1 CHAPTER AN OVERVIEW

Around the world every year the lives of more than 1.25 million people are cut short as a result of road accidents. Besides the above, around 20 and 50 million people suffer non-fatal injuries, with many incurring a disability as a result of their injury.

Road accident injuries cause considerable economic losses to individuals, their families, and to nations as a whole. **These losses arise from the cost of treatment as well as lost productivity for those killed or disabled by their injuries, and for family members who need to take time off from work or school** to care for the injured. Road **accidents cost most countries 3% of their gross domestic product.**

Road traffic injuries - Fact sheet (Reviewed January 2018: WHO)

Key facts

- **More than 1.25 million people die each year** as a result of road traffic crashes.
- Road accidents are the leading cause of death among **people aged between 15 and 29 years.**
- **90% of the world's fatalities on the roads occur in low- and middle-income countries, even though these countries** have approximately 54% of the world's vehicles.
- Nearly half of those dying on the world's roads are **"vulnerable road users": pedestrians, cyclists, and motorcyclists.**
- Road accidents **cost most countries 3% of their gross domestic product.**
- Without sustained action, road traffic crashes are **predicted to become the seventh leading cause of death by 2030.**
- The newly adopted 2030 Agenda for Sustainable Development has set an ambitious **target of halving the global number of deaths and injuries from road traffic crashes by 2020.**

NATIONAL TRENDS

Road accidents are recognized, globally, as a major public health problem, for being one of the leading causes of deaths, disabilities and hospitalization, imposing huge socio-economic costs. In case of India, road accidents are one of the top four leading causes of death and health loss among persons of age group 15-49 years.

- During **the year 2016, the total number of reported road accidents is 4,80,652, which caused injuries to 4,94,624 persons and claimed 1,50,785 lives in the country.** This would translate, on an average, into **1317 accidents and 413 accident deaths taking place on Indian roads every day; or 55 accidents and 17 deaths every hour.**

Table 1.1 Road accidents parameters				
S.No.	Parameter	2015	2016	% Change over previous year
1	Total accidents in the Country	5,01,423	4,80,652	-4.1%
2	Total number of persons killed in the Country	1,46,133	1,50,785	3.2%
3	Total number of persons injured in the Country	5,00,279	4,94,624	-1.1%
4	Accident Severity (No. of persons killed every 100 accidents)	29.1	31.4	7.9

Source: Road accidents in India: Ministry of Road Transport and Highways.

- The number of fatal accidents, i.e., an accident in which at least one victim dies, has increased consistently since 2005 and has seen a sharp rise from 1,31,726 in 2015 to 1,36,071 in 2016. Consequently, **accident severity expressed in terms of number of persons killed per 100 accidents, has gone up from 29.1 in 2015 to 31.4 in 2016.**
- In 2016, the fifty million-plus cities accounted for 18.7 per cent of total road accidents in the country, 11.8 per cent of total persons killed in road accidents and 16.7 per cent of total persons injured in road accidents. **Chennai had the highest number of road accidents (7,486) while Delhi had the highest number of deaths (1,591)) due to road accidents.** Accident severity for the combined 50 million cities was 19.8 in 2016 as against 14.9 per cent in 2015.

Road accidents in million plus cities:

- An important accident related parameter is the extent of accident severity (road accident related deaths per 100 accidents). Accident severity in terms of percentage share of 50 million plus cities was 19.8 per cent in 2016 as against 14.9 per cent in 2015. It varies from a low of 6.6 per cent in Kochi to a high of 69.9 per cent in Ludhiana Table 5.2). The other cities which reported a very high accident severity included Amritsar (67.1 per cent), Asansol - Durgapur (58.4 per cent), Varanasi (49.6 per cent), and Agra (49.2 per cent). This is depicted in Table 1.2.
- Details indicating the total number of accidents, persons killed and injured with accident severity in the 50 million plus cities is illustrated at Table 1.2. Out of these fifty million plus cities Chennai reported the highest number of road accidents (7486) during 2016 followed by Delhi (7375). Delhi reported highest number of road accident deaths (1591) followed by Chennai (1183).

