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. 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 devising 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 increased by 1.1% i.e. from 4,96,762 in 2015 to 5,02,100 in 2016. (However, the rate of deaths in road accidents per thousand vehicles has remained same from 0.7 in 2015 to 0.7 in 2016). Maximum increase in number of traffic accidents cases was reported in Madhya Pradesh (from 42,900 in 2015 to 53,817 in 2016) followed by Tamil Nadu (from 70,801 in 2015 to 73,283 in 2016) and Uttar Pradesh (from 32,884 in 2015 to 34,543 in 2016). On the other hand, maximum decrease was reported in Maharashtra (from 50,056 in 2015 to 45,046 in 2016) **[Table-1A.1]**.

5,02,100 traffic accidents resulted in injuries to 4,88,961 persons and 1,77,904 deaths during 2016. State of Uttar Pradesh (23,093 deaths) followed by Tamil Nadu (19,049 deaths) and Maharashtra (18,144 deaths) have reported maximum fatalities in traffic accidents in the country; these 3 States accounted for 13.0%, 10.7% and 10.2% of total deaths in traffic accidents respectively and collectively accounted for 33.9% (60,286 out of 1,77,904) of total fatalities reported at all India level during 2016.

The percentage share of traffic accidental deaths in total accidental deaths due to 'Other Causes' has decreased from 45.2% in 2012 to 43.4% in 2016. A rising trend was seen in absolute number of deaths in 'Traffic Accidents' during years 2013 - 2015. Number of deaths have increased by 0.3% (from 1,77,423 in 2015 to 1,77,904 in 2016) in 2016 over 2015 **[Table-1A(A)]**.

A total of 5,02,100 traffic accidents comprising of 4,73,050 road accidents, 25,927 railway accidents and 3,123 railway crossing accidents were reported; these accidents caused 1,51,801, 22,970 and 3,133 deaths respectively during 2016.

TABLE 1A(A)

Number and Share of Deaths due to Traffic Accidents during 2012 - 2016

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	2012	1,39,091	27,402	1,808	1,68,301	3,72,022	45.2%
2	2013	1,37,423	27,765	1,318	1,66,506	3,77,758	44.1%
3	2014	1,41,526	25,006	2,575	1,69,107	4,31,556	39.2%
4	2015	1,48,707	26,066	2,650	1,77,423	4,13,457	42.9%
5	2016	1,51,801	22,970	3,133	1,77,904	4,09,537	43.4%

- As per data provided by States/UTs.

STATE/UT - WISE TRAFFIC ACCIDENT CASES DURING 2016

- As per data provided by States/UTs.

Map Powered by DevInfo, UNICEF

STATE/UT - WISE TRAFFIC ACCIDENT DEATHS DURING 2016

- As per data provided by States/UTs.

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Month - wise patterns of traffic accidents reveal that maximum number of 'Traffic Accidents' have occurred in the month of May which accounted for 8.9% (44,795 out of 5,02,100) of total traffic accidents during the year 2016. 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 17.7% (88,908 out of 5,02,100) and 17.0% (85,487 out of 5,02,100) of total traffic accidents respectively during the year 2016. 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 third in the series.

A total of 4,73,050 road accident cases were reported during 2016. Road accident cases in the country have increased by 1.8% (4,73,050 in 2016 from 4,64,674 in 2015) during 2016 compared to 2015 **[Table-1A.1]**. The fatalities in road accidents have increased by 2.1% (from 1,48,707 in 2015 to 1,51,801 in 2016) during 2016 over 2015. The **Table - 1A(A)** 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 **Table–1A(B).** It is observed that the rate of deaths per thousand vehicles has decreased marginally from 0.9 in 2012 to 0.7 in 2016, as the number of vehicles in the country have increased by 44.2% (from 15,94,91,000 in 2012 to 23,00,31,000 in 2016 (latest)).

