

CHAPTER – 1

ACCIDENTS IN INDIA

Introduction

This is the sixth edition of the report after the comprehensive revision of the proformae for data collection of 'Accidental Deaths & Suicides in India' was done in 2014 in consultation with States/UTs Police and others stakeholders.

An accident is an unplanned event that results in injury, deaths, damage to property or some other losses. For statistical purpose, Accidental Deaths have been classified as deaths that could be due to forces/factors of

the nature which have been termed as 'Accidental Deaths due to Forces of Nature' or could be due to deliberate or negligent conduct of human beings, which is termed as 'Other causes of Accidental Deaths'.

The rate of accidental deaths (per lakh of population) has slightly increased in 2019 as compared to 2018. The total number of accidental deaths in 2019 was 4,21,104 [LIST-1.1]. The incidence and rate of accidental deaths during 2009 – 2019 is presented in Table-1.1.

LIST-1.1
Percentage Change in Population, Number and Rate of Accidental Deaths over the Corresponding Previous Year during 2015 to 2019

Year	Mid-Year Projected Population* (In Lakh+)	Percentage Change in Population over the Previous Year	Percentage Change in Accidental Deaths over the Previous Year	Total Number of Accidental Deaths	Rate of Accidental Deaths	Percentage Change in Rate of Accidental Deaths over the Previous Year
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2015	12591.1	1.2	-8.5	413457	32.8	-9.6
2016	12739.9	1.2	1.2	418221	32.8	0.0
2017	13091.6#	2.8	-5.2	396584	30.3	-7.6
2018	13233.8#	1.1	3.8	411824	31.1	2.6
2019	13376.1#	1.1	2.3	421104	31.5	1.3

* Source: The Registrar General of India.

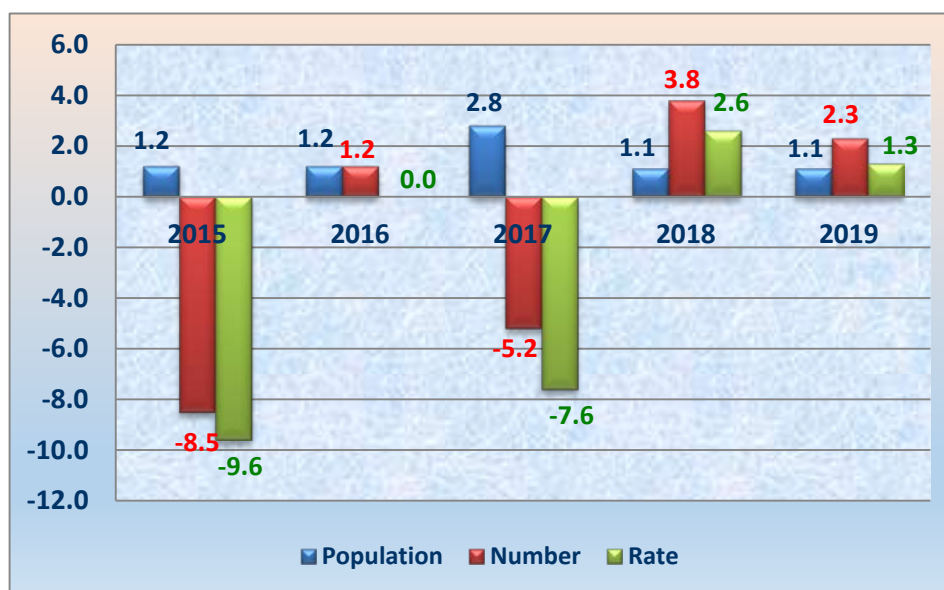
Source: Report of the Technical Group on Population Projections (November, 2019), National Commission on Population, Ministry of Health & Family Welfare.

+ One Lakh = 0.1 Million = 100,000

• As per data provided by States/UTs.

FIGURE-1.1

Percentage Change in Population, Number and Rate of Accidental Deaths during 2015 – 2019 (Over Corresponding Previous Year)



• As per data provided by States/UTs.

Out of 4,21,104 accidental deaths, 8,145 (1.9%) deaths were due to forces of nature and 4,12,959 (98.1%) deaths were due to other causes.

There was an increase of 18.2% (from 6,891 deaths to 8,145 deaths) in deaths due to forces of nature and increase of 2.0% (from 4,04,933 deaths to 4,12,959 deaths) in deaths due to other causes during 2019 as compared to 2018 [LIST-1.2].

