CHAPTER – 1A

TRAFFIC ACCIDENTS

Introduction

India has a well-knit and coordinated system of transport which plays an important role in development of economic activities by promoting fair distribution of produced goods and services and movement of people. The share of transport sector in Gross Domestic Product (GDP) of India is steadily growing. It is one of the key indicators in assessment of socio-economic development of the country. Since traffic accidents are indicator of bottlenecks and other hindrances in smooth flow of traffic, hence NCRB collects detailed data on traffic accidents including road accidents for inferring the trend and patterns of traffic accidents for the planners to devise appropriate preventive strategies.

The Bureau collects data on 'Traffic Accidents' comprising of (i) Road Accidents (ii) Railway Accidents and (iii) Railway Crossing Accidents, as these are the major contributors of accidental deaths.

Number of 'Traffic Accidents' in the country have decreased from 4,74,638 in 2018 to 4,67,171 in 2019. (However, the rate of deaths in road accidents per thousand vehicles i.e. 0.6 has remained same as it was in 2018). Maximum increase in number of traffic accidents cases in States from 2018 to 2019 was reported in Madhya Pradesh (from 49,080 to 53,379) followed by Rajasthan (from 22,401 to 24,281) and Uttar Pradesh (from 40,783 to 42,368). On the other hand, maximum decrease was reported in Tamil Nadu (from 66,110 to 59,499) **[Table–1A.1]**.

These traffic accidents resulted in injuries to 4,42,996 persons and 1,81,113 deaths during 2019. State of Uttar Pradesh (27,661 deaths) followed by Maharashtra (18,524 deaths) and Madhya Pradesh (13,497 deaths) have reported maximum fatalities in traffic accidents in the country; these 3 States accounted for 15.3%, 10.2% and 7.5% of total deaths in traffic accidents respectively and collectively accounted for 33.0% (59,682 out of 1,81,113) of total fatalities reported at all India level during 2019.

The percentage share of traffic accidental deaths in total deaths due to 'Other Causes' has increased from 42.9% in 2015 to 43.9% in 2019. A rising trend was seen in absolute number of deaths in 'Traffic Accidents' since 2015 to 2019. Number of deaths have increased by 1.3% (from 1,78,832 to 1,81,113) in 2019 over 2018 [**LIST-1A.1**].

These traffic accidents comprise of 4,37,396 road accidents, 27,987 railway accidents and 1,788 railway crossing accidents and caused 1,54,732, 24,619 and 1,762 deaths respectively during 2019.