4,73,050 road accidents caused 1,51,801 deaths and injuries to 4,85,508 persons during 2016. Generally road accidents have caused more injuries than deaths, but in Mizoram, Nagaland and Punjab, road accidents caused more deaths compared to persons injured. In Mizoram, 64 road accidents caused 60 deaths and injuries to 31 persons, in Nagaland, 53 road accidents caused 47 deaths and injuries to 46 persons and in Punjab, 6,952 road accidents caused 5,077 deaths and injuries to 4,351 persons. **[Table-1A.2].**

Table – 1A (B)
Growth in Number of Vehicles and Road Accidents in India (2012–2016)

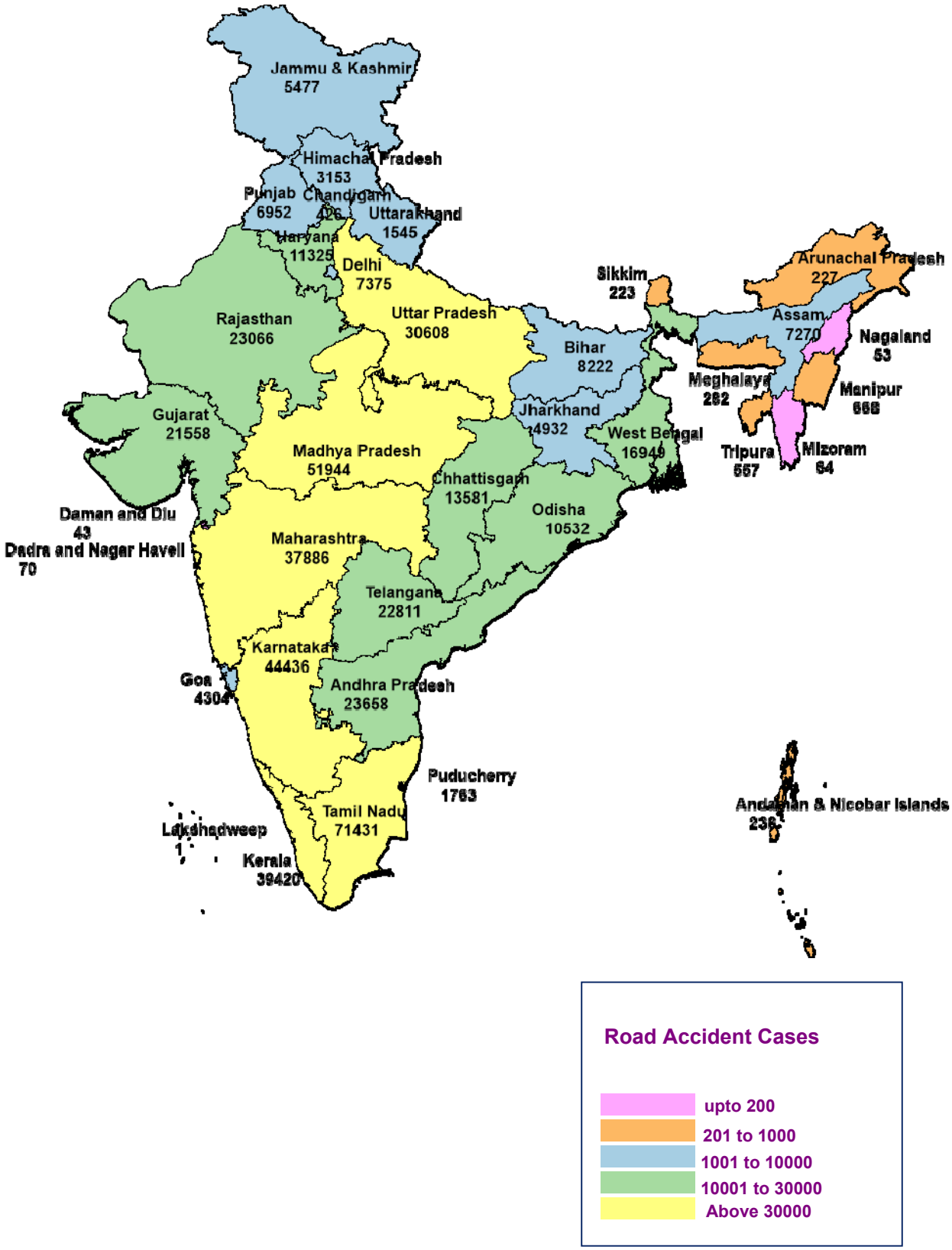
Sl. No.	Year	Road Accidents (in thousand)	% Variation over Previous Year	Persons Injured (in thousand)	% Variation over Previous Year	Persons Killed (in Nos.)	% Variation Over Previous Year	No. of Vehicles (In Thousand)#	% Variation over previous Year	Rate of Deaths per thousand Vehicles (Col.7/Col.9)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	2012	440.0	–0.02%	469.9	0.2%	1,39,091	1.6%	1,59,491	12.4%	0.9
2	2013	443.0	0.7%	469.9	0.0%	1,37,423	–1.2%	1,82,445	14.4%	0.8
3	2014	450.9	1.8%	477.7	1.7%	1,41,526	3.0%	1,82,445*	–	0.8
4	2015	464.7	3.1%	482.4	1.0%	1,48,707	5.1%	2,10,023	15.1%	0.7
5	2016	473.0	1.8%	485.5	0.6%	1,51,801	2.1%	2,30,031	9.5%	0.7