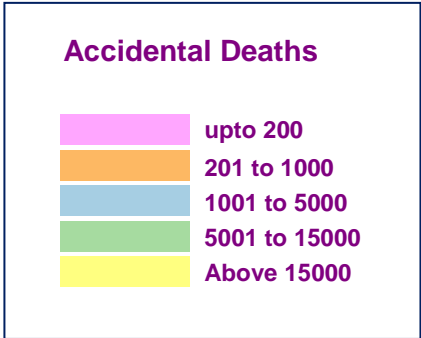
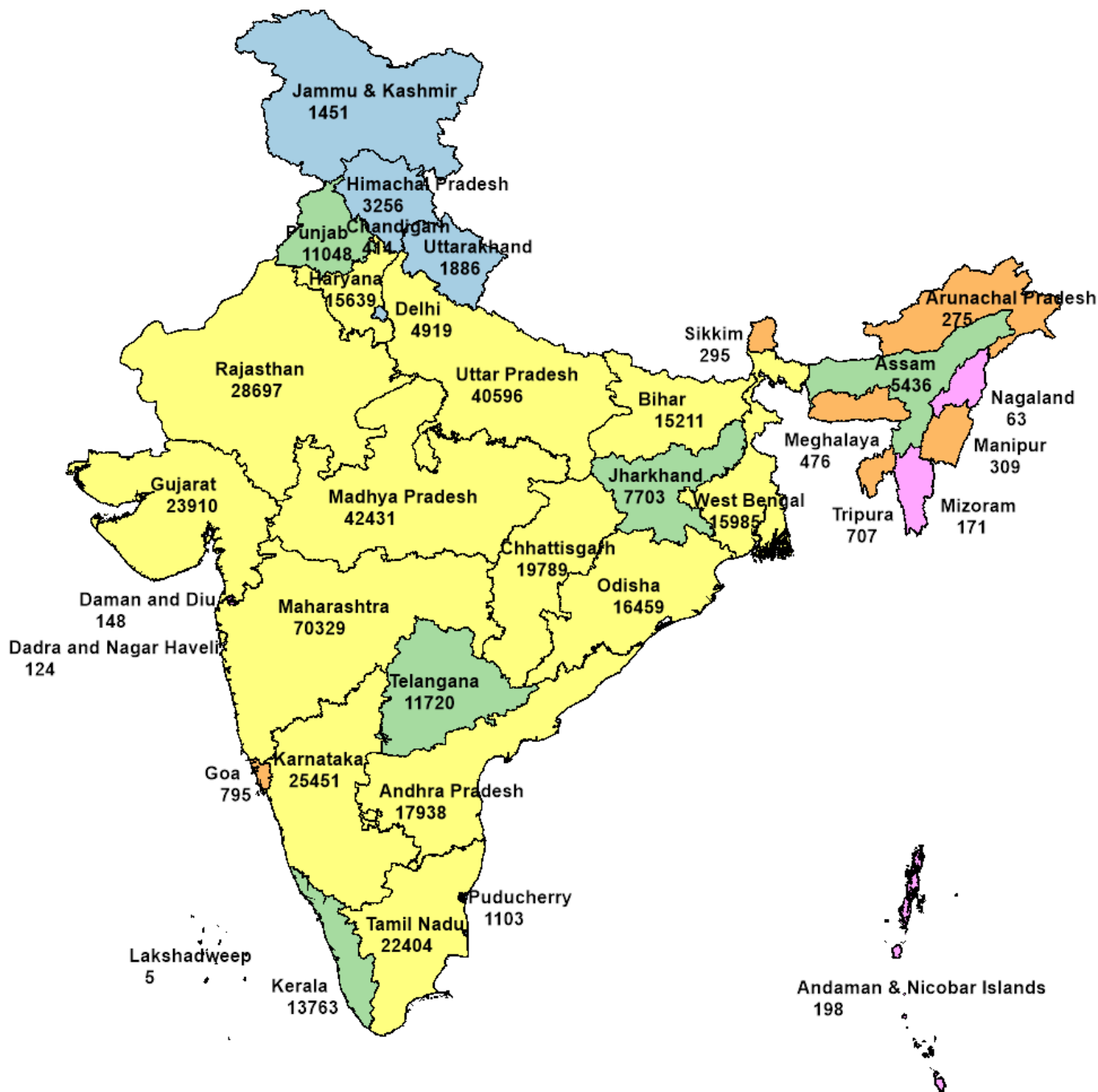
LIST-1.2

Number of Accidental Deaths due to Forces of Nature & Other Causes (2015 to 2019)

Year	Forces of Nature		Other Causes		Total Accidental Deaths	
	Number of Deaths	% change over previous year	Number of Deaths	% change over previous year	Number of Deaths	% change over previous year
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2015	10,510	-48.0	4,02,947	-6.6	4,13,457	-8.5
2016	8,684	-17.4	4,09,537	1.6	4,18,221	1.2
2017	7,143	-17.7	3,89,441	-4.9	3,96,584	-5.2
2018	6,891	-3.5	4,04,933	4.0	4,11,824	3.8
2019	8,145	18.2	4,12,959	2.0	4,21,104	2.3

• As per data provided by States/UTs.

FIGURE-1.2
STATE/UT – WISE ACCIDENTAL DEATHS DURING 2019

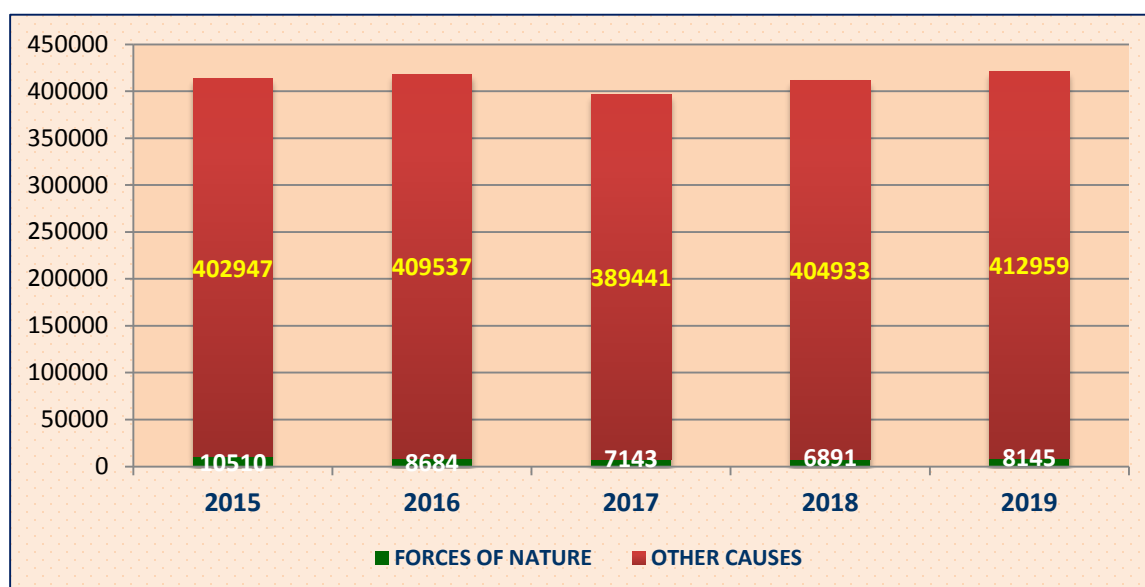


• As per data provided by States/UTs.

