

CHAPTER – 1

ACCIDENTS IN INDIA

Introduction

This is the fifth edition of the report after the comprehensive revision of the proformae for data collection of 'Accidental Deaths & Suicides in India' completed 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 increased in 2018 as compared to 2017. The total number of accidental deaths in 2018 was 4,11,824 [Table-1(A)]. The incidence and rate of accidental deaths during 2008-2018 is presented in Table-1.1.

Table – 1 (A)
Percentage Change in Population, Number and Rate of Accidental Deaths over the Corresponding Previous Year during 2014 to 2018

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)
2014	12440.4	1.2	12.8	451757	36.3	11.3
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

* Source: The Registrar General of India.

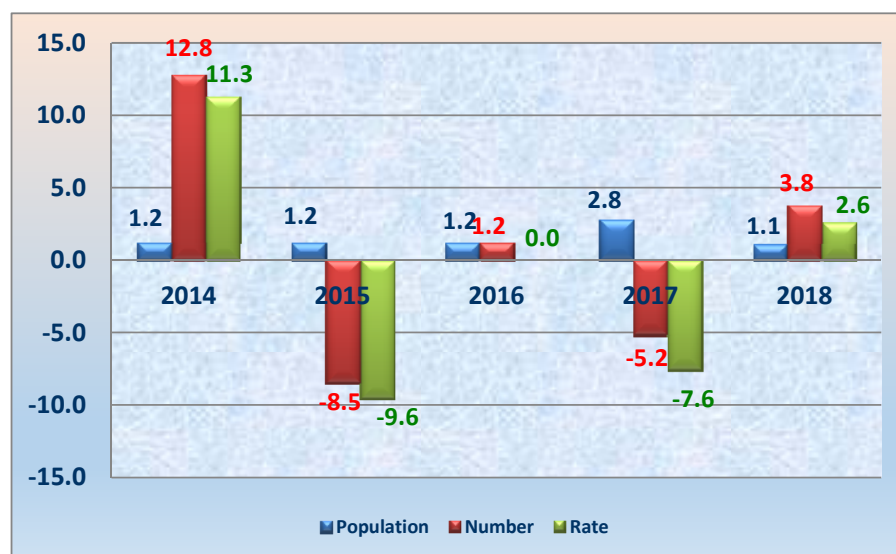
Source: Report of the Technical Group on Population Projections (November, 2019), National Commission on Population, Ministry of Health & Family Welfare.

+ 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 2014 – 2018 (Over Corresponding Previous Year)



- As per data provided by States/UTs.

Out of 4,11,824 accidental deaths, 6,891 (1.7%) deaths were due to forces of nature and 4,04,933 (98.3%) deaths were due to other causes.

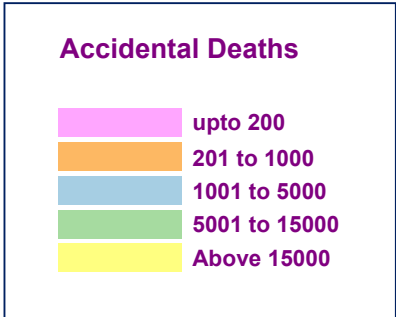
There was a decline of 3.5% (from 7,143 deaths in 2017 to 6,891 deaths in 2018) in deaths due to forces of nature and increase of 4.0% (from 3,89,441 deaths in 2017 to 4,04,933 deaths in 2018) in deaths due to other causes during 2018 as compared to 2017 [Table-1(B)].

Table — 1 (B)
Number of Accidental Deaths due to Forces of Nature & Other Causes (2014 to 2018)

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)
2014	20,201	-11.2	4,31,556	14.2	4,51,757	12.8
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

- As per data provided by States/UTs.

