

CHAPTER – 1

ACCIDENTAL DEATHS IN INDIA

Incidence and Rate of Accidental Deaths during the Decade (2000-2010)

The incidence of accidental deaths has shown a increasing trend during the decade 2000-2010 with an increase of 50% in the year 2010 as compared to 2000. The population growth during the corresponding period was 18.3% whereas the increase in the rate of accidental deaths during the same period was 32.4%. The percentage change of accidental deaths is presented in **Table-1.1**.

A total of 3,84,649 accidental deaths were reported in the country during 2010 (27,628) more than such deaths reported in 2009) showing an increase of 7.7% as compared to previous year. Correspondingly, 1.4% increase in the population and 6.2% increase in the rate of Accidental Deaths were reported during this year as compared to previous year. [**Table-1(A)**]

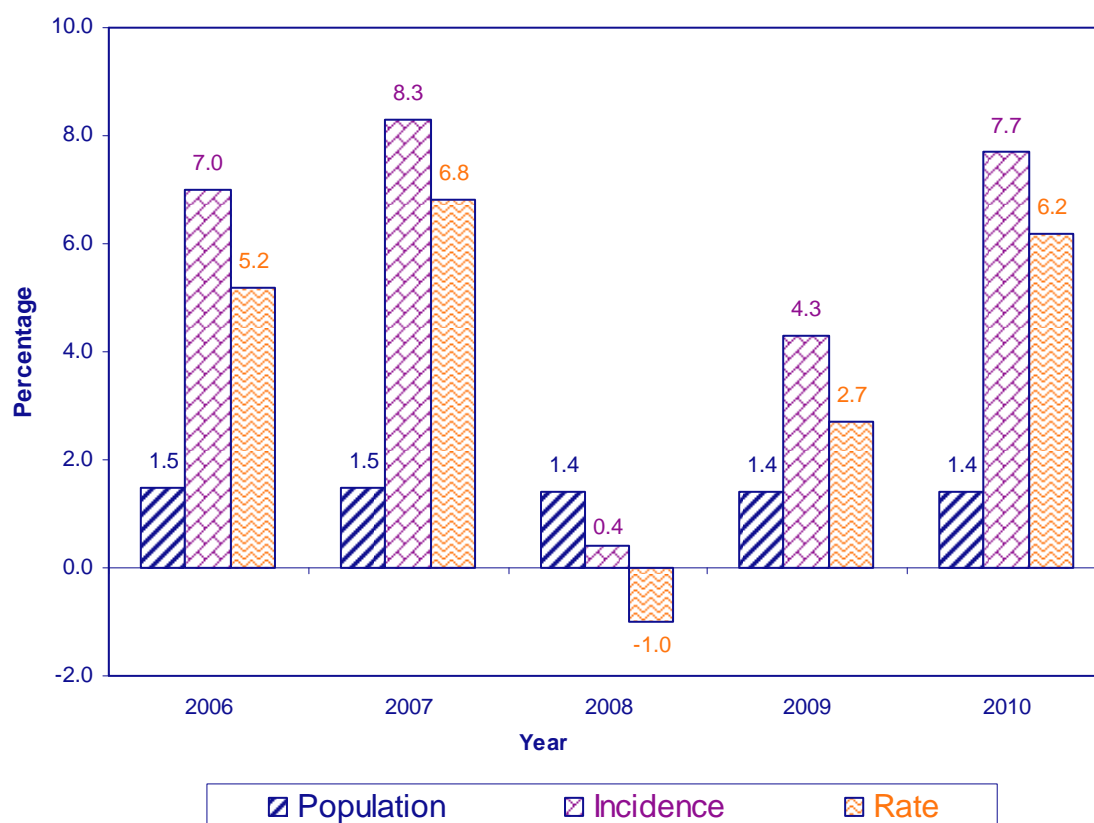
Table — 1 (A)

Percentage change in Population, Incidence and Rate of Accidental Deaths over the corresponding previous year during 2006 to 2010

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)
2006	1.5	7.0	5.2
2007	1.5	8.3	6.8
2008	1.4	0.4	-1.0
2009	1.4	4.3	2.7
2010	1.4	7.7	6.2

Figure 1.1

Percentage Change in Population, Incidence and Rate of Accidental Deaths during 2006 - 2010 (Over Corresponding Previous Year)



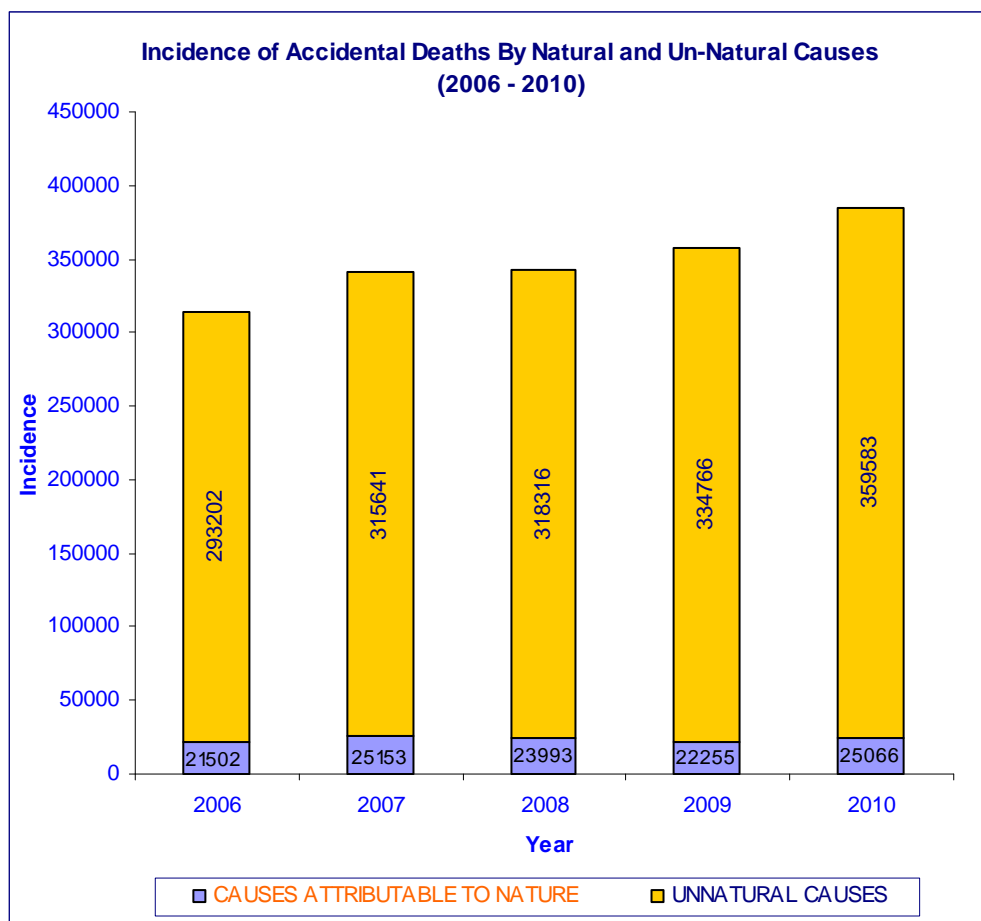
A total of 3,59,583 (93.5%) deaths were due to un-natural causes and the rest 6.5% deaths (25,066) were due to causes attributable to nature, out of total 3,84,649 accidental deaths during the year 2010. There was an increase of

