Road Accident Data Analysis

ROAD ACCIDENTS IN RAJASTHAN 2018

TRANSPORT DEPARTMENT

Government of Rajasthan

ROAD ACCIDENTS

IN

RAJASTHAN - 2018

Transport Department
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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. Omission, found if any, or suggestion regarding content of this report may be brought into consideration to the State Road Safety Cell on email id addl.rs.tdr@rajasthan.gov.in.

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Message
Transport Minister

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.

Foreword
ACS Transport

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.

Preface
Transport Commissioner

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 the 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.

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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[1], 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.

[1] 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, taxies, 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 accidents 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:

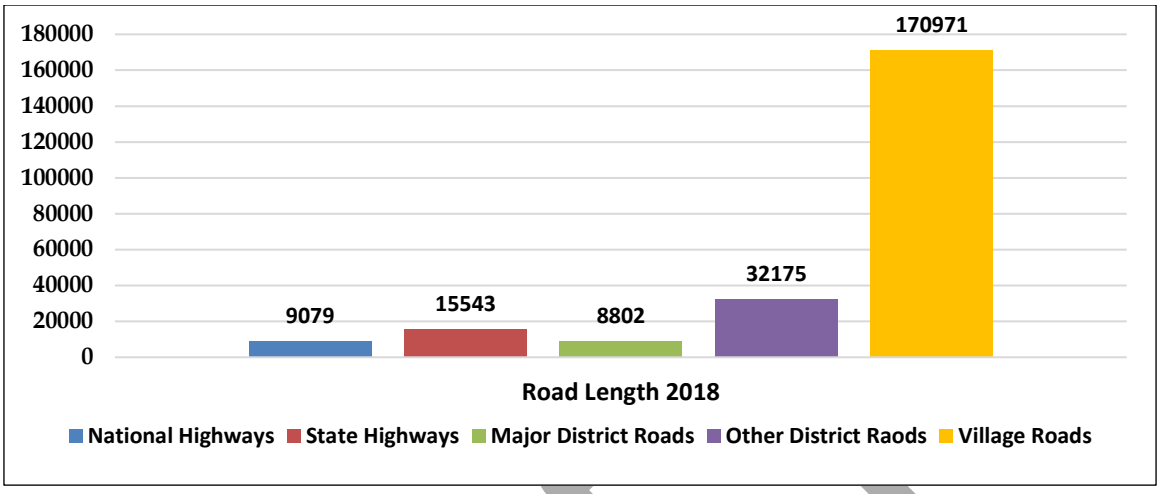
- **Accidents:** Rajasthan Police, Government of Rajasthan
- **Road Length:** Public Works Department, Government of Rajasthan
- **Vehicles:** Statistical Abstract 2016 - 17 and Administrative Report 2018 – 19, Transport Department, Government of Rajasthan

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

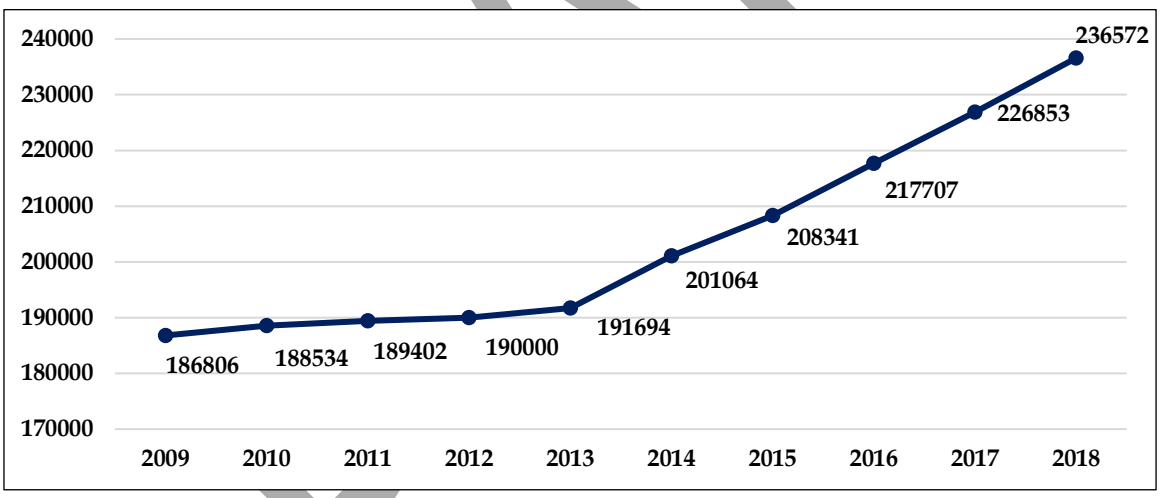
and mobility of passengers and freight across the state through the construction of new roads and upgradation of the existing roads. The status of road length in Rajasthan as on March 2018 is depicted in **Chart 1.1**.

Chart 1.1: Road Length 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)



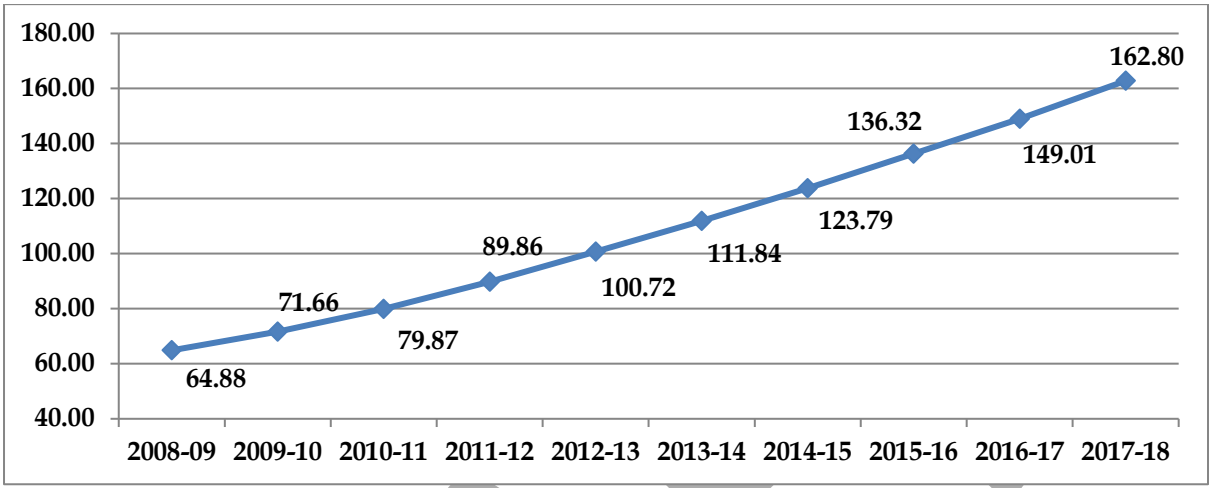
1.4 Motor Vehicles

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.

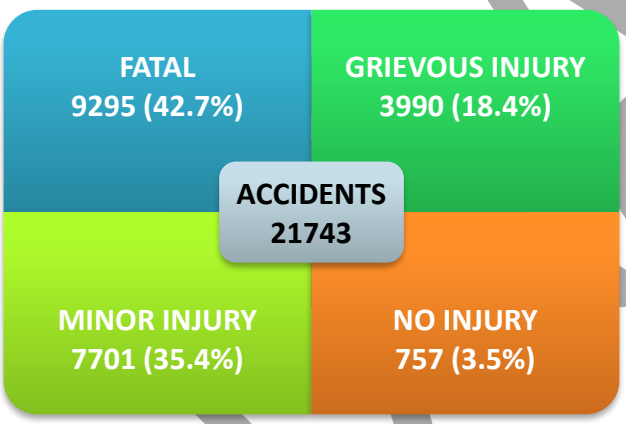
Composition of vehicular population during 2017-18 shows the highest share of two wheelers (75.6%) followed by cars, jeeps and taxis (10.6%), Tractors (6.7%), Trucks (3.7%) and Buses (0.7%). The vehicular composition shows that preference of personalized means of transport (cars and two-wheelers) is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



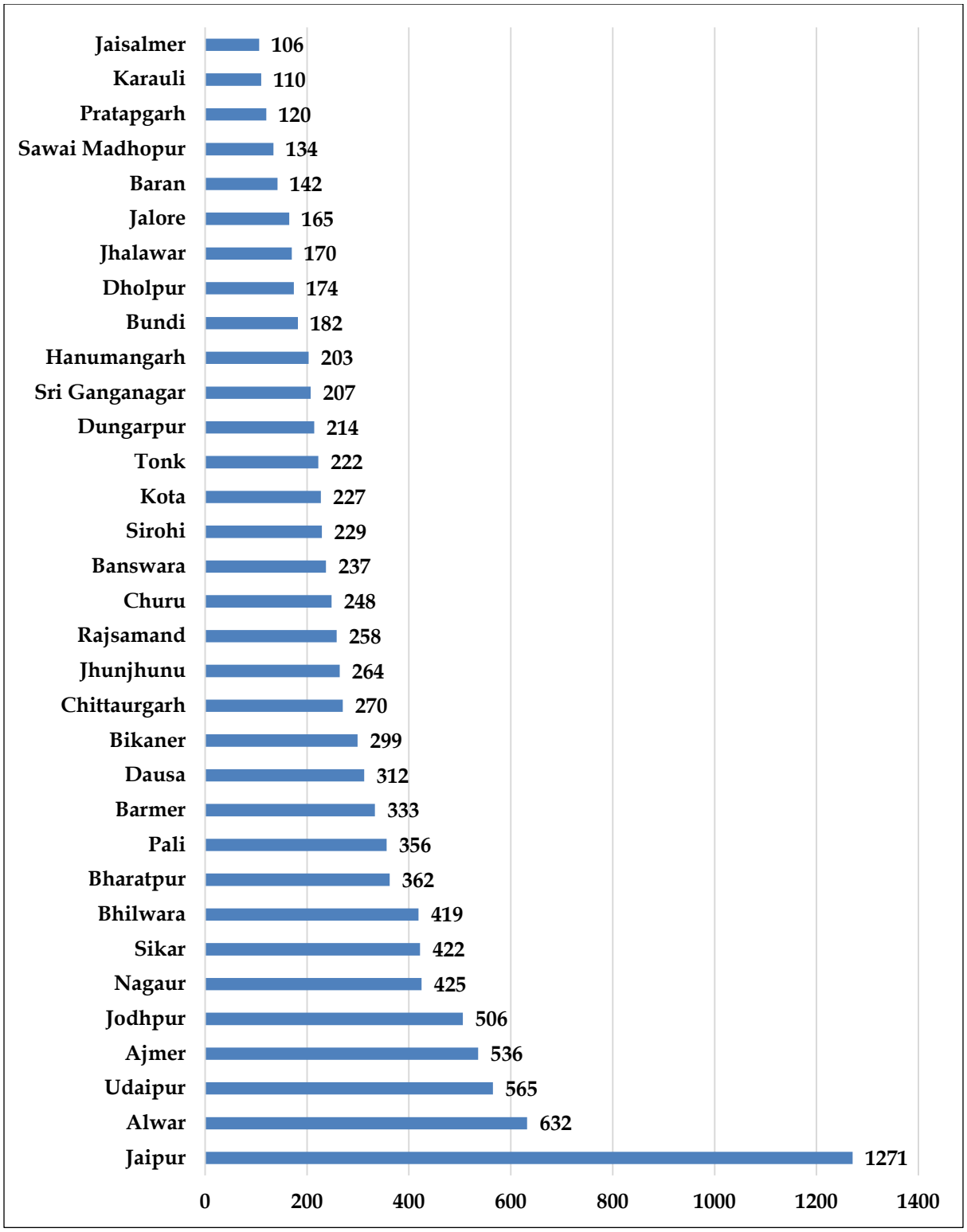
During year 2018, total 21,743 road accidents were reported in the State. Out of these 9,295 (42.7 percent) were fatal; 3,990 (18.4 percent) were grievous injury; 7,701 (35.4 percent) were minor injury and 757 (3.5 percent) were no injury accidents.