Table 1.2: Total Number of Road Accidents, Number of persons Killed & Injured in Million Plus Cities in 2016							
S.No.	Cities	Fatal Accidents	Injury Accidents	Total Accidents	No. of Persons Killed	No. of Persons Injured	Severity of Accidents*
1.	Agra	475	570	1062	522	811	49.2
2.	Ahmedabad	422	1361	1783	428	1494	24
3.	Allahabad	481	600	1100	488	758	44.4
4.	Amritsar	97	49	152	102	103	67.1
5.	Asansol-Durgapur	228	163	416	243	255	58.4
6.	Aurangabad	136	433	666	143	681	21.5
7.	Bengaluru	790	3471	5323	835	4264	15.7
8.	Bhopal	237	2481	3571	248	2650	6.9
9.	Chandigarh	144	220	428	151	329	35.3
10.	Chennai	1155	6050	7486	1183	7349	15.8
11.	Coimbatore	276	1002	2354	288	1199	21.3
12.	Delhi	1548	5671	7375	1591	7154	21.6
13.	Dhanbad	83	115	217	97	286	44.7
14.	Faridabad	208	415	624	212	508	34
15.	Ghaziabad	395	477	887	421	647	47.7
16.	Gwalior	221	1506	1993	244	1599	12.2
17.	Hyderabad	444	2148	2945	448	2469	15.2
18.	Indore	404	3880	5143	431	4263	8.4
19.	Jabalpur	337	2580	3256	352	5780	10.8
20.	Jaipur	832	1827	3004	890	2625	29.6
21.	Jamshedpur	77	103	188	77	186	41
22.	Jodhpur	91	148	270	100	239	37
23.	Kannur	47	436	504	52	660	10.3
24.	Kanpur	620	813	1451	684	911	47.1
25.	Khozikode	138	1230	1542	142	1681	9.4
26.	Kochi	161	2157	2573	169	2595	6.6
27.	Kolkata	388	2650	4104	407	3182	9.9
28.	Kollam	194	1430	1677	207	1688	12.3
29.	Kota	94	448	590	102	569	17.3
30.	Lucknow	595	869	163	631	990	38.5
31.	Ludhiana	357	174	549	384	313	69.9
32.	Madurai	217	685	946	222	926	23.5
33.	Mallapuram	376	2115	2738	402	3264	14.7
34.	Meerut	393	584	977	421	748	43.1
35.	Mumbai	529	2772	3379	562	3517	16.6
36.	Nagpur	291	1033	1373	307	1510	22.4
37.	Nashik	203	425	1031	213	599	20.7
38.	Patna	458	430	923	484	510	52.4
39.	Pune	397	901	1376	410	1036	29.8
40.	Raipur	401	1079	2240	415	1410	18.5
41.	Rajkot	153	502	719	154	610	29.4
42.	Srinagar	49	243	324	51	325	15.7
43.	Surat	273	460	790	283	687	35.8
44.	Thiruvanthapuram	177	2217	2453	180	2994	7.3
45.	Thrissur	116	1154	1357	128	1585	9.4
46.	Tiruchirapalli	141	484	657	144	732	21.9
47.	Vadodra	203	654	1046	214	878	20.5
48.	Varanasi	226	230	456	226	230	49.6
49.	Vijaywada city	362	1188	1640	379	1571	23.1
50.	Vishakapatnam	320	967	1538	327	1238	21.3
	Total	16960	63600	89359	17794	82608	19.8

Source: ROAD ACCIDENTS IN INDIA 2016: MINISTRY OF ROAD TRANSPORT AND HIGHWAYS

TRENDS IN DELHI

Delhi, over the years has witnessed spectacular growth of population due to constant influx of people from neighbouring states in search of employment and business.

- **Area of Delhi is 1483 square km. and has a population of around 189 lakhs.** Delhi has a total road length of 33,198 lane kms.
- Owing to development, city's population has increased which has created pressure on the supporting systems like housing, infrastructure and transportation. Growth in population has led to increased demand for transportation and thus to **a phenomenal increase in the number of motor vehicles.**
- There are over **104.8 Lakh registered vehicles of all categories in Delhi for the year 2017. 7.78 lakhs vehicles were added** during the year 2017. The yearly **growth of vehicular population for the year 2017 is 8.01 %.**
- Private transport viz. **private cars and two wheelers constitute 94%** of all registered vehicles in Delhi. On the contrary, all categories of buses, which are major source of **public transportation, form less than 0.5%** of total vehicular population.
- With growth of population, traffic scenario also becomes more challenging particularly with regard to accidents and to an extent it is a reason for growing number of accidents.
- This increase has manifested itself in numerous transportation problems. The traffic volume on main corridors has increased beyond the threshold level of carrying capacity of the roads.
- The **heterogeneity and magnitude of vehicle population, the unpredictability of human behavior, the economic constraints, insufficient road markings and signages, defective road designing, deficiencies in vehicles' design,** are some of the factors leading to road accident in Delhi. Drunken-driving, over-speeding, overloading, violation of traffic rules are common causes of traffic accidents.
- However, **with the increased presence and tactical deployment of traffic staff, traffic engineering and other steps taken after in-depth analysis of causes of accidents, the current traffic management strategies/techniques have proved to be effective** in reducing the number of accidents.
- **During the year 2017 – 6673 road accidents occurred in Delhi in which 6604 people were injured and 1584 people lost their lives.**
- There was a marginal increase in number of fatal accidents (-1.1%) in Delhi as compared to previous year.
- **The fatality marginally decreased by 0.4%.**
- **There is decrease of 9.5% in total accidents.**
- Pedestrians were the most vulnerable victims. In 2017, **44.3% of the total people killed in road accidents were pedestrians. Scooter/Motorcycle riders were the second most vulnerable accident-prone victims** constituting **35.2%** of the total persons killed.
- **In the year 2017, cars/taxis caused 287 fatal accidents accounting for 18.3% of total fatal accidents which was the maximum number by a vehicle type. HTVs came second with 169 (10.8%).**