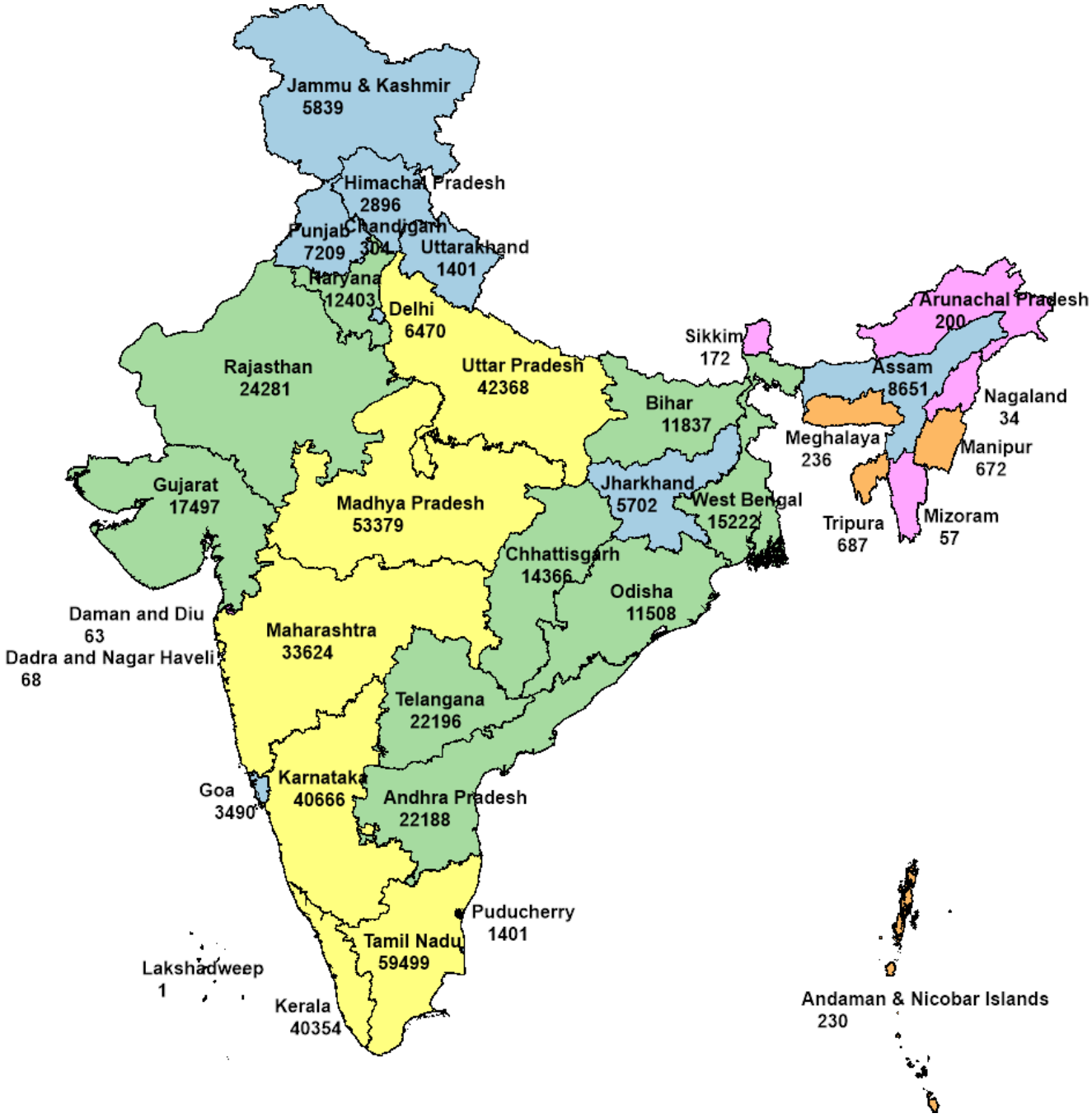
LIST–1A.1

Number and Share of Deaths due to Traffic Accidents during 2015 – 2019

Sl. No.	Year	Number of Accidental Deaths					Percentage Share of 'Traffic Accidental Deaths' in Accidental Deaths due to 'Other Causes'
		Road Accidents	Railway Accidents	Railway Crossing Accidents	Total Traffic Accidents	Total Accidental Deaths due to 'Other Causes'	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	2015	1,48,707	26,066	2,650	1,77,423	4,13,457	42.9%
2	2016	1,51,801	22,970	3,133	1,77,904	4,09,537	43.4%
3	2017	1,50,093	23,959	1,534	1,75,586	3,89,441	45.1%
4	2018	1,52,780	24,545	1,507	1,78,832	4,04,933	44.2%
5	2019	1,54,732	24,619	1,762	1,81,113	4,12,959	43.9%

- As per data provided by States/UTs.

FIGURE–1A.1
STATE/UT – WISE TRAFFIC ACCIDENT CASES DURING 2019



- As per data provided by States/UTs.

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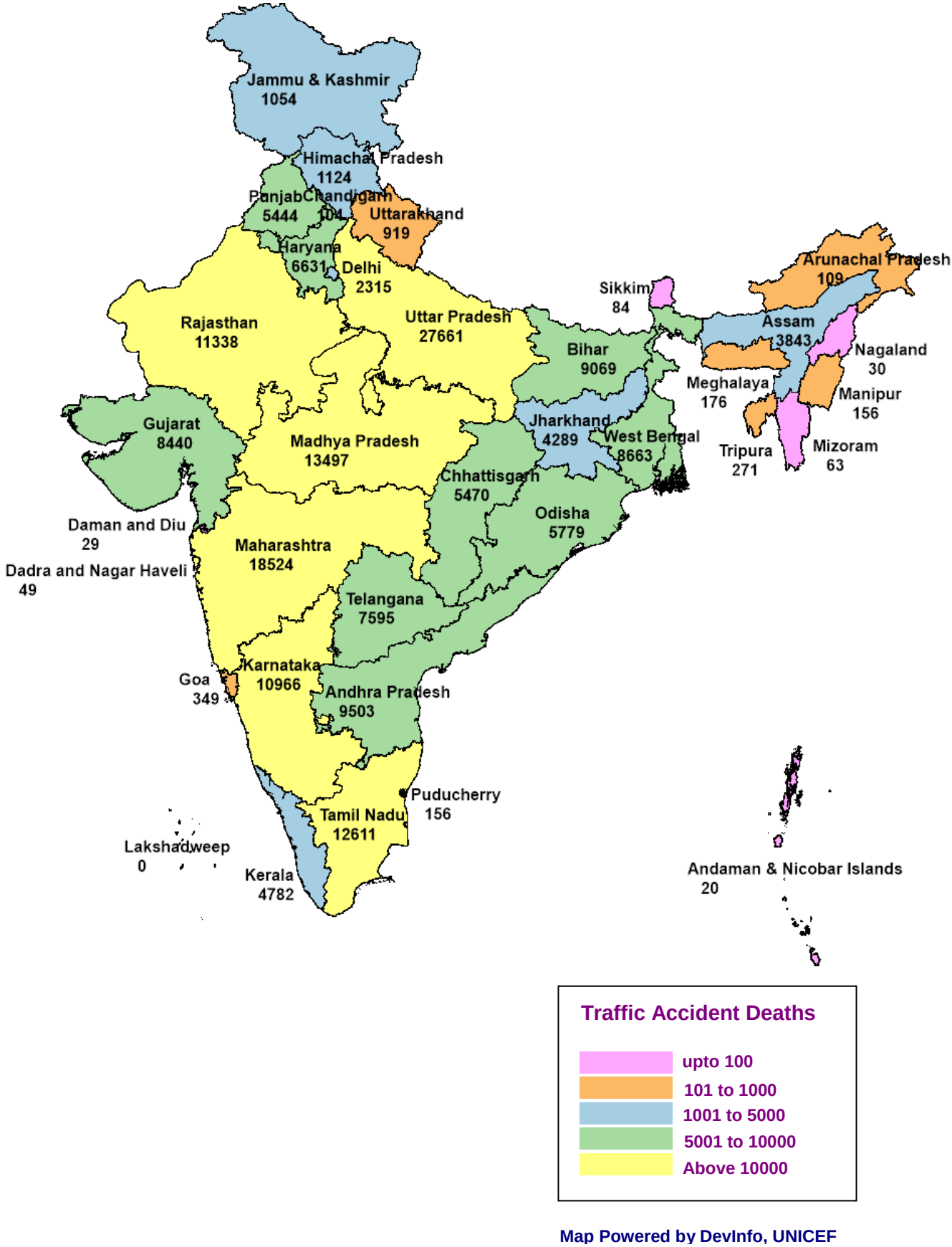
FIGURE–1A.2
STATE/UT – WISE TRAFFIC ACCIDENT DEATHS DURING 2019



- As per data provided by States/UTs.

Month - wise patterns of traffic accidents reveal that maximum number of 'Traffic Accidents' have occurred in the month of January which accounted for 9.2% (42,896 out of 4,67,171). The month-wise break-up of 'Traffic Accidents' for each State/UT/City are presented in **Table-1A.5**.

Time of occurrence - wise analysis of traffic accidents reveal that maximum number of 'Traffic Accidents' have taken place during 18:00 hrs – 21:00 hrs and 15:00 hrs – 18:00 hrs, accounting for 18.7% (87,271) and 17.1% (79,935) of total traffic accidents (4,67,171) respectively during the year 2019. State/UT-wise 'Traffic Accidents' by time of occurrence is presented in **Table-1A.6**.