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
TOTAL		**21743**	**10320**	**21547**	**47.5**

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)

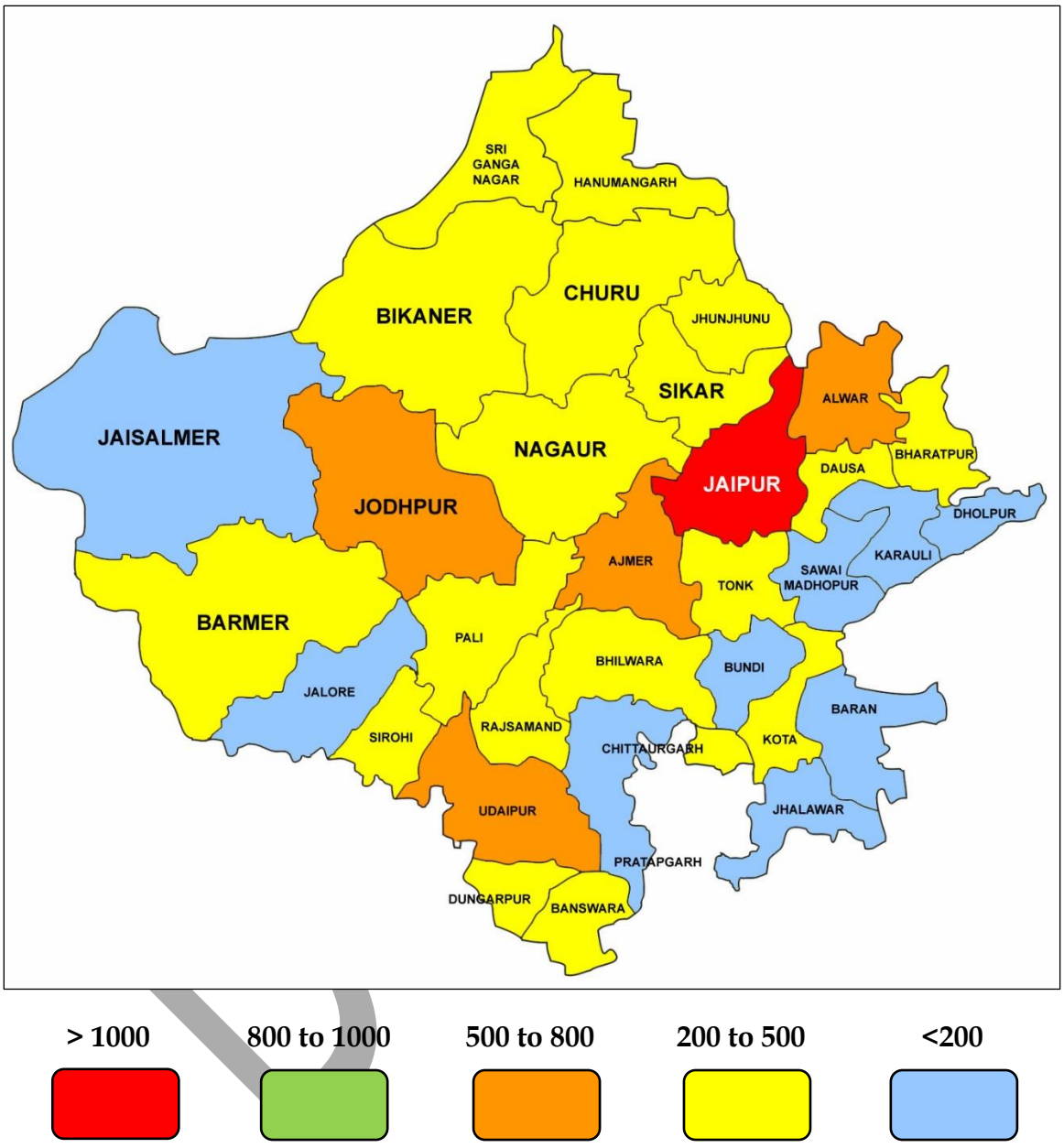
Rank	District	Persons Killed 2017	Persons Killed 2018	Increase in Fatalities	%age Increase
1	Udaipur	501	565	**64**	**12.77**
2	Alwar	574	632	**58**	**10.10**
3	Barmer	296	333	**37**	**12.50**
4	Pratapgarh	85	120	**35**	**41.18**
5	Dungarpur	183	214	**31**	**16.94**
6	Bikaner	271	299	**28**	**10.33**
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 Total Number of Fatalities Across Rajasthan in Year 2018

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.

Map 1.1: Segregation of Fatalities in Rajasthan in year 2018



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.

Table 1.6: Percentage Share of Rajasthan in India for Various Parameters

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	461334	21743	4.71 8th Rank
Injuries	466727	21547	4.62 9th Rank
Fatalities	149131	10320	6.92 6th Rank
Severity	31.8	47.5	NA

*Approximate vehicle population of India in 2017

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 8th position. Tamil Nadu reported highest 63,920 accidents in 2018.

Table 1.7: Share in Total Number of Road Accidents (in %age) During Year 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	**Rajasthan**	**4.71**	**21743**
9	Andhra Pradesh	4.32	19928
10	Gujarat	4.06	18745

Share in Total Number of Fatalities (in %age) 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 6th position. Uttar Pradesh reported highest number of road accident fatalities during year 2018.

Table 1.8: Share in Total Number of Fatalities (in %age) 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 %age) 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 9th 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.

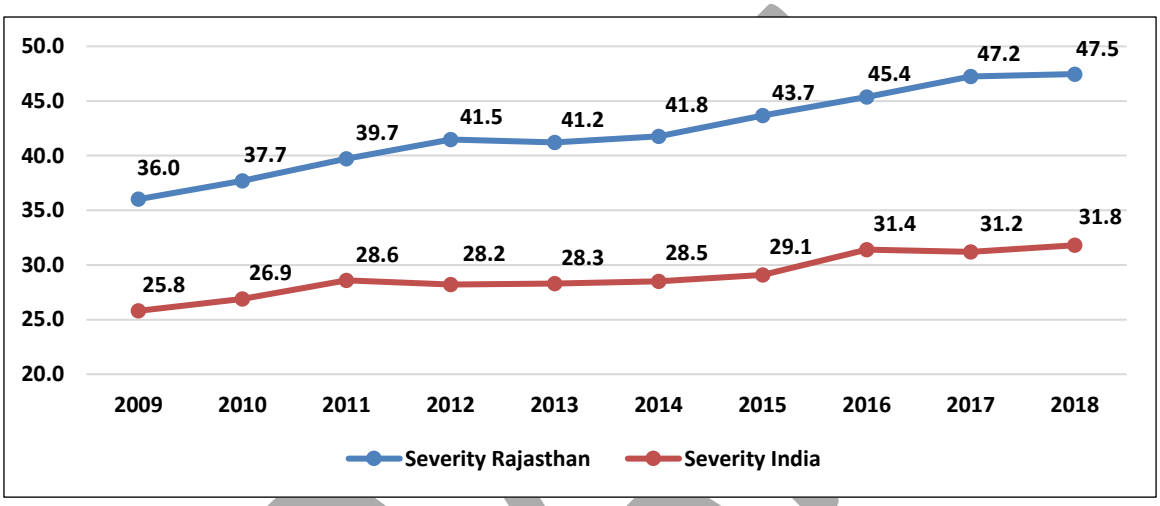
Table 1.9: Share in Total Number of Injured (in %age) During Year 2018

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.

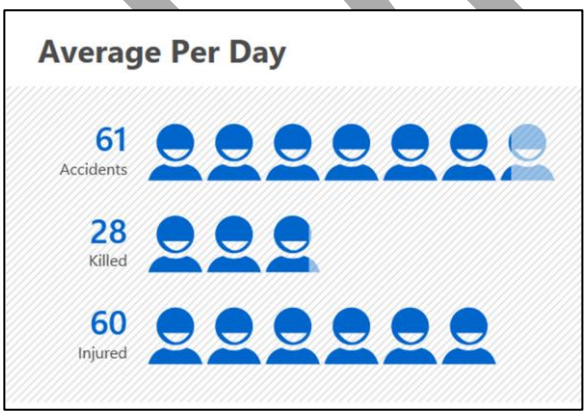


Figure 2.1

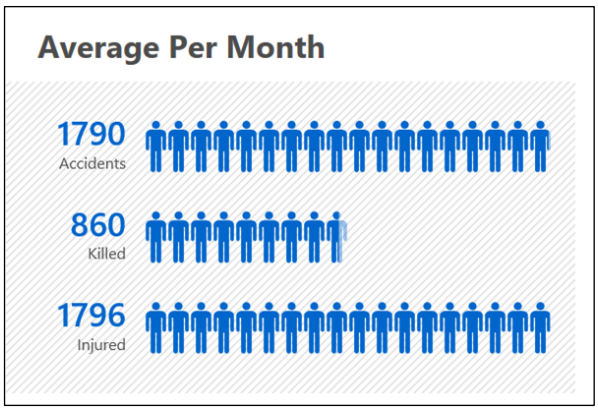


Figure 2.2

2.2 Long Term Profile

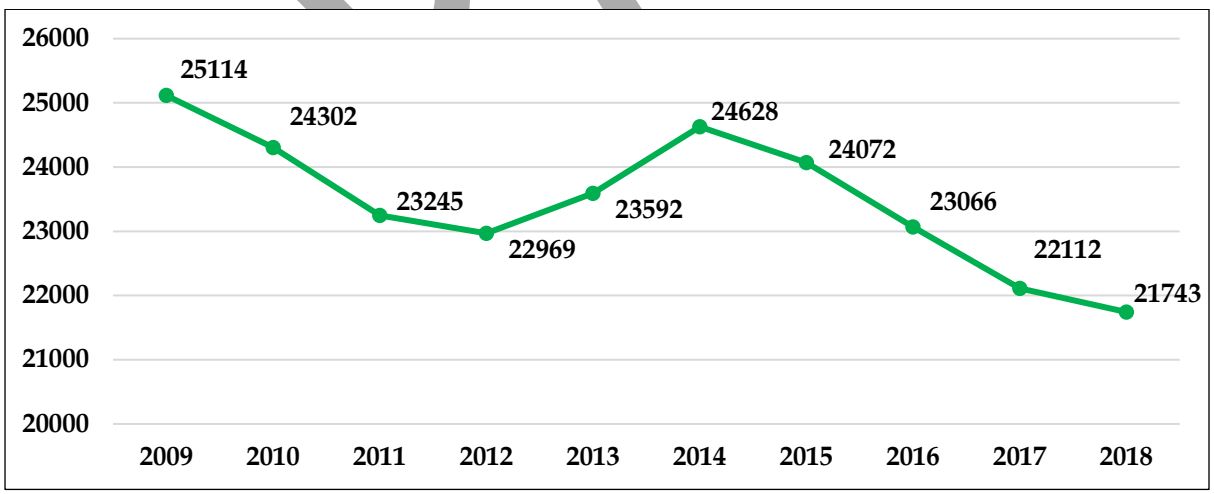
The long-term profile of road accidents, persons killed and persons injured for the period 2009 to 2018 in Rajasthan is shown in **Table 2.2**.

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.

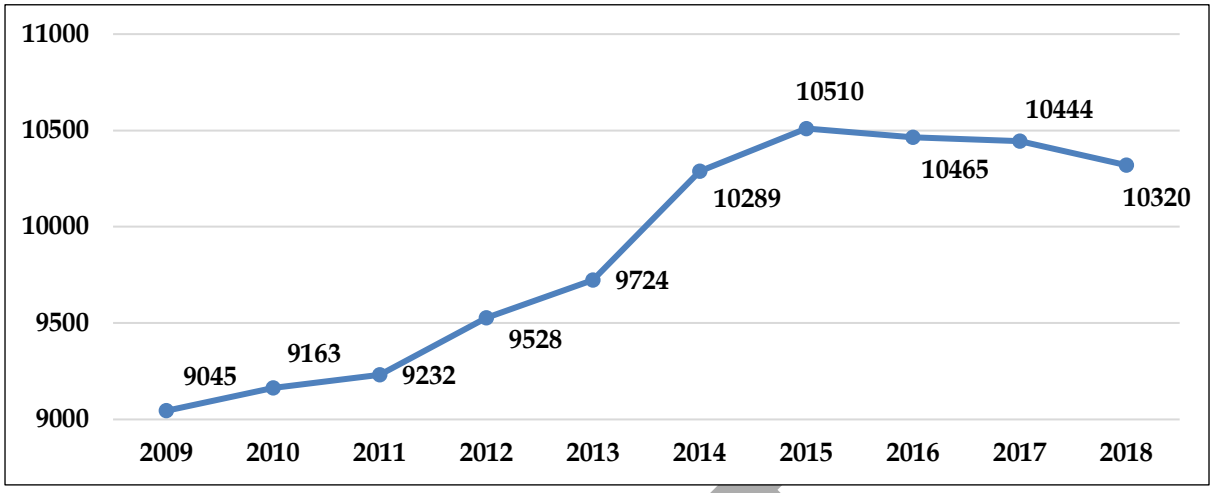
Chart 2.1: Road Accidents in Rajasthan (2009 – 2018)



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.

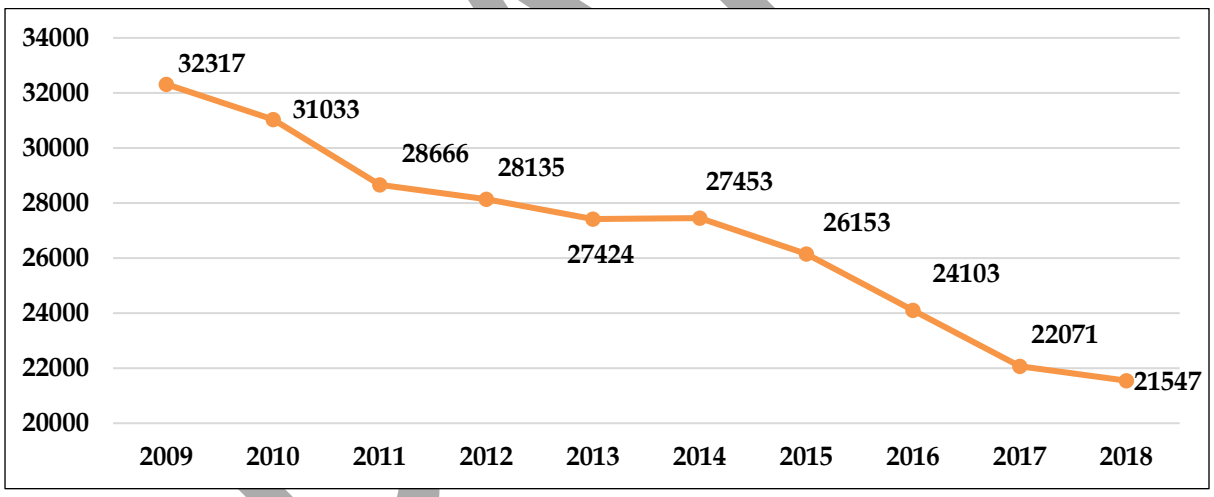
Chart 2.2: Number of Persons Killed in Road Accidents (2009 – 2018)



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.