'#' Source: Road Accidents in India - 2017, TRW, MoRT&H, as per latest published data.

'*'- figures of the year 2013 used due to non-availability of data

- As per data provided by States/UTs.

STATE/UT - WISE ROAD ACCIDENT CASES DURING 2016



- As per data provided by States/UTs.

Map Powered by DevInfo, UNICEF

During 2016, two wheelers have accounted for maximum fatal road accidents (46,370 deaths), contributing 30.5% of total road accidental deaths, followed by trucks/lorries (26,514 deaths) (17.5%), cars (20,714 deaths) (13.6%) and buses (12,602 deaths) (8.3%) [**Table-1A.3**].

Majority of deaths due to two wheelers accidents were reported in Tamil Nadu (5,666 deaths) and Maharashtra (5,595 deaths), accounting for 12.2% and 12.1% of total deaths due to two wheeled vehicles respectively. Large number of deaths due to trucks/lorries accidents (5,981 out of 26,514) were reported in Uttar Pradesh, accounting for 22.6% and large number of deaths due to car accidents (2,879 out of 20,714) were reported in Tamil Nadu (13.9%) of total such accidents. 17.0% (2,140 out of 12,602) and 16.6% (2,096 out of 12,602) of total fatal road accidents due to buses were reported in Tamil Nadu and Uttar Pradesh respectively. 14.2% (1,140 out of 8,047) of pedestrians were died in road accidents were reported in Maharashtra during 2016 [**Table-1A.4**].

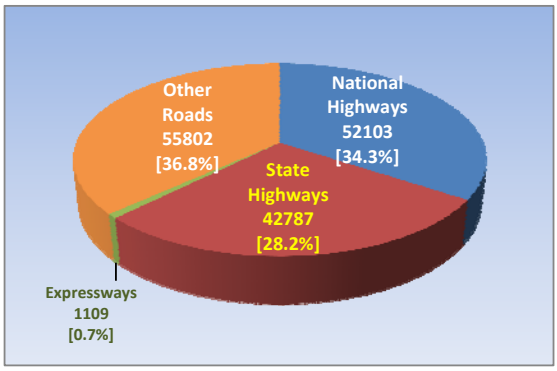
The month-wise distribution of 'Road Accidents' shows that most of road accidents were reported in the month of May (42,222 cases), contributing 8.9% of total road accidents. Majority of accidents in this month (May) have been reported in Tamil Nadu, accounting for 14.2% of total accidents reported (6,012 out of 42,222 cases) in the month of May **[Table-1A.5].**