Map Powered by DevInfo, UNICEF

FIGURE-1.3

Total Number of Accidental Deaths due to Forces of Nature and Other Causes during 2015-2019



• As per data provided by States/UTs.

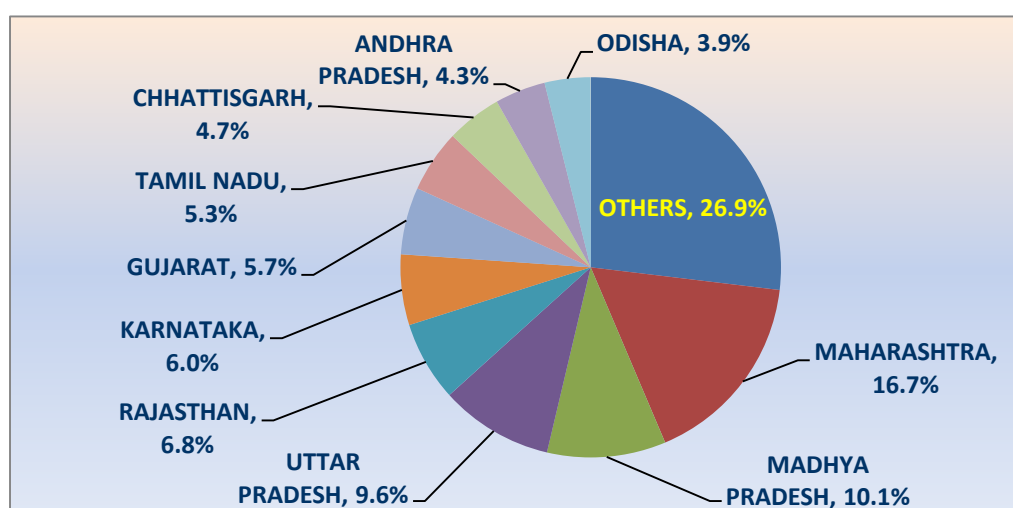
Number & Rate of Accidental Deaths in States, UTs and Cities

Maharashtra with a population share of 9.2% has reported highest number of accidental deaths (70,329), contributing nearly one-sixth (16.7%) of total accidental deaths reported in the country. Uttar Pradesh, the most populous State in the country with population

share of 16.9% has accounted for 9.6% of the total accidental deaths in the country. The other States having higher percentage share in total accidental deaths were Madhya Pradesh (10.1%), Rajasthan (6.8%), Karnataka (6.0%), Gujarat (5.7%), Tamil Nadu (5.3%), Chhattisgarh (4.7%), Andhra Pradesh (4.3%), Odisha (3.9%) and West Bengal (3.8%) [Table-1.2].

FIGURE-1.4

Percentage Share of Major States in Accidental Deaths during 2019



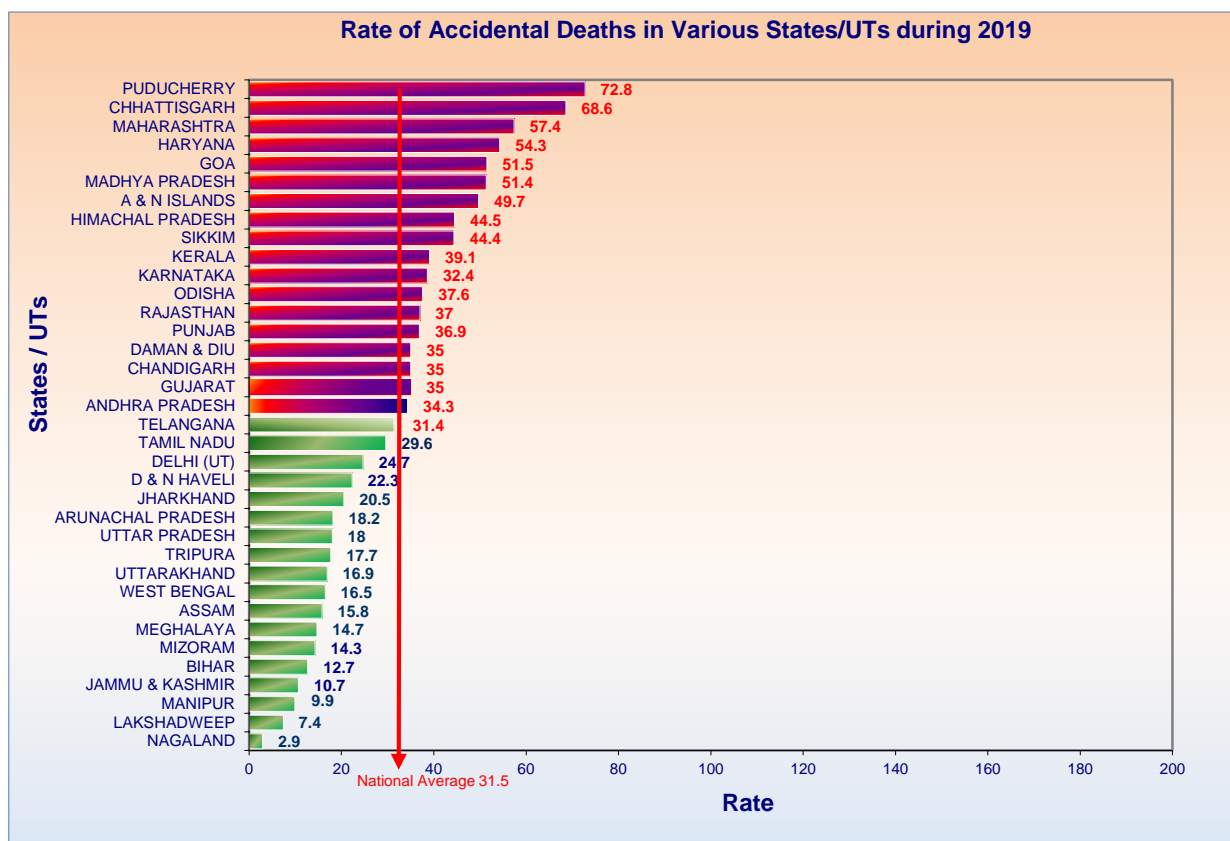
• As per data provided by States/UTs.