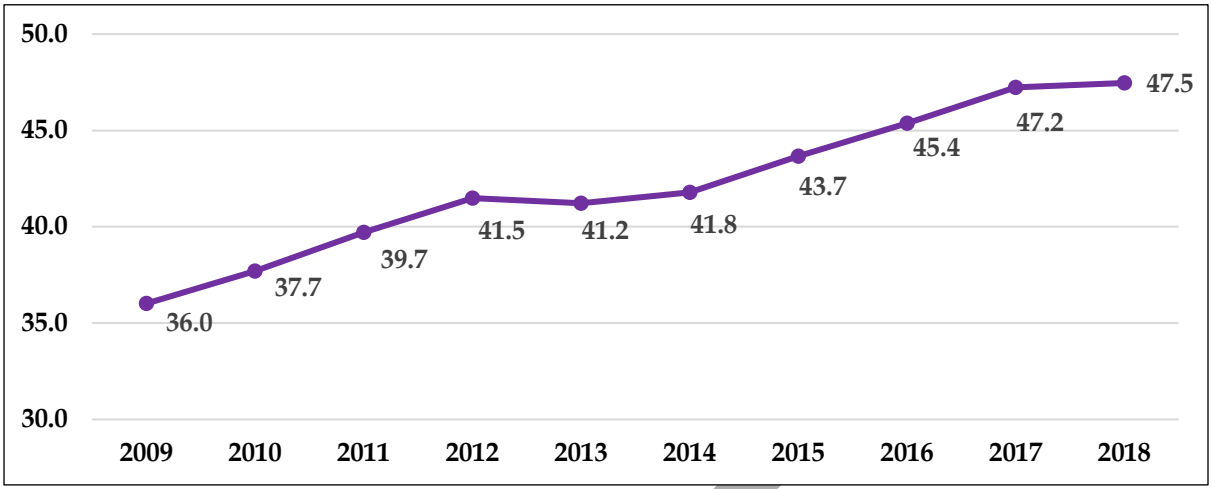
Chart 2.3: Number of Persons Injured in Road Accidents (2009 – 2018)



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)

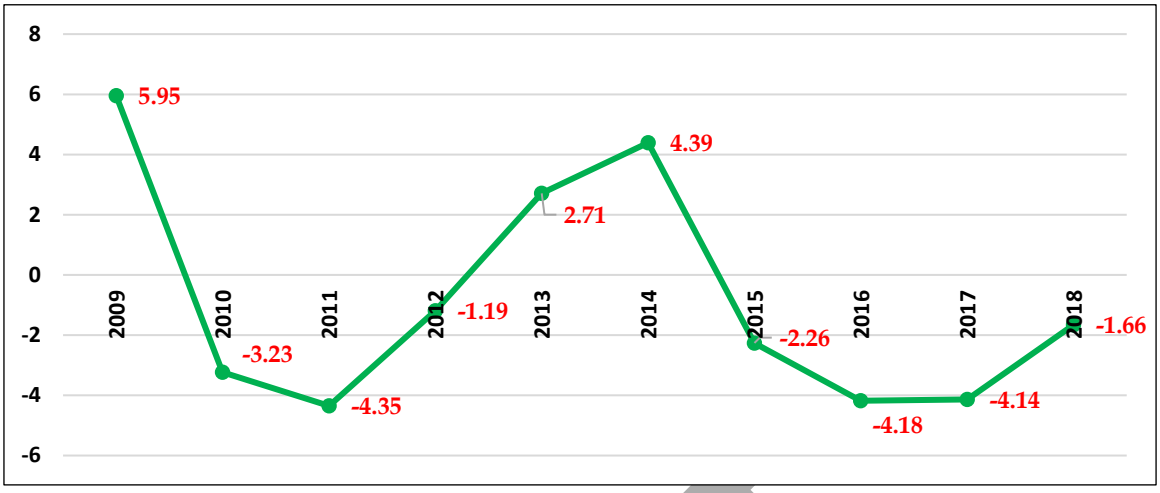


Chart 2.6: Percentage Change in Number of Persons Killed (2009 - 2018)

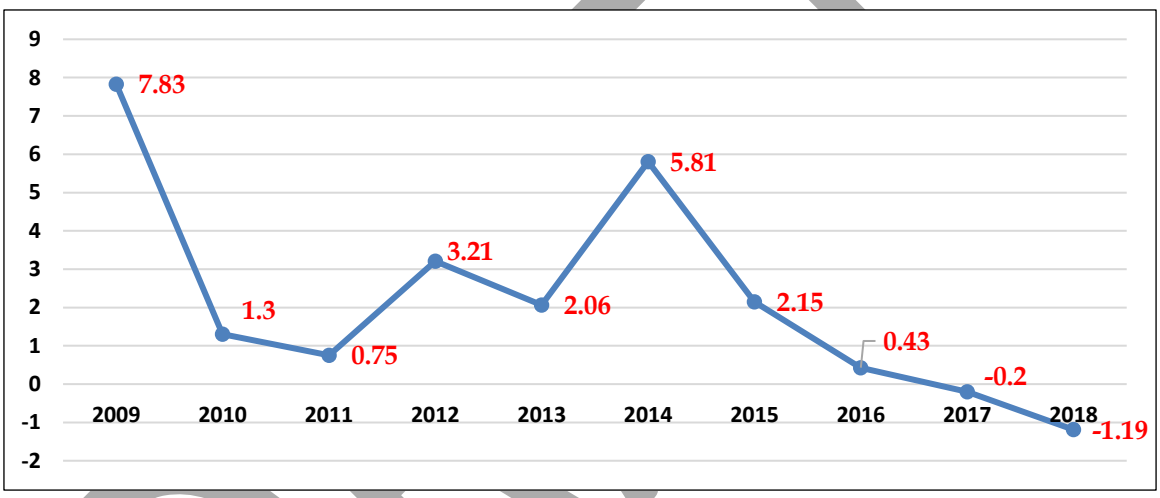
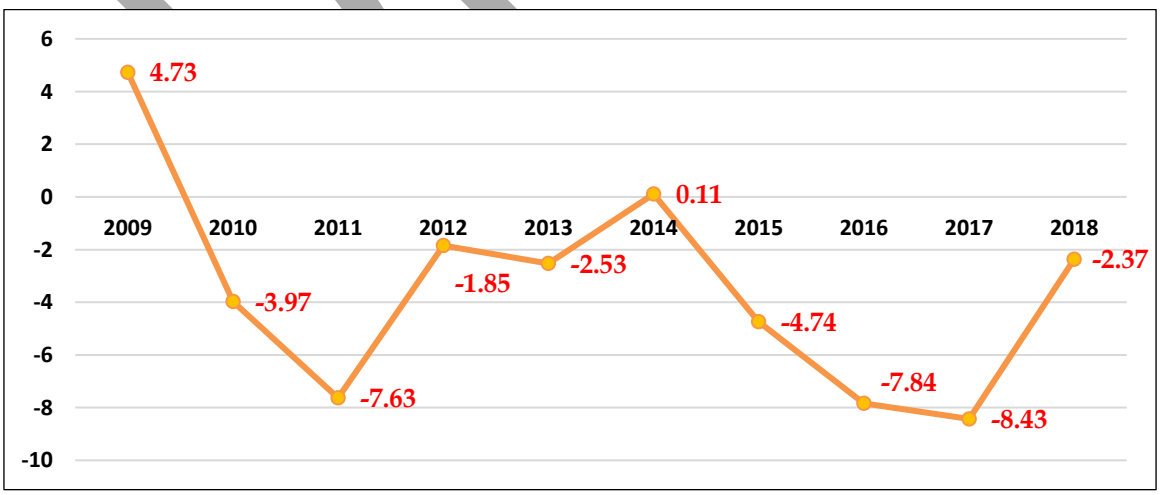


Chart 2.7: Percentage Change in Number of Persons Injured (2009 – 2018)



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.

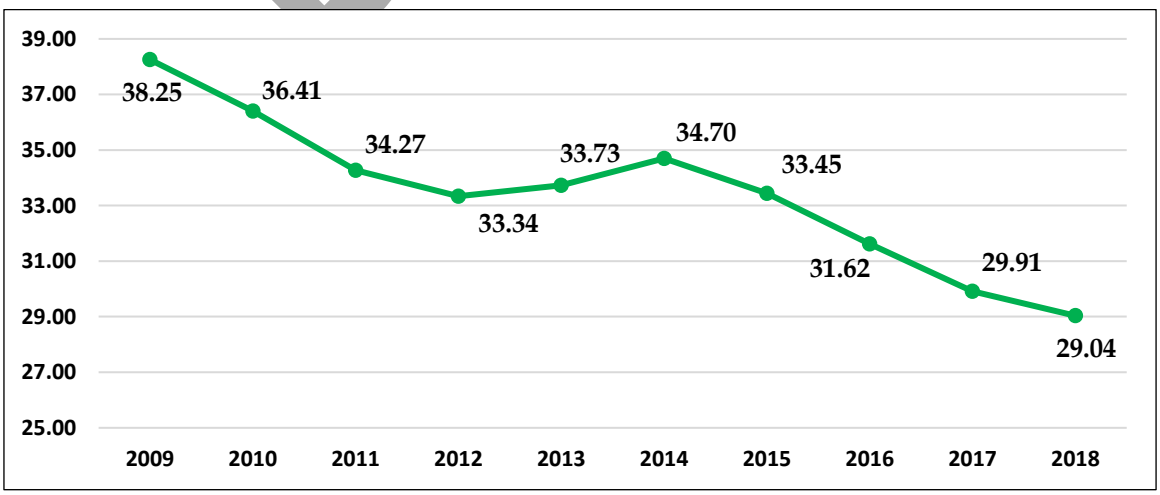
Table 2.4: Accidents Classified According to Type of Injuries (2009 – 2018)

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

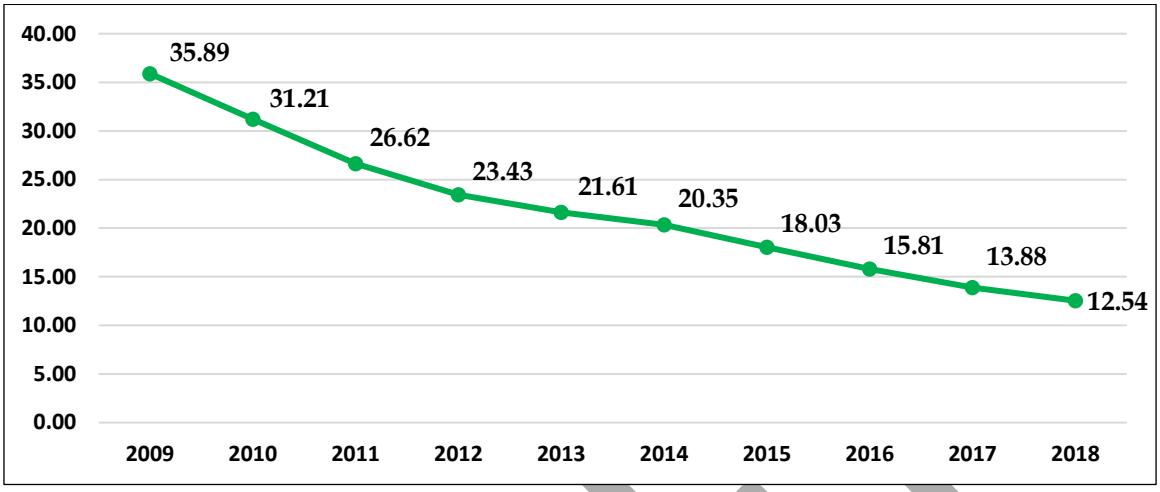
To get an appropriate measure of incidence of accidents, normalized accident rates for Rajasthan have been worked out in terms of number of road accidents, killings and injuries (a) per lakh persons, (b) per ten thousand motor vehicles and (c) per ten thousand kilometres of road length. Some of the broad 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)



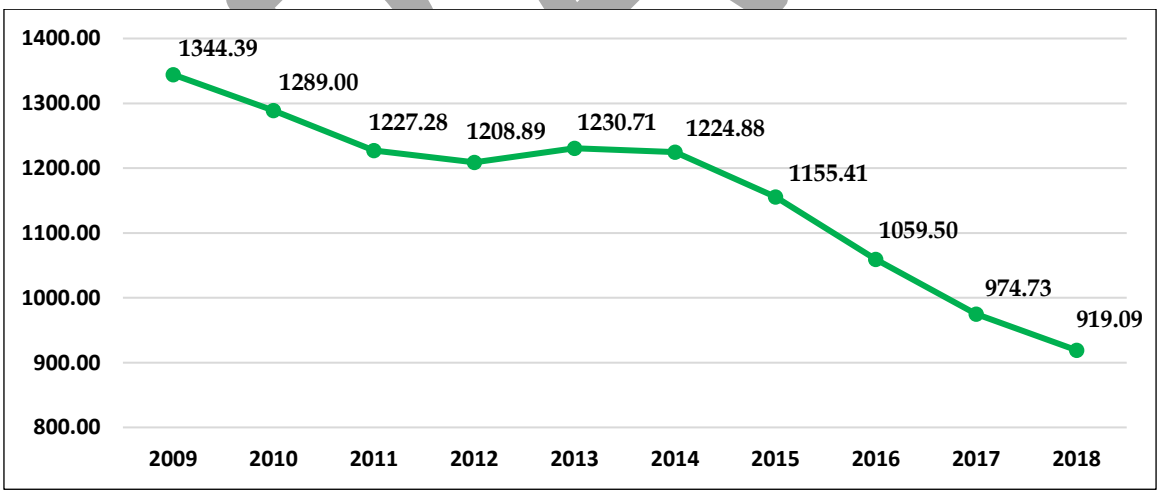
Number of road accidents per ten thousand vehicles are also declining. From 35.89 accidents per ten thousand vehicles in 2009, the rate has declined to 12.54 accidents per ten thousand vehicles in 2018.