12.6% in deaths due to causes attributable to nature and an increase of 7.4% in deaths due to un-natural causes as compared to 2009, resulting in an overall increase of accidental deaths by 7.7%. [Table-1(B)]

Table — 1 (B)
Incidence of Accidental Deaths by Natural & Un-Natural Causes (2006 to 2010)

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)
2006	21,502	-4.1	2,93,202	7.9	3,14,704	7.0
2007	25,153	17.0	3,15,641	7.7	3,40,794	8.3
2008	23,993	-4.6	3,18,316	0.8	3,42,309	0.4
2009	22,255	-7.2	3,34,766	5.2	3,57,021	4.3
2010	25,066	12.6	3,59,583	7.4	3,84,649	7.7

Figure 1.2

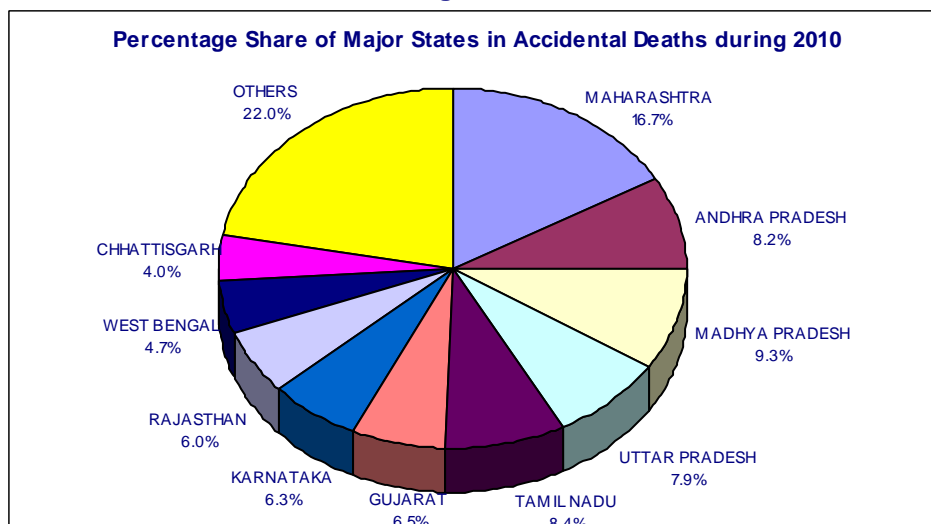


Incidence & Rate of Accidental Deaths in States, UTs and Cities (Table-1.2)

Maharashtra has reported 64,204 accidental deaths out of 3,84,649 such deaths in the country during the year and remained at the top with 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%, on the other hand, has accounted for 7.9% of accidental deaths and stood at 5th position after Maharashtra (16.7%), Madhya Pradesh (9.3%), Tamil Nadu (8.4%) and Andhra Pradesh (8.2%). The States of Gujarat (6.5%), Karnataka (6.3%) and Rajasthan (6.0%) have also reported significant shares of deaths due to accidents during 2010.

Figure 1.3



The highest **rate of accidental deaths** was reported from D & N Haveli (92.9) and Chhattisgarh (63.3) against the National average rate of 32.4.

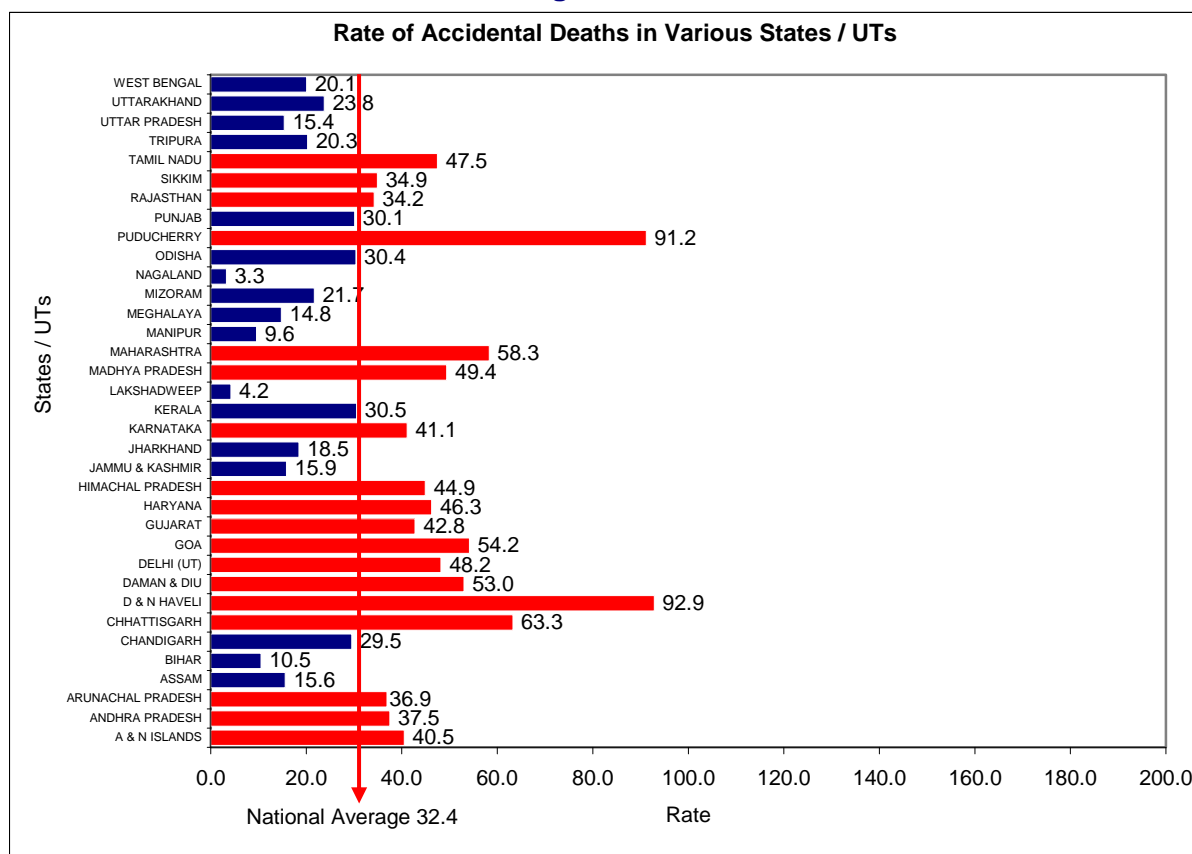
13 States & 5 UTs have constituted high risk areas reporting higher rates of 'Accidental

Deaths' than the All-India average of 32.4 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-à-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 32.4)	Sl. No.	States / UTs	Rate (less than 32.4)
1	D & N HAVELI	92.9	1	KERALA	30.5
2	PUDUCHERRY	91.2	2	ODISHA	30.4
3	CHHATTISGARH	63.3	3	PUNJAB	30.1
4	MAHARASHTRA	58.3	4	CHANDIGARH	29.5
5	GOA	54.2	5	UTTARAKHAND	23.8
6	DAMAN & DIU	53.0	6	MIZORAM	21.7
7	MADHYA PRADESH	49.4	7	TRIPURA	20.3
8	DELHI (UT)	48.2	8	WEST BENGAL	20.1
9	TAMIL NADU	47.5	9	JHARKHAND	18.5
10	HARYANA	46.3	10	JAMMU & KASHMIR	15.9
11	HIMACHAL PRADESH	44.9	11	ASSAM	15.6
12	GUJARAT	42.8	12	UTTAR PRADESH	15.4
13	KARNATAKA	41.1	13	MEGHALAYA	14.8
14	A & N ISLANDS	40.5	14	BIHAR	10.5
15	ANDHRA PRADESH	37.5	15	MANIPUR	9.6
16	ARUNACHAL PRADESH	36.9	16	LAKSHADWEEP	4.2
17	SIKKIM	34.9	17	NAGALAND	3.3
18	RAJASTHAN	34.2			

Figure 1.4



The incidence of Accidental Deaths has increased by 7.7% at National level during 2010 as compared to 2009. D & N Haveli has reported the highest increase of 28.3% followed by Mizoram (25.1%), Assam (19.6%) and West Bengal (15.6%) while Lakshadweep has reported the highest decline of 62.5% followed by Meghalaya (20.2%) and Chandigarh (12.9%) [Table-1.3]

Males, accounting for 79.7% of total victims, were at a greater risk from accidents than females. Though the children's estimated population (up to 14 years age) as per census 2001 was 35.0% of the total population, accidental deaths of children accounted for 6.0% of total such deaths.