Other States/UTs include Arunachal Pradesh, Assam, Bihar, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Manipur, Mizoram, Meghalaya, Nagaland, Punjab, Sikkim, Telangana, Tripura, Uttarakhand, West Bengal, Chandigarh, A & N Island, D&N Haveli, Daman & Diu, Delhi, Lakshadweep and Puducherry

The highest **rate of accidental deaths** was reported from Puducherry (72.8) followed by Chhattisgarh (68.6), Maharashtra (57.4), Haryana (54.3), Goa (51.5) and Madhya Pradesh (51.4) against the national average of 31.5. Nineteen (19) out of 36 States/UTs have

reported higher rates of 'Accidental Deaths' as compared to All India Average of 31.5 deaths per one lakh of population [**Figure – 1.5**].

FIGURE–1.5



- As per data provided by States/UTs.

The number of accidental deaths has increased by 2.3% at national level during 2019 as compared to 2018. The number of 'Accidental Deaths' due to forces of nature has increased by 18.2% and deaths due to other causes have increased by 2.0% during 2019 over the year 2018. [**Table-1.3**].

Chandigarh has reported the highest percentage increase (71.1%) in total accidental deaths in the year 2019 as compared to 2018 (from 242 in 2018 to 414 in 2019), followed by Bihar (19.6%), Jharkhand (16.8%), Himachal Pradesh (13.6%) and Kerala (11.8%).

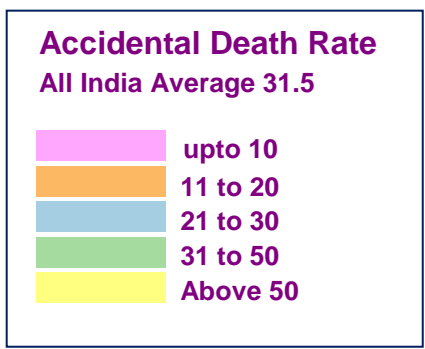
Nagaland has reported a decline of 26.7% in total accidental deaths in the year 2019 as compared to 2018 followed by Dadar & Nagar Haveli (23.9%), Arunachal Pradesh (18.9%) and Lakshadweep (16.7%). [**Table-1.3**].

Gender-wise analysis reveals that female and male constitute 19.2% and 80.8% of total victims respectively. Age group of majority of the victims was between 30 to 45 years. This group of people has accounted for 30.9% of all persons killed in accidents in the country during the year 2019. A total of 46,697 senior citizens (60 years & above of age) have also got killed in various accidents during 2019 comprising 11.1%. [**Table-1.4**]

FIGURE-1.6
STATE/UT – WISE RATE OF ACCIDENTAL DEATHS DURING 2019



Note:
 Rate of Accidental Deaths means Number of Accidental Deaths per 1,00,000 population.



Map Powered by DevInfo, UNICEF

- As per data provided by States/UTs.

Causes of Accidental Deaths

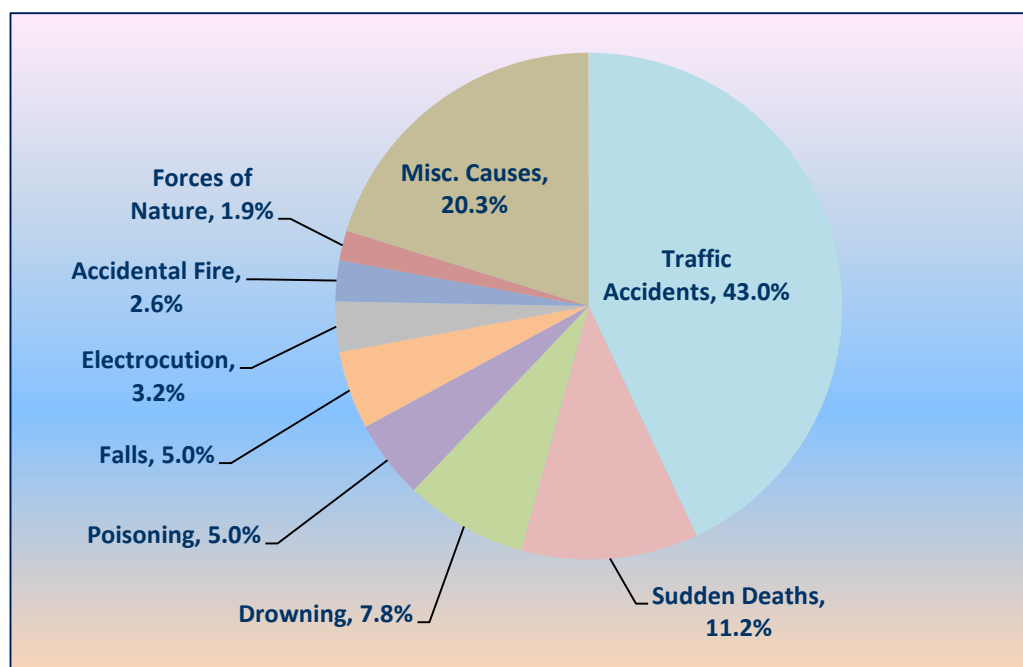
Accidental deaths have been grouped into two broad categories i.e. 'Deaths due to Forces of Nature and 'Deaths due to Other Causes'. Classification of types and causes of accidental deaths has been done for statistical purpose only.