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



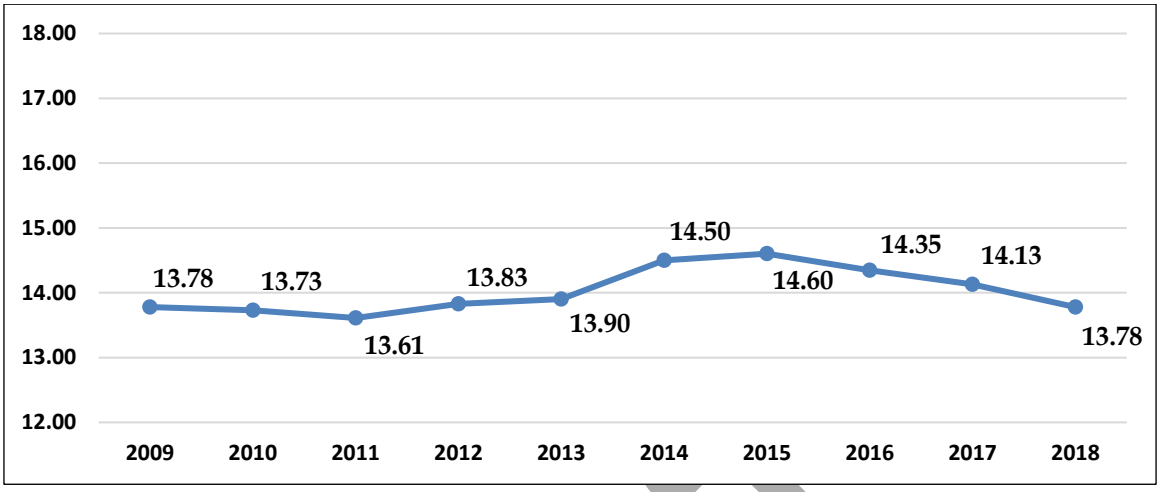
Number of road accidents per ten thousand kilometres of road length shows a declining trend from 2009 to 2018. From 1344 accidents per ten thousand kilometres of road in 2009, the rate has declined to 919 accidents in year 2018.

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



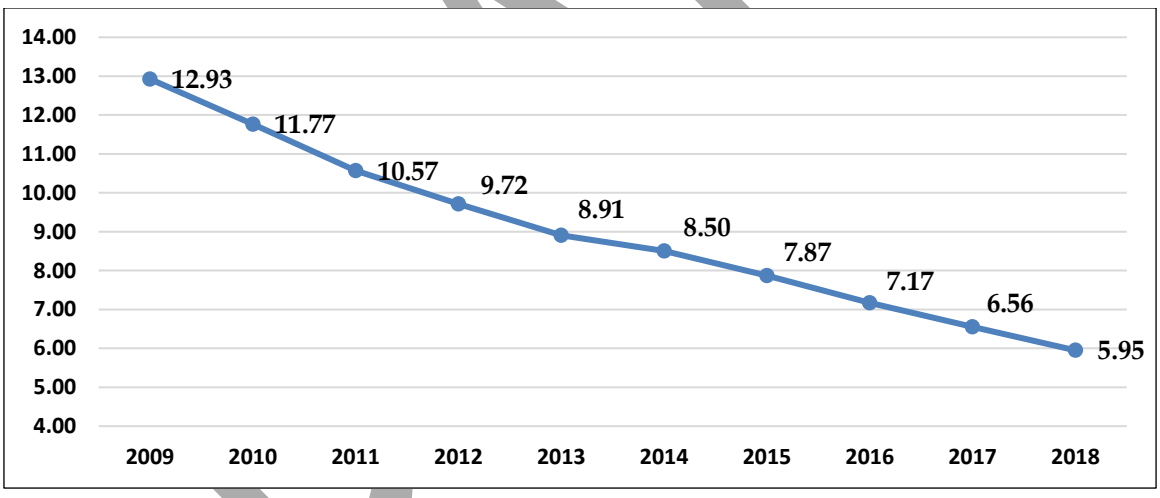
Number of persons killed per lac population has not depicted any steep variation. It is fluctuating between 13 to 15 deaths per lac population in last ten years. Number of persons killed per lac population has been reported similar in year 2009 and 2018 i.e. 13.78 persons. The trend of the same is depicted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

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



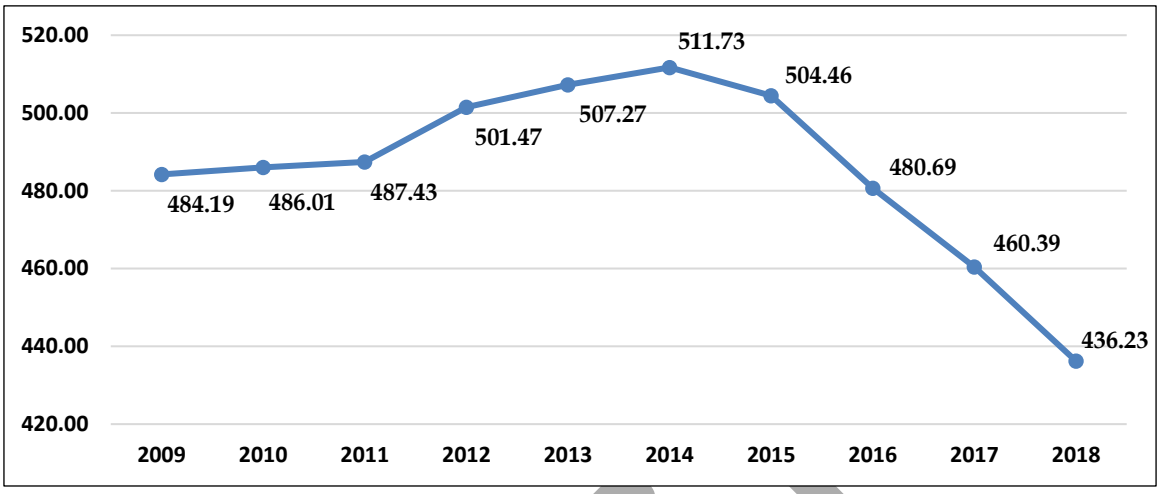
Number of persons killed per ten thousand vehicles has shown significant decline from 2009 to 2018. In year 2009, number of persons killed per ten thousand vehicles was 12.93 and the same has come down to 5.95 in 2018. The detailed trend is shown in **Chart 2.12**.

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)



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

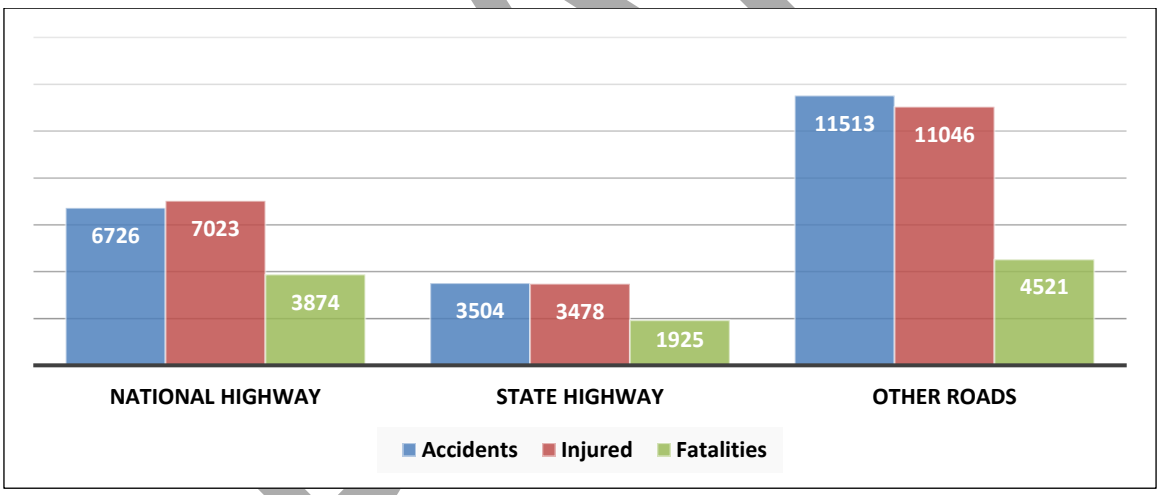
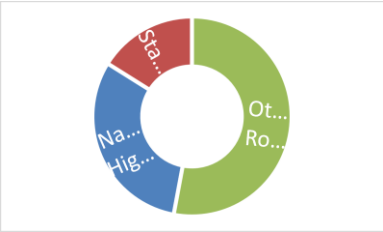


Chart 3.2: Percentage Share of Road Accidents, Number of Persons Killed and Injured as Per Road Category

Accidents	Killed	Injured
		



Sample for color combination

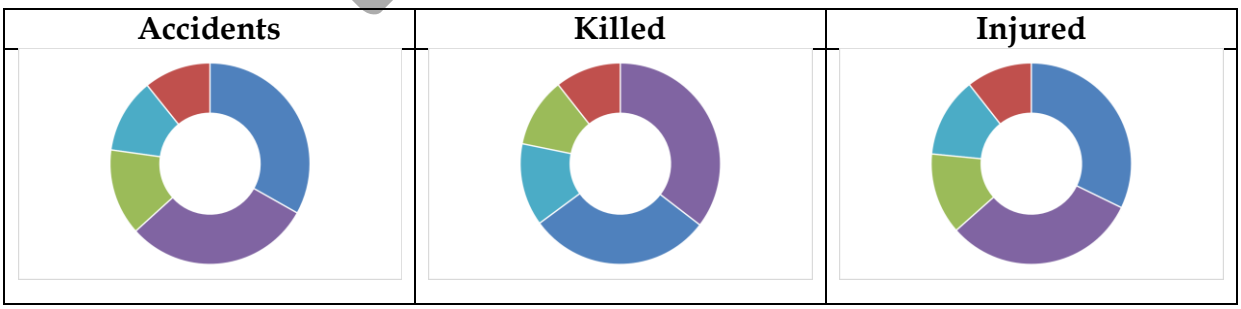
3.2 Accidents on Road Junctions

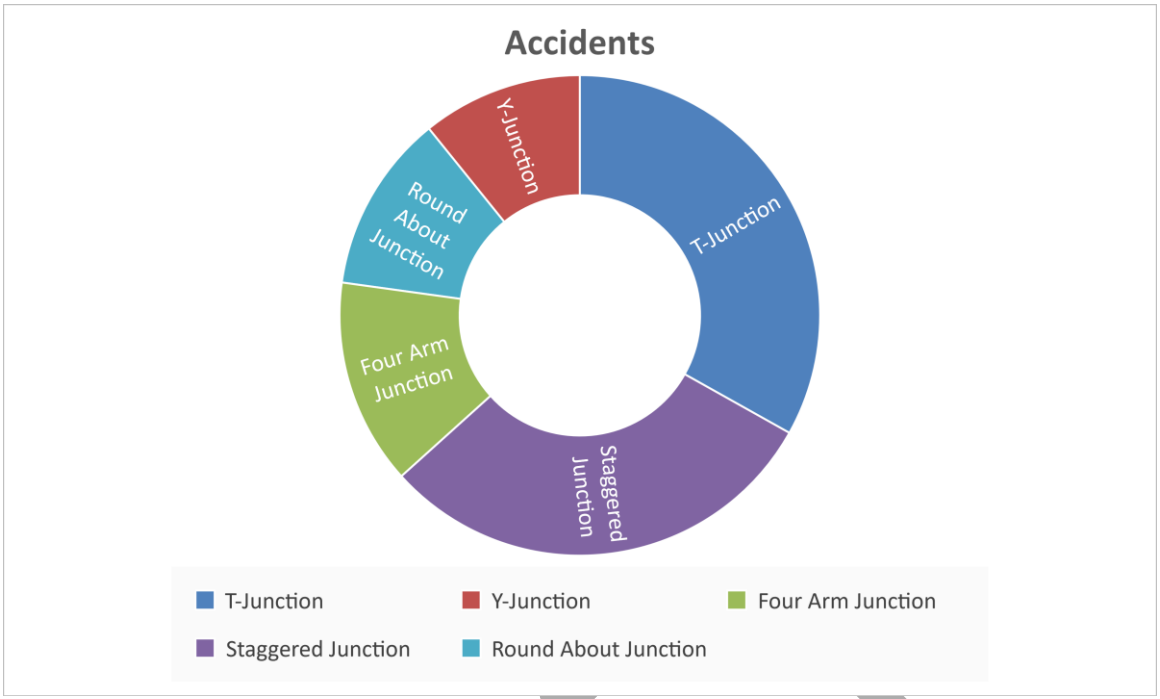
Road junctions are points of traffic merging and hence are prone to accidents. **Table 3.2** gives the number of accidents, persons killed and injured at different types of traffic junctions. Out of 21,743 accidents 5,243 accidents happened at various junctions which contributes share of 24 percent of 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
TOTAL	**5243**	**100.00**	**2195**	**100.00**	**7153**	**100.00**

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





Sample for Designing

3.3 Accidents at Police Controlled Junctions

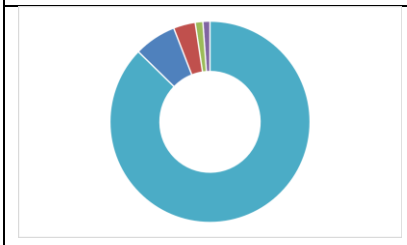
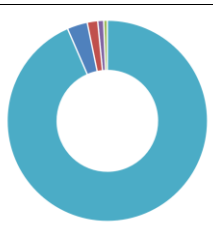
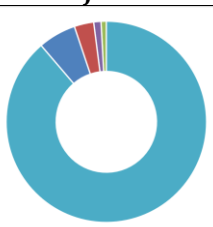
It may be seen that the maximum number of accidents occurred at uncontrolled areas during the calendar year 2018. Total 4,576 accidents occurred at uncontrolled junctions having share of 87.28 percent in road accidents at Traffic Controlled/Police Controlled areas. The details regarding road accidents 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.

