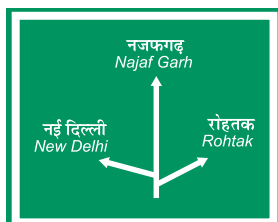


### Cautionary Road Signs

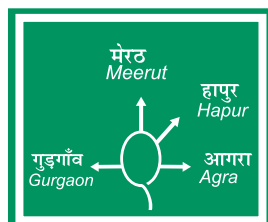




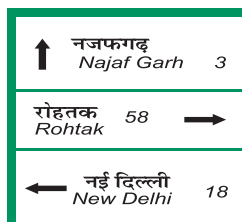
## Informatory Road Signs



Advance Direction Sign



Advance Destination Sign  
on Rotary Intersection



Advance Direction Sign  
With Distances



Direction Sign



Confirmatory Sign

|                       |                              |                           |                      |                                     |
|-----------------------|------------------------------|---------------------------|----------------------|-------------------------------------|
|                       |                              |                           |                      |                                     |
| Resting Place         | No Through Road              | Bus Terminal              | Railway Station      | Public Telephone                    |
|                       |                              |                           |                      |                                     |
| Tunnel Ahead          | Pedestrian<br>Subway         | Hospital                  | First Aid            | Restaurant                          |
|                       |                              |                           |                      |                                     |
| Light<br>Refreshments | Place Identification         | Petrol Pump               | Parking Lot Rickshaw | Parking Lot Scooter<br>& Motorcycle |
|                       |                              |                           |                      |                                     |
| Parking Lot<br>Taxi   | Parking Lot<br>Auto Rickshaw | Parking Lot<br>Both Sides | Parking Lot<br>Cycle |                                     |



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