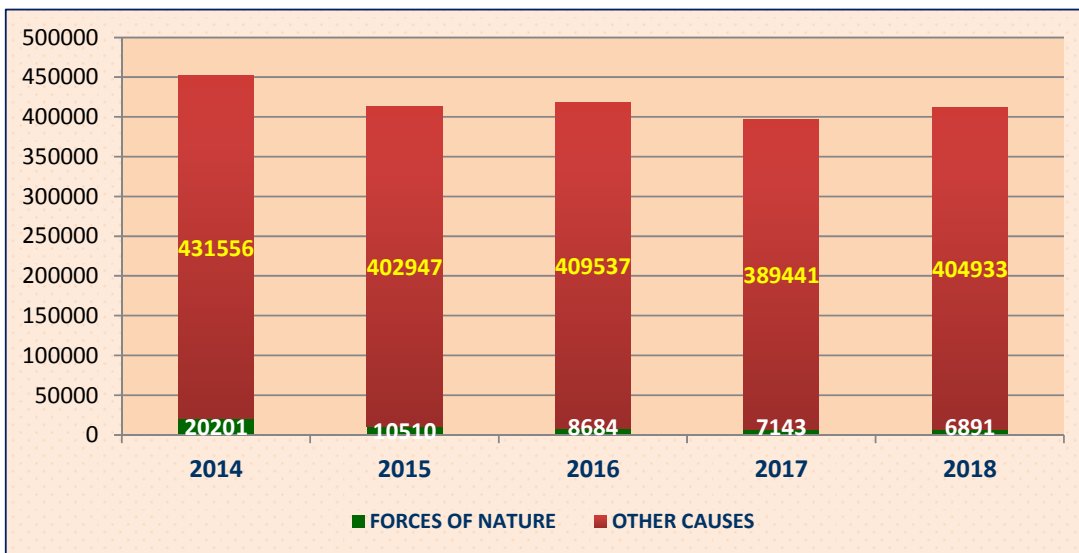
STATE/UT - WISE ACCIDENTAL DEATHS DURING 2018



• As per data provided by States/UTs.

Map Powered by DevInfo, UNICEF

Figure 1.2
Number of Accidental Deaths due to Forces of Nature and Other Causes during 2014-2018



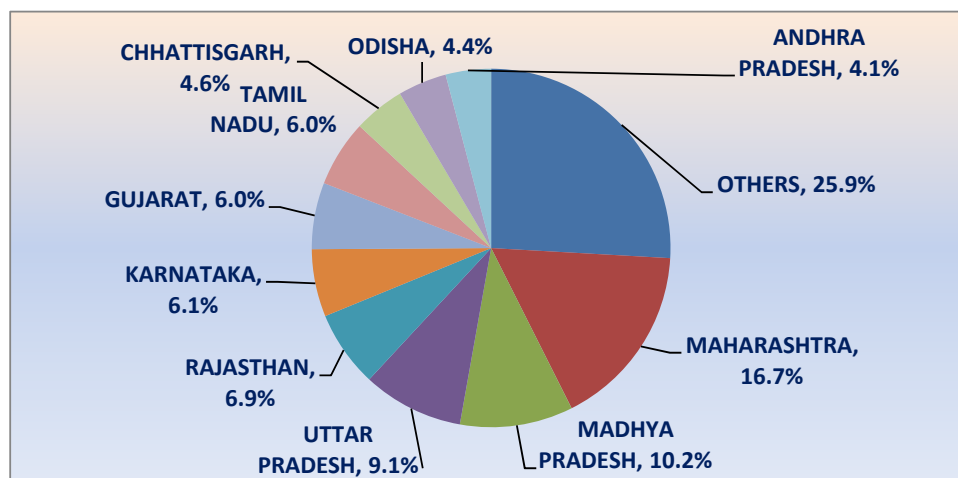
• As per data provided by States/UTs.

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

Out of 4,11,824 accidental deaths, like previous year, in 2018 also, Maharashtra with a population share of 9.2% has reported highest number of accidental deaths (68,834), 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 16.8% has accounted for 9.1% of the total accidental deaths in the country. The other States having higher percentage share in total accidental deaths were Madhya Pradesh (10.2%), Rajasthan (6.9%), Karnataka (6.1%), Gujarat & Tamil Nadu (6.0% each), Chhattisgarh (4.6%), Odisha (4.4%), Andhra Pradesh (4.1%) and West Bengal (4.0%) during 2018 [Table-1.2].