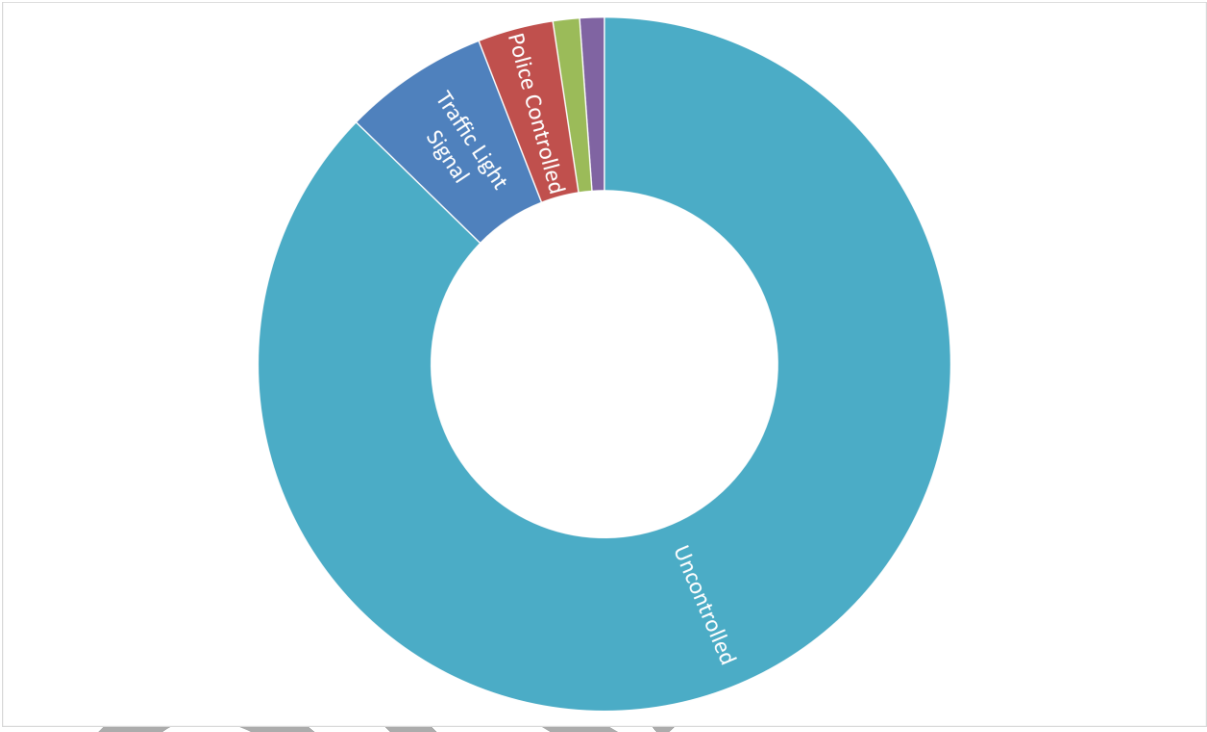
Table 3.3: Total Number of Road Accidents, Number of Persons Killed and Injured at Police Controlled Junctions During Year 2018

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
TOTAL	**5243**	**100.00**	**2195**	**100.00**	**7153**	**100.00**

Chart 3.4: Percentage Share of Road Accidents, Number of Persons Killed and

Injured Based on Police controlled Junction

Accidents	Killed	Injured
		



Sample for Designing

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
TOTAL	**9295**	**21743**	**10320**	**21547**

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

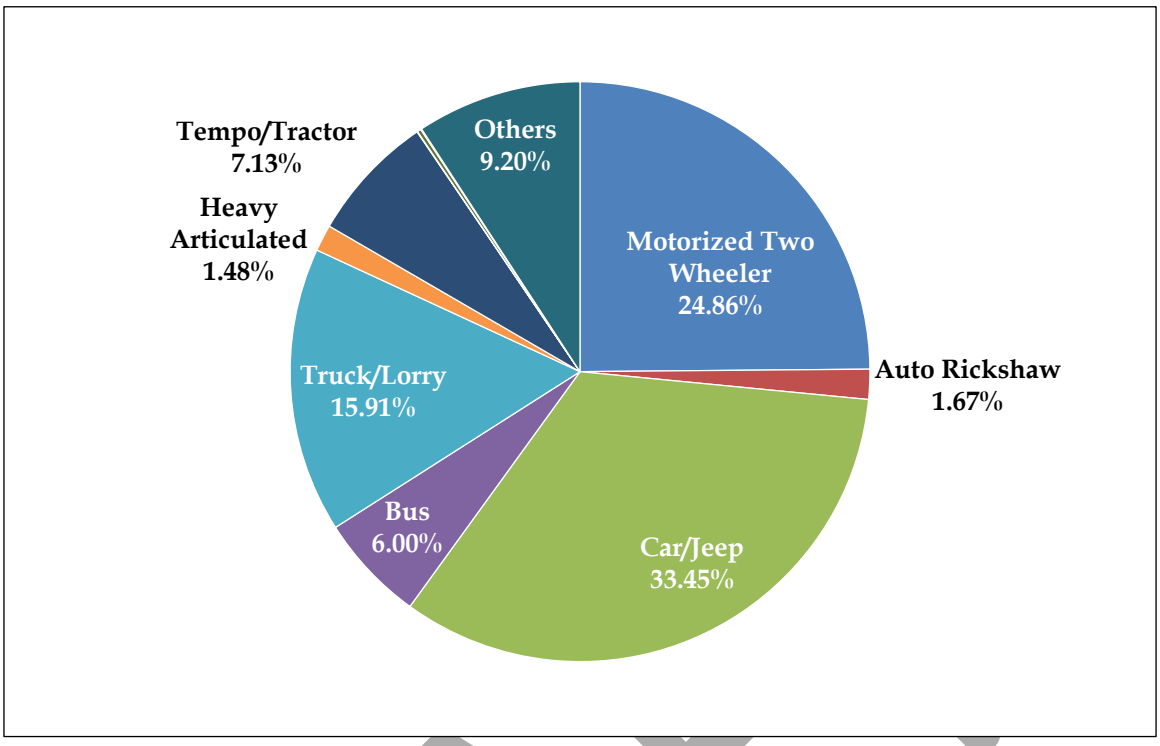
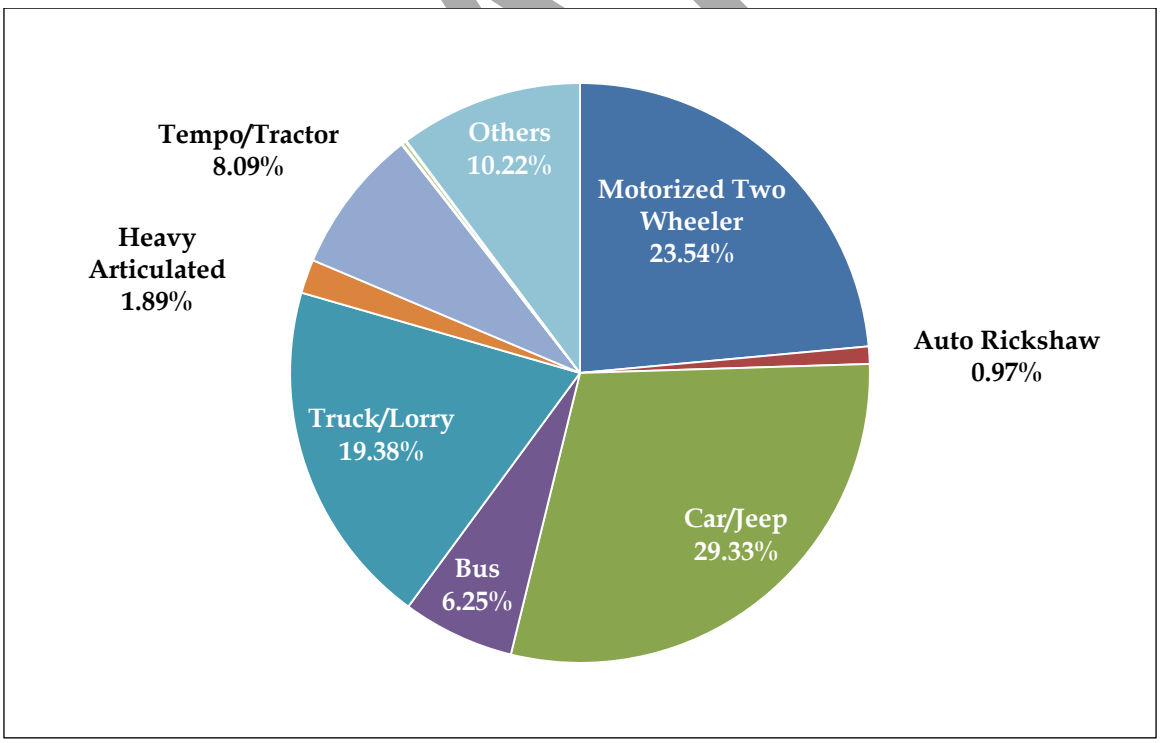


Chart 4.2: Share of Fatalities According to Type of Vehicle in Year 2018



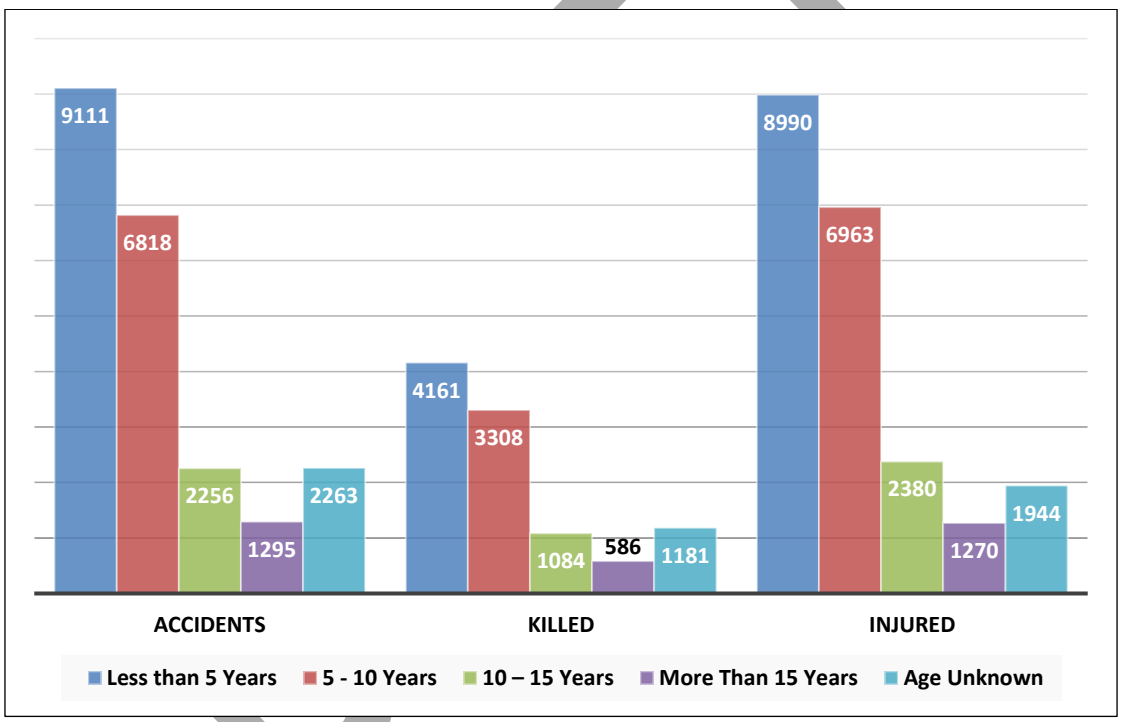
4.2 Accidents Based on Age of Vehicles

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
TOTAL	**9295**	**21743**	**10320**	**21547**

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



Section 5 – Road Accident by Road User Category

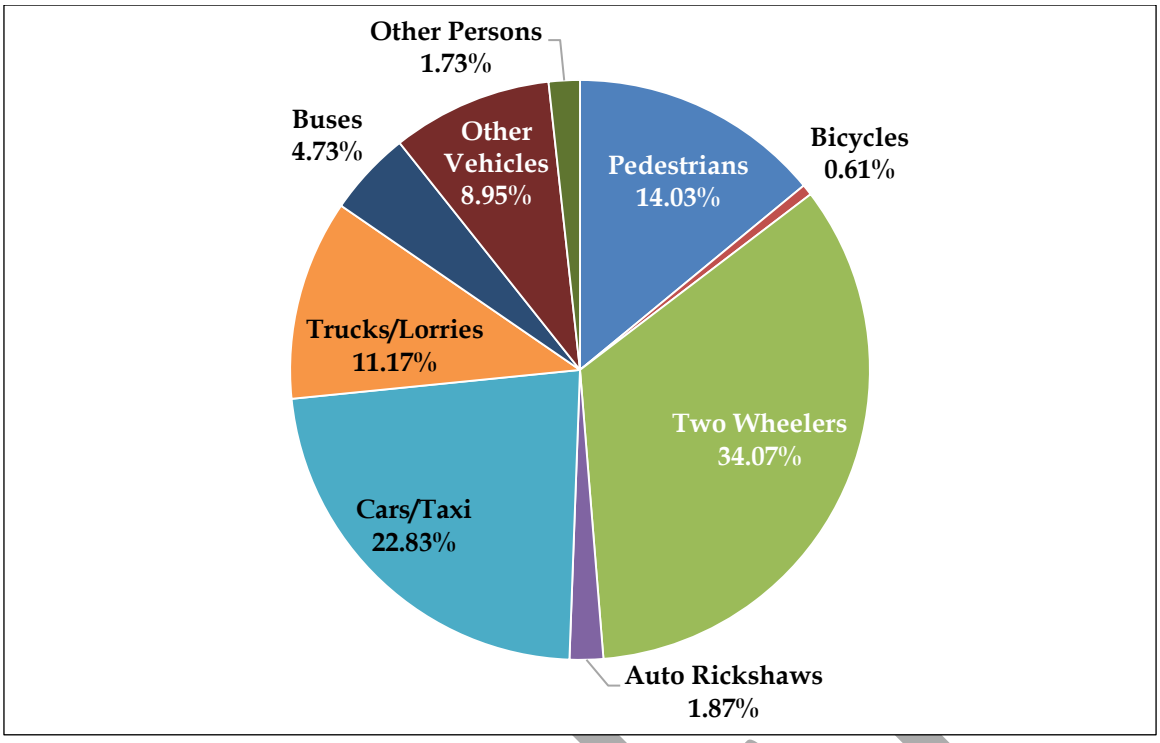
5.1 Accidents Classified According to Road User Category

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/Taxies (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
TOTAL	**10320**	**100.00**	**21547**	**100.00**