Most of the victims of accidents were aged between 15 to 44 years. This group of people has accounted 61.1% of all persons killed in accidents in country during the year. [Table-1.4]

Causes of Accidental Deaths – Table-1(D)

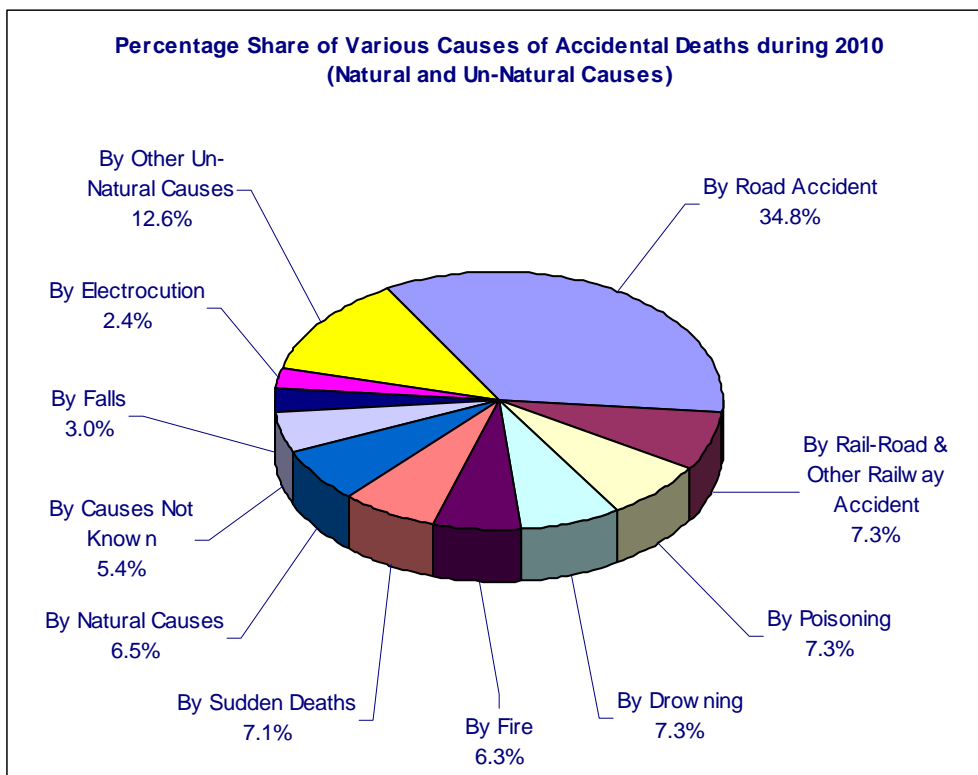
The percentage of 'Accidental Deaths' due to causes attributable to Nature and those due to Un-Natural Causes were 6.5% and 93.5%

respectively. The magnitude of 'Accidental Deaths' by causes attributable to Nature has increased by 12.6% and that of deaths by Un-Natural Causes has increased by 7.4% during 2010 over the year 2009.

The share of accidental deaths due to causes attributable to Nature has increased from 6.2% in 2009 to 6.5% in 2010. Share of deaths due to un-natural causes has decreased from 93.8% in 2009 to 93.5% in 2010. Under causes attributable to nature, the share of deaths due to 'Flood', 'Lightning' and 'Starvation/Thirst' has increased whereas the share of causes such as 'Cold and Exposure', 'Heat Stroke' and 'Landslide' remained the same in the year 2010. The share of causes not attributable to nature has increased for causes such as 'Factory/Machine Accidents', 'Killed by Animals' and 'Mines or quarry disaster' whereas the share of causes such as 'Stampede', 'Air Crash' and 'Suffocation' has decreased as compared to the previous year. [Table-1(D)].

The average rate of Accidental Deaths has marginally increased from 30.5 in 2009 to 32.4 in 2010.

Figure 1.5



Table—1 (D)
Incidence, Share & Rate of Accidental Deaths by Causes Attributable to Nature
and Un-Natural Causes during 2009 & 2010