Figure 1.3
Percentage Share of Major States in Accidental Deaths during 2018



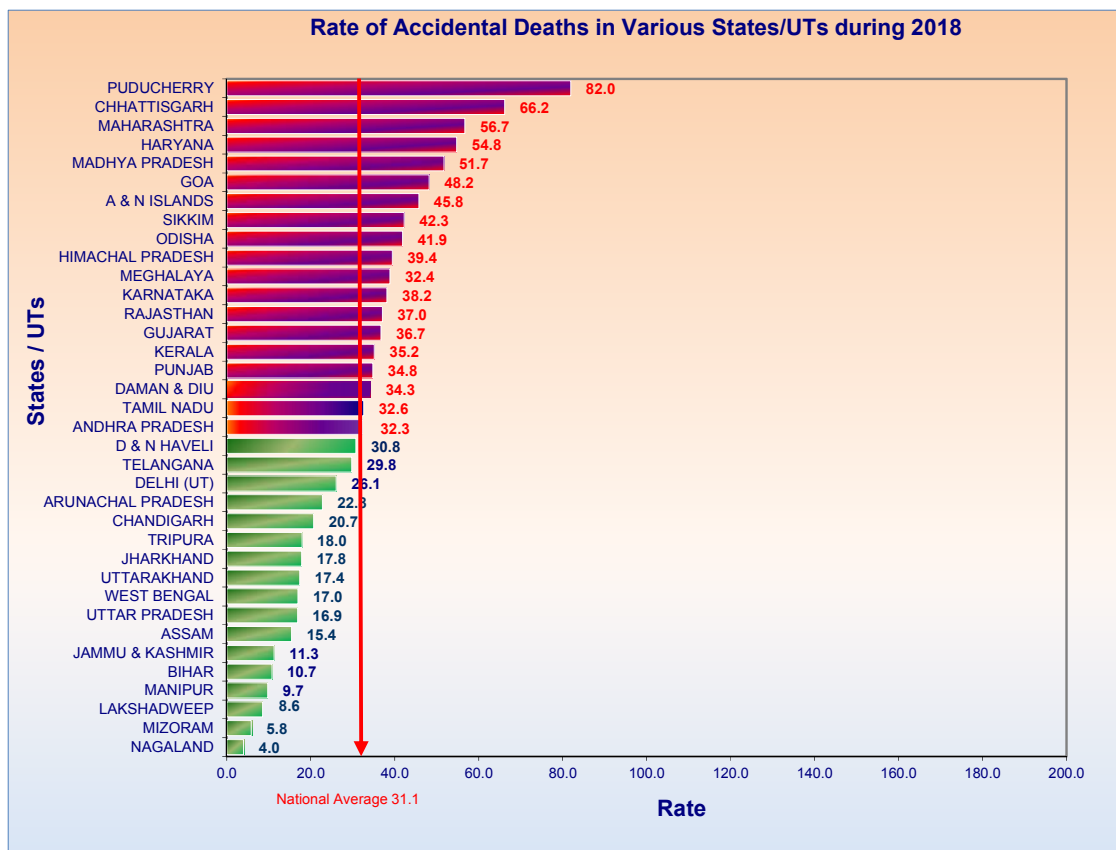
• As per data provided by States/UTs.

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

The highest **rate of accidental deaths** was reported from Puducherry (82.0) followed by Chhattisgarh (66.2), Maharashtra (56.7), Haryana (54.8), Madhya Pradesh (51.7) and Goa (48.2) against the national average rate of 31.1. 19 out of 36 States/UTs have reported

higher rates of 'Accidental Deaths' as compared to All India Average of 31.1 deaths per one lakh of population at all India level [Figure- 1.4].

Figure 1.4



- As per data provided by States/UTs.

The number of accidental deaths has increased by 3.8% at national level during 2018 as compared to 2017. The number of 'Accidental Deaths' due to forces of nature have decreased by 3.5% and deaths due to other causes have increased by 4.0% during 2018 over the year 2017. [Table-1.3].

Arunachal Pradesh has reported the highest percentage increase (45.5%) in total accidental deaths in the year 2018 as compared to 2017 (from 233 in 2017 to 339 in 2018), followed by Odisha (27.4%), Uttarakhand (21.7%), Jammu & Kashmir (12.2%) and Assam

(9.7%). Puducherry has reported a decline of 21.8% in total accidental deaths in the year 2018 as compared to 2017 followed by Chandigarh (19.3%), Mizoram (13.4%) and Daman & Diu (12.7%) [Table-1.3].