Most of road accidents (84,667 out of 4,73,050 cases) were reported during 18:00 hrs to 21:00 hrs (Night), accounting for 17.9% of total road accidents. During 18:00 hrs to 21:00 hrs (Night), majority of road accidents were reported in Tamil Nadu (15,072 cases), Madhya Pradesh (9,148 cases) and Karnataka (7,316 cases). Time period '15:00 hrs to 18:00 (Day)' and '09:00 hrs to 12:00 hrs (Day)' accounted for 17.2% (81,571 cases) and 15.3% (72,229 cases) of total road accidents during 2016 [**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 1.8% of total road length (1.01 Lakh Kms out of 56 Lakh Kms) accounted for highest road accidents, contributing 28.7% of total road accidents. State Highways having the share of 3.1% (1.76 Lakh Kms) of total road length have reported 25.2% 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 2016.

A total of 2,711 cases of road accidents were also reported on Expressways which caused injuries to 2,866 persons and deaths of 1,109 persons. The highest number of persons died in road accidents were reported on the National Highways accounting for 34.3% (52,103 out of 1,51,801) followed by State Highways (28.2%) (42,787 deaths). A total of 55,802 persons died due to road accidents on the other roads during 2016.

Figure 1A.1
Accidental Deaths by Road Classification during 2016



- As per data provided by States/UTs.

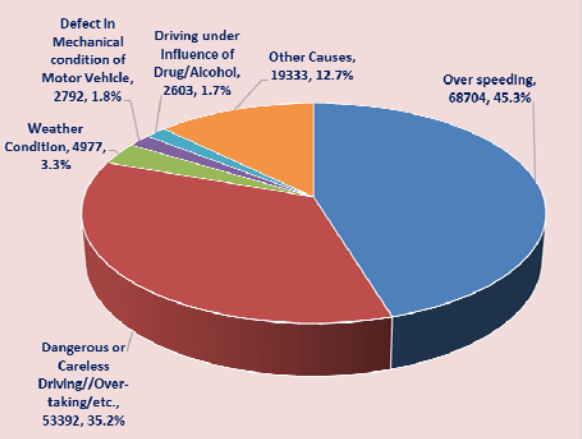
State/UT-wise patterns revealed that maximum fatalities in road accidents on the National Highways took place in Tamil Nadu (12.5%) (6,495 out of 52,103 deaths) followed by Uttar Pradesh (12.2%) (6,374 deaths), Karnataka (8.6%) (4,459 deaths), Maharashtra (7.3%) (3,803 deaths) and Rajasthan (7.1%) (3,706 deaths) during 2016.

Maximum number of accidents on State Highways in the country occurred in Tamil Nadu (23,405 cases). Maximum fatalities in road accidents on State Highways were also reported in Tamil Nadu (6,013 out of 42,787 deaths) which accounted for 14.1% of total deaths due to road accidents on State Highways, followed by Uttar Pradesh (12.6%)

during 2016. Maximum fatalities on the Expressways was reported in Uttar Pradesh contributing 38.1% (423 out 1,109) followed by Maharashtra (14.0%), Madhya Pradesh (10.3%), Gujarat (9.6%) and Jharkhand (9.0%) during 2016 **[Table-1A.7]**

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 49.5% of total accidents (2,34,303 out of 4,73,191 cases) which caused 68,704 deaths and injuries to 2,41,158 persons. Dangerous/careless driving or overtaking caused 1,54,500 accidents which resulted in 53,392 deaths and injuries to 1,52,918 persons during 2016. 2.9% (13,848 out of 4,73,191 cases) of such accidents were due to poor weather condition. Driving under influence of drug/alcohol & defect in mechanical condition of motor vehicle contributed 1.4% of total such accidents which resulted in injuries to 6,635 persons & 6,472 persons and 2,603 deaths & 2,792 deaths respectively in the country.

Figure 1A.2
Major Causes of Road Accident Deaths during 2016



- As per data provided by States/UTs.