Under causes attributable to 'Forces of Nature', the deaths due to 'Avalanche', 'Exposure to Cold', 'Earthquake', 'Epidemic', 'Flood', 'Heat/Sun Stroke' and 'Lightning' have increased during the year 2019 over the previous year 2018 whereas the deaths due to *inter-alia* 'Cyclone', 'Tornado', 'Landslide', 'Torrential Rain' and 'Forest Fire' have decreased in 2019 over 2018.

The deaths due to Other Causes such as 'Drowning', 'Electrocution', 'Falls', 'Traffic Accidents', 'Stampede', 'Sudden Deaths', 'Deaths of Women during Pregnancy' and 'Killed by Animals' have increased whereas the deaths due to 'Air Crash', 'Collapse of Structure', 'Accidental Explosion', 'Factory/Machine Accidents', 'Accidental Fire', 'Firearms', 'Mines or Quarry Disaster', 'Deaths due to Consumption of Illicit/Poisonous Liquor', 'Poisoning', 'Suffocation' and 'Drug overdose' have decreased in 2019 as compared to the previous year 2018.

Cause-wise details of accidental deaths, its share and percentage variation during 2019 over 2018 are presented in **Table-1.0**.

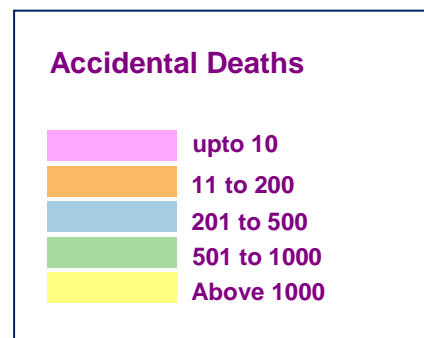
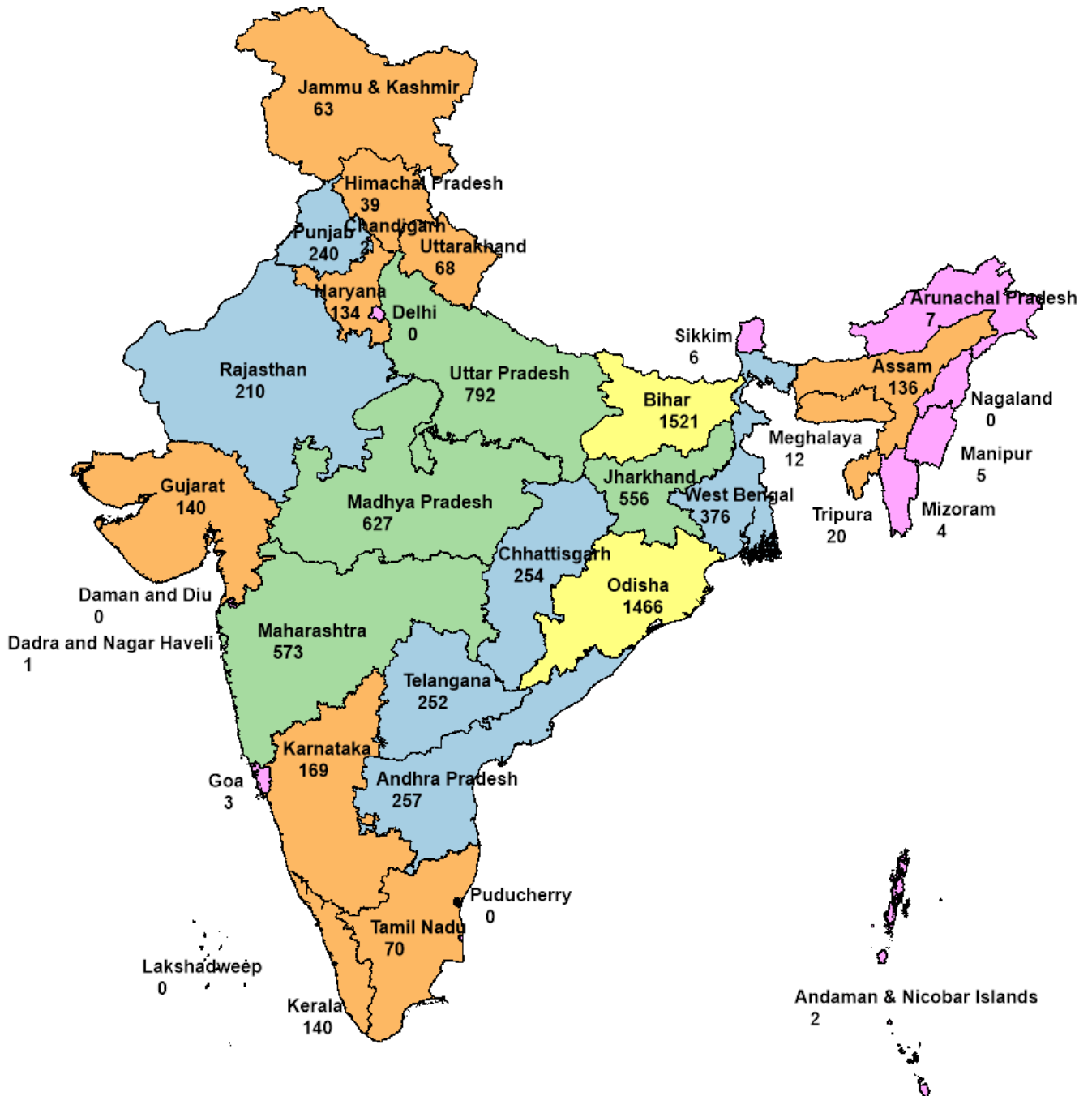
FIGURE-1.7
Percentage Share of Various Major Causes of Accidental Deaths during 2019
(Forces of Nature and Other Causes)