Sl. No.	Cause	2009			2010			% variation of incidence in 2010 over 2009
		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)
A. CAUSES ATTRIBUTABLE TO NATURE:								
1	Avalanche	22	0.0	0.0	45	0.0	0.0	104.5
2	Cold and Exposure	742	0.2	0.1	937	0.2	0.1	26.3
3	Cyclone/Tornado	128	0.0	0.0	106	0.0	0.0	-17.2
4	Starvation/Thirst	175	0.0	0.0	210	0.1	0.0	20.0
5	Earthquake	2	0.0	0.0	8	0.0	0.0	300.0
6	Epidemic	75	0.0	0.0	57	0.0	0.0	-24.0
7	Flood	726	0.2	0.1	965	0.3	0.1	32.9
8	Heat Stroke	1071	0.3	0.1	1274	0.3	0.1	19.0
9	Landslide	394	0.1	0.0	347	0.1	0.0	-11.9
10	Lightning	2113	0.6	0.2	2622	0.7	0.2	24.1
11	Torrential Rains	132	0.0	0.0	123	0.0	0.0	-6.8
12	Other causes attributable to nature	16675	4.7	1.4	18372	4.8	1.5	10.2
	Total (A)	22255	6.2	1.9	25066	6.5	2.1	12.6
B. UN-NATURAL CAUSES								
1	Air-Crash	12	0.0	0.0	23	0.0	0.0	91.7
2	Collapse of Structure:	2847	0.8	0.2	2682	0.7	0.2	-5.8
	(i) House	1091	0.3	0.1	985	0.3	0.1	-9.7
	(ii) Building	265	0.1	0.0	377	0.1	0.0	42.3
	(iii) Dam	30	0.0	0.0	15	0.0	0.0	-50.0
	(iv) Bridge	44	0.0	0.0	49	0.0	0.0	11.4
	(v) Others	1417	0.4	0.1	1256	0.3	0.1	-11.4
3	Drowning:	25911	7.3	2.2	28001	7.3	2.4	8.1
	(i) Boat Capsize	984	0.3	0.1	760	0.2	0.1	-22.8
	(ii) Other Cases	24927	7.0	2.1	27241	7.1	2.3	9.3
4	Electrocution:	8539	2.4	0.7	9059	2.4	0.8	6.1
5	Explosion:	668	0.2	0.1	493	0.1	0.0	-26.2
	(i) Bomb explosion	261	0.1	0.0	112	0.0	0.0	-57.1
	(ii) Other explosion (Boilers etc.)	407	0.1	0.0	381	0.1	0.0	-6.4
6	Falls:	10622	3.0	0.9	11571	3.0	1.0	8.9
	(i) Fall from Height	8796	2.5	0.8	9828	2.6	0.8	11.7
	(ii) Fall into Pit/Manhole etc.	1826	0.5	0.2	1743	0.5	0.1	-4.5
7	Factory/Machine Accidents	1044	0.3	0.1	1043	0.3	0.1	-0.1
8	Fire:	23268	6.5	2.0	24414	6.3	2.1	4.9
	(i) Fireworks/Crackers	547	0.2	0.0	276	0.1	0.0	-49.5
	(ii) Short-Circuit	1328	0.4	0.1	1312	0.3	0.1	-1.2
	(iii) Gas Cylinder/Stove Burst	4127	1.2	0.4	4820	1.3	0.4	16.8
	(iv) Other Fire Accidents	17266	4.8	1.5	18006	4.7	1.5	4.3
9	Fire-Arms	1504	0.4	0.1	1688	0.4	0.1	12.2
10	Sudden Deaths:	24836	7.0	2.1	27364	7.1	2.3	10.2
	(i) Heart Attacks	16007	4.5	1.4	17563	4.6	1.5	9.7
	(ii) Epileptic Fits/Giddiness	3535	1.0	0.3	4130	1.1	0.3	16.8
	(iii) Abortions/Child Birth	811	0.2	0.1	785	0.2	0.1	-3.2
	(iv) Influence of Alcohol	4483	1.3	0.4	4886	1.3	0.4	9.0
11	Killed by animals	962	0.3	0.1	981	0.3	0.1	2.0
12	Mines or quarry disaster	423	0.1	0.0	355	0.1	0.0	-16.1
13	Poisoning:	26634	7.5	2.3	28012	7.3	2.4	5.2
	(i) Food Poisoning/Accidental Intake of Insecticide	8154	2.3	0.7	9437	2.5	0.8	15.7
	(ii) Spurious/poisonous liquor	1450	0.4	0.1	1202	0.3	0.1	-17.1
	(iii) Leakage of poisonous gases Etc.	247	0.1	0.0	154	0.0	0.0	-37.7
	(iv) Snake Bite/Animal Bite	8035	2.3	0.7	8639	2.2	0.7	7.5
	(v) Other	8748	2.5	0.7	8580	2.2	0.7	-1.9
14	Stampede	110	0.0	0.0	113	0.0	0.0	2.7
15	Suffocation	1257	0.4	0.1	1400	0.4	0.1	11.4
16	Traffic Accidents:	152689	42.8	13.1	161736	42.0	13.6	5.9
	(i) Road Accidents	126896	35.5	10.9	133938	34.8	11.3	5.5
	(ii) Rail-Road Accidents	1516	0.4	0.1	3347	0.9	0.3	120.8
	(iii) Other Railway Accidents	24277	6.8	2.1	24451	6.4	2.1	0.7
17	Other Causes	35906	10.1	3.1	40057	10.4	3.4	11.6
18	Causes Not Known	17534	4.9	1.5	20591	5.4	1.7	17.4
	Total (B)	334766	93.8	28.6	359583	93.5	30.3	7.4
	Grand Total (A+B)	357021	100.0	30.5	384649	100.0	32.4	7.7

Causes Attributable to Nature

The age group-wise distribution of accidental deaths by causes attributable to nature is given in **Table-1.5**. 76.1% victims of causes attributable to nature were males. Age-wise, 6.9% of such victims were up to 14 years of age while 53.0% were in the age-group of 15-44 years. 24.9% such victims were in the age-group 45-59 years. Senior citizens (60 yrs. and above) constituted 15.2% of the total victims.

10.8% deaths were reported from Rajasthan followed by West Bengal (10.4%), Andhra Pradesh (9.5%) and Uttar Pradesh (9.4%) (**Table-1.10**). 16.6% deaths in Punjab, 11.1% deaths in Uttarakhand and 10.6% deaths in Bihar and Haryana (each) were due to 'Cold and Exposure' only. 44.3% deaths in Jammu & Kashmir, 30.9% deaths in Assam, 23.0% deaths in Maharashtra and 13.9% deaths in Tamil Nadu were due to 'Flood'. 24.0% deaths in Tripura, 19.0% deaths in Maharashtra and 14.9% deaths in Punjab were due to 'Heat stroke'. 77.8% deaths in Mizoram, 23.7% deaths in Sikkim and 21.9% deaths in Arunachal Pradesh were due to 'Landslide'. 'Lightning' accounted for 78.9% deaths in Kerala, 67.1% deaths in Chattisgarh, 55.1% deaths in Madhya Pradesh and 47.4% deaths in Maharashtra.

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 6,78,326 cases of 'Un-Natural Accidents' caused 3,59,583 deaths and rendered 5,03,932 people injured during 2010. (Table-1.6)**

Maharashtra accounting for 9.3% (one-eleventh) of country's population has reported almost one sixth (17.7%) of accidental deaths due to unnatural causes. Madhya Pradesh and Tamil Nadu accounted for 9.7% and 8.8% deaths respectively during the year. (**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' (37.2%), Railway Accidents and Rail-Road accidents (7.7%), 'Poisoning' (7.8%), 'Drowning' (7.8%), 'Sudden Deaths' (7.6%) and 'Fire Accidents' (6.8%).

The number of cases of Un-natural accidents at the National level has increased by 4.7% (from 6,47,904 in 2009 to 6,78,326 in 2010) as compared to previous year. The number of persons injured has increased by 1.6% (from 4,96,190 in 2009 to 5,03,932 in 2010) while the number of persons killed in these accidents has increased by 7.4% (from 3,34,766 in 2009 to 3,59,583 in 2010). The Accident cases due to 'Stampede' have decreased by 93.0% (from 1532 in 2009 to 107 in 2010) and cases of 'Killed by animals' have decreased by 13.3% from 1293 in 2009 to 1,121 in 2010 while cases due to 'Air crash' increased by 75.0% from 8 in 2009 to 14 in 2010. [**Table-1.6**]

The proportion of male injured and killed due to un-natural causes in the country was 80.5% and 77.6% respectively of the total such injuries and deaths (**Table-1.11**). 93.4% of injuries and 37.2% 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 66.6% of those killed were females as compared to 33.4% males. [**Table-1.7**]

The cause-wise analysis of un-natural deaths revealed that 19.6% deaths in Goa were due to 'Drowning', 28.0% deaths in Sikkim were due to 'Falls', 11.5% deaths in Gujrat were due to 'Fire', 100% deaths in Lakshadweep were attributed as 'Sudden Deaths', 15.5% deaths in Madhya Pradesh were due to 'Poisoning' and 73.3% deaths in Nagaland were due to 'Road Traffic Accidents' and 3.5% deaths in Uttar Pradesh were due to 'Fire-arms'. [**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 un-natural causes (Road Accidents and Poisoning) during 2010