Cause - wise analysis of fatal road accidents revealed that 45.2% (68,704 out of 1,51,942 deaths) and 35.1% (53,392 out of 1,51,942 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 3.3% (4,977 deaths) and 1.8% (2,792 deaths) of total deaths due to road accidents respectively during 2016.

Large number of deaths in road accidents due to over- speeding were reported in Tamil Nadu (16.7%) (11,443 out of 68,704 deaths) followed by Maharashtra (11.2%) (7,711 out of 68,704 deaths). Dangerous/careless driving or overtaking caused maximum fatalities in Uttar Pradesh (16,161 out of 53,392) which accounted for 30.3% of total deaths followed by 7.5% (3,993) deaths in Karnataka. Maximum fatalities due to driving under influence of drug/alcohol were reported in Jharkhand followed by Telangana, Assam, and Bihar which accounted for 17.0%, 16.4%, 9.1% and 7.8% of total deaths in such road accidents in country respectively during 2016 [**Table-1A.9**].

A total of 141 accidental deaths were reported at un-manned railways crossing. 91.5% of such incidents were reported in Uttar Pradesh (129 out of 141 deaths) during 2016 [**Table-1A.9**].

Place of occurrence - wise patterns of road accidents reveal that 55.5% of total accidents have occurred in rural areas (2,62,750 out of 4,73,050 cases) and 44.5% in urban areas (2,10,300 out of 4,73,050 cases) during 2016. Both in rural as well as urban area most of the accidents were reported at places near residential area. 24.6% (64,597 out of 2,62,750 cases) accidents in rural area and 26.0% (54,743 out of 2,10,300 cases) in urban area have taken place near residential area. 7.2% of road accidents in urban area took place at pedestrian crossing (15,168, out of 2,10,300 cases) during 2016. Besides, 7.2% (33,957 out of 4,73,050 cases) of road accidents in the country have taken place near schools, college or other educational institutions during 2016 [**Table 1A.10**].

Uttar Pradesh followed by Tamil Nadu have reported 14.2% and 9.1% 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 16.0% of total such deaths during 2016 [**Table-1A.11**].

STATE/UT - WISE ROAD ACCIDENT DEATHS DURING 2016

- As per data provided by States/UTs.

Railway Accidents

A total of 25,927 cases of 'Railway Accidents' were reported, showing a decrease of 11.9% during the year 2016 over 2015 (29,419 cases). 25,927 railways accidents caused injuries to 3,375 persons and 22,970 deaths during 2016 [**Table–1A.1 & 1A.2**].

Maximum railway accidents were reported in Maharashtra accounting for 27.6% (7,160 out of 25,927 cases) followed by Uttar Pradesh (12.7%) (3,301 cases). These two States have also reported highest fatalities in railways accidents, accounting for 19.4% (4,462 out of 22,970 deaths) and 14.9% (3,432 deaths) of total deaths in railways accidents respectively. 2,699 out of 3,375 persons injured in railways accidents were reported in Maharashtra alone during 2016 **[Table 1A.2]**.

The month-wise distribution of 'Railway Accidents' shows that most of railway accidents were reported in the month of July (2,301 cases), contributing 8.9% of total railway accidents. Maharashtra (555 out of 2,301 cases) has reported maximum railways accidents in the month of July, accounting for 24.1% of total such accidents **[Table-1A.5]**.

Most of railway accidents (4,297 out of 25,927) have taken place during 09:00 hrs to 12:00 hrs (Day), accounting for 16.6% of total railway accidents. 14.8% (3,833 cases) railways accidents were reported during '18:00 hrs to 21:00 hrs (Night)'. 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 31.9% (1,221 cases) and 27.0% (1,161 cases) respectively **[Table-1A.6]**.

State/UT - wise classification of railways accidents is presented in **Table-1A.12**. 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 (73.9%) (19,160 out of 25,927). State of Maharashtra has reported the majority of such cases, accounting for 34.2% (6,560 out of 19,160 cases) of total cases of fall from train or collision of trains with people at track. A total of 16,315 persons died due to either fall from trains or collision of trains with people at tracks, accounting for 71.0% of total deaths in railway accidents (22,970 deaths).

