

## CHAPTER – 1

### ACCIDENTAL DEATHS IN INDIA

#### Incidence and Rate of Accidental Deaths during the Decade (1996-2006)

The incidence of accidental deaths has shown a mixed trend during the decade 1996-2006 with an increase of 43 per cent in the year 2006 as compared to 1996. The population growth during the corresponding period was 20.2 per cent whereas the increase in the rate of accidental deaths during the same period was 19 per cent. The percentage change of accidental deaths are presented in **Table-1.1**.

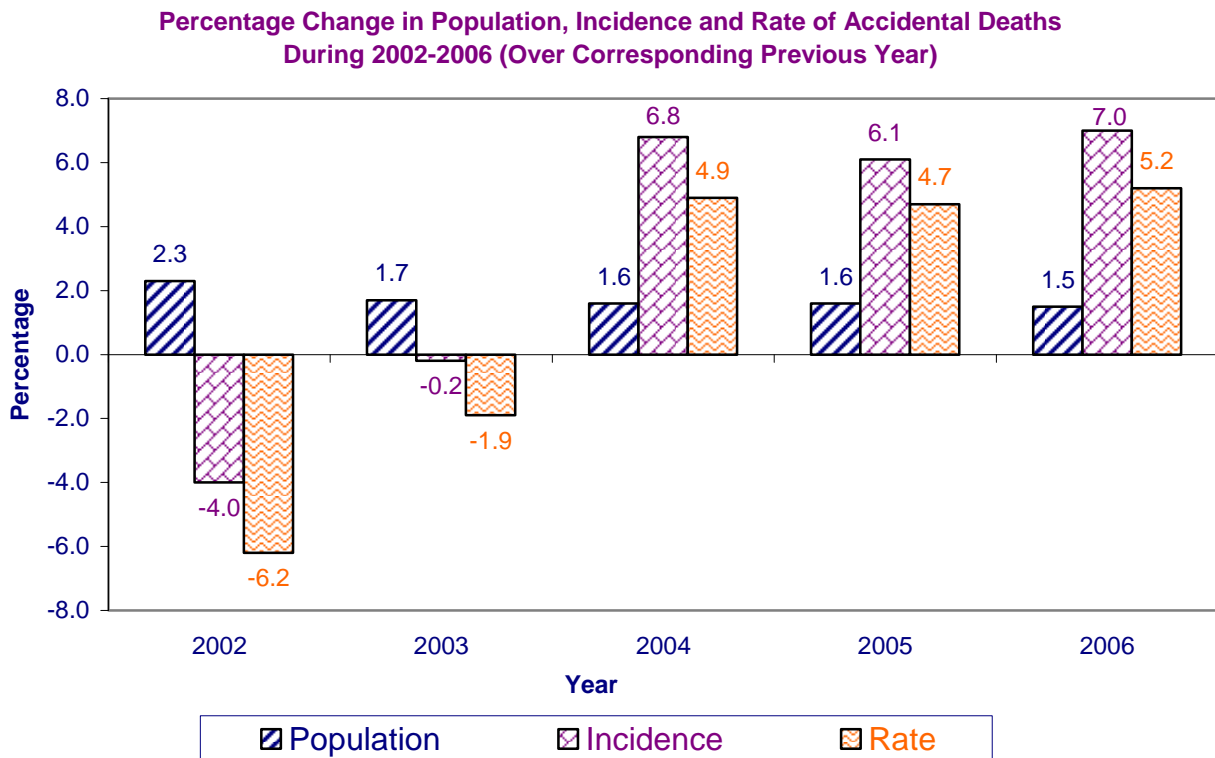
A total of 3,14,704 accidental deaths were reported in the country during 2006 (20,529 more than such deaths reported in 2005) showing an increase of 7.0 per cent as compared to previous year. Correspondingly, 1.5 per cent increase in the population and 5.2 per cent increase in the rate of Accidental Deaths were reported during this year as compared to previous year. **[Table 1(A)]**

Table — 1 (A)

Percentage change in Population, Incidence and Rate of Accidental Deaths over the corresponding previous year during 2002 to 2006

Year	Percentage Change in Population over the Previous Year	Percentage Change in Accidental Deaths over the Previous Year	Percentage Change in Rate of Accidental Deaths over the previous Year
(1)	(2)	(3)	(4)
2002	2.3	- 4.0	- 6.2
2003	1.7	- 0.2	- 1.9
2004	1.6	6.8	4.9
2005	1.6	6.1	4.7
2006	1.5	7.0	5.2

**Figure 1.1**



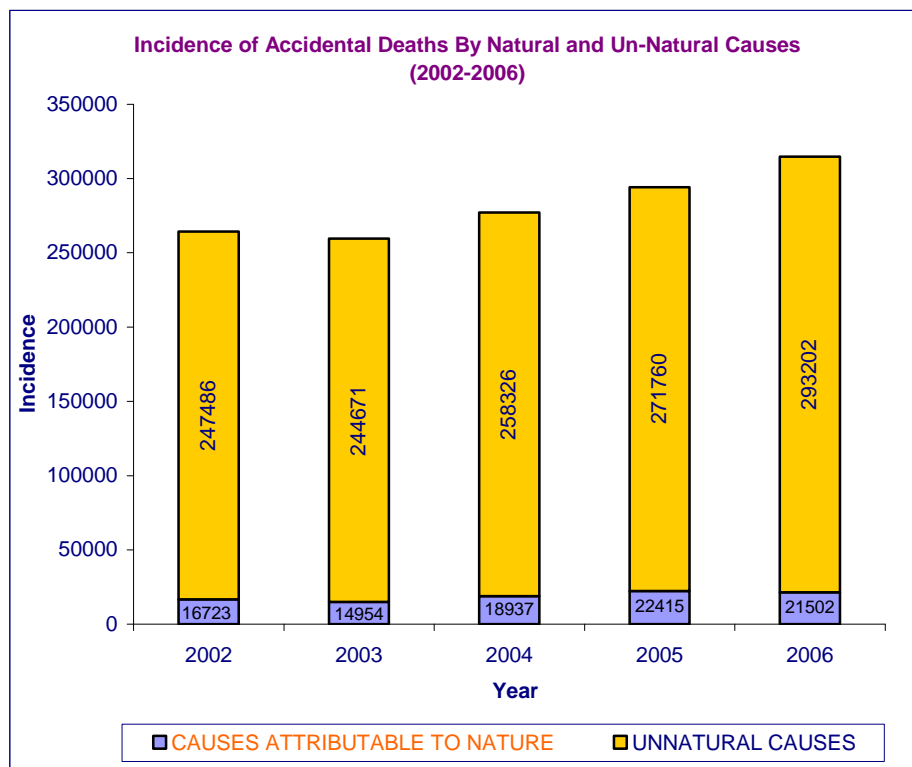
2,93,202 (93.2%) deaths were due to un-natural causes and the rest 6.8% deaths (21,502) were due to causes attributable to nature, out of total 3,14,704 accidental deaths during the year 2006. There was a decrease of

4.1% in deaths due to causes attributable to nature and an increase of 7.9 per cent in deaths due to un-natural causes as compared to 2005, resulting in an overall increase of accidental deaths by 7.0 per cent [Table 1(B)].