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



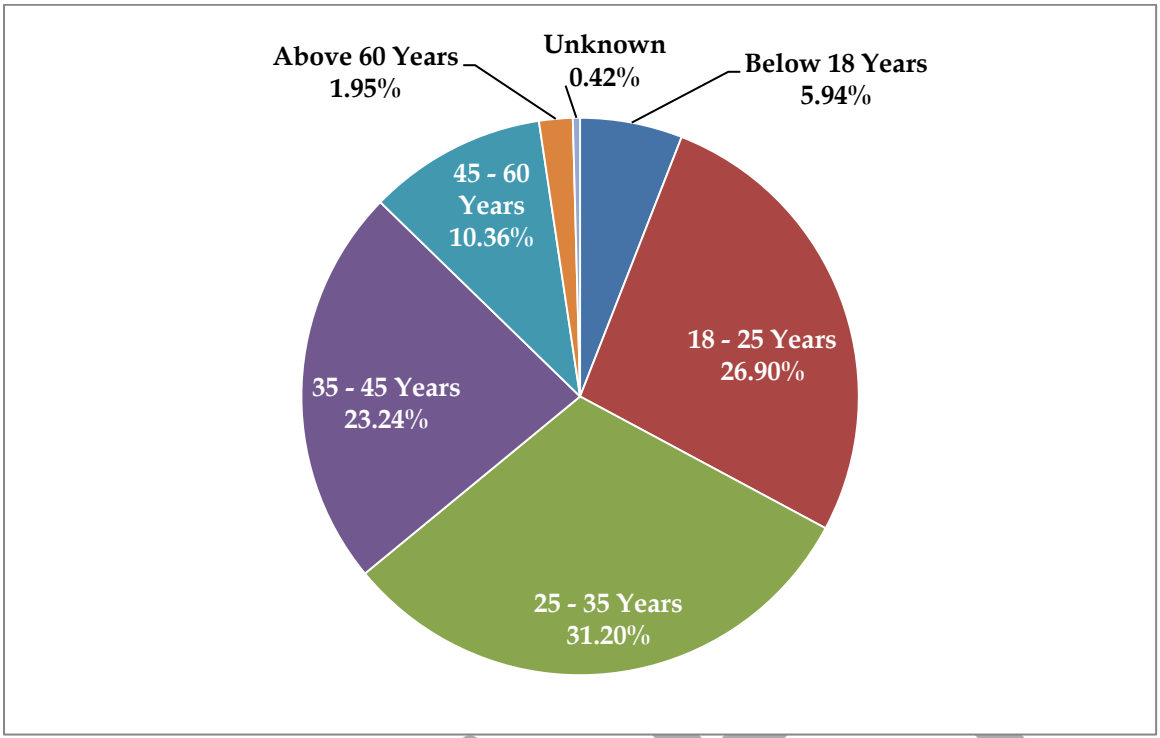
5.2 Age Profile of Road Accident Victims

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
TOTAL	**10320**	**100.00**	**21547**	**100.00**

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



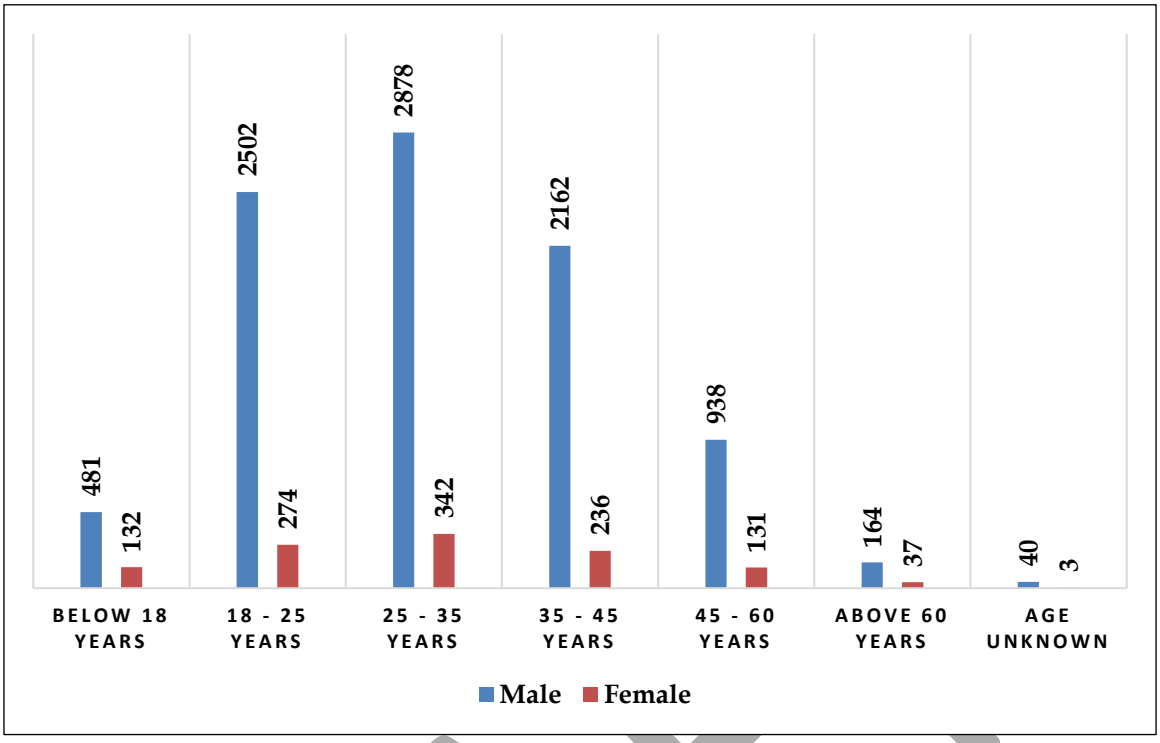
5.3 Gender-wise Age Profile of Road Accident Victims

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
TOTAL	**9165**	**1155**	**18067**	**3480**
%age Share	**88.81**	**11.19**	**83.85**	**16.15**

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
TOTAL	**21743**	**100.00**

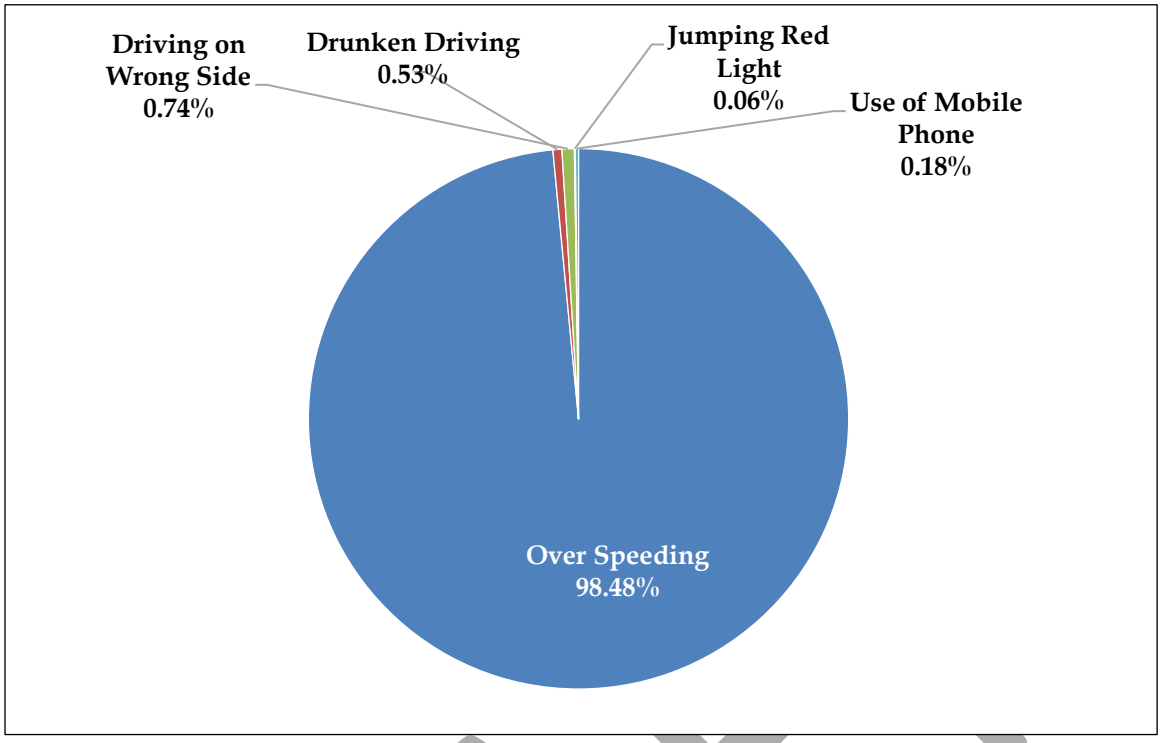
6.2 Accidents, Number of Persons Killed and Injured According to Type of Violations

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
TOTAL	**20525**	**9766**	**20274**

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.

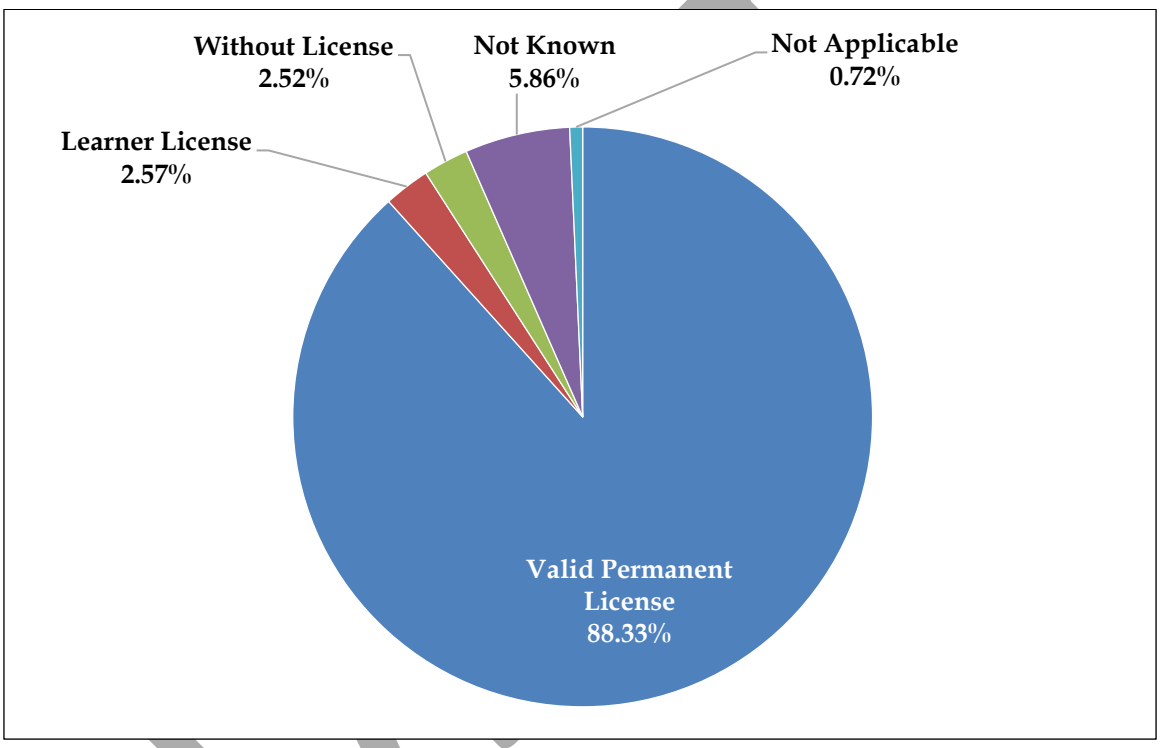
Distraction while driving is also responsible for road accidents. Act of talking over mobile phones while driving has become a cause of road accidents. This has resulted in 39 road accidents, deaths of 18 persons and 67 number of persons injured during the calendar year 2018.

6.2 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
TOTAL	**21743**	**100.00**

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

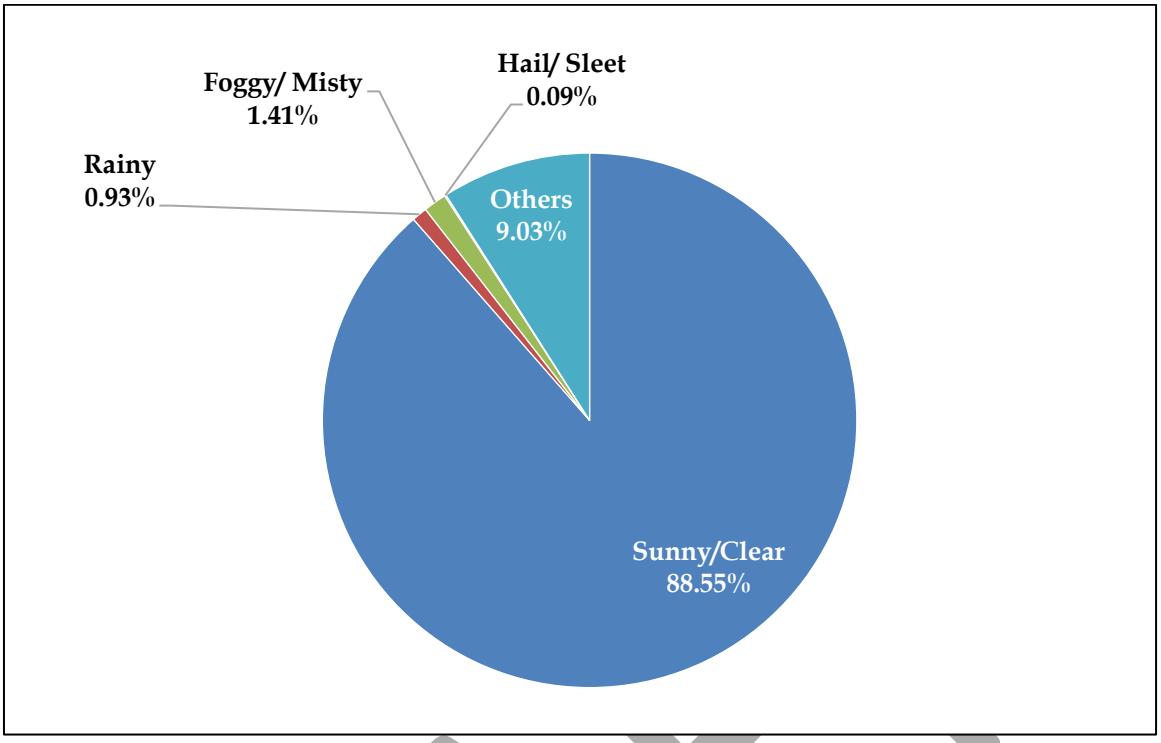


6.3 Other Parameters of Road Accidents

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**.