Sl. No.	High Accidental death Prone Areas				
	Road Accident Deaths All-India Percentage Share = 37.2%		Sl. No.	Poisoning All-India Percentage Share = 7.8%	
	State/UT	%Share		State/UT	%Share
1	NAGALAND	73.3	1	MADHYA PRADESH	15.5
2	JAMMU & KASHMIR	66.5	2	ARUNACHAL PRADESH	12.8
3	MANIPUR	59.3	3	KARNATAKA	12.0
4	UTTAR PRADESH	53.5	4	PUNJAB	11.1
5	BIHAR	53.5	5	CHHATTISGARH	10.5
6	ANDHRA PRADESH	52.6	6	ODISHA	9.4
7	MEGHALAYA	49.6	7	TAMIL NADU	9.3
8	TAMIL NADU	48.8	8	UTTARAKHAND	9.0
9	HARYANA	46.9	9	HIMACHAL PRADESH	8.8
10	RAJASTHAN	45.2	10	WEST BENGAL	8.7
11	HIMACHAL PRADESH	44.8	11	JHARKHAND	8.5
12	UTTARAKHAND	44.7	12	BIHAR	8.4
13	ASSAM	44.1	13	ANDHRA PRADESH	8.1
14	JHARKHAND	43.2			
15	ARUNACHAL PRADESH	42.4			
16	KARNATAKA	42.3			
17	CHANDIGARH	41.6			
18	SIKKIM	40.6			
19	MIZORAM	39.0			
20	ODISHA	37.8			
21	KERALA	37.3			

Table – 1 (F)
High Accidental death prone areas on the basis of Percentage share of deaths due to unnatural causes (Drowning, Fire and Sudden Deaths) during 2010

Sl. No.	High Accidental death Prone Areas				
	Deaths due to Drowning All-India Percentage Share = 7.8%		Sl. No.	Fire All-India Percentage Share = 6.8%	
	State/UT	%Share		State/UT	%Share
1	GOA	19.6	1	GUJARAT	11.5
2	A & N ISLANDS	17.1	2	MADHYA PRADESH	9.2
3	DAMAN & DIU	17.0	3	A & N ISLANDS	9.1
4	KERALA	16.4	4	MAHARASHTRA	8.7
5	MADHYA PRADESH	12.8	5	SIKKIM	8.6
6	MIZORAM	11.9	6	TAMIL NADU	8.1
7	ASSAM	11.0	7	KARNATAKA	6.8
8	UTTARAKHAND	10.7	Sl. No.	Sudden Deaths All-India Percentage Share = 7.6%	
9	CHHATTISGARH	9.7		State/UT	%Share
10	TRIPURA	9.7	1	LAKSHADWEEP	100.0
11	KARNATAKA	9.5	2	PUDUCHERRY	50.8
12	MEGHALAYA	9.4	3	KERALA	19.4
13	ANDHRA PRADESH	8.6	4	A & N ISLANDS	17.1
14	SIKKIM	8.6	5	DAMAN & DIU	17.0
15	MAHARASHTRA	8.5	6	MAHARASHTRA	15.5
16	PUDUCHERRY	8.4	7	D & N HAVELI	14.7
17	GUJARAT	8.2	8	CHANDIGARH	14.2
18	ARUNACHAL PRADESH	7.9	9	TRIPURA	14.1
			10	A & N ISLANDS	9.2
			11	UTTARAKHAND	9.1
			12	HIMACHAL PRADESH	8.5
			13	HARYANA	7.6

Table – 1 (G)
High Prone areas on the basis of Percentage share of deaths due to unnatural causes (Rail Road & Railways Accidents) during 2010

Sl. No.	High Accidental death Prone Areas	
	Rail-Road & Railways Accidental Deaths All-India Percentage Share = 7.7%	
	State/UT	%Share
1	WEST BENGAL	17.1
2	DELHI (UT)	15.1
3	UTTAR PRADESH	14.6
4	BIHAR	14.3
5	PUNJAB	13.6
6	HARYANA	11.2
7	ASSAM	10.2
8	MAHARASHTRA	7.9
9	CHHATTISGARH	7.8

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 2.1% during 2010 compared to 2009 [Table-1.6]. The casualties in Road Accidents in the country have increased by 5.5 during 2010 as compared to 2009. Their proportion in total deaths due to Un-natural causes has decreased from 37.9% in 2009 to 37.2% in 2010. The following statistics reveal the growing magnitude of 'Road Accidental Deaths'. [Table-1(H)] A total of 4,61,757 'Traffic Accidents' were reported during the year comprising 4,30,654 'Road Accidents', 2,843 'Rail-Road Accidents' and 28,260 'Other Railway Accidents'. These accidents caused 1,33,938, 3,347 and 24,451 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 decreased marginally from 1.5 in 2006 to 1.2 in 2010 even as the number of vehicles in the country have increased by 28.3% and the quantum of 'Road Accidents' has increased.

Railway Accidents & Rail-Road Accidents

2,843 cases of 'Rail-Road Accidents' were reported during the year 2010 which shows an increase of 36.7% over 2009 where 2,080 cases were reported. The cases of deaths due to 'Rail-Road Accidents' have increased by 120.8% from 1,516 cases in 2009 to 3,347 in 2010. 2,879 victims (out of 3,347 deaths) were males and 468 were females. [Table-1.6] 756 cases were reported in the second quarter of the year 2010 which accounted for 26.6% of the total 'Rail-Road Accidents' during the year while in 2009, 532 cases were reported in the second quarter. [Table-1.9]

Table – 1 (H)

Share of 'Road Accident Deaths' in Total 'Accidental Deaths' by Un-natural Causes during 2006 to 2010

Sl. No.	Year	Number of Accidental Deaths		Percentage share of 'Road Accident' Deaths in Un-Natural Total Deaths
		Road Accidents	Total Un-natural	
(1)	(2)	(3)	(4)	(5)
1	2006	1,05,725	2,93,202	36.1
2	2007	1,14,590	3,15,641	36.3
3	2008	1,18,239	3,18,316	37.1
4	2009	1,26,896	3,34,766	37.9
5	2010	1,33,938	3,59,583	37.2

Table – 1 (I)

Growth in Number of Vehicles and Road Accidents in India (2006-2010)

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	2006	394.4	1.0	452.9	1.1	1,05,725	7.6	72,718	9.7	1.5
2	2007	418.6	6.1	465.3	2.7	1,14,590	8.4	72,718	–	1.6
3	2008	415.8	–0.7	469.1	0.8	1,18,239	3.2	89,618	23.2	1.3
4	2009	421.6	1.4	466.6	-0.5	1,26,896	7.3	89,618	–	1.4
5	2010	430.6	2.1	470.6	0.9	1,33,938	5.5	1,14,953	28.3	1.2

Source: for Col.9, 'Road Transport Year Book' of Transport Research Wing, Ministry of Road Transport & Highways, Govt. of India.
 Note: data for the year 2006 is repeated in 2007 due to non availability of data for this year.
 data for the year 2008 is repeated in 2009 due to non availability of data for this year.