- As per data provided by States/UTs.

Misc. Causes include Collapse of Structure, Suffocation, Deaths of Women during Pregnancy, Killed by Animals, Deaths due to Consumption of Illicit/Poisonous Liquor, Accidental Explosion, Drug Overdose, Factory/Machine Accidents, Firearm, Mines or Quarry Disaster, Stampede, Air-Crash, Ship Accidents, Other than above & Unknown Causes.

FIGURE-1.8
STATE/UT – WISE DEATHS DUE TO FORCES OF NATURE DURING 2019



Map Powered by DevInfo, UNICEF

- As per data provided by States/UTs.

Accidental Deaths due to Forces of Nature

Cause - wise accidental deaths due to forces of nature are presented in **Table-1.5**. Out of 8,145 accidental deaths due to forces of nature, 35.3% deaths were due to 'Lightning' (2,876 deaths), 15.6% deaths due to 'Heat/Sun Stroke' (1,274 deaths), 11.6% deaths due to 'Flood (948 deaths) and 9.8% deaths due to 'Exposure to Cold' (796 deaths) during the year 2019. 'Landslide' and 'Cyclone' caused 3.2% (264 deaths) and 0.4% (33 deaths) of total deaths due to forces of nature respectively.

The age group-wise distribution of accidental deaths due to forces of nature is given in **Table-1.5**. As per age-wise classification of deaths due to forces of nature, 6.5% of such victims were below 14 years of age (533 out of 8,145 deaths), 5.7% in the age-group of 14 years to below 18 years (468 deaths), 17.8% in the age-group of 18 years to below 30 years (1,448 deaths), 25.3% in the age-group of 30 years to below 45 years (2,064 deaths) and 24.9% victims were in age group 45 years to below 60 years (2,029 deaths) during 2019. Senior citizens (60 yrs. and above) constituted 19.7% (1,603 deaths) of the total such victims.

State/UT - wise and gender - wise distribution of accidental deaths in the country by forces of nature along with their share in total deaths is presented **Table-1.8**. 'Lightning' was the dominant factor and caused 83.5%, 81.4% and 66.7%, of total such deaths in Chhattisgarh (212 out of 254 death), Tamil Nadu (57 out of 70 deaths) and Goa (2 out of 3 deaths) respectively. 'Heat/Sun Stroke' was the dominant factor and caused 61.9% (156 out of 252 deaths) of total accidental deaths due to forces of nature in Telangana. 58.8% (141 out of 240 death) of death in Punjab were due to 'Exposure to Cold'. 73.5% (100 out of 136 deaths) of deaths in Assam was due to 'Flood'. 'Landslide' was the dominant factor and caused 75.0%, 71.4%, 51.4% and 44.1% of total deaths in Mizoram (3 out of 4 deaths), Arunachal Pradesh (5 out of 7 deaths), Kerala (72 out of 140 deaths) and Uttarakhand (30 out of 68 deaths) respectively during 2019.

Majority of accidental deaths due to 'Cyclone' were reported in Odisha which accounted for 42.4% (14 out of 33 deaths) of

total such deaths reported in the country during 2019. Majority of deaths due to 'Torrential Rain' were reported in Uttar Pradesh which accounted for 24.6% (17 out of 69 deaths) of total such deaths in the country during 2019.

Accidental Deaths due to Other Causes

It is generally accepted that accidents due to 'Other Causes' are preventive and can be reduced by effective safety measures and safety consciousness.