**Table — 1 (B)  
Incidence of Accidental Deaths by Natural & Un-Natural Causes  
(2002 to 2006)**

Year	Causes Attributable to Nature		Un-Natural Causes		Total Accidental Deaths	
	Incidence	% change over previous year	Incidence	% change over previous year	Incidence	% change over previous year
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2002	16,723	- 54.4	2,43,399	5.6	2,60,122	- 4.0
2003	14,954	- 10.6	2,44,671	- 1.1	2,59,625	- 0.2
2004	18,937	26.6	2,58,326	5.6	2,77,263	6.8
2005	22,415	18.4	2,71,760	5.2	2,94,175	6.1
2006	21,502	-4.1	2,93,202	7.9	3,14,704	7.0

**Figure 1.2**

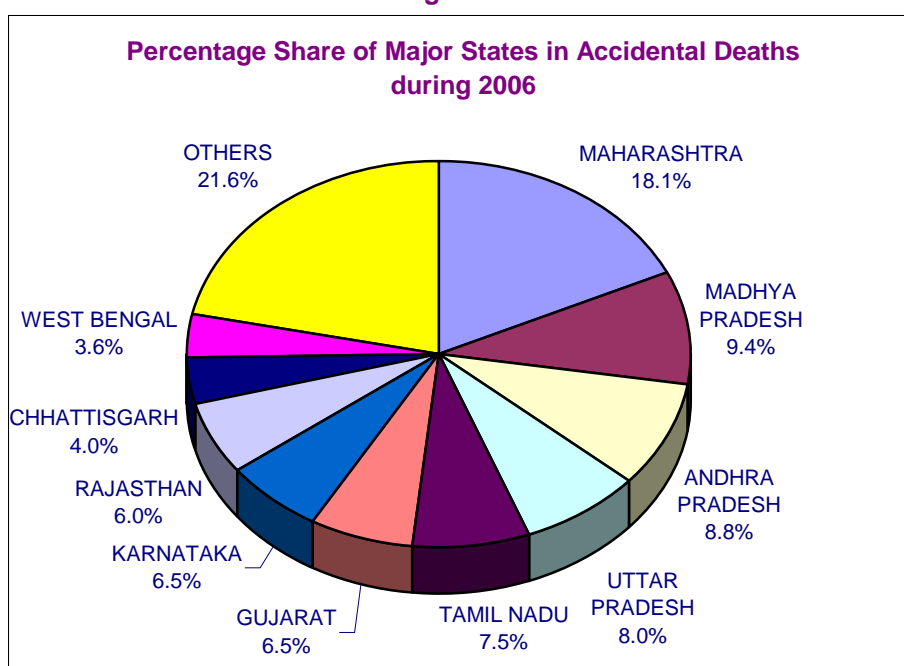


**Incidence & Rate of Accidental Deaths in States, UTs and Cities (Table 1.2)**

Maharashtra has reported 57,103 accidental deaths out of 3,14,704 such deaths in the country during the year and remained at the top with nearly one fifth (18.1%) of total accidental deaths reported in the country. Uttar Pradesh, the most populous State in the country with

population share of 16.5%, on the other hand, has accounted for 8.0% of accidental deaths and stood at 4<sup>th</sup> position after Maharashtra (18.1%), Madhya Pradesh (9.4%) and Andhra Pradesh (8.8%). The States of Tamil Nadu (7.5%) Gujarat and Karnataka (6.5%) have also reported significant shares of deaths due to accidents during 2006.

**Figure 1.3**



The highest **rate of accidental deaths** was reported from **D & N Haveli (88.0)** followed by Pondicherry (78.9) against the National average rate of 28.1.

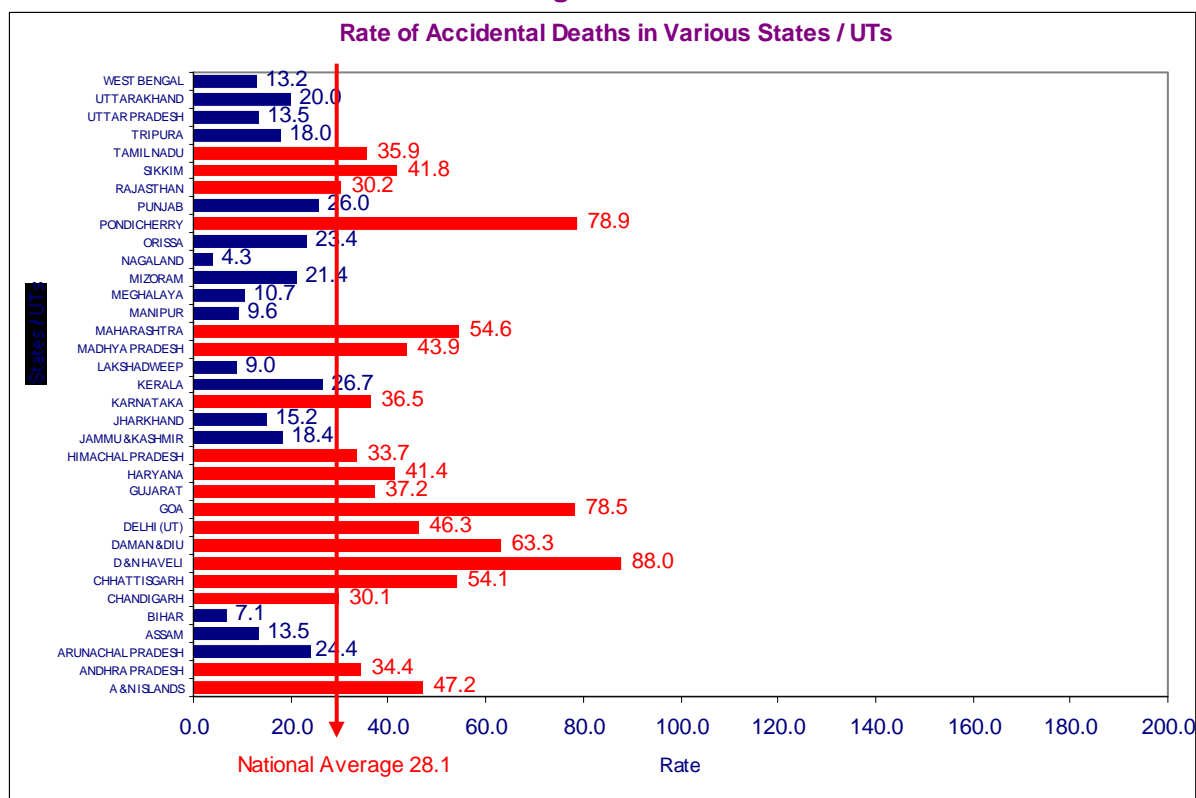
12 States & 6 UTs have constituted high risk areas reporting higher rates of 'Accidental

Deaths' than the All-India average of 28.1 deaths per one lakh of population. The grouping of the States/UTs as more accident prone and less accident prone on the basis of their rates of accidental deaths vis-a-vis the All-India average rate is presented in **Table – 1(C)**.

**Table — 1 (C)**  
**State/UT-wise Rate of Accidental Deaths in Comparison to All India (Rate)**

More Accident Prone			Less Accident Prone		
Sl. No.	States / UTs	Rate (more than 28.1)	Sl. No.	States / UTs	Rate (less than 28.1)
1	D & N HAVELI	88.0	1	KERALA	26.7
2	PONDICHERRY	78.9	2	PUNJAB	26.0
3	GOA	78.5	3	ARUNACHAL PRADESH	24.4
4	DAMAN & DIU	63.3	4	ORISSA	23.4
5	MAHARASHTRA	54.6	5	MIZORAM	21.4
6	CHHATTISGARH	54.1	6	UTTARAKHAND	20.0
7	A & N ISLANDS	47.2	7	JAMMU & KASHMIR	18.4
8	DELHI (UT)	46.3	8	TRIPURA	18.0
9	MADHYA PRADESH	43.9	9	JHARKHAND	15.2
10	SIKKIM	41.8	10	ASSAM	13.5
11	HARYANA	41.4	11	UTTAR PRADESH	13.5
12	GUJARAT	37.2	12	WEST BENGAL	13.2
13	KARNATAKA	36.5	13	MEGHALAYA	10.7
14	TAMIL NADU	35.9	14	MANIPUR	9.6
15	ANDHRA PRADESH	34.4	15	LAKSHADWEEP	9.0
16	HIMACHAL PRADESH	33.7	16	BIHAR	7.1
17	RAJASTHAN	30.2	17	NAGALAND	4.3
18	CHANDIGARH	30.1			

**Figure 1.4**



**The incidence of Accidental Deaths has increased by 7.0 per cent at National level during 2006 as compared to 2005.** Lakshadweep has reported a major increase of 100 per cent (3 deaths in 2005 to 6 deaths in 2006) followed by Nagaland (65 deaths in 2005 to 93 deaths in 2006 i.e. an increase of 43.1%) while A & N Islands has shown a decline of 93.5 per cent during 2006 as compared to 2005 (2858 in 2005 to 187 in 2006). [Table (1.3)]

Males, accounting for 78.5 per cent of total victims, were at a greater risk from accidents than females. Though the children's population (up to 14 years age) as per census 2001 was 30.4 per cent of the total population, accidental deaths of children accounted for 7.1 per cent of total such deaths.