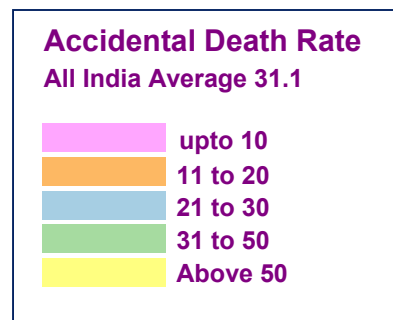
Gender-wise analysis reveals that female and male constitute 19.6% and 80.4% of total victims respectively. Age group of most of the victims was between 30 to 45 years. This group of people has accounted for 30.9% of all persons killed in accidents in the country during the year 2018. A total of 41,976 senior citizens (60 years & above of age) have also got killed in various accidents during 2018 [Table-1.4].

STATE/UT - WISE RATE OF ACCIDENTAL DEATHS DURING 2018



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

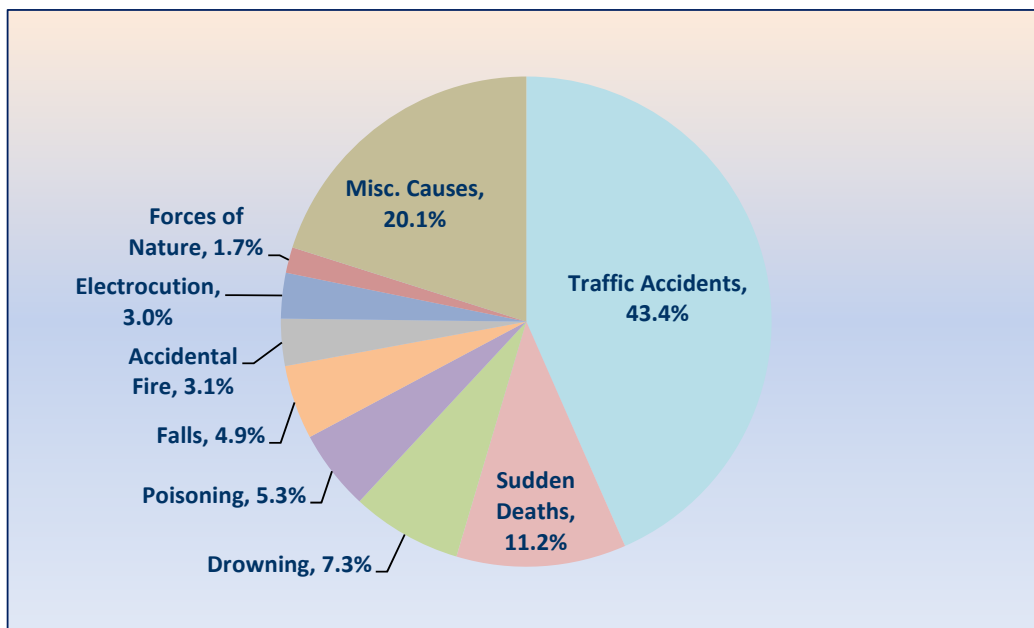
Accidental deaths have been grouped into two broad categories i.e. 'Deaths due to Forces of Nature and 'Deaths due to Other Causes'. Classification of types and causes of accidental deaths has been done for statistical purpose only.

Under causes attributable to 'Forces of Nature', the deaths due to 'Exposure to Cold', 'Tornado', 'Flood' and 'Landslide' have increased during the year 2018 over the previous year 2017 whereas the deaths due to which *inter-alia* include 'Avalanche', 'Cyclone', 'Earthquake', 'Epidemic', , 'Heat/Sun Stroke', 'Lightning', 'Torrential Rain' and 'Forest Fire' have decreased in 2018 over 2017.

The deaths due to Other Causes such as 'Collapse of Structure', 'Electrocution', 'Falls', 'Factory/ Machine Accidents', 'Mines or Quarry Disaster', 'Traffic Accidents', 'Sudden Deaths', 'Deaths of Women during Pregnancy', 'Poisoning', 'Suffocation' and 'Drug Overdose' has increased whereas the deaths due to 'Air Crash', 'Ship Accidents', ' Drowning', 'Accidental Explosion', 'Accidental Fire', 'Firearms', 'Stampede', 'Deaths due to Consumption of Illicit/Poisonous Liquor' and 'Killed by Animals' has increased in 2018 as compared to the previous year 2017.

Cause-wise details of accidental deaths, its share and percentage variation during 2018 over 2017 are presented in **Table-1(C)**.