Road Accidents

The Bureau has made an effort to capture comprehensive information on road accidents using the revised proformae and published the first report for the year 2014 and this edition is sixth in the series.

A total of 4,37,396 road accident cases were reported during 2019. Road accident cases in the country have decreased from 4,45,514 in 2018 to 4,37,396 in 2019 **[Table-1A.1]**. The fatalities in road accidents have increased by 1.3% (from 1,52,780 in 2018 to 1,54,732 in 2019). The **LIST–1A.1** can be referred to see the patterns of 'Road Accidental Deaths'.

The number of vehicles, number of road accidents along with resultant fatalities and injuries therefrom, their percentage variations over previous year and the rate of accidental deaths per thousand vehicles during the last five years are presented in **LIST–1A.2**. It is observed that the rate of deaths per thousand vehicles in 2019 has increased slightly to 0.61 in 2019.

4,37,396 road accidents caused 1,54,732 deaths and injuries to 4,39,262 persons during 2019. Generally road accidents have caused more injuries than deaths, but in Mizoram, Punjab and Uttar Pradesh, road accidents caused more deaths compared to persons injured. In Mizoram, 57 road accidents caused 63 deaths & injuries to 25 persons, in Punjab, 6,316 road accidents caused 4,613 deaths and injuries to 3,726 persons and in Uttar Pradesh, 37,537 road accidents caused 23,285 deaths and injuries to 22,251 persons. **[Table-1A.2]**.

LIST–1A.2

Growth in Number of Vehicles and Road Accidents in India (2015–2019)

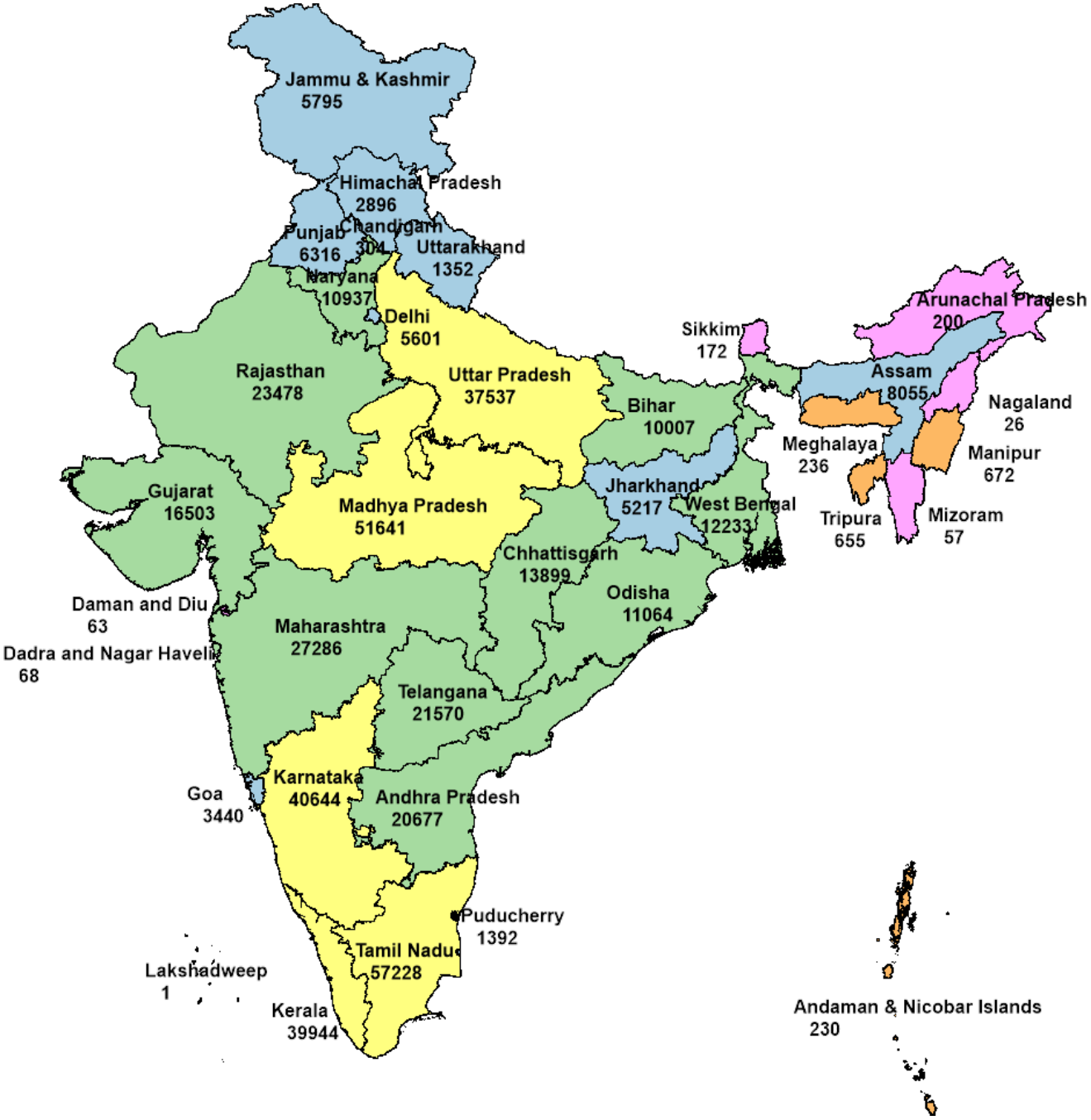
Sl. No.	Year	Road Accidents (in thousand)	% Variation over Previous Year	Persons Injured (in thousand)	% Variation over Previous Year	Persons Killed (in Nos.)	% Variation Over Previous Year	No. of Vehicles (In Thousand)#	% Variation over previous Year	Rate of Deaths per thousand Vehicles (Col.7/Col.9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	2015	464.7	3.1%	482.4	1.0%	1,48,707	5.1%	2,10,023	15.1%	0.71
2	2016	473.0	1.8%	485.5	0.6%	1,51,801	2.1%	2,30,031	9.5%	0.66
3	2017	445.7	-5.8%	456.2	-6.0%	1,50,093	-1.1%	2,53,311	10.1%	0.59
4	2018	445.5	-0.0%	446.5	-2.1%	1,52,780	1.8%	2,53,311*	-	0.60
5	2019	437.4	-1.8	439.2	-1.6	1,54,732	1.3	2,53,311*	-	0.61

'#' Source: Road Accidents in India - 2018, TRW, MoRT&H, as per latest published data.

