

Chapter – 1

Accidental Deaths in India

Incidence and rate of accidental deaths during the decade (2002-2012)

The incidence of accidental deaths has shown an increasing trend during the period 2003 -2012 with an increase of 51.8% in the year 2012 as compared to 2002, however 0.2% decrease was observed in 2003 over previous year 2002. The population growth during the period 2003-2012 was 13.6% whereas the increase in the rate of accidental deaths during the same period was

34.2%. The percentage change of accidental deaths is presented in **Table-1.1**.

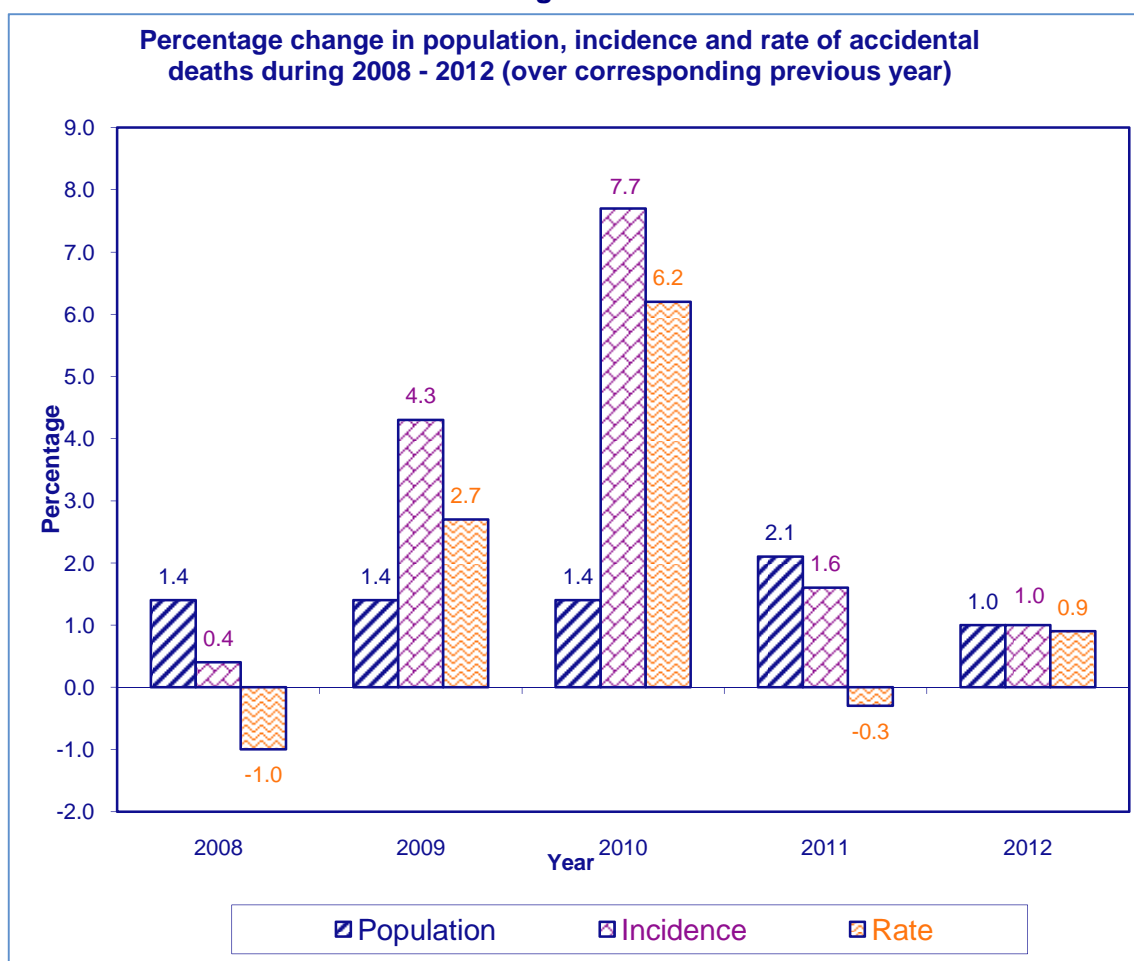
A total of 3,94,982 accidental deaths were reported in the country during 2012 (4,098 more than such deaths reported in 2011) showing an increase of 1.0% as compared to 2011. Correspondingly, 0.3% increase in the population and a marginal rise of 0.9% in rate of 'Accidental Deaths' were reported during this year as compared to 2011. [**Table-1(A)**]