Figure 1.5
Percentage Share of Various Major Causes of Accidental Deaths during 2018
(Forces of Nature and Other Causes)



- As per data provided by States/UTs.

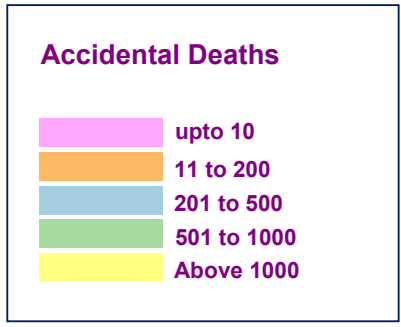
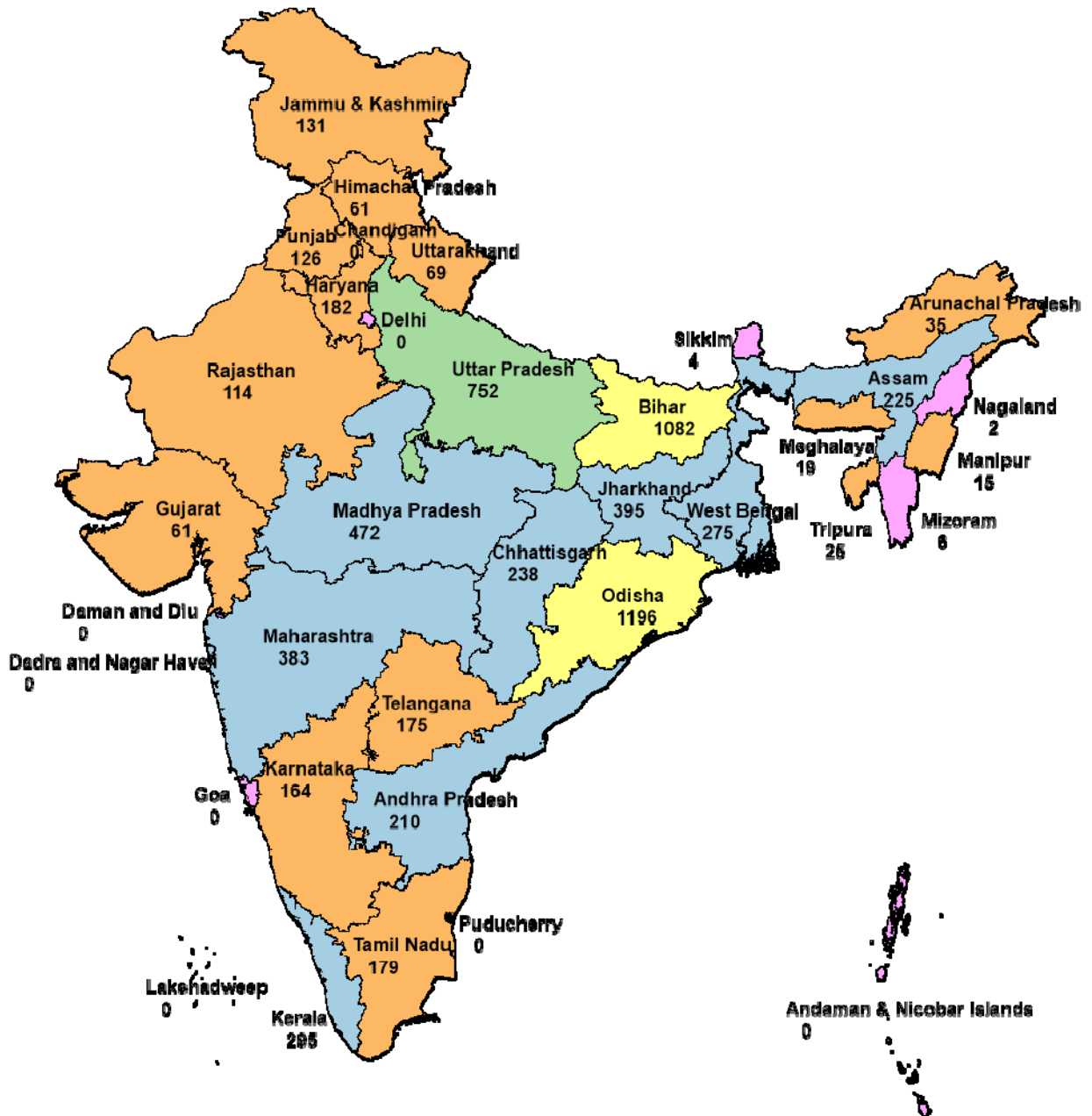
Misc. Causes include Collapse of Structure, Suffocation, Deaths of Women during Pregnancy, Killed by Animals, Deaths due to Consumption of Illicit/Poisonous Liquor, Accidental Explosion, Drug Overdose, Factory/Machine Accidents, Firearm, Mines or Quarry Disaster, Stampede, Air-Crash, Ship Accidents,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