- **Accident classification according to day and night show that in 2017, 720 fatal accidents occurred during day time whereas 845 occurred during night time.**
- **Accidents tend to increase during 7 p.m. to 2 a.m. on all days of week** as during these high congestion hours, commercial vehicles also start moving in Delhi, due to lifting of restrictions of no entry for them.
- **The spatial distribution is uneven. The concentration of accidents is high in densely populated areas. Fatal accidents are more in areas where there is a dangerous mix of vulnerable road users and heavy and high speed vehicles.**
- **National highways and major roads of the city are more accident prone due** to heavy movement of commercial as well as other vehicles. Most of the roads in Delhi were not designed to carry this magnitude of traffic volume. As a result, traffic problems such as congestion, delays, overcrowding of buses, pollution and increased road accidents need to be tackled by the traffic managers.
- 303 accident cluster points were spatially analyzed out of which **145 cluster points were identified as Accident Prone Zones,** as per the criteria as elaborated in chapter 10. The alphabetical list is at Table no 10.1.
- **Ring Road (20), Outer Ring Road (19), GTK Road (15), Grand Trunk Road (6) and Mathura Road (6)** have the maximum number of dangerous stretches on them.
- **Behaviour pattern of road users/ motorists have a direct link with the occurrence of accidents. Road safety laws improve road user behaviour – a critical factor in road safety – to reduce road accidents, injuries and deaths.**
- In the year 2017, **a total of 62,87,486 challans (59,33,987 compounded at the spot and 3,53,499 sent to court) were issued from which a total amount of Rs. 995,372,600/- was realised as compounding amount** (challan amount).
- **Prioritizing the needs of vulnerable road users and recognizing the importance of the built-up environment when making political and planning decisions with appropriate modifications to the physical road environment and setting up a supportive policy framework can bring down accidents.**
- **Modifying the environment while protecting road users from unacceptable levels of risk, as well as building bicycle and pedestrian lanes, tunnels and car-free play areas and other environmental solutions can be implemented to protect the road users.** Where road users cannot be separated, the strategy should acknowledge the need to give **pedestrian safety priority over car traffic – particularly by reducing speed.**

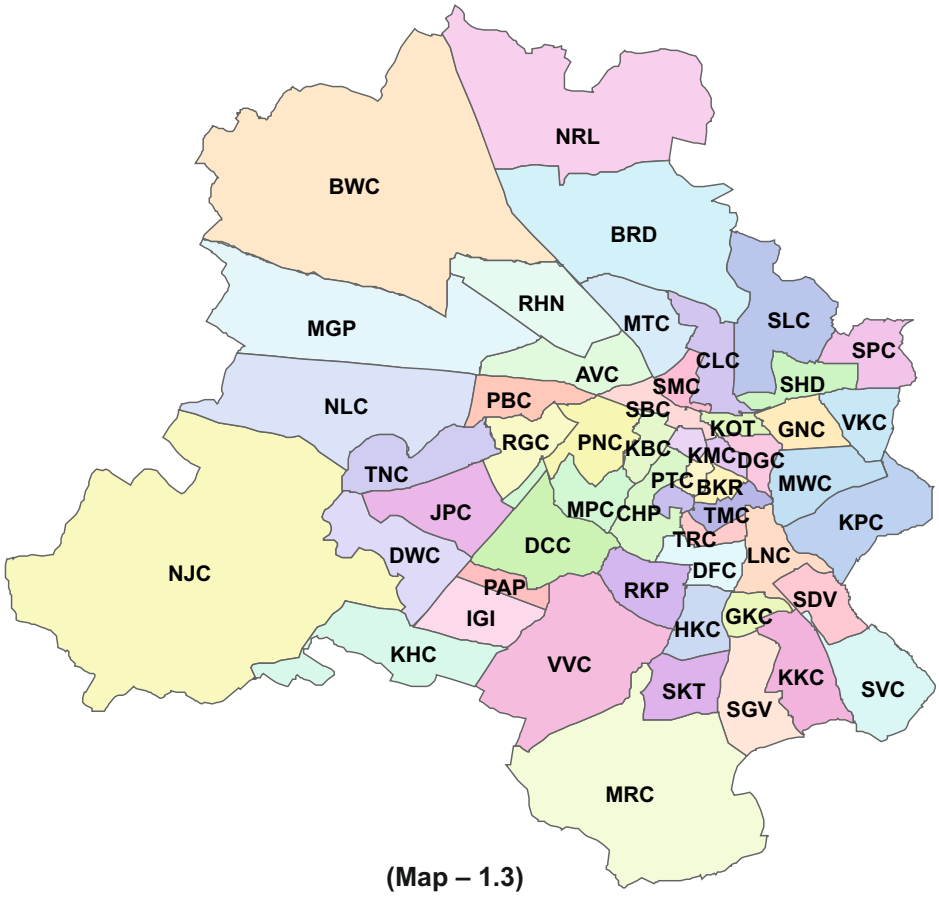
TRAFFIC RANGES(6)