'*' figures of the previous year used due to non-availability of data.

- As per data provided by States/UTs.

FIGURE–1A.3
STATE/UT – WISE ROAD ACCIDENT CASES DURING 2019



- As per data provided by States/UTs.

Map Powered by DevInfo, UNICEF

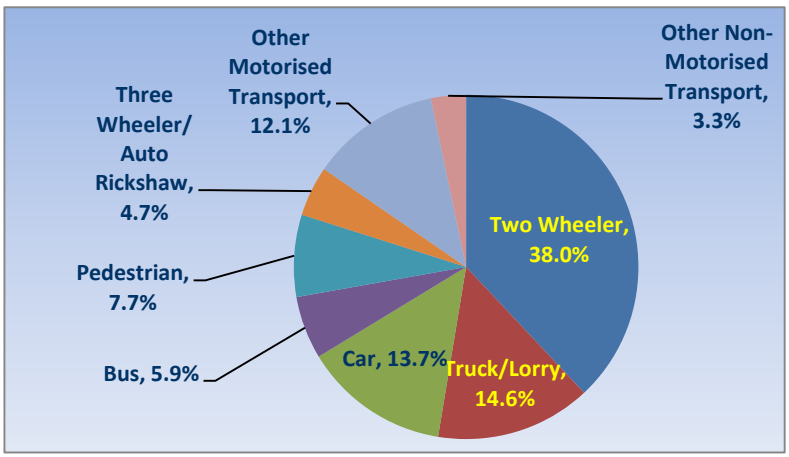
During 2019, two wheelers have accounted for maximum fatal road accidents (58,747 deaths), contributing 38.0% of total road accidental deaths, followed by trucks/lorries (22,637 deaths) (14.6%), cars (21,196 deaths) (13.7%) and buses (9,192 deaths) (5.9%) [**Table-1A.3**].

Majority of deaths due to two wheelers accidents were reported in Maharashtra (7,137 deaths) and Uttar Pradesh (6,431 deaths), accounting for 12.1% and 10.9% of total deaths due to two wheeled vehicles respectively. Large number of deaths due to trucks/lorries accidents (5,272 out of 22,637) were reported in Uttar Pradesh, accounting for 23.3% and large number of deaths due to car accidents (3,355 out of 21,196) were also reported in Uttar Pradesh (15.8%) of total such accidents. 21.3% (1,957 out of 9,192) and 12.3% (1,135 out of 9,192) of total fatal road accidents due to buses were reported in Uttar Pradesh and Tamil Nadu respectively. Deaths of 13.7% (1,398 out of 10,199) of pedestrians in road accidents were reported in Maharashtra during 2019 [**Table-1A.4**].

The month-wise distribution of 'Road Accidents' shows that most of road accidents were reported in the month of January (40,508 cases), contributing 9.3% of total road accidents. Majority of accidents in this month (January) have been reported in Madhya Pradesh, accounting for 12.8% of total accidents reported (5,205 out of 40,548 cases) in the month of January **[Table-1A.5].**

FIGURE–1A.4

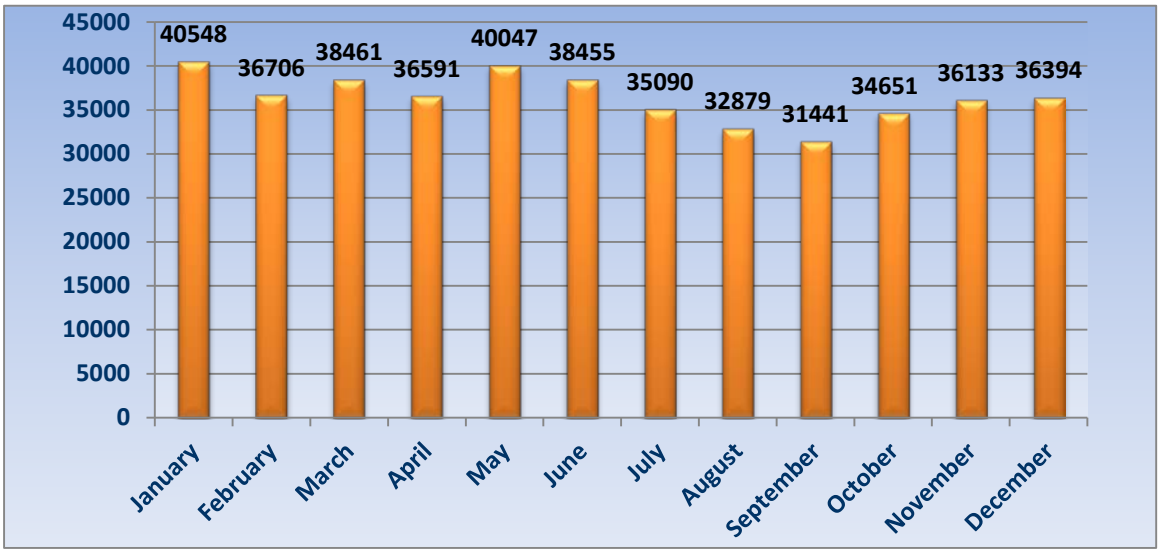
Vehicle wise Road Accident Deaths during 2019



Other Motorised Transport includes SUV/Station Wagon, Jeep, Tractor etc.