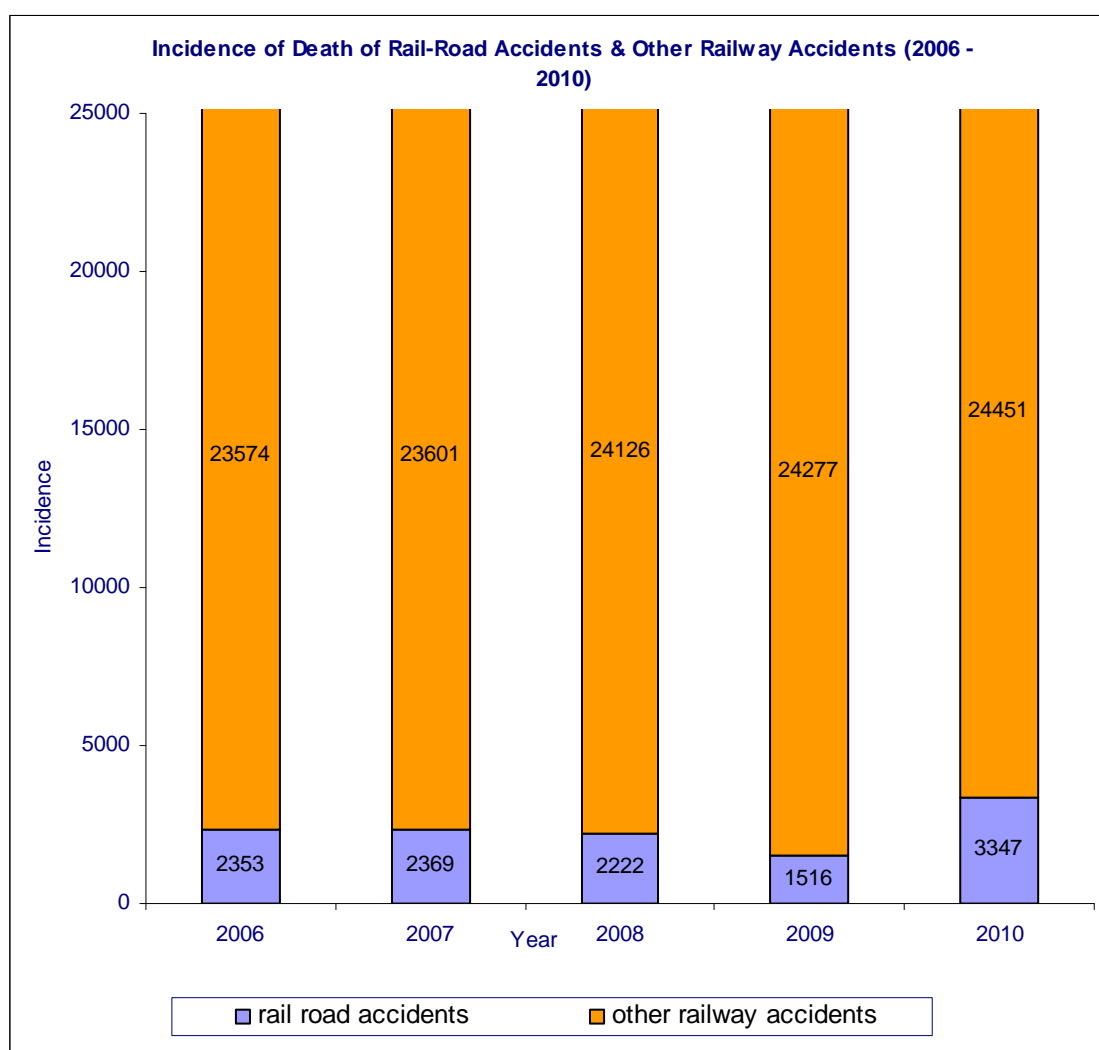


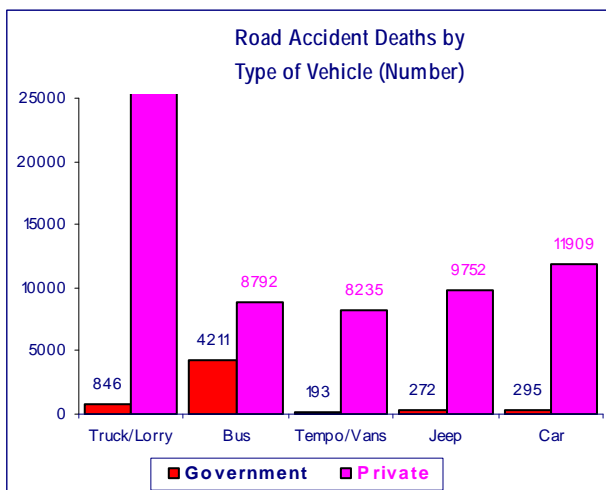
Table — 1 (J)
Incidence and Rate of Deaths due to Road Accidents during 2010
(State/UT wise)

Sl. No.	State/UT	No. of cases of Road Accidents	Total Registered Motor Vehicles as on 31.03.2009 (in 000')	No. of deaths due to Road Accidents in 2010	Rate of Accidental Deaths per 000' vehicles (Col.5 / Col.4)	Rate of Deaths (Col.5/Col.3) x100
(1)	(2)	(3)	(4)	(5)	(6)	(7)
STATES:						
1	ANDHRA PRADESH	42428	8059	15337	1.9	36.1
2	ARUNACHAL PRADESH	280	22	139	6.3	49.6
3	ASSAM	5485	1235	2030	1.6	37.0
4	BIHAR	8441	1960	4693	2.4	55.6
5	CHHATTISGARH	7802	2115	2888	1.4	37.0
6	GOA	4574	674	342	0.5	7.5
7	GUJARAT	20498	10999	7384	0.7	36.0
8	HARYANA	11161	4425	5006	1.1	44.9
9	HIMACHAL PRADESH	3077	494	1099	2.2	35.7
10	JAMMU & KASHMIR	6142	668	1029	1.5	16.8
11	JHARKHAND	4228	2038	2140	1.1	50.6
12	KARNATAKA	46220	6953	9574	1.4	20.7
13	KERALA	35082	4860	3950	0.8	11.3
14	MADHYA PRADESH	30127	6011	8539	1.4	28.3
15	MAHARASHTRA	50619	14451	14063	1.0	27.8
16	MANIPUR	602	147	153	1.0	25.4
17	MEGHALAYA	257	142	184	1.3	71.6
18	MIZORAM	125	70	82	1.2	65.6
19	NAGALAND	44	240	44	0.2	100.0
20	ODISHA	9413	2607	4105	1.6	43.6
21	PUNJAB	2439	4832	2133	0.4	87.5
22	RAJASTHAN	24302	6490	9163	1.4	37.7
23	SIKKIM	186	29	71	2.4	38.2
24	TAMIL NADU	64996	12891	15409	1.2	23.7
25	TRIPURA	901	144	236	1.6	26.2
26	UTTAR PRADESH	25416	10779	15099	1.4	59.4
27	UTTARAKHAND	1479	787	917	1.2	62.0
28	WEST BENGAL	14725	3044	5470	1.8	37.1
	TOTAL (STATES):	421049	107166	131279	1.2	31.2
UNION TERRITORIES:						
29	A & N ISLANDS	285	60	27	0.5	9.5
30	CHANDIGARH	456	747	138	0.2	30.3
31	D & N HAVELI	79	63	62	1.0	78.5
32	DAMAN & DIU	36	70	23	0.3	63.9
33	DELHI (UT)	7220	6302	2170	0.3	30.1
34	LAKSHADWEEP	0	7	0	0.0	0.0
35	PUDUCHERRY	1529	538	239	0.4	15.6
	TOTAL (UTs):	9605	7787	2659	0.3	27.7
	TOTAL (ALL INDIA):	430654	114953	133938	1.2	31.1

Source: for column 4 - 'Road Transport Year Book' of Transport Research Wing, Ministry of Road Transport & Highways, Govt. of India.

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 6.3 followed by Sikkim and Bihar 2.4 each as compared to 1.2 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. But highest number of deaths due to road accidents during the years were reported in Tamil Nadu (15,409) followed by Andhra Pradesh (15,337). The rate of deaths per 100 cases of road accidents was highest in Nagaland (100.0), followed by Punjab (87.5) and Meghalaya (71.6) compared to 31.1 at the National level.