(Map – 1.1)

TRAFFIC DISTRICTS (11)

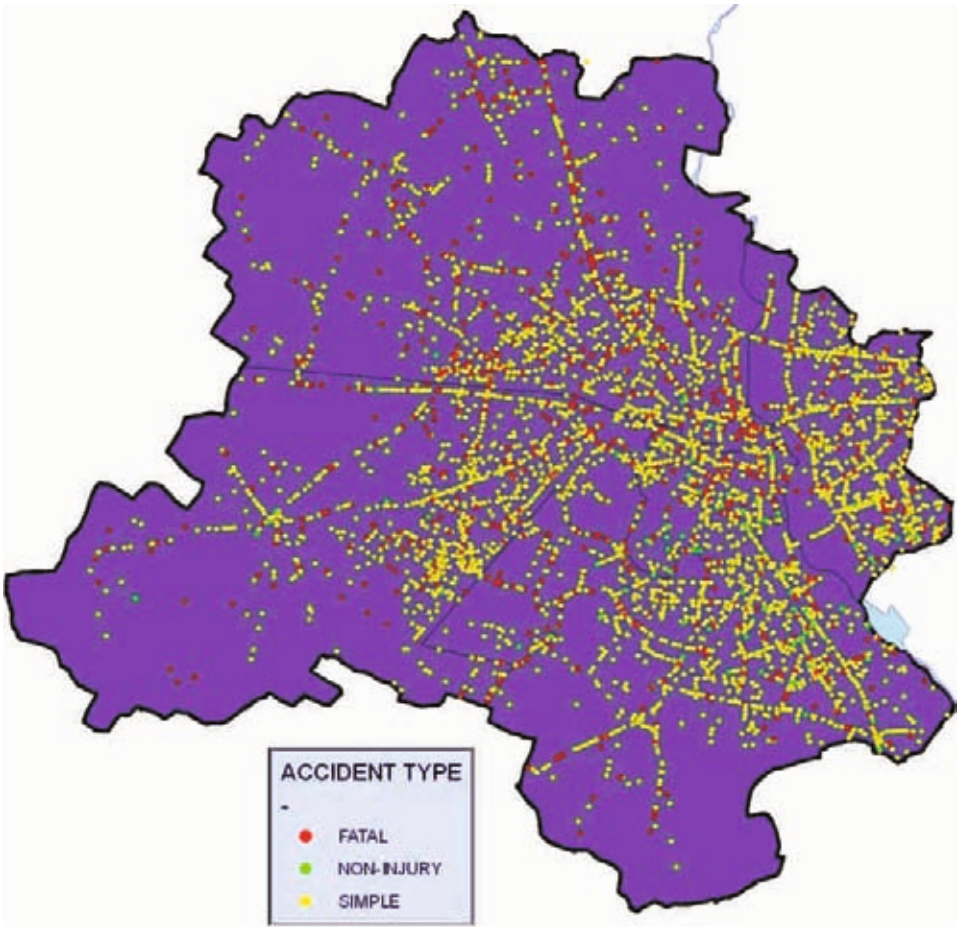
(Map – 1.2)

TRAFFIC CIRCLES



(Map – 1.3)

ROAD ACCIDENTS IN DELHI -2017



(Map – 1.4)

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