Most of the victims of accidents were aged between 15 to 44 years. This group of people has accounted for nearly two-third (60.5%) of all persons killed in accidents in country during the year. [Table (1.4)]

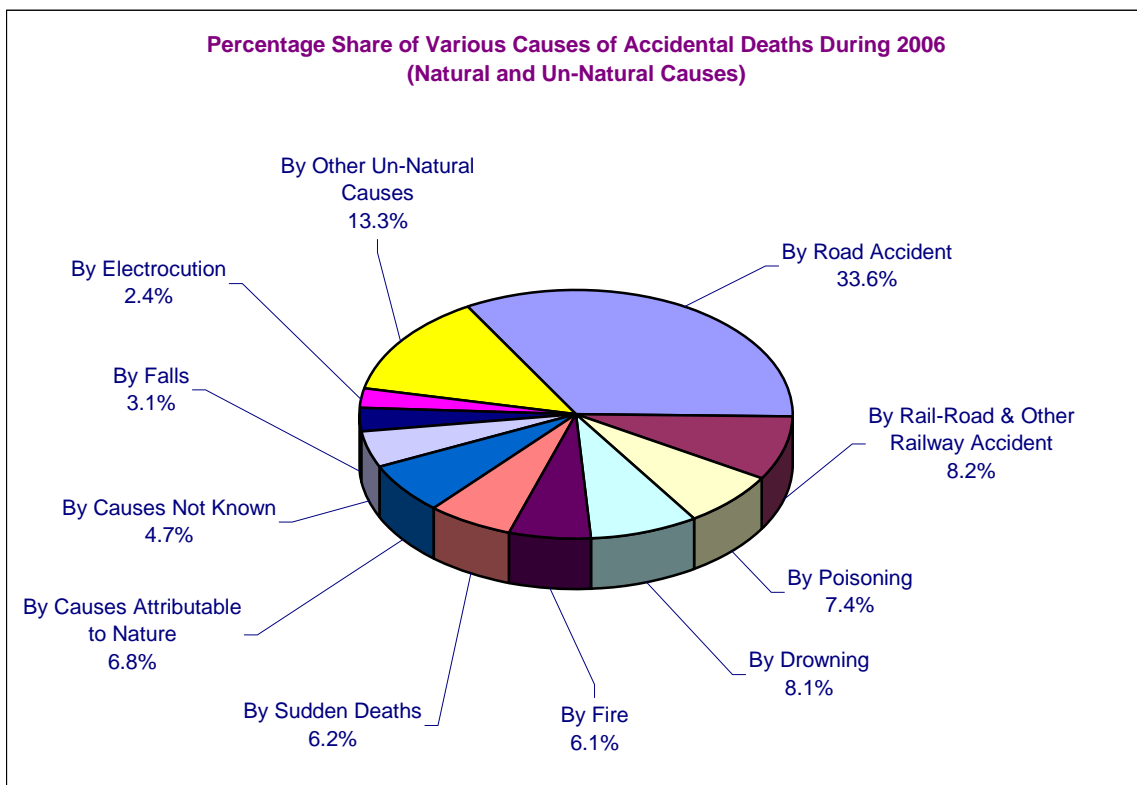
**Causes of Accidental Deaths—[Table 1(D)]**

The percentage of 'Accidental Deaths' due to causes attributable to nature and those due to Un-Natural Causes were 6.8% and 93.2% respectively. The magnitude of 'Accidental Deaths' by causes attributable to nature has decreased by 4.1% and that of deaths by Un-Natural Causes has increased by 7.9 per cent during 2006 over the year 2005.

The share of accidental deaths due to causes attributable to Nature has decreased from 7.6% in 2005 to 6.8% in 2006. Share of deaths due to Un-natural causes has increased from 92.4% in 2005 to 93.2% in 2006. The share of deaths due to causes attributable to Nature such as 'Lightning' and Un-Natural Causes such as 'Drowning, 'Explosion', 'Factory/Machine Accidents', 'Poisoning' and 'Traffic Accidents' has increased. The same has decreased due to Un-Natural causes such as 'Fire', 'Fire-arms', 'Sudden deaths', 'Mines or quarry disaster', 'Stampede', 'Air crash' and 'Collapse of structure' etc. [Table (1D)].

**The average rate of Accidental Deaths has marginally increased from 26.7 in 2005 to 28.1 in 2006.**

**Figure 1.5**



**Table — 1 (D)**  
**Incidence, Share & Rate of Accidental Deaths By Causes Attributable to Nature**  
**and Un-Natural Causes**  
**During 2005 & 2006**