Table-1(C)
Number and Share of Accidental Deaths due to Forces of Nature and Other Causes - 2017 & 2018

Sl. No.	Cause	2017		2018		% Variation during 2018 over 2017
		No.	% Share (w.r.t. All India)	No.	% Share (w.r.t. All India)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
A. FORCES OF NATURE						
1	Avalanche	38	0.5	5	0.1	-86.8
2	Exposure to Cold	738	10.3	757	11.0	2.6
3	Cyclone	133	1.9	125	1.8	-6.0
4	Tornado	14	0.2	36	0.5	157.1
5	Tsunami	0	0.0	0	0.0	-
6	Earthquake	2	0.0	0	0.0	-100.0
7	Epidemic	3	0.0	0	0.0	-100.0
8	Flood	496	6.9	500	7.3	0.8
9	Heat/Sun Stroke	1127	15.8	890	12.9	-21.0
10	Landslide	231	3.2	404	5.9	74.9
11	Lightning	2885	40.4	2357	34.2	-18.3
12	Torrential Rain	259	3.6	101	1.5	-61.0
13	Forest Fire	19	0.3	10	0.1	-47.4
14	Causes other than above	1198	16.8	1706	24.8	42.4
15	Total (A)	7143	100.0	6891	100.0	-3.5
B. OTHER CAUSES						
1	Air-Crash	16	0.0	15	0.0	-6.3
2	Ship Accidents	8	0.0	0	0.0	-100.0
3	Collapse of Structure	1997	0.5	2017	0.5	1.0
4	Drowning	30279	7.8	30187	7.5	-0.3
5	Electrocution	12004	3.1	12154	3.0	1.2
6	Accidental Explosion	729	0.2	696	0.2	-4.5
7	Falls	19092	4.9	20201	5.0	5.8
8	Factory/Machine Accidents	582	0.1	694	0.2	19.2
9	Accidental Fire	13159	3.4	12748	3.1	-3.1
10	Firearm	540	0.1	528	0.1	-2.2
11	Mines or Quarry Disaster	93	0.0	125	0.0	34.4
12	Traffic Accidents	175586	45.1	178832	44.2	1.8
13	Stampede	49	0.0	6	0.0	-87.8
14	Sudden Deaths	42999	11.0	46003	11.4	7.0
15	Deaths of Women during Pregnancy	1086	0.3	1146	0.3	5.5
16	Deaths due to Consumption of Illicit/Poisonous Liquor	1510	0.4	1365	0.3	-9.6
17	Killed by Animals	1207	0.3	1130	0.3	-6.4
18	Poisoning	20809	5.3	21646	5.3	4.0
19	Suffocation	1725	0.4	1921	0.5	11.4
20	Drug Overdose	745	0.2	875	0.2	17.4
21	Causes Not Known	12179	3.1	14634	3.6	20.2
22	Causes other than above	53047	13.6	58010	14.3	9.4
	Total (B)	389441	100.0	404933	100.0	4.0
	Grand Total (A+B)	396584	100.0	411824	100.0	3.8

• As per data provided by States/UTs.

STATE/UT - WISE DEATHS DUE TO FORCES OF NATURE DURING 2018



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 6,891 accidental deaths due to forces of nature, 34.2% deaths were due to 'Lightning' (2,357 deaths), 12.9% deaths due to 'Heat/Sun Stroke' (890 deaths), 11.0% deaths due to 'Exposure to Cold' (757 deaths) and 7.3% deaths due to 'Flood' (500 deaths) during the year 2018. 'Landslide' and 'Cyclone' caused 5.9% (404 deaths) and 1.8% (125 deaths) of total deaths due to forces of nature respectively during 2018.