FIGURE–1A.5

Month-wise occurrence of Road Accidents during 2019



- As per data provided by States/UTs.

Most of road accidents (83,097 out of 4,37,396 cases) were reported during 18:00 hrs to 21:00 hrs (Night), accounting for 19.0% of total road accidents. During 18:00 hrs to 21:00 hrs (Night), majority of road accidents were reported in Tamil Nadu (13,143 cases), Madhya Pradesh (9,767 cases) and Karnataka (8,197 cases). Time period '15:00 hrs to 18:00 (Day)' and '12:00 hrs to 15:00 hrs (Day)' accounted for 17.4% (75,963 cases) and 15.3% (66,720 cases) of total road accidents during 2019 [**Table-1A.6**].

Road-wise classification of accidents is presented in **Table-1A.7**. As per road classification, the National Highways which has a share of only 1.9% of total road length* (1.14 Lakh KMs out of 58 Lakh KMs) accounted for highest road accidents, contributing 29.4% of total road accidents. State Highways having the share of 2.97% (1.75 Lakh KMs) of total road length have reported 24.5% of road accidents in the country. However, a considerable number of road accidents were also reported on other roads. These accounted for 45.5% of total such accidents during 2019.

A total of 2,403 cases of road accidents were also reported on Expressways which caused injuries to 1,997 persons and deaths of 1,389 persons. The highest number of deaths in road accidents were reported on the National Highways accounting for 34.4% (53,213 out of 1,54,732) followed by State Highways (25.6%) (39,624 deaths). A total of 60,506 persons died due to road accidents on the other roads during 2019.

State/UT-wise patterns revealed that maximum fatalities in road accidents on the National Highways took place in Uttar Pradesh (13.5%) (7,187 out of 53,213 deaths) followed by Maharashtra (9.6%) (5,083 deaths), Tamil Nadu (7.4%) (3,921 deaths), Rajasthan (7.3%) (3,891 deaths) and Karnataka (7.2%) (3,826 deaths) during 2019.

Maximum number of accidents on State Highways in the country occurred in Tamil Nadu (19,279 cases). Maximum fatalities in road accidents on State Highways were reported in Uttar Pradesh (6,385 out of 39,624 deaths) which accounted for 16.1% of total deaths due to road accidents on State Highways, followed by Maharashtra (9.6%) during 2019. Maximum fatalities on the Expressways was reported in Uttar Pradesh contributing 54.8% (761 out 1,389) followed by Maharashtra (12.0%), Haryana (7.5%), Rajasthan (6.6%), West Bengal (5.7%) and Jharkhand (4.8%) during 2019. **[Table-1A.7]**

LIST–1A.3

Road Accidental Deaths in every 100 km-2019

(Road Category wise)

Type of Road	2019				
	Length of Road (in KM*)	Road Accident Cases	Total Number of Deaths	Cases per 100 KM	Deaths per 100 KM
National Highways	114158#	128602	53213	113	47
State Highways	175036#	107327	39624	61	23
Other Roads	5608477#	201467	61895	4	1
Total	5897671#	437396	154732	7	3

- As per data provided by States/UTs.

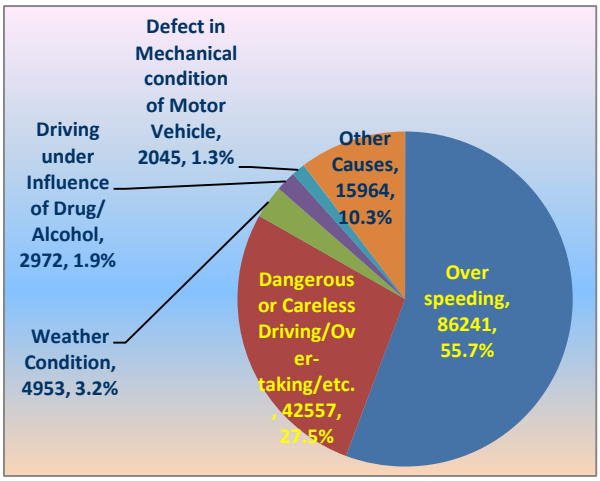
* Source: Road Accidents in India – 2018, Ministry of Road Transport & Highways.

figures of the previous year used due to non-availability of data.

Cause-wise distribution of road accidents (which also include unmanned railway crossing accidents) is presented in **Table-1A.8**. Cause-wise analysis of road accidents revealed that most of road accidents were due to over-speeding accounting for 59.6% of total accidents (2,60,898 out of 4,37,443 cases) which caused 86,241 deaths and injuries to 2,71,581 persons. Dangerous/careless driving or overtaking caused 1,12,519 accidents (25.7% of total accidents) which resulted in 42,557 deaths and injuries to 1,06,555 persons during 2019. 2.6% (11,303 out of 4,37,443 cases) of such accidents were due to poor weather condition. Driving under influence of drug/alcohol contributed 1.7% of total accidents which resulted in injuries to 6,675 persons & 2,972 deaths in the country.

FIGURE–1A.6

Major Causes of Road Accident Deaths during 2019



- As per data provided by States/UTs.

Cause - wise analysis of fatal road accidents revealed that 55.7% (86,241 out of 1,54,779 deaths) and 27.5% (42,557 out of 1,54,779 deaths) of fatalities in road accidents were due to over-speeding and dangerous/careless driving or overtaking respectively. Poor weather conditions and mechanical defects in motor vehicles caused 3.2% (4,953 deaths) and 1.3% (2,045 deaths) of total deaths due to road accidents respectively during 2019.