Figure 1.6



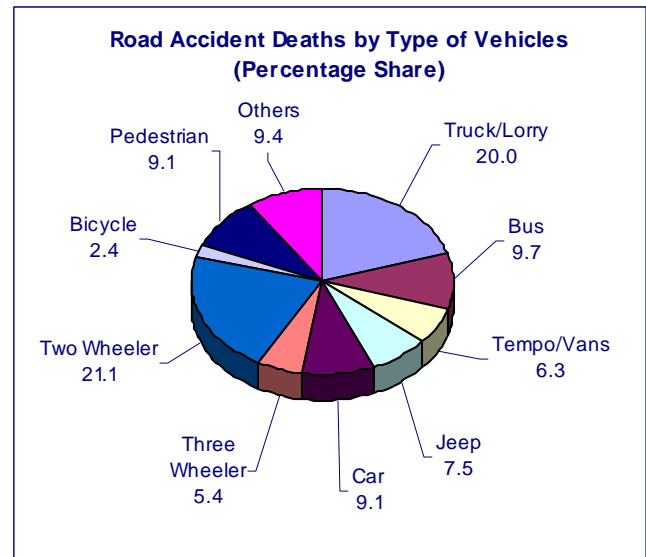
Fatal Road Accidents

Tamil Nadu, Andhra Pradesh, Maharashtra, Karnataka and Rajasthan have accounted for 11.5%, 10.5%, 7.1% and 6.8% respectively of total 'Road Accident' deaths in the country.

1,13,935 males and 20,003 females totaling 1,33,938 persons were killed during the year 2010, while traveling by various modes of transport on roads. 28,234 persons (20.1%) of

these were riding on 'Two-wheelers', 26,800 (20.0%) were occupants of 'Truck/Lorry', 13,003 (9.7%) were killed while traveling in buses and 12,204 (9.1%) were traveling in car. [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 97.3% victims of 'Jeeps', 96.8% victims of 'Truck/Lorry', '97.6% victims of 'Cars', 97.7% victims of 'Tempo/Vans' and 67.6% victims of 'Buses' involved in accidents, were traveling in private vehicles.

The number of persons who died of 'Truck/Lorry' accidents was highest in Andhra Pradesh (12.9%) followed by Tamil Nadu (11.6%) and Uttar Pradesh (12.7%). 19.6% of 'Bus' victims and 16.3% of 'Car' victims were from Tamil Nadu only. 18.0% of 'Tempo/Van' victims, 16.5% 'Jeep' victims and 24.2% 'Bicycle' victims were from Uttar Pradesh. 31.2% of 'Three Wheeler' victims were from Andhra Pradesh and 16.3% and 15.3% 'Pedestrian' and 'Two Wheeler' victims were from Maharashtra.

Table — 1 (K)
Sex wise Road Accident Deaths by Type of Vehicle during 2010

Sl. No.	Type of Vehicle	Number of Road Accidental Deaths			%share of total vehicles
		Male	Female	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1	Truck/Lorry	23446	3354	26800	20.0
	Government	718	128	846	0.6
	Private	22728	3226	25954	19.4
2	Bus	10448	2555	13003	9.7
	Government	3366	845	4211	3.1
	Private	7082	1710	8792	6.6
3	Tempo/Vans	7024	1404	8428	6.3
	Government	169	24	193	0.1
	Private	6855	1380	8235	6.1
4	Jeep	8227	1797	10024	7.5
	Government	229	43	272	0.2
	Private	7998	1754	9752	7.3
5	Car	10162	2042	12204	9.1
	Government	258	37	295	0.2
	Private	9904	2005	11909	8.9
6	Three Wheeler	5954	1296	7250	5.4
7	Two Wheeler	24865	3369	28234	21.1
8	Bicycle	2955	269	3224	2.4
9	Pedestrian	9983	2159	12142	9.1
10	Others	10871	1758	12629	9.4
	Total	113935	20003	133938	100.0

Traffic Accidents by Month & Time of Occurrence

As per **Table-1.9**, a total of 1,22,004 'Traffic Accidents' were reported in the 2nd quarter of the year accounting for 26.4% (out of 4,61,757) 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 (39,821) followed by month of March (37,861) contributing 9.2% and 8.8%. Maximum 'Rail-Road Accidents' occurred during the month of June (261) and March (258). [**Table-1.12**]

Tamil Nadu and Maharashtra, which accounted for the maximum (15.1%) and (11.8%) of 'Road Accidents' in the country have also reported the maximum number of 'Road Accidents' during each month of the year at national level. Delhi has reported the maximum number of 'Road Accidents' among UTs which is 1.7% at the National level. Uttar Pradesh has reported 29.4% of 'Rail-Road accidents' in the country.

A total of 8,369 (out of 28,260) accidents accounting for 29.6% of 'Railway Accidents' (other than 'Rail-Road accidents') were reported from Maharashtra alone followed by Uttar Pradesh 3,143 (11.1%) and West Bengal 2,646 (9.4%). Delhi (1,493) and Puducherry (6) are the only UTs which have recorded such accidents. [**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' (69,282) were reported during 6 p.m. to 9 p.m (16.1%), 68,879 cases during 3 p.m. to 6 p.m. (16.1%), and least number (29,129) of these accidents (6.8%) was reported during 1200 to 3 AM in the night. **The maximum 'Rail-Road Accidents' were reported during 6 AM to 9 AM, 475 (16.7%). The maximum number of 'Other Railway Accidents' 4687 (16.6%) 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 as per 2001 census. Mumbai has reported the maximum number of 'Accidental Deaths' (9,093) followed by Delhi (7,717) accounting for 17.5% and 14.9% respectively of the total accidental deaths reported by 35 mega cities. The rate of 'Accidental Deaths' was highest in Pune (101.8) followed by Nasik (99.7) as compared to average rate for the cities (48.0). Mumbai's share (17.5%) of accidental deaths among cities was relatively higher than that of Maharashtra (16.7%) at the national level. [Table-1.2]

Evidently, average rate of accidental deaths in cities (48.0) was higher than the All-India rate

(32.4).

Except five cities viz. Kochi, Dhanbad, Kolkata, Lucknow and Madurai, all other 30 cities have reported higher or equal rate of 'accidental deaths' than the National average. It is also interesting to note that all 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 share of deaths in cities 1.2%. The comparative reporting of 'accidental deaths' during 2010 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 2010