Sl. No.	Cause	2005			2006			% variation of incidence in 2006 over 2005
		No.	% share (w.r.t. All India)	Rate	No.	% share (w.r.t. All India)	Rate	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>A. CAUSES ATTRIBUTABLE TO NATURE:</b>								
1	Avalanche	238	0.1	0.0	18	0.0	0.0	-92.4
2	Cold and Exposure	646	0.2	0.1	694	0.2	0.1	7.4
3	Cyclone/Tornado	1438	0.5	0.1	96	0.0	0.0	-93.3
4	Starvation/Thirst	163	0.1	0.0	174	0.1	0.0	6.7
5	Earthquake	724	0.2	0.1	8	0.0	0.0	-98.9
6	Epidemic	103	0.0	0.0	76	0.0	0.0	-26.2
7	Flood	785	0.3	0.1	1097	0.3	0.1	39.7
8	Heat Stroke	1075	0.4	0.1	754	0.2	0.1	-29.9
9	Landslide	590	0.2	0.1	274	0.1	0.0	-53.6
10	Lightning	2064	0.7	0.2	2387	0.8	0.2	15.6
11	Torrential Rains	557	0.2	0.1	259	0.1	0.0	-53.5
12	Other causes attributable to nature	14032	4.8	1.3	15665	5.0	1.4	11.6
	<b>Total (A)</b>	<b>22415</b>	<b>7.6</b>	<b>2.1</b>	<b>21502</b>	<b>6.8</b>	<b>1.9</b>	<b>-4.1</b>
<b>B. UN-NATURAL CAUSES</b>								
1	Air-Crash	6	0.0	0.0	2	0.0	0.0	-66.7
2	<b>Collapse of Structure:</b>	2718	0.9	0.2	2399	0.8	0.2	-11.7
	(i) House	917	0.3	0.1	933	0.3	0.1	1.7
	(ii) Building	253	0.1	0.0	250	0.1	0.0	-1.2
	(iii) Dam	32	0.0	0.0	34	0.0	0.0	6.3
	(iv) Bridge	234	0.1	0.0	169	0.1	0.0	-27.8
	(v) Others	1282	0.4	0.1	1013	0.3	0.1	-21.0
3	<b>Drowning:</b>	23571	8.0	2.1	25571	8.1	2.3	8.5
	(i) Boat Capsize	759	0.3	0.1	830	0.3	0.1	9.4
	(ii) Other Cases	22812	7.8	2.1	24741	7.9	2.2	8.5
4	Electrocution:	6987	2.4	0.6	7619	2.4	0.7	9.0
5	<b>Explosion:</b>	643	0.2	0.1	824	0.3	0.1	28.1
	(i) Bomb explosion	304	0.1	0.0	486	0.2	0.0	59.9
	(ii) Other explosion (Boilers etc.)	339	0.1	0.0	338	0.1	0.0	-0.3
6	<b>Falls:</b>	9132	3.1	0.8	9821	3.1	0.9	7.5
	(i) Fall from Height	7698	2.6	0.7	8259	2.6	0.7	7.3
	(ii) Fall into Pit/Manhole etc.	1434	0.5	0.1	1562	0.5	0.1	8.9
7	Factory/Machine Accidents	671	0.2	0.1	869	0.3	0.1	29.5
8	<b>Fire:</b>	19093	6.5	1.7	19222	6.1	1.7	0.7
	(i) Fireworks/Crackers	237	0.1	0.0	304	0.1	0.0	28.3
	(ii) Short-Circuit	895	0.3	0.1	962	0.3	0.1	7.5
	(iii) Gas Cylinder/Stove Burst	3439	1.2	0.3	3377	1.1	0.3	-1.8
	(iv) Other Fire Accidents	14522	4.9	1.3	14579	4.6	1.3	0.4
9	Fire-Arms	2254	0.8	0.2	2161	0.7	0.2	-4.1
10	<b>Sudden Deaths:</b>	18519	6.3	1.7	19450	6.2	1.8	5.0
	(i) Heart Attacks	11622	4.0	1.1	12491	4.0	1.1	7.5
	(ii) Epileptic Fits/Giddiness	2838	1.0	0.3	2625	0.8	0.2	-7.5
	(iii) Abortions/Child Birth	696	0.2	0.1	759	0.2	0.1	9.1
	(iv) Influence of Alcohol	3363	1.1	0.3	3575	1.1	0.3	6.3
11	Killed by animals	847	0.3	0.1	864	0.3	0.1	2.0
12	Mines or quarry disaster	456	0.2	0.0	409	0.1	0.0	-10.3
13	<b>Poisoning:</b>	20800	7.1	1.9	23434	7.4	2.1	12.7
	(i) Food Poisoning/Accidental Intake of Insecticide	7390	2.5	0.7	8043	2.6	0.7	8.8
	(ii) Spurious/poisonous liquor	724	0.2	0.1	685	0.2	0.1	-5.4
	(iii) Leakage of poisonous gases Etc.	249	0.1	0.0	326	0.1	0.0	30.9
	(iv) Snake Bite/Animal Bite	7078	2.4	0.6	7945	2.5	0.7	12.2
	(v) Other	5359	1.8	0.5	6435	2.0	0.6	20.1
14	Stampede	346	0.1	0.0	18	0.0	0.0	-94.8
15	Suffocation	1549	0.5	0.1	1696	0.5	0.2	9.5
16	<b>Traffic Accidents:</b>	118265	40.2	10.7	131652	41.8	11.9	11.3
	(i) Road Accidents	98254	33.4	8.9	105725	33.6	9.6	7.6
	(ii) Rail-Road Accidents	1389	0.5	0.1	2353	0.7	0.2	69.4
	(iii) Other Railway Accidents	18622	6.3	1.7	23574	7.5	2.1	26.6
17	Other Causes	31389	10.7	2.8	32478	10.3	2.9	3.5
18	Causes Not Known	14514	4.9	1.3	14713	4.7	1.3	1.4
	<b>Total (B)</b>	<b>271760</b>	<b>92.4</b>	<b>24.6</b>	<b>293202</b>	<b>93.2</b>	<b>26.2</b>	<b>7.9</b>
	<b>Grand Total (A+B)</b>	<b>294175</b>	<b>100.0</b>	<b>26.7</b>	<b>314704</b>	<b>100.0</b>	<b>28.1</b>	<b>7.0</b>

Note : — (dash) stands for very negligible figure (less than 0.1)

## Causes Attributable to Nature

The age group-wise distribution of accidental deaths by causes attributable to nature is given in **Table 1.5**. Nearly 74.9 per cent victims of causes attributable to nature were males. Age-wise, nearly 6.7 per cent were up to 14 years of age while 55.1 per cent were in the age-group of 15-44 years. Senior citizens (60 yrs. and above) constituted 14.5 per cent of the total victims.

Nearly 13.4 per cent deaths were reported from Gujarat followed by Karnataka (10.7%) and Madhya Pradesh (9.9%) (**Table-1.10**). The reasons for accidental deaths due to natural causes could not be specified in Goa and Mizoram. 32.4% deaths in Uttarakhand and 23.8% deaths in Haryana were due to 'Cold and Exposure' only. 10.7 percent deaths in Haryana were due to Epidemic. 38.8% deaths in Maharashtra were reported due to Floods, while 36.7% deaths in West Bengal were due to 'Heat Stroke' alone. Nagaland reported 25.0% deaths due to Starvation/Thirst under causes attributable to Nature. 30.9% deaths were due to 'Landslide' in Uttarakhand. 54.4% deaths in Kerala and 49.0% deaths in Maharashtra were due to 'Lightning'. No deaths have been reported from Manipur, A & N Islands, Chandigarh, Lakshadweep and Pondicherry due to causes attributable to Nature.

## Un-natural Causes

It is generally accepted that accidents due to 'Un-Natural Causes' are preventable in nature and can be reduced by effective safety measures—safety consciousness, effective human interventions, etc. **A total of 5,96,656 cases of 'Un-Natural Accidents' caused 2,93,202 deaths and rendered 4,79,294 people injured during 2006. (Table- 1.6)**

Maharashtra accounting for 9.3% (one-eleventh) of country's population has reported almost one fifth (19.2%) of accidental deaths due to unnatural causes. Madhya Pradesh accounting for only 6.0% of the country's population has reported 9.3% per cent of such deaths. (**Table-1.11**)

The age-group-wise distribution of Accidental Deaths in the country by various Un-Natural

Causes along with their share in total deaths is presented in **Table 1.7**. The 'Accidental Deaths' due to Un-Natural Causes were mainly on account of 'Road Accidents' (36.1%), Railway Accidents and Rail-Road accidents (8.8%), 'Drowning' (8.7%) 'Poisoning' (8.0%), 'Fire Accidents' (6.6%) and 'Sudden Deaths' (6.6%).

The number of cases of Un-natural accidents at the National level has increased by 3.8 per cent (from 5,74,850 in 2005 to 5,96,656 in 2006) as compared to previous year. The number of persons injured has increased by 1.8% (from 4,70,923 in 2005 to 4,79,294 in 2006) and the number of persons killed in these accidents has also increased by 7.9% (from 2,71,760 in 2005 to 2,93,202 in 2006). The Accident cases due to 'Factory/Machine Accidents' have increased by 35.6 per cent from 912 in 2005 to 1237 in 2006, while cases of Stampede have decreased by 72.6 per cent from 62 in 2005 to 17 in 2006. [**Table (1.6)**]

The proportion of male injured and killed due to un-natural causes in the country was 81.5 per cent and 76.8 per cent respectively of the total such injuries and deaths (**Table-1.11**). 94.5 per cent of injuries and 36.1 per cent of deaths were due to Road Accidents only at the National level. Males out-numbered females in all kinds of accidental casualties except 'Fire Accidents' where 67.9 per cent females were killed in these accidents compared to 32.1 per cent males. [**Table (1.7)**]

The cause-wise analysis of un-natural deaths revealed that 72.9 per cent deaths in Nagaland were due to 'Road Accidents', 39.5 per cent deaths in Pondicherry were attributed as Sudden Deaths, 13.2% and 11.2% deaths in Gujarat and A&N Islands were due to 'Fire Accidents', 22.6 per cent deaths in Sikkim were due to 'Falls', 66.7 per cent deaths in Lakshadweep were due to 'Drowning', 16.1 per cent deaths in Orissa were due to 'Poisoning'. Reasons for 25.1% deaths in Chandigarh could not be specified. [**Table (1.11)**]

The details of States and UTs categorized as high prone areas (percentage share exceeding the All-India share) on the basis of the percentage share of deaths on these counts are presented in **Table 1(E)**.