State/UT - wise causes of railways accidents is presented in **Table-1A.13**. Majority of States/UTs have furnished railways accidents under unclassified category 'Other Causes', a total of 25,598 out of 25,927 cases of railways accidents were furnished under 'Other Cause' (fall of persons from trains/ persons coming under trains, comes under this category). During 2016, a total of 219 cases of railways accidents occurred due to fault of driver. Mechanical defects (like poor design, track faults, bridge/tunnel collapse, etc.) caused 58, 18 and 8 railways accidents in Madhya Pradesh, Maharashtra and Jharkhand respectively. In Chhattisgarh, a total of 189 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 246 lives in railways accidents during 2016.

Maximum railway crossing accidents were reported in Haryana accounting for 39.0% (1,218 out of 3,123 cases) followed by Uttar Pradesh (20.3%) (634 cases) and Madhya Pradesh (7.2%) (225 cases). These States have also reported highest fatalities in railway crossing accidents, accounting for 38.9% (1,218 out of 3,133 deaths), 20.9% (655 deaths) and 7.2% (225 deaths) respectively during 2016 **[Table-1A.2]**.

Traffic Accidents in Cities

A total of 85,506 traffic accidents were reported in 53 cities during 2016. 85,506 traffic accidents caused injuries to 73,313 persons and 18,404 deaths. The maximum fatalities in traffic accidents was reported in Delhi City (2,113 deaths) followed by Chennai (1,183 deaths) and Bengaluru (988 deaths) **[Table-1A.2]**.

Road Accidents (83,324 cases) accounted for 97.4% of total traffic accidents in 53 mega cities during 2016. Chennai accounted for 9.0% (7,486 out of 83,324 cases) of total road accidents reported in 53 mega cities followed by Delhi City (7.0%) (5,827 cases) and Bengaluru (6.4%) (5,356 cases). However, the

large number of fatal road accidents were reported in Delhi City (1,191 deaths) followed by Chennai (1,183 deaths), accounting for 7.33% and 7.28% of total deaths due to road accidents in 53 mega cities respectively during 2016.

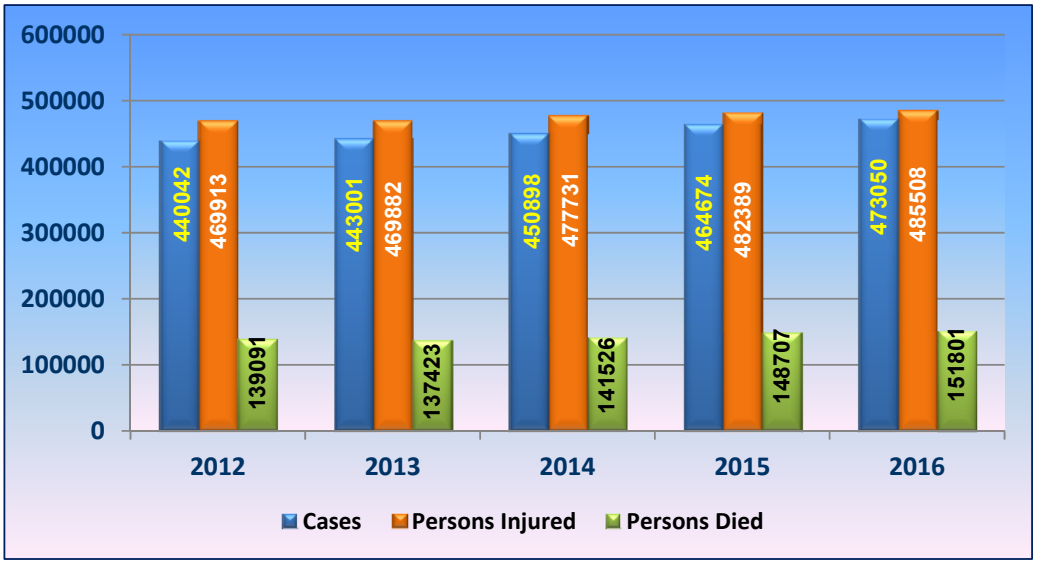
Cause-wise analysis of road accidents (including unmanned railway crossing) revealed that most of road accident deaths (including unmanned railway crossing) in 53 mega cities were due to over-speeding driving/over-taking which accounted for 45.7% (7,439 out of 16,270 deaths) of total deaths due to road accidents during 2016. Dangerous/careless also caused 38.1% of total deaths due to road accidents (6,202 out of 16,270 deaths). Driving under influence of drug/alcohol had caused 2.1% (335 out of 16,270 deaths) of fatalities in road accidents. Among 53 mega cities, most of fatal accidents due to drunken driving were reported in Hyderabad (89 out of 335 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 23.1% (3,750 out of 16,249 deaths) of deaths in road accidents in 53 mega cities, followed by 7.8% near schools/ college/other educational institutions (1,271 out of 16,249 deaths) and 6.7% (1,092 out of 16,249 deaths) near factory/industrial area. Out of 53 mega cities, Patna (116 deaths) followed by Bengaluru (109 deaths) have reported maximum cases of road accidents at pedestrian crossing. As per road-wise classification of road accidents, 19.2% of total road accidents in 53 mega cities were reported at the National Highways. 27.6% of fatalities in road accidents were reported at the National Highways during 2016.