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, 6.6% of such victims were below 14 years of age (454 out of 6,891 deaths), 6.6% in the age-group of 14 years & above to below 18 years (456 deaths), 19.7% in the age-group of 18 years to below 30 years (1,361 deaths), 25.5% in the age-group of 30 years to below 45 years (1,755 deaths) and 24.6% victims were in age group 45 years to below 60 years (1,693 deaths) during 2018. Senior citizens (60 yrs. and above) constituted 17.0% (1,172 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' caused 89.5%, 80.7% and 76.8%, of total such deaths in Chhattisgarh (213 out of 238 death), Madhya Pradesh (381 out of 472 deaths) and Karnataka (126 out of 164 deaths) respectively. 'Heat/Sun Stroke' caused 61.1% (107 out of 175 deaths) of total accidental deaths due to forces of nature in Telangana. 65.9% (83 out of 126 death) of death in Punjab were due to 'Exposure to Cold'. 42.4% (125 out of 295 deaths) of deaths in Kerala was due to 'Flood'. 'Landslide' caused 100.0%, 66.7%, 60.9% and 60.0% of total deaths in Nagaland (2 out of 2), Mizoram (4 out of 6 deaths), Uttarakhand (42 out of 69 deaths) and Manipur (9 out of 15 deaths) respectively during 2018.

Majority of accidental deaths due to 'Cyclone' were reported in Tamil Nadu which accounted for 76.0% (95 out of 125 deaths) of total such deaths reported in the country during

2018. Majority of deaths due to 'Torrential Rain' were reported in Bihar which accounted for 58.4% (59 out of 101 deaths) of total such deaths during 2018.

Other Causes of Accidental Deaths

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

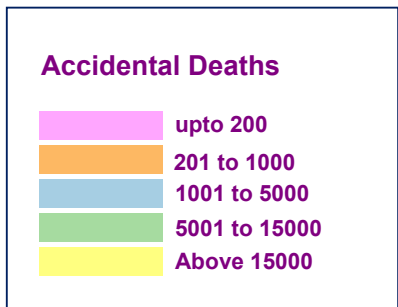
A total of 7,02,094 cases of Accidents due to 'Other Causes' were reported in the country which resulted in 4,04,933 deaths and left 4,54,244 persons injured during 2018 [**Table-1.6**].

The cause-wise analysis of deaths revealed that majority of deaths were due to traffic accidents which accounted for 44.2% (1,78,832 out of 4,04,933 deaths) of total deaths due to 'Other Causes' during the year 2018. Besides, 'Sudden Deaths', 'Drowning', 'Poisoning' and 'Falls' caused 11.4% (46,003 deaths), 7.5% (30,187 deaths), 5.3% (21,646 deaths) and 5.0% (20,201 deaths) of total deaths due to other causes respectively [**Table-1(C)**].

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 above - below 45 years and 18 above - below 30 years which accounted for 31.0% (1,25,444 deaths) and 27.1% (1,09,837 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% (one-tenth) of country's population has reported 16.9% (68,451 out of 4,04,933 deaths) of accidental deaths due to other causes. Madhya Pradesh, Uttar Pradesh, Rajasthan, Karnataka, Gujarat and Tamil Nadu accounted for 10.3%, 9.1%, 7.0%, 6.1%, 6.1% and 6.0% of total such deaths respectively during the year 2018.

STATE/UT - WISE ACCIDENTAL DEATHS DUE TO OTHER CAUSES DURING 2018



• As per data provided by States/UTs.

Map Powered by DevInfo, UNICEF

State/UT-wise and Cause-wise details on 'Other Cause of Accidents' is presented in **Table 1.9**. State/UT-wise analysis reveals that a total of 26,329 out of 1,78,832 deaths due to traffic accidents were reported in Uttar Pradesh accounting for 14.7% of total such deaths in the country during 2018. A total of 15,633 out of 46,003 deaths were reported from Maharashtra under 'Sudden Deaths' accounted for 34.0% of total such deaths. Large number of deaths due to 'Drowning' were reported from Madhya Pradesh (4,542 out of 30,187) accounting for 15.0% of such deaths. Maximum number of deaths due to 'Poisoning' were reported from Madhya Pradesh (4,300 out of 21,646) accounting for 19.9% of such deaths.