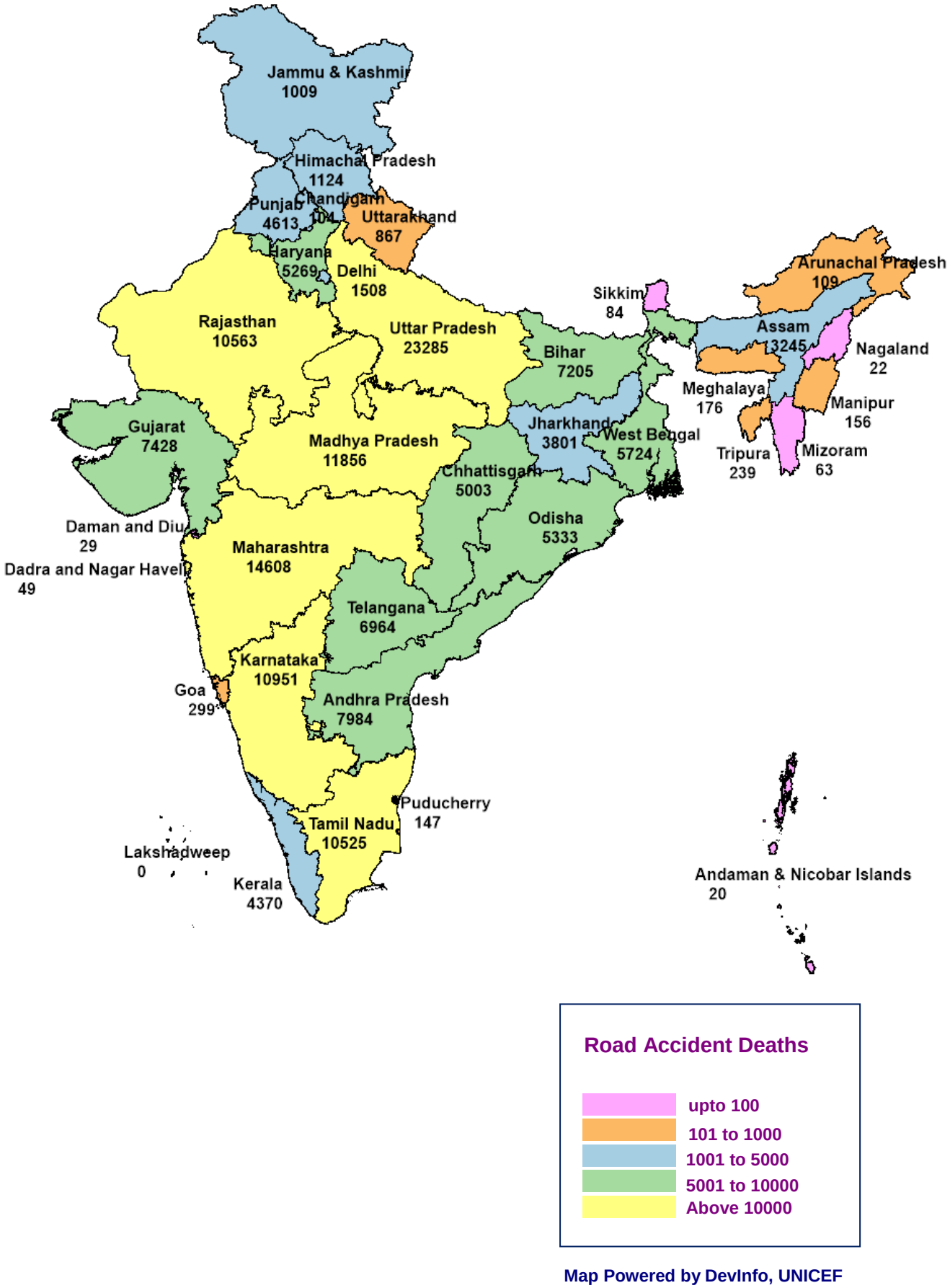
Large number of deaths in road accidents due to over- speeding were reported in Karnataka (10.8%) (9,314 out of 86,241 deaths) followed by Tamil Nadu (10.2%) (8,832 out of 86,241 deaths). Dangerous/careless driving or overtaking caused maximum fatalities in Uttar Pradesh (12,020 out of 42,557) which accounted for 28.2% of total deaths followed by 13.6% (5,802) deaths in Maharashtra. Maximum fatalities due to driving under influence of drug/alcohol were reported in Uttar Pradesh (28.6%) followed by Jharkhand (13.9%), Madhya Pradesh (6.7%) and Telangana (6.0%) during 2019 [**Table-1A.9**].

A total of 47 accidental deaths were reported at un-manned railways crossings. 51.1% of such deaths were reported in Tripura (24 out of 47 deaths) during 2019 [**Table-1A.9**].

Place of occurrence - wise patterns of road accidents reveal that 59.5% of total accidents have occurred in rural areas (2,60,379) and 40.5% in urban areas (1,77,017) out of 4,37,396 total cases during 2019. Both in rural as well as urban area most of the accidents were reported at places near residential area. 28.9% (75,201 out of 2,60,379 cases) accidents in rural area and 31.5% (55,742 out of 1,77,017 cases) in urban area have taken place near residential area. 6.0% of road accidents in urban area took place at pedestrian crossing (10,591 out of 1,77,017 cases). Besides, 8.5% (37,143 out of 4,37,396 cases) of road accidents in the country have taken place near schools, college or other educational institutions [**Table 1A.10**].

Uttar Pradesh followed by Odisha have reported 26.3% and 8.0% of total deaths due to road accidents near schools/college/other educational institutes in urban area respectively. Uttar Pradesh also reported highest fatalities due to road accidents at places near to residential area (urban area) accounting for 19.4% of total such deaths during 2019 [**Table-1A.11**].

FIGURE–1A.7
STATE/UT – WISE ROAD ACCIDENT DEATHS DURING 2019



- As per data provided by States/UTs.

Railway Accidents

A total of 27,987 cases of 'Railway Accidents' were reported, showing an increase of 1.2% during the year 2019 over 2018 (27,643). 27,987 railways accidents caused injuries to 3,569 persons and 24,619 deaths during 2019 [**Table–1A.1 & 1A.2**].