**Table – 1 (E)**  
**High Accidental death Prone areas on the basis of Percentage share of deaths**  
**due to unnatural causes (Road Accidents and Poisoning) during 2006**

Sl. No.	High Accidental death Prone Areas				
	Road Accident Deaths All-India Percentage Share = 36.1%		Sl. No.	Poisoning All-India Percentage Share = 8.0%	
	State/UT	%Share		State/UT	%Share
1	NAGALAND	72.9	1	ORISSA	16.1
2	MANIPUR	63.3	2	MADHYA PRADESH	15.9
3	JAMMU & KASHMIR	60.2	3	CHHATTISGARH	13.4
4	MEGHALAYA	55.5	4	PUNJAB	11.7
5	UTTARAKHAND	54.6	5	TAMIL NADU	10.8
6	ARUNACHAL PRADESH	50.0	6	WEST BENGAL	10.8
7	UTTAR PRADESH	49.4	7	KARNATAKA	9.5
8	TAMIL NADU	49.3	8	BIHAR	8.4
9	HIMACHAL PRADESH	48.4	9	HARYANA	8.4
10	ANDHRA PRADESH	47.7			
11	ASSAM	47.0			
12	HARYANA	46.7			
13	CHANDIGARH	45.9			
14	MIZORAM	43.8			
15	KARNATAKA	43.4			
16	RAJASTHAN	42.3			
17	WEST BENGAL	41.6			
18	JHARKHAND	40.9			
19	KERALA	40.6			
20	BIHAR	39.6			
21	SIKKIM	38.3			
22	GOA	37.1			

**Table – 1 (F)**

**High Accidental death Prone areas on the basis of Percentage share of deaths due to unnatural causes (Drowning and Fire) during 2006**

Sl. No.	High Accidental death Prone Areas				
	Deaths due to Drowning All-India Percentage Share = 8.7%		Sl. No.	Fire All-India Percentage Share = 6.6%	
	State/UT	%Share		State/UT	%Share
1	LAKSHADWEEP	66.7	1	GUJARAT	13.2
2	SIKKIM	25.7	2	A & N ISLANDS	11.2
3	A & N ISLANDS	22.5	3	MAHARASHTRA	8.9
4	GOA	21.6	4	DELHI (UT)	7.7
5	DAMAN & DIU	20.4	5	TAMIL NADU	7.5
6	KERALA	17.8	6	TOTAL (UTs)	7.4
7	D & N HAVELI	15.1	7	JHARKHAND	7.3
8	MADHYA PRADESH	14.1	8	MADHYA PRADESH	7.3
9	TRIPURA	13.8	9	D & N HAVELI	6.7
10	PONDICHERRY	12.1			
11	CHHATTISGARH	11.5			
12	MEGHALAYA	11.3			
13	GUJARAT	10.1			
14	MAHARASHTRA	9.7			
15	KARNATAKA	9.6			
16	ANDHRA PRADESH	9.3			
17	JHARKHAND	9.3			
18	RAJASTHAN	9.2			
19	ASSAM	8.9			
20	MIZORAM	8.9			

**Table – 1 (G)**

**High Prone areas on the basis of Percentage share of deaths due to unnatural causes (Rail Road & Railways Accidents) during 2006**

Sl. No.	High Accidental death Prone Areas	
	Rail Road & Railways Accidental Deaths All-India Percentage Share = 8.8%	
	State/UT	%Share
1.	BIHAR	25.5
2.	WEST BENGAL	23.0
3.	HARYANA	16.2
4.	ASSAM	14.8
5.	DELHI (UT)	14.0
6.	PUNJAB	12.8
7.	MAHARASHTRA	8.9

## Traffic Accidents

Traffic Accidents comprising of (i) Road Accidents (ii) Rail-Road Accidents and (iii) Other Railway Accidents were the major contributors of accidental deaths by Un-natural causes. 'Road Accidents' in the country have increased by 1.0% during 2006 compared to 2005 [Table (1.6)]. The casualties in Road Accidents in the country have increased by 7.6% during 2006 as compared to 2005. Their proportion in total deaths due to Un-natural causes, however, remained static at 36.1% in 2006. The following statistics reveal the growing magnitude of 'Road Accidental Deaths' [Table 1(H)]. A total of 4,23,426 'Traffic Accidents' were reported during the year comprising of 3,94,432 'Road Accidents', 2,829 'Rail-Road Accidents' and 26,165 'Other Railway Accident'. These accidents caused 1,05,725, 2353 and 23,574 deaths respectively during the year [Table (1.6)].

### Road Accident Deaths

The number of vehicles, number of road accidents along with casualties & injuries

therein, their percentage variations over previous year and the rate of accidental deaths per thousand vehicles during the last five years are presented in Table – 1(I). It is observed that the rate of deaths per thousand vehicles has increased marginally from 1.4 in 2002 to 1.5 in 2006 though the number of vehicles in the country and the quantum of 'Road Accidents' have increased.

### Railway Accident & Rail-Road Accidents

2829 cases of Rail-road accidents were reported during the year 2006 which accounted for 11.5% increase over 2005 where 2537 cases were reported. The cases of deaths due to Rail-Road accidents have increased by 69.4% from 1389 cases in 2005 to 2353 in 2006. 1881 victims (out of 2353 deaths) were males and 472 were females. (Table – 1.6). 773 cases were reported in the first quarter of the year 2006 which accounted for 27.3% of the total Rail-Road accidents during the year while in 2005 593 cases were reported in the same quarter. (Table – 1.9)

Table – 1 (H)

Share of 'Road Accident Deaths' in Total 'Accidental Deaths' by Un-natural Causes during 2002 to 2006

Sl. No.	Year	Number of Accidental Deaths		% share in Un-Natural Total Deaths
		Road Accidents	Total Un-natural	
(1)	(2)	(3)	(4)	(5)
1.	2002	84,059	2,43,399	34.5
2.	2003	84,430	2,44,671	34.5
3.	2004	91,376	2,58,326	35.2
4.	2005	98,254	2,71,760	36.2
5.	2006	1,05,725	2,93,202	36.1

**Table – 1 (I)**

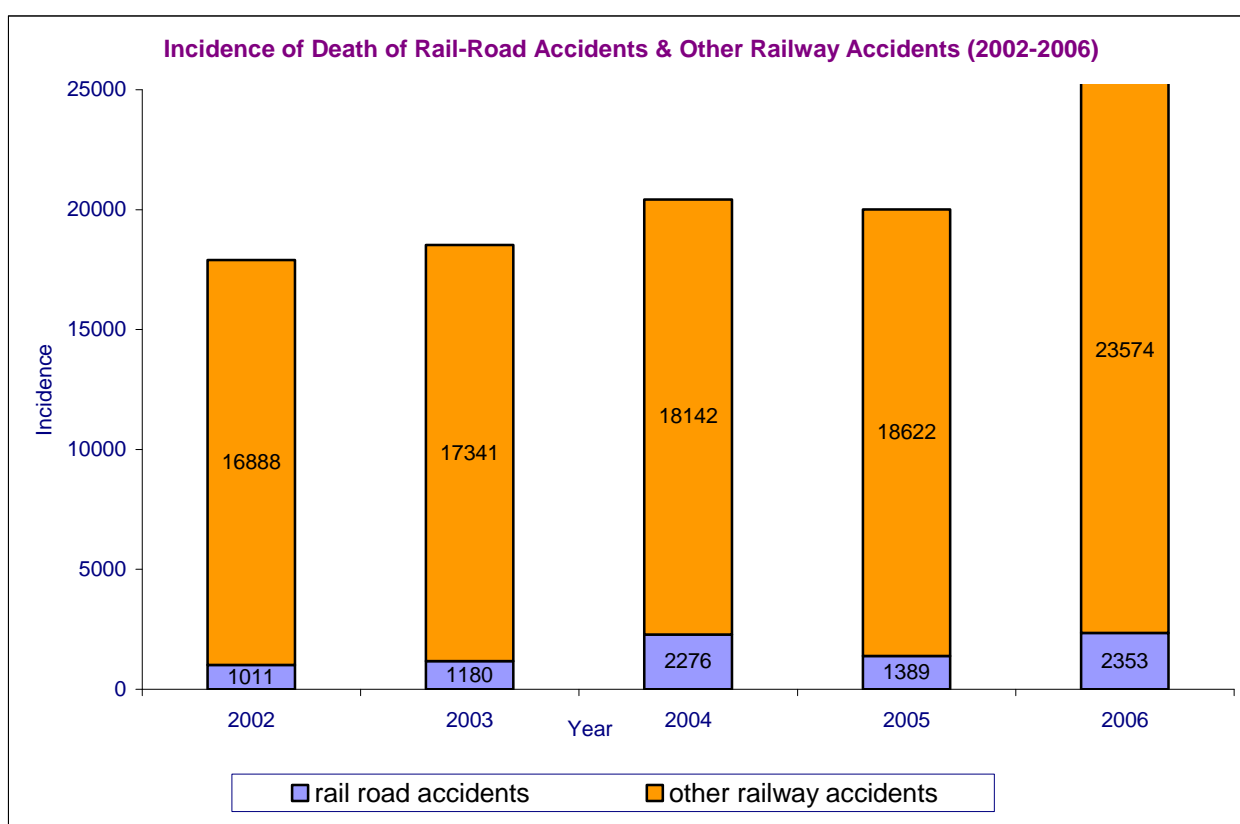
**Growth in No. of Vehicles and Road Accidents in India (2002-2006)**