A total of 1,346 incidents of consumption of illicit/spurious liquor caused 1,365 deaths in the country during 2018. States where various such deaths were reported include Madhya Pradesh (410 deaths) followed by Karnataka (218 deaths), Haryana (162 deaths), Punjab (159 deaths), Uttar Pradesh (78 deaths), Chhattisgarh (77 deaths) and Rajasthan (64 deaths) during 2018.

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 13,099 cases of fire accidents were reported in the country during 2018, showing a decrease of 2.2% during 2018 over 2017 (13,397 cases). 13,099 incidents of fire accidents caused injuries to 777 persons and 12,748 deaths during 2018. The cause-wise analysis of fire accidents revealed that 56.5% of total deaths (7,208 out of 12,748) due to fire accidents were reported in residential/dwelling buildings during 2018 [**Table 1.11**].

Large number of cases of fire accidents were reported in Madhya Pradesh (1,992 out of 13,099), accounting for 15.2% of total such cases during 2018 [**Table-1.11**].

The State/UT-wise analysis of place of fire accidents revealed that 23 States & UTs have reported 50.0% or more deaths due to 'Fire in residential or dwelling building' during 2018. These States/UTs were Manipur, Nagaland, Tripura, A & N Islands & Daman & Diu (100% each), Punjab (91.7%), Telangana (87.6%), Karnataka (86.1%), Gujarat (81.0%) and Goa, Sikkim & D & N Haveli (80.0%) [**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 61,345 accidental deaths were reported in 53 mega cities during 2018. Maximum numbers of accidental deaths (9,417 deaths) were reported in Mumbai accounting for 15.4% of total deaths, followed by Delhi City (4,374), Pune (4,000), Bengaluru (3,643), Jaipur (2,832) and Nagpur (2,394).

Rate of accidental deaths in these 53 mega cities was higher (38.2) than all India rate of accidental deaths (31.1). The rate of accidental deaths was highest in Aurangabad (104.2) followed by Rajkot (99.8), Nagpur (95.8), Raipur (94.6), Jodhpur (93.2) and Vasai Virar (92.8) as compared to average rate for the cities (38.2) [Table-1.2].

Out of 61,345 accidental deaths in 53 mega cities; 448 and 60,897 deaths were due to forces of nature and other causes of accidents respectively during 2018. A decrease of 2.6% was observed in deaths due to forces of nature and an increase of 0.6% was witnessed in deaths due to 'Other Causes' during 2018 over 2017 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 lowest share of deaths in cities accounting for 1.2% of total accidental deaths in 53 mega cities during 2018. The comparative reporting of 'Accidental Deaths' during 2018 in the top four-metropolitan cities is presented in Table-1(D).

Accidental Deaths due to Forces of Nature in Cities

A total of 448 deaths due to forces of nature were reported in these 53 mega cities during 2018. Among specified causes of accidents due to forces of nature in 53 cities, maximum deaths were reported due to 'Heat/Sun Stroke' followed by 'Exposure to cold', accounting for 34.8% and 34.6% of total such accidental deaths during 2018. All deaths in Ahmedabad (10 deaths), Hyderabad & Jaipur (2 deaths) and Vijayawada (39 deaths) were due to 'Heat/Sun Stroke' during 2018. Maximum deaths i.e. 100% in Gwalior (1 out of 1 death), 100% in Lucknow (2 out of 2 deaths), 73.5% (25 deaths out of 34 deaths) in Ludhiana and 71.4% (15 deaths out of 21 deaths) in Dhanbad were due to 'Exposure to Cold'.

Accidental Deaths due to Other Causes in Cities

A total of 1,15,826 cases of 'Other' accidents were reported in 53 mega cities which caused injuries to 62,067 persons and 60,897 deaths during 2018. The cause-wise analysis of deaths due to other causes revealed that 27.8%, 20.3%, and 7.0% deaths in 53 cities were due to 'Traffic Accidents', 'Sudden Deaths' and 'Falls' respectively.

Among 53 cities, Mumbai city accounted for 15.4% of total deaths reported under 'Other' accidents followed by Delhi City and Pune which accounted for 7.1% and 6.5% respectively during 2018.

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

Table – 1 (D)
Rate of Accidental Deaths in Metropolitan Cities during 2018

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	3.1	22.1
2.	Delhi	163.2	10.1	7.1	26.8
3.	Kolkata	141.1	8.8	1.2	5.2
4.	Mumbai	184.1	11.4	15.4	51.2

- As per data provided by States/UTs.