Maximum railway accidents were reported in Maharashtra accounting for 22.6% (6,338 out of 27,987 cases) followed by Uttar Pradesh (14.2%) (3,980 cases). These two States have also reported highest fatalities in railways accidents, accounting for 15.9% (3,916 out of 24,619 deaths) and 14.3% (3,521 deaths) of total deaths in railways accidents respectively. 2,435 out of 3,569 persons injured in railways accidents were reported in Maharashtra alone during 2019 **[Table 1A.2]**.

The month-wise distribution of 'Railway Accidents' shows that most of railway accidents were reported in the month of June (2,522 cases), contributing 9.0% of total railway accidents. Maharashtra (552 out of 2,522 cases) has reported maximum railways accidents in the month of June, accounting for 21.9% of total such accidents **[Table-1A.5]**.

Most of railway accidents (4,518 out of 27,987) have taken place during 06:00 hrs to 09:00 hrs (Day), accounting for 16.1% of total railway accidents. 16.0% (4,468 cases) railways accidents were reported during '09:00 hrs to 12:00 hrs (Day)'. Maharashtra has reported maximum accidents during 18:00 hrs to 21:00 hrs (Night) and 09:00 hrs to 12:00 hrs (Day), accounting for 16.7% (1,061 cases) and 15.4% (974 cases) respectively **[Table-1A.6]**.

State/UT - wise classification of railways accidents is presented in **Table-1A.12** and **Figure-1A.9**. The analysis of classification of railway accidents revealed that incidents of 'Fall from Trains or Collision with People at Track' constituted majority of railway accidents (76.3%) (21,361 out of 27,987). State of Maharashtra has reported the majority of such cases, accounting for 28.4% (6,059 out of 21,361 cases) of total cases of fall from train or collision of trains with people at track. A total of 18,339 persons died due to either fall from trains or collision of trains with people at tracks, accounting for 74.5% of total deaths in railway accidents (24,619 deaths).

State/UT - wise causes of railways accidents is presented in **Table-1A.13**. The causes include Fault of Driver, Sabotage, Signalmen's Error, Mechanical Failure and Other causes. Majority of States/UTs have furnished railways accidents under unclassified category 'Other Causes', a total of 27,662 out of 27,987 cases of railways accidents were furnished under 'Other Cause' (fall of persons from trains, persons coming under trains etc. come under this category). During 2019, a total of 51 cases of railways accidents occurred due to fault of driver. Mechanical defects (like poor design, track faults, bridge/tunnel collapse, etc.) caused 155, 41 and 31 railways accidents in Uttar Pradesh, Uttarakhand and Jharkhand respectively. In Uttar Pradesh, a total of 29 persons died in railways accidents due to fault of driver. Mechanical defects (like poor design, track faults, bridge/tunnel collapse, etc.) led to loss of 410 lives in railways accidents during 2019.

Maximum railway crossing accidents were reported in Uttar Pradesh accounting for 47.6% (851 out of 1,788 cases) followed by Bihar (13.5%) (241 cases) and Madhya Pradesh (12.9%) (230 cases). These States have also reported highest fatalities in railway crossing accidents, accounting for 48.5% (855 out of 1,762 deaths), 13.7% (242 deaths) and 13.2% (232 deaths) respectively during 2019 **[Table-1A.2]**.

Traffic Accidents in Cities

A total of 69,064 traffic accidents were reported in 53 cities during 2019. 69,064 traffic accidents caused injuries to 59,070 persons and 16,538 deaths. The maximum fatalities in traffic accidents was reported in Delhi City (2,207 deaths) followed by Chennai (1,252 deaths) and Jaipur (859 deaths) **[Table-1A.2]**.

Road Accidents (67,228 cases) accounted for 97.3% of total traffic accidents in 53 mega cities during 2019. Chennai accounted for 10.2% (6,871 out of 67,228 cases) of total road accidents reported in 53 mega cities followed by Delhi City (8.0%) (5,349 cases) and

Bengaluru (7.0%) (4,684 cases). However, the large number of fatal road accidents were reported in Delhi City (1,400 deaths) followed by Chennai (1,252 deaths), accounting for 9.5% and 8.5% of total deaths due to road accidents in 53 mega cities respectively during 2019.

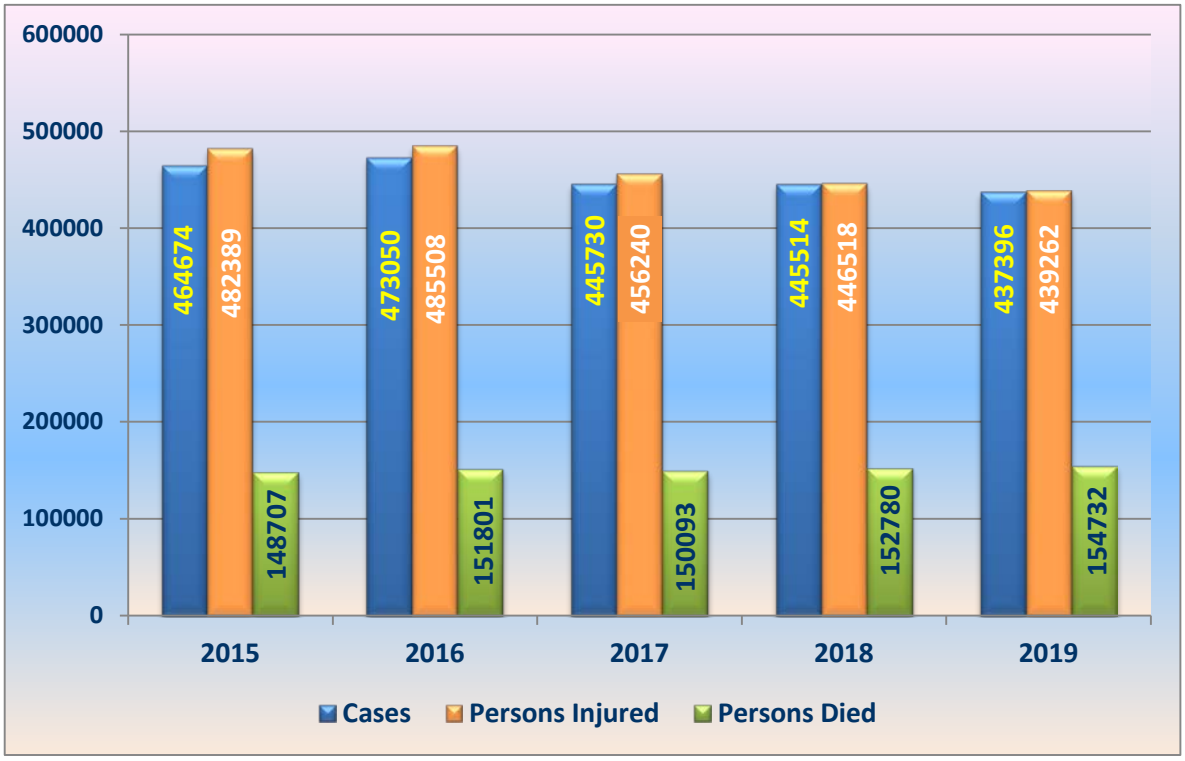
Cause-wise analysis of road accidents (including unmanned railway crossing) revealed that most of road accident deaths (including unmanned railway crossing) in 53 mega cities were due to over-speeding which accounted for 54.9% (8,117 out of 14,785 deaths) of total deaths due to road accidents during 2019. Dangerous or Careless Driving/Over-taking etc. also caused 27.7% of total deaths due to road accidents (4,089 out of 14,785 deaths). Driving under influence of drug/alcohol had caused 2.4% (354 out of 14,785 deaths) of fatalities in road accidents. Among 53 mega cities, most of fatalities due to driving under influence of drug/alcohol were reported in Ranchi (80 out of 354 deaths) **[Table-1A.9]**.