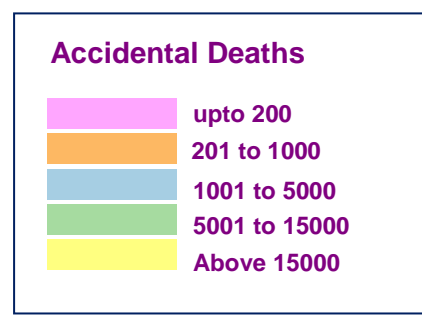
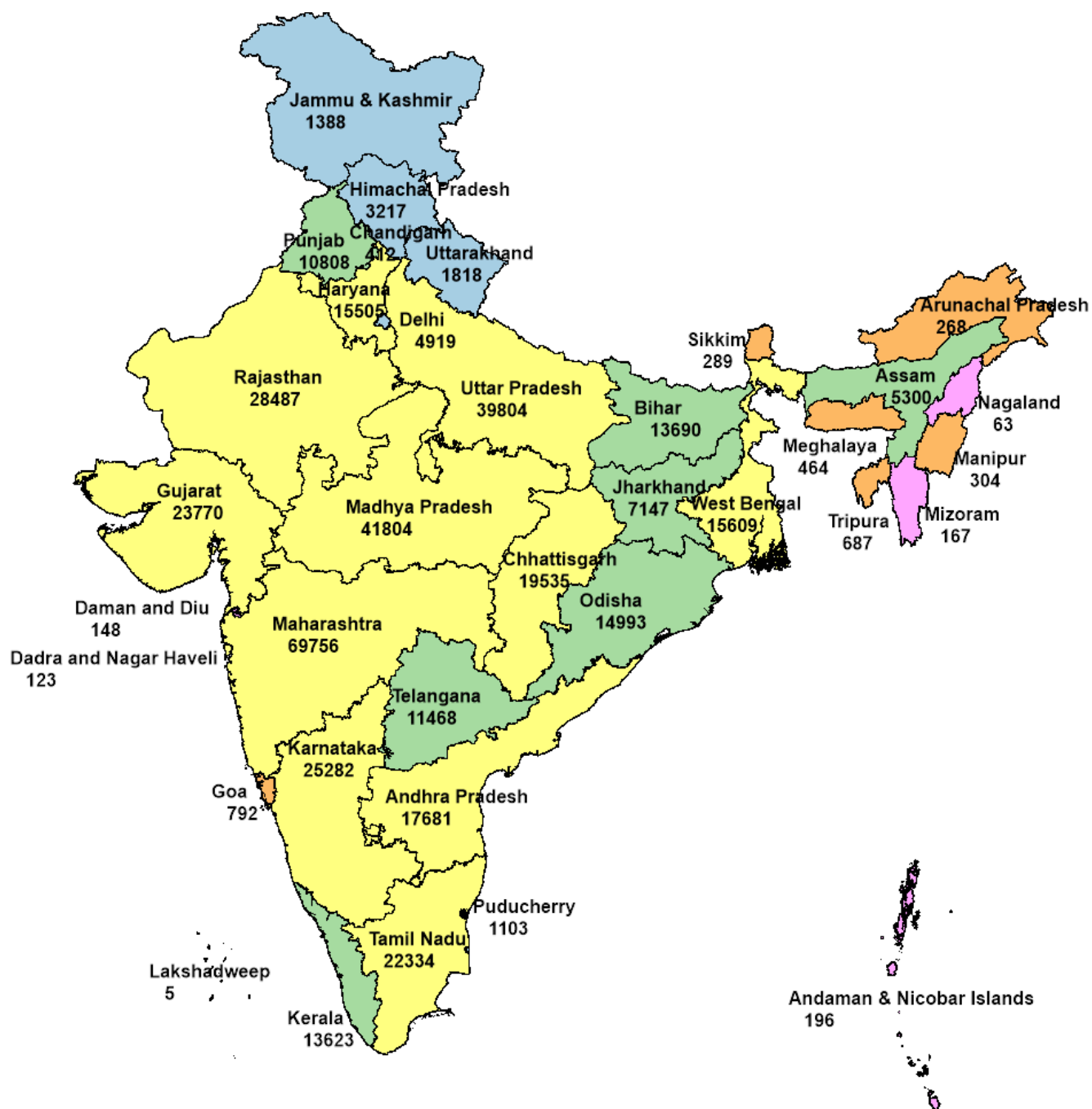
A total of 7,01,324 cases of Accidents due to 'Other Causes' were reported in the country which resulted in 4,12,959 deaths and left 4,46,284 persons injured during 2019 [**Table-1.6**].

The cause-wise analysis of deaths revealed that majority of deaths were due to traffic accidents which accounted for 43.9% (1,81,113 out of 4,12,959 total deaths) of total deaths due to 'Other Causes' during the year 2019. Besides, 'Sudden Deaths', 'Drowning', 'Poisoning' and 'Falls' caused 11.5% (47,295 deaths), 7.9% (32,671 deaths), 5.1% (21,196 deaths) and 5.1% (20,901 deaths) of total deaths due to other causes respectively. [**Table-1.0**]

The age-group-wise distribution of accidental deaths in the country by various 'Other Causes' along with their share in total deaths is presented in **Table-1.7**. Majority of victims were in age groups 30 - below 45 years and 18 - below 30 years which accounted for 31.0% (1,28,148 deaths) and 26.1% (1,07,930 deaths) of total such deaths respectively.

State/UT-wise and gender-wise distribution of accidental deaths in the country by various other causes is presented in **Table-1.9**. Maharashtra with 9.2% of country's population has reported 16.9% (69,756 out of 4,12,959 deaths) of accidental deaths due to other causes. Madhya Pradesh, Uttar Pradesh, Rajasthan, Karnataka, Gujarat and Tamil Nadu accounted for 10.1%, 9.6%, 6.9%, 6.1%, 5.8% and 5.4% of total such deaths respectively during the year 2019.

FIGURE-1.9
STATE/UT – WISE ACCIDENTAL DEATHS DUE TO OTHER CAUSES
DURING 2019



• As per data provided by States/UTs.

Map Powered by DevInfo, UNICEF

State/UT-wise and Cause-wise details on 'Accidents due to Other Cause' is presented in **Table-1.9**. State/UT-wise analysis reveals that Uttar Pradesh accounted for maximum deaths (27,661 out of 1,81,113) under traffic accidents. Maharashtra accounted for maximum deaths (15,358 out of 47,295) under 'Sudden Deaths'. Madhya Pradesh accounted for maximum deaths (4,904 out of 32,671) under 'Drowning'. Madhya Pradesh accounted for maximum deaths (4,041 out of 21,196) under 'Poisoning'.