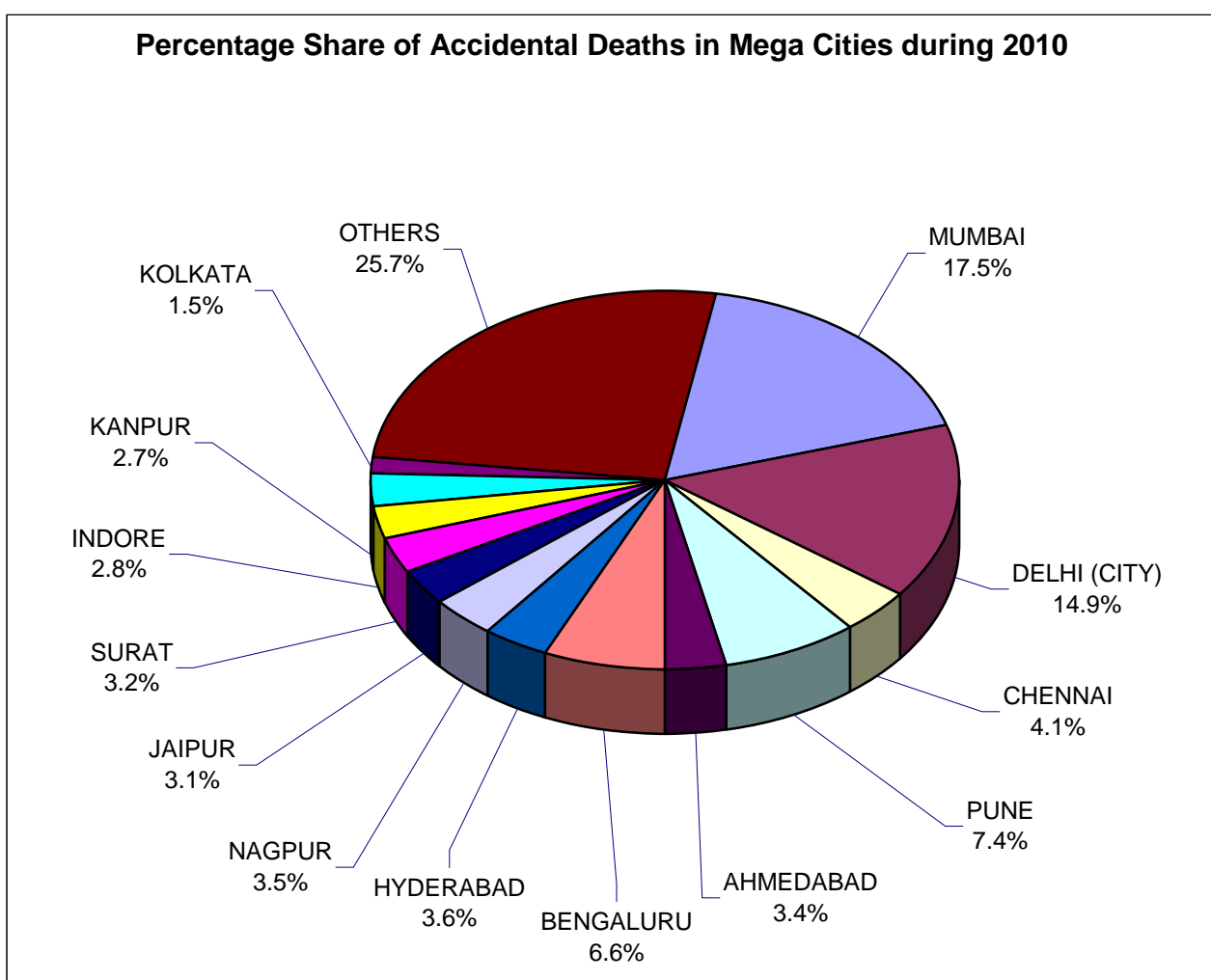
Sl. No.	City	Rate in City	Rate in Parent State
(1)	(2)	(3)	(4)
1	PUNE	101.8	58.3
2	NASIK	99.7	58.3
3	INDORE	89.9	49.4
4	MEERUT	86.9	15.4
5	NAGPUR	86.4	58.3
6	RAJKOT	82.2	42.8
7	VIJAYAWADA	70.7	37.5
8	JAIPUR	68.5	34.2
9	JABALPUR	64.8	49.4
10	DELHI (CITY)	60.3	48.2
11	SURAT	59.8	42.8
12	BENGALURU	59.7	41.1
13	VISHAKHAPATNAM	58.4	37.5
14	AGRA	57.6	15.4
15	VARANASI	57.5	15.4
16	FARIDABAD	53.6	46.3
17	KANPUR	53.0	15.4
18	ALLAHABAD	51.9	15.4
19	ASANSOL	51.1	20.1
20	VADODARA	49.3	42.8
21	JAMSHEDPUR	45.9	18.5
22	LUDHIANA	36.1	30.1
23	AMRITSAR	32.7	30.1
24	KOCHI	31.6	30.5
25	PATNA	29.3	10.5
26	LUCKNOW	24.3	15.4

Table – 1 (M)

Rate of Accidental Deaths in Metropolitan Cities during 2010

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	4.1	33.1
2.	Delhi	127.9	11.9	14.9	60.3
3.	Kolkata	132.2	12.3	1.5	6.1
4.	Mumbai	163.7	15.2	17.5	55.6

Figure – 1.8



48,058 deaths due to un-natural causes & 3,772 deaths due to causes attributable to Nature were reported from 35 cities out of total 51,830 'accidental deaths' as compared to 48,351 deaths during 2009 accounting for an increase of 7.2% during the year. 7 cities out of 35 have reported a decline in accidental deaths. Bhopal city reported the maximum decrease of 67.4% (from 1052 in 2009 to 343 in 2010) while Patna city has reported the

maximum increase of 90.8% (from 262 in 2009 to 500 in 2010) in the number of accidental deaths during the year 2010. [Table-1.3]

Though 35 cities accounted for nearly 9.1% of the country's population, they reported comparatively more deaths due to accidents (i.e. 13.5% of total accidental deaths in the country) and significantly higher rate of 48.0

as compared to 32.4 at the National level. The share of deaths in cities due to causes attributable to Nature was 15.0% while that due to un-natural causes was 13.4% at the national level.

Accidental Deaths due to Un-Natural causes in 35 cities reported an increase of 6.7% over the previous year (from 45,044 to 48,058) as compared to 7.4% increase at the national level (from 3,34,766 to 3,59,583). These 35 cities accounted for nearly 14.9% (97,194 out of 6,78,326) of accident cases due to un-natural causes in the country which rendered 11.1% (56,056 out of 5,03,932) injured & 13.4% (48,058 out of 3,59,583) dead. The highest number of un-natural accidents (18.9%) and the maximum number of deaths (17.5%) were reported in Mumbai city amongst the 35 mega cities. [Table-1.11]

Delhi city among 35 cities has reported the highest number of deaths by causes attributable to Nature (44.6%) followed by Hyderabad city (14.5%). Under un-natural accidents, it is reported that Delhi has experienced maximum damage by Collapse of structure (mainly building) which caused 46.9% and 27.8% people injured and casualties respectively among 35 mega cities. Maximum cases of Drowning were reported in Mumbai (277), maximum casualties due to

Explosion (bomb) were reported in Pune (17) during the year among 35 Mega Cities. The cases of Falls which resulted into maximum deaths were reported in Mumbai (452 deaths out of 452 cases). Maximum cases of Factory /machine accidents were reported in Delhi (89) which caused 28 deaths while Delhi (city), Jamshedpur, Ludhiana, Meerut, Surat and Vishakhapatnam combinely (104 deaths) contributed 10% total such accidents at All India level (1043 deaths). Maximum number of Sudden deaths were reported in Mumbai 24% (1428) out of 35 Mega Cities. 12 out of 28 people died due to Killed by animals. Maximum cases of Poisoning was reported in Nasik (1540) which led into injuries of 1514 people.

Highest incidences of Traffic Accident cases was reported in Delhi (city) (7479) which resulted into 5809 injuries and 2829 deaths followed by Bengaluru (6490 cases, 5376 injuries and 832 deaths) and Mumbai (4008 cases, 3492 injuries and 785 deaths). Highest cases of Road Accidents were reported in Bengaluru (6490) which resulted into 5376 injuries and 832 deaths. While Delhi (city) has reported 5987 of such cases which led to 5389 injuries and 1757 deaths among 35 Mega Cities. [Table-1.11]