Place of occurrence – wise deaths in road accidents reveals that most of fatalities due to road accidents have taken place near residential area, contributing 31.4% (4,638 out of 14,782 deaths) of deaths in road accidents in 53 mega cities, followed by 10.6% near schools/ college/other educational institutions (1,570 out of 14,782) deaths and 7.6% (1,128 out of 14,782 deaths) near factory/industrial area. Out of 53 mega cities, Faridabad (108 deaths) followed by Kolkata (93 deaths) have reported maximum cases of road accidents at pedestrian crossing. **[Table-1A.11]**. As per road-wise classification of road accidents, 20.8% of total road accidents in 53 mega cities were reported at the National Highways. 27.4% of fatalities in road accidents were reported at the National Highways during 2019 **[Table-1A.7]**.

A total of 1,568 railway accidents were reported in 53 mega cities where in Delhi City has reported maximum incidents by contributing 54.7% of total railway accidents during 2019.

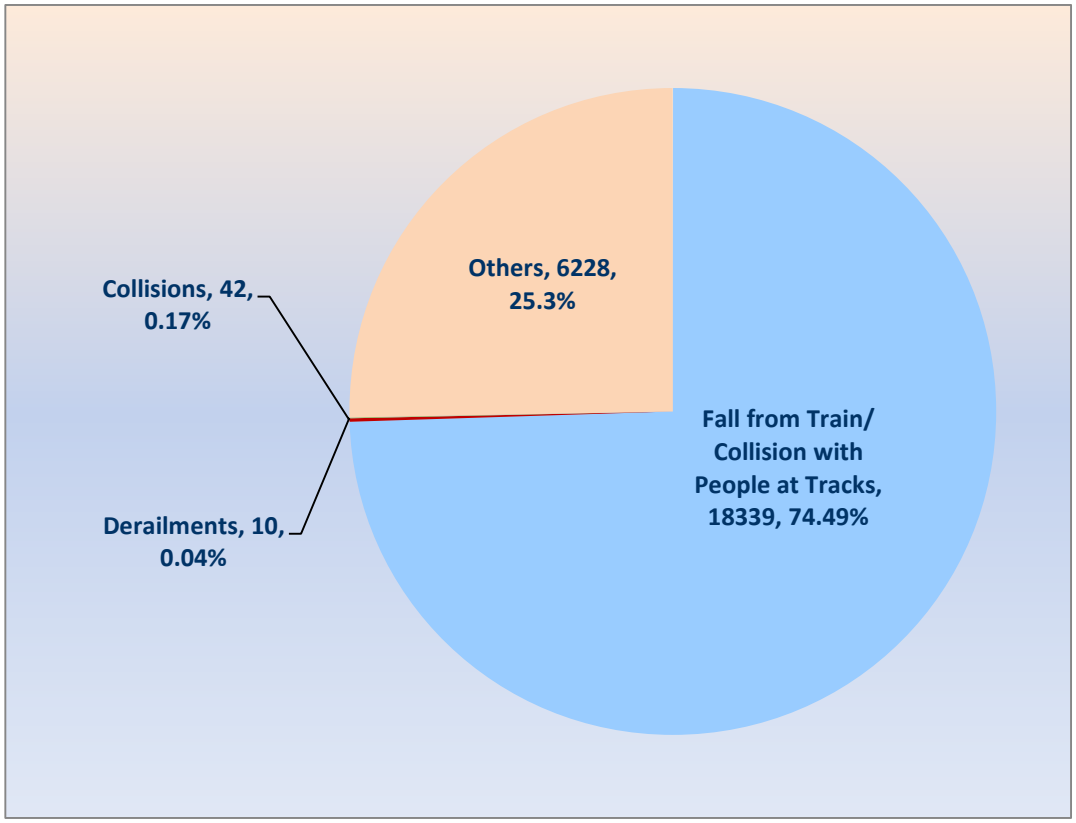
FIGURE–1A.8

Trend of Road Accident Cases, Persons Injured and Persons Died during 2015–2019



- As per data provided by States/UTs.

FIGURE–1A.9
Classification of Railway Accident Deaths during 2019



- As per data provided by States/UTs.

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