A total of 1,141 incidents of consumption of illicit/spurious liquor caused 1,296 deaths in the country during 2019. States where various such deaths were reported include Karnataka (268 deaths) followed by Punjab (191 deaths), Madhya Pradesh (190), Chhattisgarh and Jharkhand (115 deaths each), Assam (98 deaths) and Rajasthan (88 deaths).

Fire Accidents

Considering the number of fire accidents in the country and potential of the damage that can be caused by such accidents, the Bureau has also collected data on fire accidents according to places of occurrence for appropriate preventive strategies viz. 'Fire in School Buildings', 'Fire in Commercial Buildings', 'Fire in Residential / Dwelling Buildings', 'Fire in Government Buildings', 'Fire in Mines', 'Fire in Factories', 'Accidental Fire in

Trains' and 'Accidental Fire in Vehicles' [**Table-1.10**].

A total of 11,037 cases of fire accidents were reported in the country during 2019, showing a decrease of 15.7% as compared to 2018 (13,099 cases). 11,037 incidents of fire accidents caused injuries to 441 persons and 10,915 deaths during 2019. The cause-wise analysis of fire accidents revealed that 58.0% of total deaths (6,329 out of 10,915) were reported in residential/dwelling buildings during 2019 [**Table 1.11**].

Large number of cases of fire accidents were reported in Madhya Pradesh (1,532 out of 11,037), accounting for 13.9% of total such cases during 2019 [**Table-1.11**].

The State/UT-wise analysis of place of fire accidents revealed that 26 States & UTs have reported 50.0% or more deaths due to 'Fire in residential or dwelling building' during 2019. These States/UTs were Meghalaya, Uttarakhand, Lakshadweep (100% each), Goa (92.3%), Assam (91.8%), Gujarat (89.9%), Tamil Nadu (86.8%), A & N Islands (85.7%), Punjab (83.9%), Kerala (83.5%), Jammu & Kashmir (82.6%) and Tripura (81.5%). [**Table-1.11**].

Accidents in Cities

The term 'Mega City' refers to a city which has a population of 10 lakhs or more. As per the Population Census 2011, the status of mega city has been accorded to 53 cities.

A total of 61,404 accidental deaths were reported in 53 mega cities during 2019. Maximum numbers of accidental deaths (9,246 deaths) were reported in Mumbai accounting for 15.1% of total deaths, followed by Delhi City (4,516), Bengaluru (4,016), Pune (3,949), Jaipur (2,628) and Surat (2,353).

Rate of accidental deaths in these 53 mega cities was higher (38.2) than all India rate of accidental deaths (31.5). The rate of accidental deaths was highest in Rajkot (99.3) followed by Nasik (99.0), Jodhpur (97.6), Vasai Virar (92.1), Raipur (89.4) and Aurangabad (87.1) as compared to average rate for the cities (38.2) [Table-1.2].

Out of 61,404 accidental deaths in 53 mega cities; 418 and 60,986 deaths were due to 'Forces of Nature' and 'Other Causes' respectively during 2019. A decrease of 6.7% was observed in deaths due to forces of nature and an increase of 0.1% was witnessed in deaths due to 'Other Causes' during 2019 over 2018 respectively. [Table-1.3]

Kolkata, the third largest city in terms of population (8.8% of the total population of all mega cities) among 53 cities, reported the low share of deaths in cities accounting for 0.5% of total accidental deaths in 53 mega cities during 2019. The comparative reporting of 'Accidental Deaths' during 2019 in the top four-metropolitan cities is presented in LIST-1.3.

Accidental Deaths due to Forces of Nature in Cities

A total of 418 deaths due to forces of nature were reported in these 53 mega cities during 2019. Among specified causes of accidents due to forces of nature, maximum deaths were reported due to 'Heat/Sun Stroke' followed by 'Exposure to cold', accounting for 26.3% and 26.1% of total such accidental deaths. Due to 'Heat/Sun Stroke' maximum deaths were reported in Amritsar (38 deaths), Vijayawada (15 deaths) and Ludhiana (14 deaths). Due to 'Exposure to Cold' 70.0% deaths were reported in Dhanbad (7 out of 10 death), 69.6% deaths in Ludhiana (32 out of 46 death), 60.0% in Ghaziabad (3 out of 5 deaths), and 50.0% in Durg Bhilainagar (1 out of 2 deaths).

Accidental Deaths due to Other Causes in Cities

A total of 1,14,409 cases of 'Other' accidents were reported in 53 mega cities which caused injuries to 59,745 persons and 60,986 deaths during 2019. The cause-wise analysis of deaths due to other causes revealed that 27.1%, 19.8%, and 6.6% deaths in 53 cities were due to 'Traffic Accidents', 'Sudden Deaths' and 'Falls' respectively.

Among 53 cities, Mumbai city accounted for 15.1% of total deaths reported under 'Other' accidents followed by Delhi City and Bengaluru which accounted for 7.4% and 6.6% respectively during 2019.

"Data on City-wise information is available on our website under 'Additional Tables for ADSI'"

LIST-1.3
Rate of Accidental Deaths in Metropolitan Cities during 2019

Sl. No.	City	Population (In Lakhs)	Share of Population In Cities (Percent)	Share of Deaths In Cities (Percent)	Rate (No. of Deaths Per One Lakh Population)
(1)	(2)	(3)	(4)	(5)	(6)
1.	Chennai	87.0	5.4	3.2	22.4
2.	Delhi	163.2	10.1	7.4	27.7
3.	Kolkata	141.1	8.8	0.5	2.3
4.	Mumbai	184.1	11.4	15.1	50.2

- As per data provided by States/UTs.