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.	2002	335.7	3.7	388.9	10.1	81,873	2.0	58,863	7.0	1.4
2.	2003	336.4	2.0	382.9	- 1.5	84,430	0.4	66,289	12.6	1.3
3.	2004	361.3	7.4	413.9	8.1	91,376	8.2	66,289*	-	1.4
4.	2005	390.4	8.0	447.9	8.2	98,254	7.5	66,289*	-	1.5
5.	2006	394.4	1.0	452.9	1.1	1,05,725	7.6	72,718@	9.7	1.5

**Source :** For Col.9, Motor Transport Statistics of India-2002-2003, Transport Research Wing, Ministry of Road Transport & Highways, New Delhi.

\* : data for the year 2003 is repeated in 2004 also due to non availability.

@ As per latest data of Ministry of Road Transport & Highways (2004 - 05).



**Table — 1 (J)**  
**Incidence and Rate of Deaths Due to Road Accidents During 2006**  
**(State, UT & City-wise)**

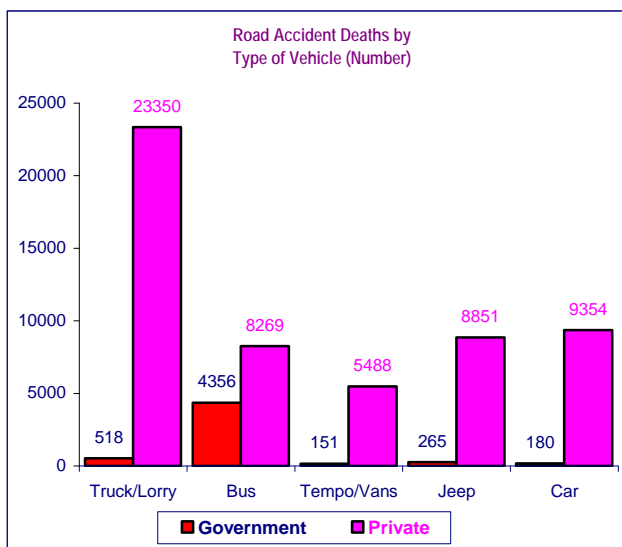
Sl. No.	State/UT	No. of cases of Road Accidents	Total Registered Motor Vehicles as on 31.03.2006 (in 000')	No. of deaths due to Road Accidents in 2006	Rate of Accidental Deaths per 000' vehicles (Col.5 / Col.4)	Rate of Deaths (Col.5/Col.3) × 100
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>STATES:</b>						
1	ANDHRA PRADESH	41323	5720	12661	2.2	30.6
2	ARUNACHAL PRADESH	243	21*	116	5.5	47.7
3	ASSAM	4080	727	1740	2.4	42.6
4	BIHAR	4382	751	2231	3.0	50.9
5	CHHATTISGARH	7111	1216	2574	2.1	36.2
6	GOA	3749	436	310	0.7	8.3
7	GUJARAT	18944	7087	5599	0.8	29.6
8	HARYANA	10262	2548	4420	1.7	43.1
9	HIMACHAL PRADESH	2416	289	890	3.1	36.8
10	JAMMU & KASHMIR	5609	439	1092	2.5	19.5
11	JHARKHAND	4301	1217	1667	1.4	38.8
12	KARNATAKA	43280	3977	7939	2.0	18.3
13	KERALA	41728	2792	3627	1.3	8.7
14	MADHYA PRADESH	25038	3804	5598	1.5	22.4
15	MAHARASHTRA	48887	8969	11934	1.3	24.4
16	MANIPUR	521	106	157	1.5	30.1
17	MEGHALAYA	176	73^	132	1.8	75.0
18	MIZORAM	72	42	64	1.5	88.9
19	NAGALAND	77	172	62	0.4	80.5
20	ORISSA	7729	1525	2745	1.8	35.5
21	PUNJAB	2251	3529	2048	0.6	91.0
22	RAJASTHAN	23348	3834	7154	1.9	30.6
23	SIKKIM	39	17	88	5.2	225.6
24	TAMIL NADU	55145	8575	11009	1.3	20.0
25	TRIPURA	793	76	196	2.6	24.7
26	UTTAR PRADESH	16207	6460	11520	1.8	71.1
27	UTTARAKHAND	1461	516	975	1.9	66.7
28	WEST BENGAL	13085	2548	4557	1.8	34.8
	<b>TOTAL (STATES):</b>	<b>382257</b>	<b>67466</b>	<b>103105</b>	<b>1.5</b>	<b>27.0</b>
<b>UNION TERRITORIES:</b>						
29	A & N ISLANDS	155	28+	22	0.8	14.2
30	CHANDIGARH	521	586	141	0.2	27.1
31	D & N HAVELI	103	35	45	1.3	43.7
32	DAMAN & DIU	57	48	27	0.6	47.4
33	DELHI (UT)	9699	4237	2167	0.5	22.3
34	LAKSHADWEEP	1	5	1	0.2	100.0
35	PONDICHERRY	1639	313	217	0.7	13.2
	<b>TOTAL (UTs):</b>	<b>12175</b>	<b>5252</b>	<b>2620</b>	<b>0.5</b>	<b>21.5</b>
	<b>TOTAL (ALL INDIA):</b>	<b>394432</b>	<b>72718</b>	<b>105725</b>	<b>1.5</b>	<b>26.8</b>

**Source** :For column 4 -'Motor Transport Statistics of India 2002-2003' report of Transport Research wing, Ministry of Road Transport & Highways, New Delhi.

**Note** : \* – Data relates to 1996-97; + – Data relates to 2001-02;  
^ – Data relates to the year 2002-03.

The rate of Road Accident Deaths per thousand registered motor vehicles in each State/UT is presented in **Table-1(J)**. It is observed that the rate of Accidental Deaths per thousand vehicles was highest in Arunachal Pradesh at 5.5 followed by Sikkim 5.2, Himachal Pradesh 3.1, Bihar 3.0, Tripura 2.6 and Jammu & Kashmir 2.5 as compared to 1.5 at the National level although the States of Maharashtra and Tamil Nadu had the highest and the second highest number of registered vehicles in the country. The rate of deaths per 100 cases of road accidents was highest in Sikkim (225.6) followed by Lakshadweep (100) compared to 26.8 at the National level.