A total of 1,930 railway accidents were reported in 53 mega cities where in Delhi City has reported maximum incidents by contributing 48.4% of total railway accidents during 2016.

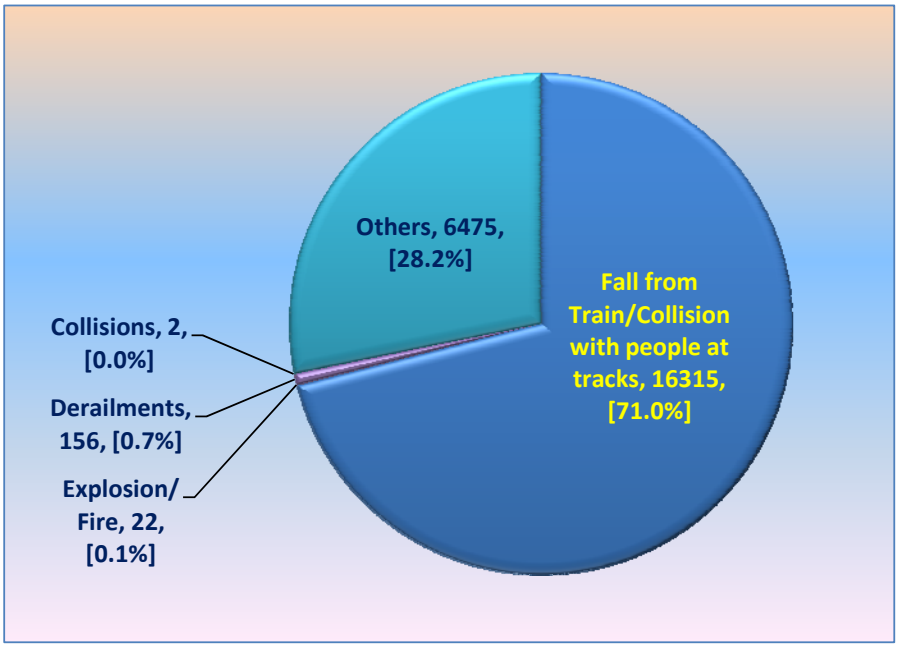
Figure 1A.3

Trend of Road Accident Cases, Persons Injured and Persons Died during 2012–2016



- As per data provided by States/UTs.

Figure 1A.4
Classification of Railway Accidents Deaths during 2016



- As per data provided by States/UTs.

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