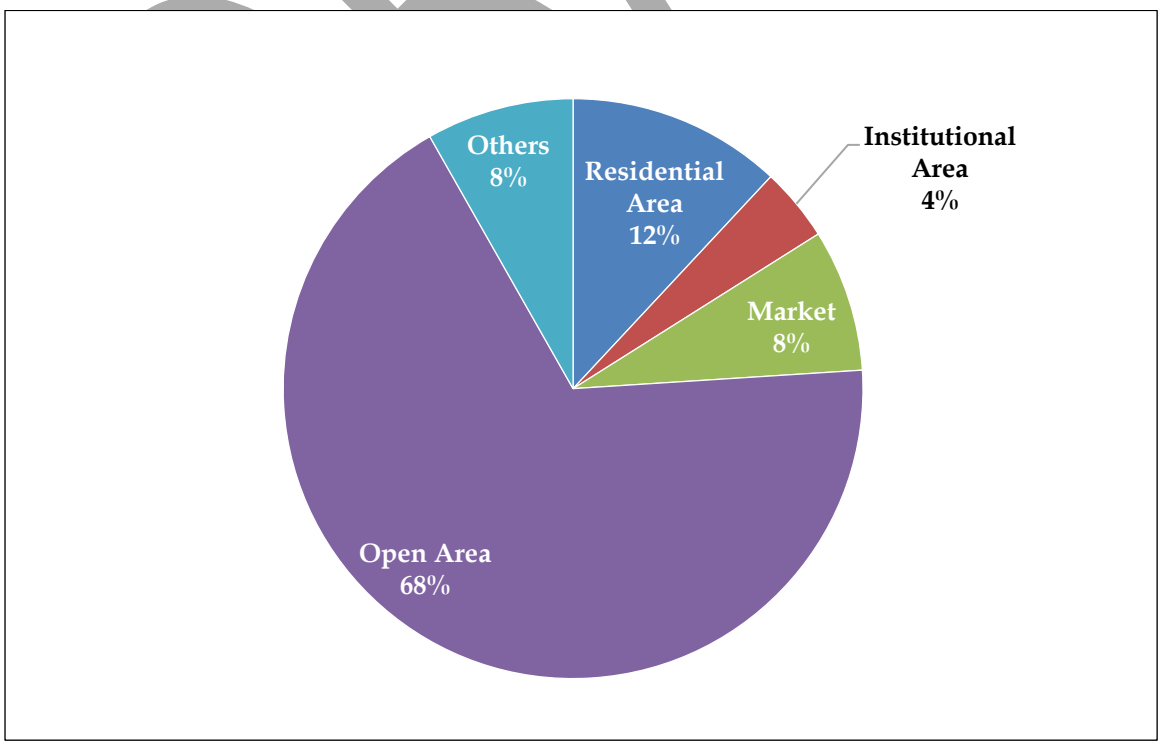
Chart 6.3: Share of Persons Killed According to Weather Condition in 2018



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**.

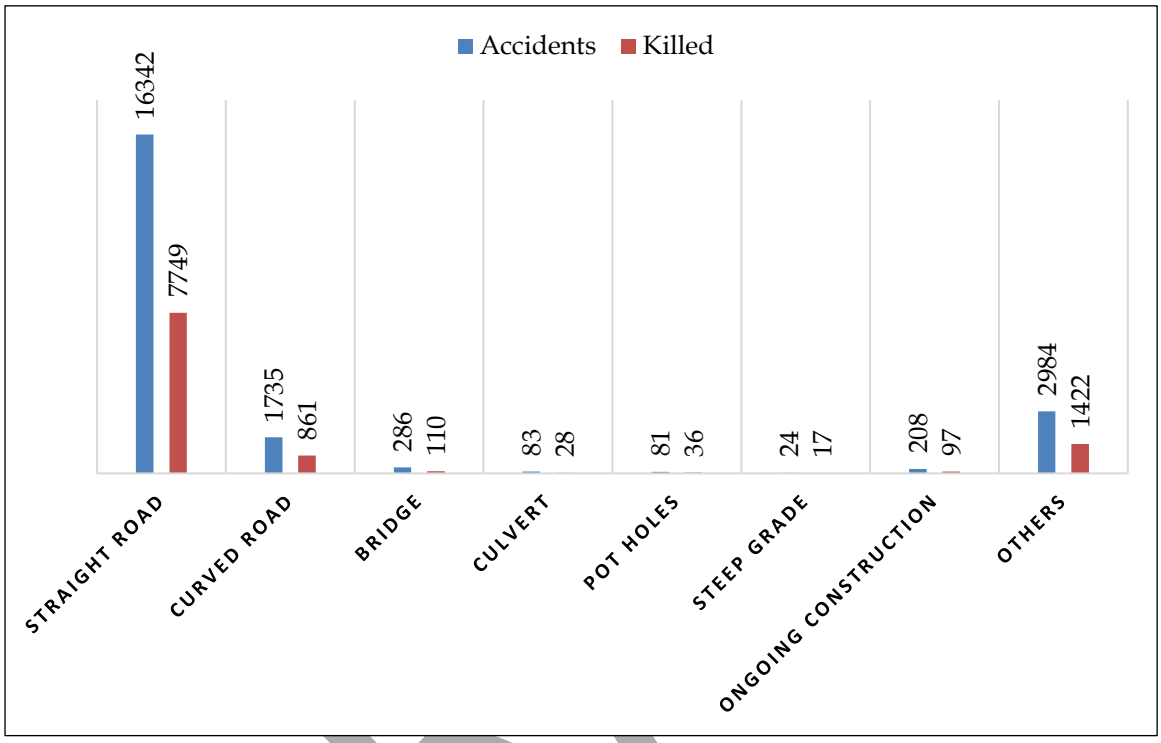
Chart 6.4: Share of Persons Killed According to Spot of Accident During Year 2018



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**.

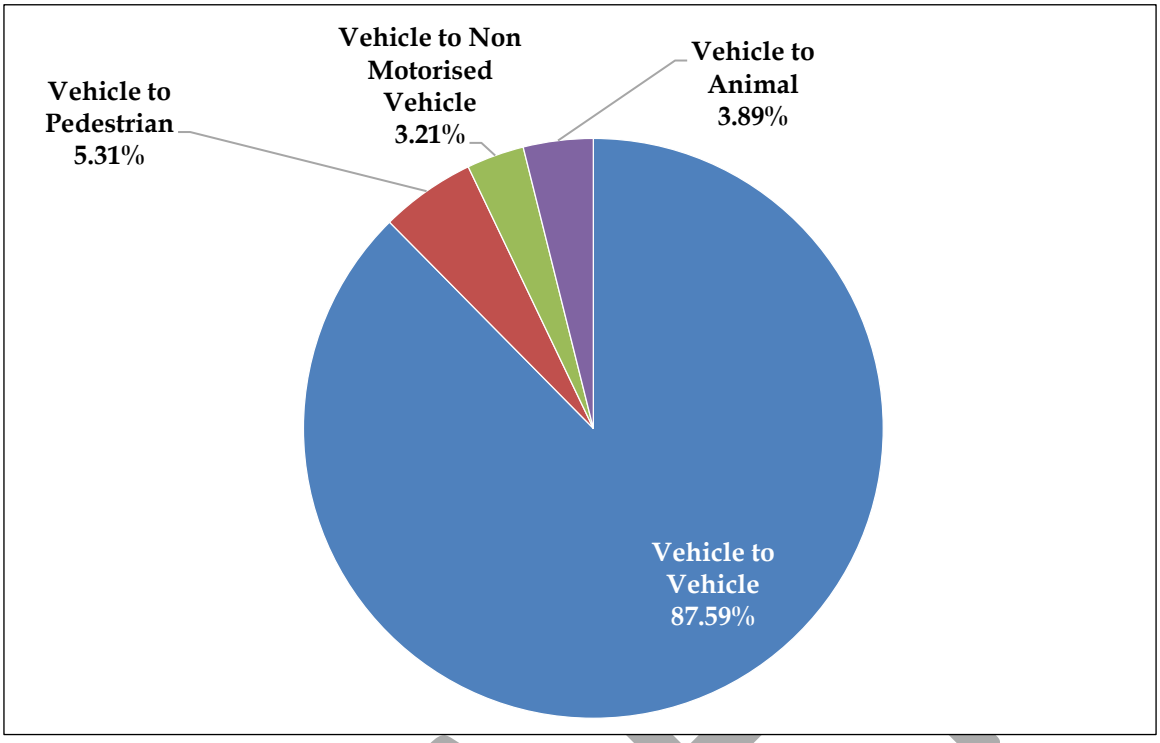
Chart 6.5: Number of Accidents & Persons Killed According to Road Feature in 2018



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**.

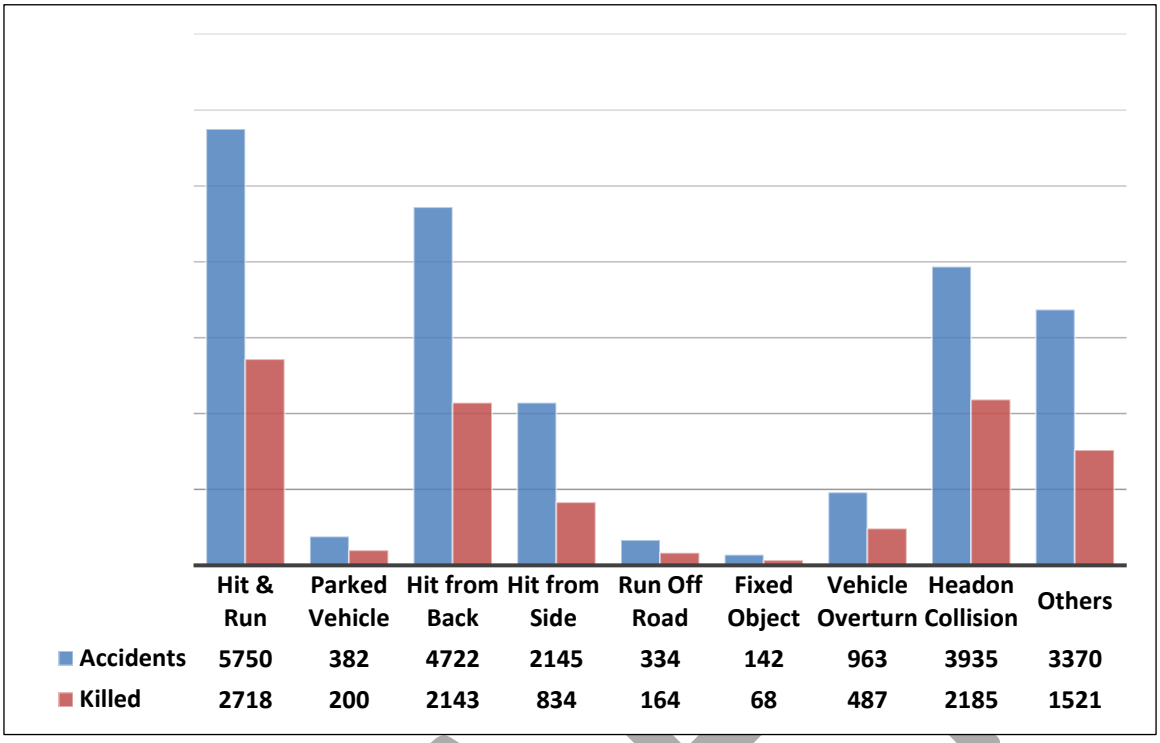
Chart 6.6: Share of Persons Killed According to Type of Collision in Year 2018



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**.