**Figure 1.6**



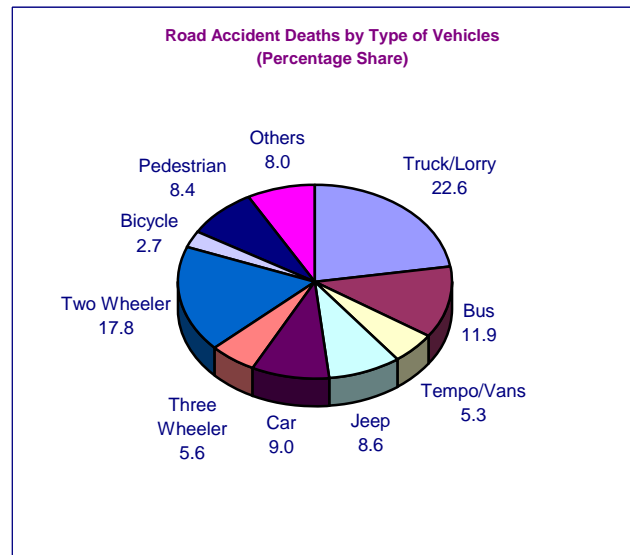
### Fatal Road Accidents

Tamil Nadu and Maharashtra have accounted for 14.0 per cent and 12.4 per cent respectively of total 'Road Accident' cases in the country. Andhra Pradesh and Maharashtra have reported 12 per cent and 11.3 per cent respectively of total Road Accident Deaths in the country.

89,177 males and 16,548 females totaling 1,05,725 were killed during the year 2006, while traveling by various modes of transport on

roads. 23,868 persons (22.6%) of these were occupants of 'Truck or Lorry', 18,833 (17.8%) were riding on 'Two-wheelers', 12,625 (11.9%) were killed while traveling in buses and 8,906 (8.4%) were pedestrians. [Table (1.7 & 1.8)]

**Figure 1.7**



Although break-up of total Government and Private vehicles are not available, it is pertinent to note that 97.8 per cent victims of 'Truck/Lorry', 65.5 per cent of 'Buses', 97.3 per cent of 'Tempo/Vans' and 97.6 per cent of 'Jeeps and Cars' involved in accidents, were traveling in private vehicles.

The number of persons who died of 'Truck/Lorry' accidents was highest in Andhra Pradesh (13.9%) followed by Uttar Pradesh (11.6%). 18.5% of 'Bus victims' and 22.1% of 'Car victims' were from Tamil Nadu only. 15.2% of 'Tempo/Van victims' and 16.6% 'Jeep' victims were from Uttar Pradesh and 31.2% of 'Three Wheeler' victims were from Andhra Pradesh. 15.6% 'Two Wheeler victims' and 16.6% Pedestrians were from Maharashtra alone.

**Table — 1 (K)**  
**Sex wise Road Accident Deaths by Type of Vehicle during 2006**

Sl. No.	Type of Vehicle	Number of Road Accidental Deaths			%share of total vehicles
		Male	Female	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1	<b>Truck/Lorry</b>	20958	2910	23868	22.6
	Government	440	78	518	0.5
	Private	20518	2832	23350	22.1
2	<b>Bus</b>	10170	2455	12625	11.9
	Government	3556	800	4356	4.1
	Private	6614	1655	8269	7.8
3	<b>Tempo/Vans</b>	4592	1047	5639	5.3
	Government	124	27	151	0.1
	Private	4468	1020	5488	5.2
4	<b>Jeep</b>	7480	1636	9116	8.6
	Government	209	56	265	0.3
	Private	7271	1580	8851	8.4
5	<b>Car</b>	7507	2027	9534	9.0
	Government	144	36	180	0.2
	Private	7363	1991	9354	8.8
6	Three Wheeler	4757	1128	5885	5.6
7	<b>Two Wheeler</b>	16491	2342	18833	17.8
8	Bicycle	2672	235	2907	2.7
9	<b>Pedestrian</b>	7403	1503	8906	8.4
10	Others	7147	1265	8412	8.0
	<b>Total</b>	<b>89177</b>	<b>16548</b>	<b>105725</b>	<b>100.0</b>

### Traffic Accidents by Month & Time of Occurrence

As per **Table 1.9**, a total of 1,11,193 'Traffic Accidents' were reported in the 2<sup>nd</sup> quarter of the year accounting for 26.3 per cent (out of 4,23,426) of total traffic accidents during the year. The month-wise break-up of accidents for each State/UT/City are presented in **Table-1.12**.

The month-wise distribution of 'Road Accidents' has also shown more accidents during May (37,019) and December (34,379) sharing 9.4 per cent and 8.7 per cent respectively. Maximum 'Rail-Road Accidents' occurred during the month of May (291). The maximum numbers of 'Other Railway Accidents' were reported during the months of October (2,446) and September (2,349). [**Table (1.12)**]

Tamil Nadu, which accounted for the maximum (14.0%) Road Accidents in the country has also reported the maximum number of Road Accidents during almost each month of the year at national level. Delhi has reported the maximum number of 'Road Accidents' among UTs which is 2.5% at the National level. Uttar

Pradesh has reported 28.8 per cent of 'Rail-Road accidents' in the country.

A total of 8,210 (out of 26,165) accidents accounting for 31.4% of 'Railway Accidents' (other than 'Rail-Road accidents') were reported from Maharashtra only followed by Uttar Pradesh 2,158, (8.2%). Delhi and Pondicherry are the only UTs who have recorded such accidents. A total of 924 and 6 such accidents were reported in Delhi and Pondicherry UTs respectively. [**Table (1.12)**]

The distribution of 'Traffic Accidents' in each State/UT/City during the 8 classified time periods (Pahar) of the day is presented in **Table 1.13**. Maximum 'Road Accidents' (62,023) were reported during 3 p.m. to 6 p.m. (15.7%), 60,584 cases during 6 p.m. to 9 p.m. (15.4%), and least number (30,236) of these accidents (7.7%) were reported during 12 O' clock to 3 AM in the night. **The maximum 'Rail-Road Accidents' were reported during 12 O' clock to 3 AM in the night (16.9%). The maximum number of 'Other Railway Accidents' (16.0%) were reported during 9 A.M to 1200 noon.** [**Table (1.13)**]

## Accidental Deaths in Cities

The term 'mega city' refers to cities which have a population of over 10 lakhs. Mumbai has reported the maximum number of 'Accidental Deaths' (9,026) followed by Delhi (6602) accounting for 19.5 per cent and 14.3 per cent respectively of the total accidental deaths reported by 35 mega cities. The rate of 'Accidental Deaths' was highest in Rajkot (75.7) followed by Pune (74.3) as compared to average rate for the cities (42.9). Mumbai's share (19.5%) of Accidental Deaths among cities was higher than that of Maharashtra (18.1%) at the national level. [Table (1.2)]

Evidently, average rate of Accidental Deaths in cities (42.9) was higher than the All-India rate

(28.1). Except Nine cities viz. Amritsar, Asansol, Bhopal, Dhanbad, Kolkata, Lucknow, Ludhiana, Madurai and Patna all other 26 cities have reported higher rate of 'Accidental Deaths' than the National average. It is also interesting to note that 26 out of 35 cities have reported higher rate of 'Accidental Deaths' as compared to their parent State's rate. The same is reflected in **Table 1(L)**.

Kolkata, the second largest city in terms of population (12.3% of the population of all mega cities) among 35 cities after Mumbai (15.2%), reported the lowest accidental death rate of 7.4. The comparative reporting of 'Accidental Deaths' during 2006 in the top four-mega cities is presented in **Table 1(M)**.