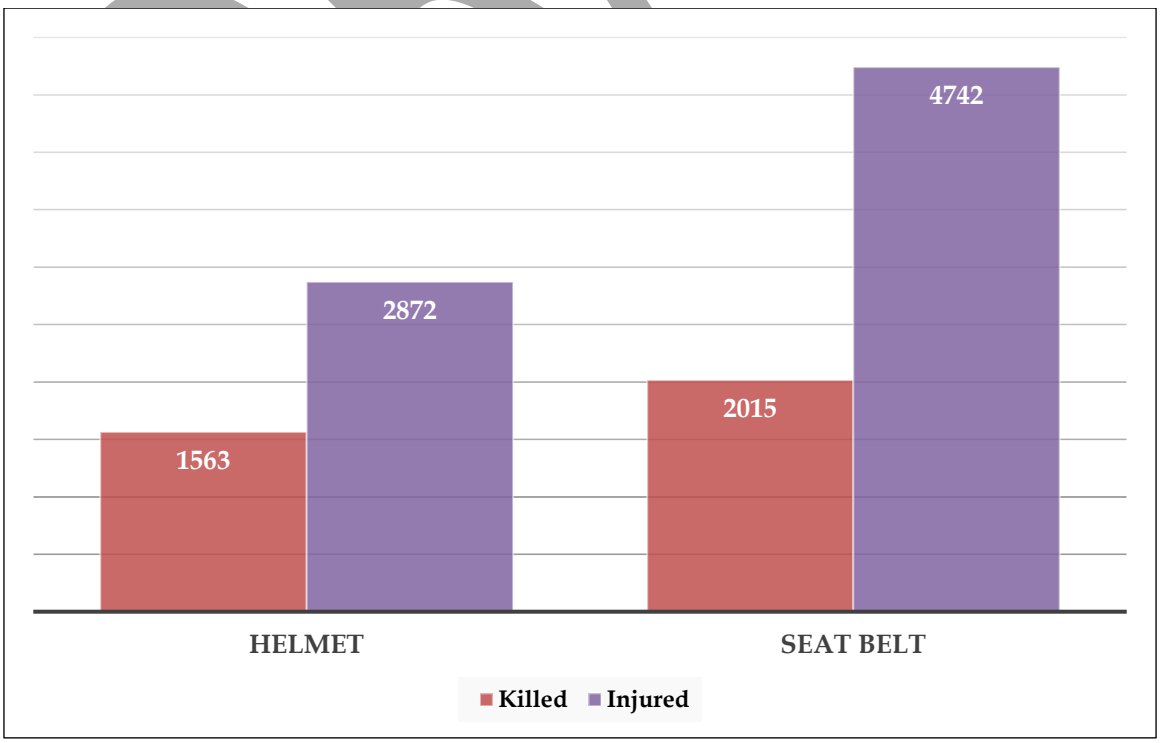
Chart 6.7: Number of Accidents and Persons Killed According to Nature of Accident



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

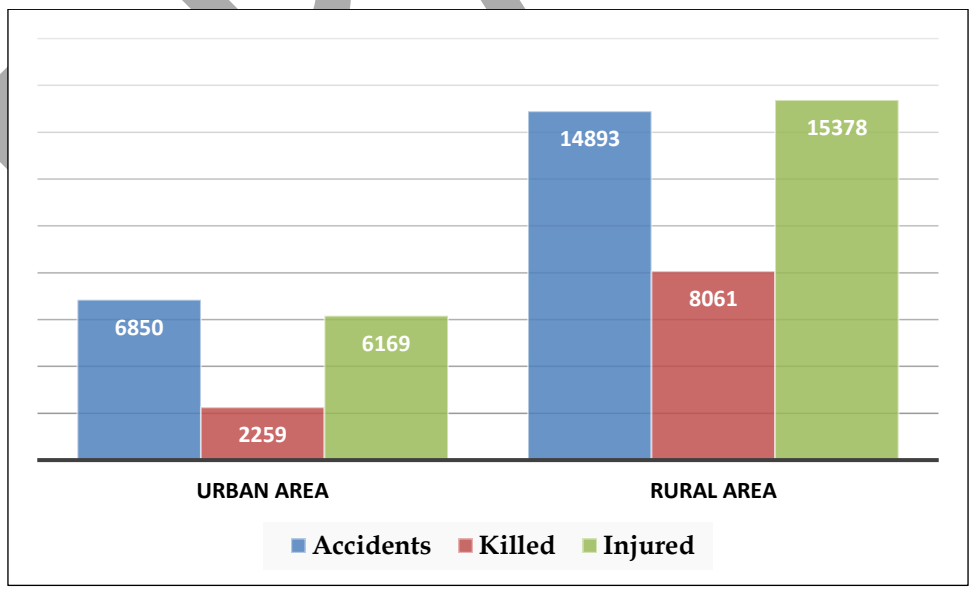
7.1 Road Accidents in Urban and Rural Areas

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 (22.39)	6850 (31.50)	2259 (21.89)	6169 (28.63)
Rural Area	7093 (76.31)	14893 (68.50)	8061 (78.11)	15378 (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

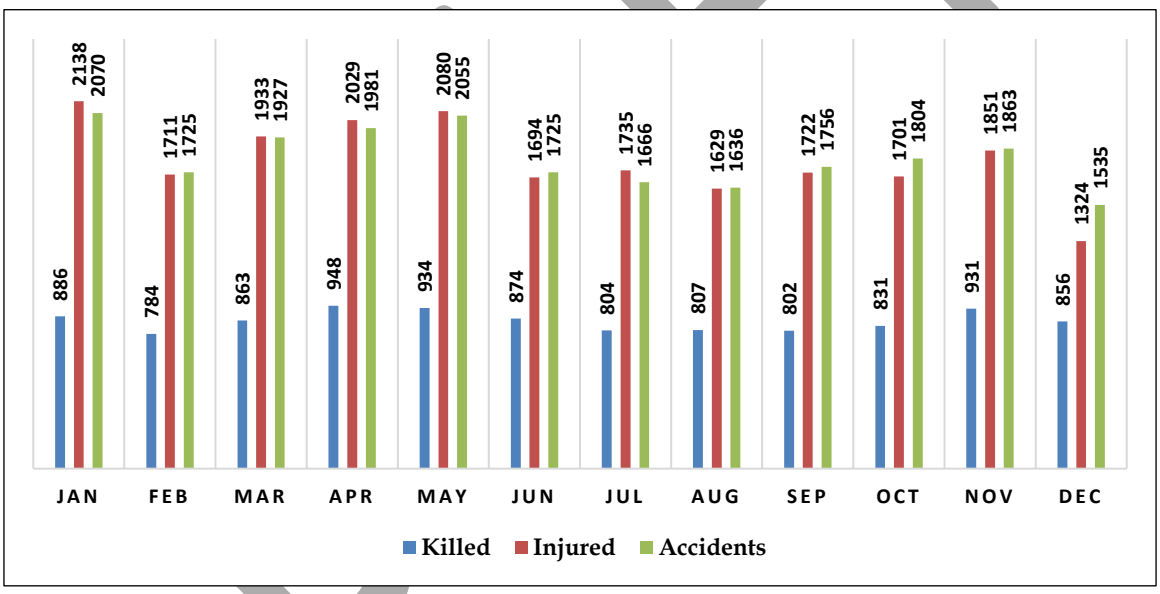
The month wise details of road accidents, persons killed and injured in the state during 2018 are given below at **Table 7.2**.

Table 7.2: Month-wise Occurrences of Road Accidents, Persons Killed and Persons Injured During Year 2018

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

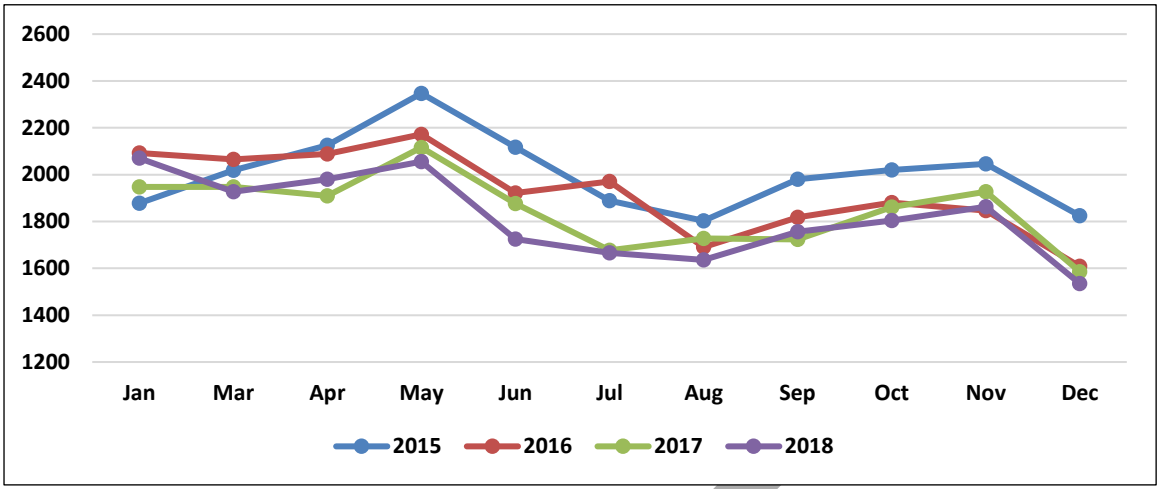
It is seen from Chart 7.2 that the total number of accidents during 2018 were highest in the month of January (2,070) and followed by the month of May (2,055) and April (1,981). Similarly, the total number of persons killed were highest in the month of April (948) followed by month of May (934). The 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
TOTAL	**21743**	**10320**	**21547**

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

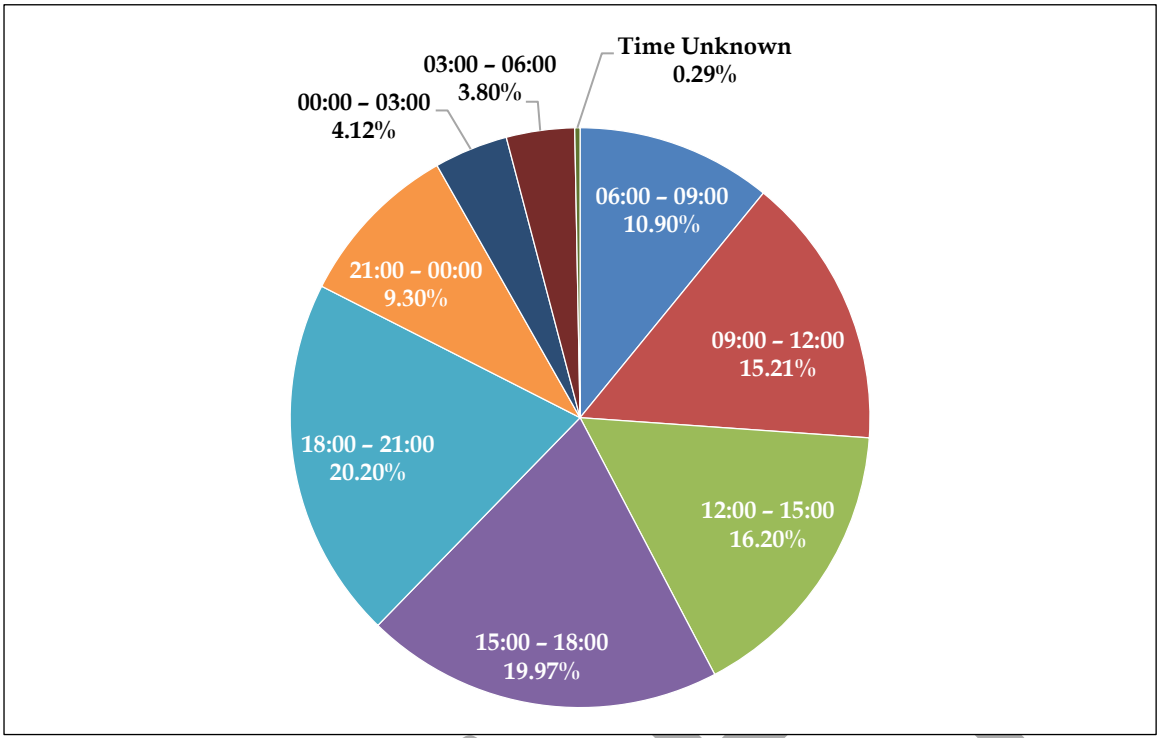


Chart 7.5: Time-wise Occurrences of Road Accidents, Persons Killed and Persons Injured

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.

8.9 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, Sujangarh, 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
TOTAL		**54**	

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 Neem Ka Thana Fatehpur	3
		Churu	Rajgarh	1
3	Alwar	Alwar	Behror	1
4	Bharatpur	Bharatpur	Deeg	1
5	Ajmer	Nagaur	Merta	1
		Didwana	Makrana Nawa	2
		Tonk	Niwai Uniyara Deoli	3
6	Jodhpur	Jodhpur	Pipad City	1
		Jaisalmer	Pokaran	1
7	Pali	Pali	Sumerpur Sojat	2
		Jalore	Sanchor	1
8	Udaipur	Udaipur	Salumber	1
		Rajsamand	Nathdwara Bhim 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 Challan**	**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
TOTAL	**1,73,328**	**42,791**	**24.69**	**30,273**	**17.47**

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
TOTAL	**26,23,014**	**84,816**

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
TOTAL	**3,36,375**	**2,75,864**	**7,748**

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) Checking 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

Trauma Care Facilities in Rajasthan

There are 57 Trauma Centers in Rajasthan. Number of Trauma Centers in different district is depicted in **Table 9.10**.

Table 9.10: List of 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 9.11**.

Table 9.11: 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
TOTAL		**1477**

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 9.12: 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 9.13**.

Table 9.13: 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
TOTAL		**4718**

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 9.14. 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: 9.14 Number of Police Circles and Police Station in Range in Rajasthan			
S. No.	**Range / 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 9.15: Number of Challans Made by Police in 2018									
Range / Commissionerate	**Without Helmet**	**Without Seatbelt**	**Over Speeding**	**Use of Mobile 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 9.16: 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
TOTAL	**7,16,203**	**2,73,596**	**38.20**

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 **9.17** to **Table 9.21**.

a) Road Safety Audit up to Year 2018

Table 9.17: 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) 151 (4 Lane)
4	RSRDCC	2,803	2,000
5	NHAI	4,696	1,826
6	LSG/UDH	59,104	59 (LSG)
			227(UDH)
TOTAL		**2,14,223**	**7,694**

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

Table 9.18: 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	-	-
TOTAL	**2,660**	**281**	**63**	**2,599**	**1,451**	**105**

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

Table 9.19: 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 9.20: 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

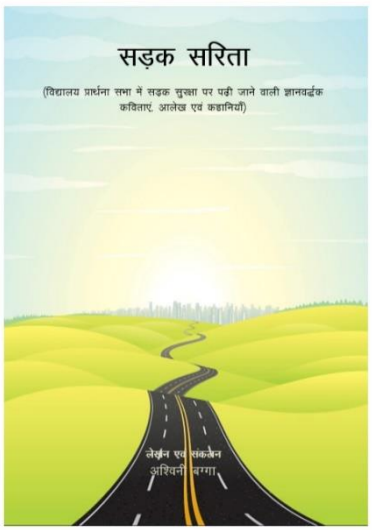
Table 9.21: Bus Bay / Shelter Developed During up to Year 2018			
Stakeholder Department	**Target up to Dec. 2018**	**Bus Bays / Bus Shelter**	**Truck Lay Bay**
NHAI	500 Km. Road length to be covered Bus shelter and bus bays are to be developed on NH as per IRC.	1,782 Km covered	Truck lay byes/ rest 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 byes 134 bus shelters	144	19 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 Activity 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.

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 un-natural 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.

Annexure 2 – Road Signs

Road Signs – 2 Pages