**Table – 1 (L)**  
**Rate of Accidental Deaths in Cities**  
**(with rate higher than parent state) during 2006**

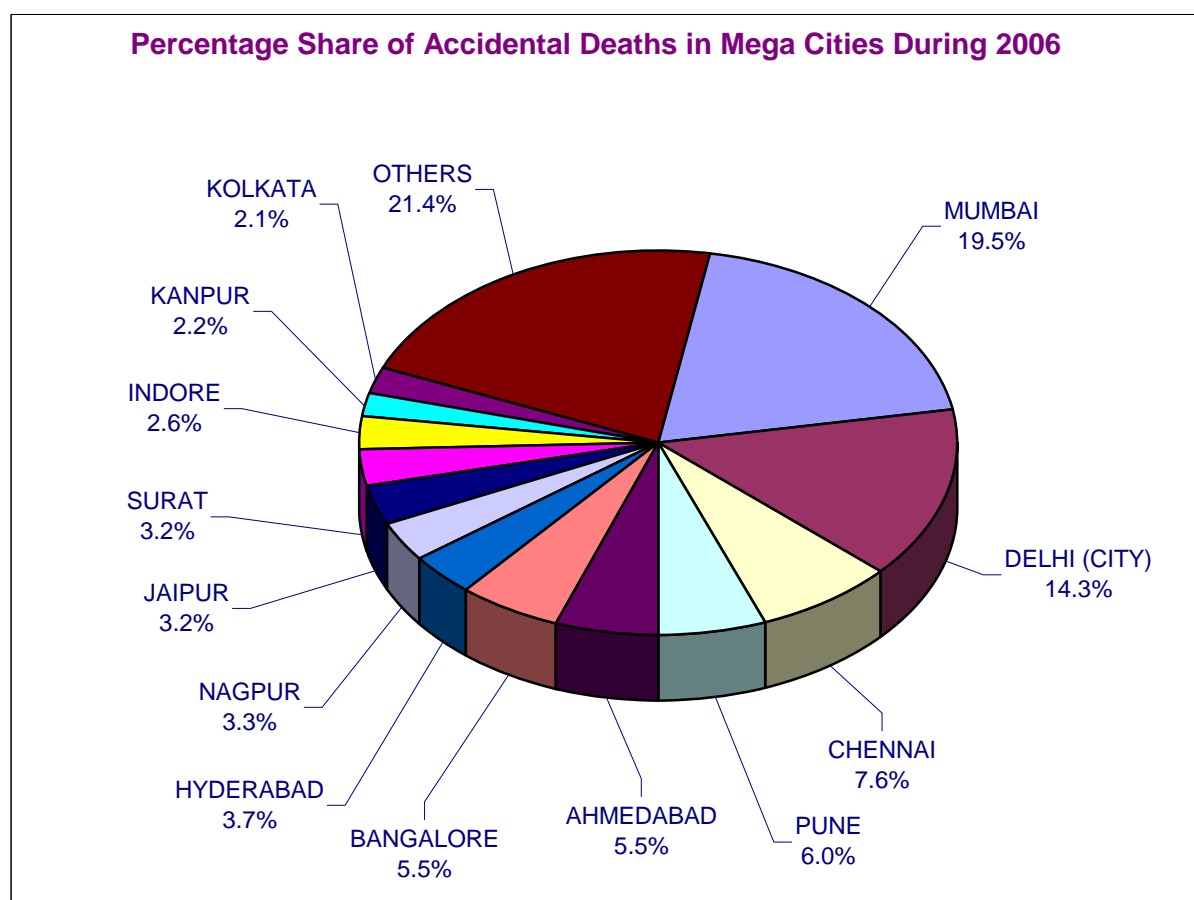
SI. No.	City	Rate in City	Rate in Parent State
(1)	(2)	(3)	(4)
1	MUMBAI	55.1	54.6
2	NAGPUR	72.3	54.6
3	NASIK	74.2	54.6
4	PUNE	74.3	54.6
5	DELHI (CITY)	51.6	46.3
6	INDORE	73.3	43.9
7	FARIDABAD	54.0	41.4
8	AHMEDABAD	56.4	37.2
9	RAJKOT	75.7	37.2
10	SURAT	52.2	37.2
11	BANGALORE	45.0	36.5
12	CHENNAI	55.0	35.9
13	VIJAYAWADA	55.5	34.4
14	VISHAKHAPATNAM	36.7	34.4
15	JAIPUR	63.1	30.2
16	KOCHI	29.7	26.7
17	LUDHIANA	27.4	26.0
18	JAMSHEDPUR	35.6	15.2
19	AGRA	41.8	13.5
20	ALLAHABAD	46.6	13.5
21	KANPUR	37.0	13.5
22	LUCKNOW	24.4	13.5
23	MEERUT	64.5	13.5
24	VARANASI	32.8	13.5
25	ASANSOL	21.0	13.2
26	PATNA	20.5	7.1

**Table – 1 (M)**

**Rate of Accidental Deaths in Metropolitan Cities during 2006**

Sl. No	City	Estimated Mid-Year 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	64.3	6.0	7.6	55.0
2.	Delhi	127.9	11.9	14.3	51.6
3.	Kolkata	132.2	12.3	2.1	7.4
4.	Mumbai	163.7	15.2	19.5	55.1

**Figure-1.8**



42,066 deaths due to un-natural causes & 4,238 deaths due to causes attributable to Nature were reported from 35 cities out of total 46,304 'Accidental Deaths' as compared to 43,600 deaths during 2005 accounting for an increase of 6.2 per cent during the year. 9 cities out of 35 have reported a decline in accidental deaths. Patna city reported the maximum increase of 525% (from 56 to 350) while Dhanbad city has reported the maximum decline of 61.4 per cent (from 415 to 160) in the number of accidental deaths during the year 2006. [Table 1.3]

Though, 35 cities accounted for nearly 9.6 per cent of the country's population, they reported comparatively more deaths due to accidents (i.e. 14.7 per cent of total accidental deaths in the country) and significantly higher rate of 42.9 as compared to 28.1 at the National level. The share of deaths in cities due to causes attributable to Nature was 19.7 per cent while that due to un-natural causes was 14.3 per cent at the national level.

Accidents due to Un-Natural causes in 35 cities reported an increase of 3.2 per cent over the previous year (from 91,052 to 93,969) as compared to 3.7 per cent increase at the National level (from 5,74,850 to 5,96,656). These 35 cities accounted for nearly 15.7 per cent (93,969 out of 5,96,656) of accidents due to un-natural causes in the country which rendered 12.1 per cent (57,970 out of 4,79,294) injured & 14.3 per cent (42,066 out of 2,93,202) dead. Mumbai city alone accounted for 13.0 per cent of un-natural accidents and nearly 21.4 per cent of deaths due to these accidents in 35 mega cities. [Table (1.11)]

Delhi city among 35 cities has reported the highest number of deaths by causes attributable to Nature (32.6%) followed by Ahmedabad city (30.1%). In Agra, 27.3 per cent of such deaths were due to 'Starvation/Thirst'. 100 per cent deaths in Lucknow were due to 'Cold and Exposure'. 93.5 per cent deaths in Surat were due to Flood. 62.5 per cent deaths in Faridabad were due to 'Heat Stroke'. 66.7 per cent such deaths in Kochi were due to 'Landslide'. All such deaths reported in Pune were due to 'Lightning'. [Table (1.10)]

16 per cent of Deaths due to un-natural causes in Delhi city were due to 'Other

Railway Accidents'. 27.9 & 26.5 per cent respectively of un-natural deaths were due to 'Fire' in Rajkot and Jamshedpur, 15.2 per cent such deaths were due to 'Falls' in Surat. 'Sudden Deaths' accounted for 31.9 and 31.2 per cent per cent respectively of un-natural deaths in Rajkot and Nasik. 'Suffocation' accounted for 27.2 per cent un-natural deaths reported in Indore whereas 15.1 per cent such deaths in the city were due to 'Poisoning'.

Among Un-natural causes, the share of 'Deaths' in cities due to 'Falls' (5.6%), 'Fire' (8.4%) and 'Sudden Deaths' (10.5%) was higher than their corresponding shares of 3.3 per cent, 6.6 per cent and 6.6 per cent at the national level. Share of deaths due to 'Drowning' (4.8%), 'Poisoning' (4.0%), deaths in Traffic Accidents (32.3%), on the other hand, were comparatively lower than their corresponding shares of 8.7 per cent, 8.0 per cent and 44.9 per cent respectively at the National level. [Table (1.11)]

In Madurai and Asansol 92.5 per cent and 92.3 per cent of total un-natural accidental deaths were due to 'Road Accidents'. Coimbatore city alone reported 27.5 per cent and 11.9 per cent deaths of Pedestrian and bicycle riders reported in the 35 mega cities during 2006.

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