Table – 1 (A)

Percentage change in population, incidence and rate of accidental deaths over the corresponding previous year during 2008 to 2012

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)
2008	1.4	0.4	-1.0
2009	1.4	4.3	2.7
2010	1.4	7.7	6.2
2011	2.1	1.6	-0.3
2012	1.0	1.0	0.9

Figure 1.1



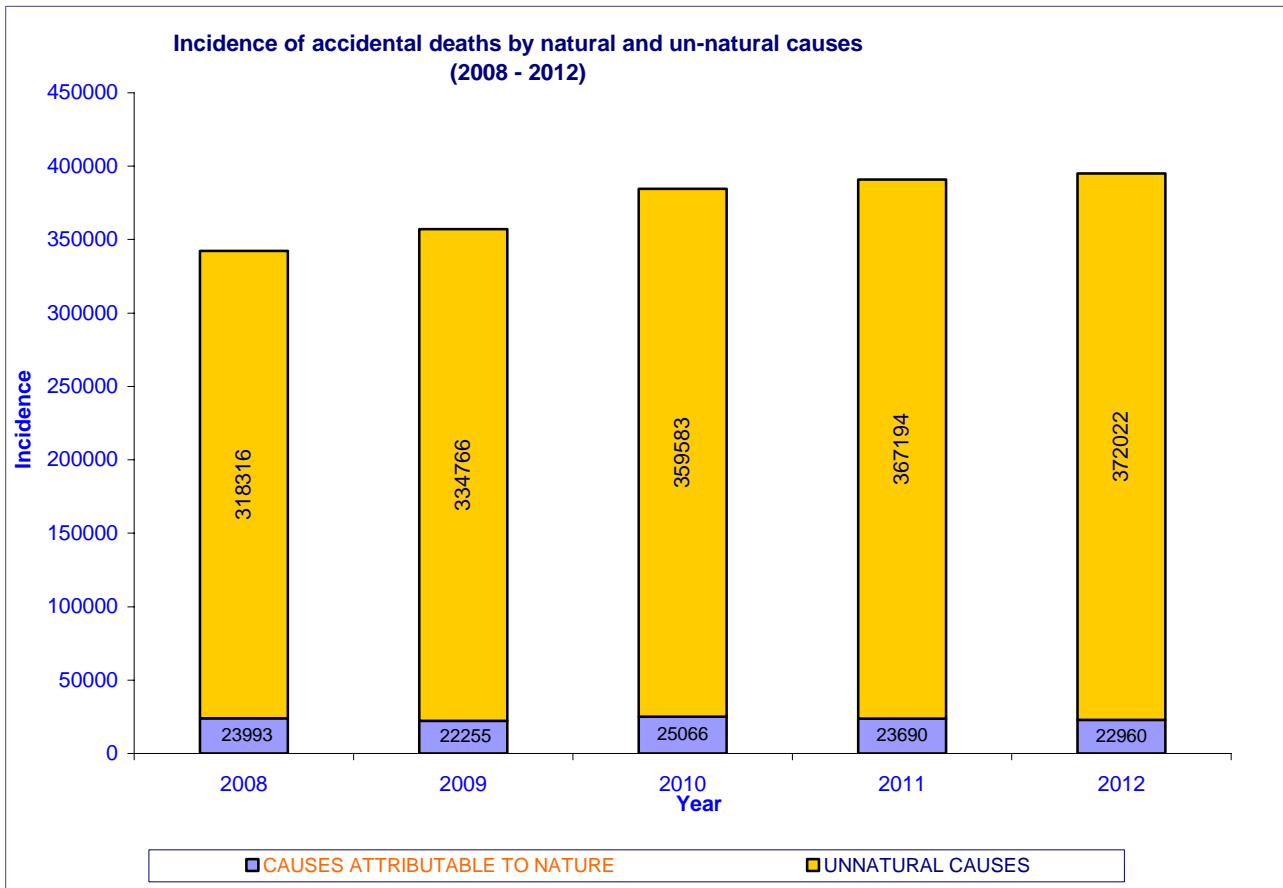
A total of 3,72,022 (94.2%) deaths were due to un-natural causes and the rest of 5.8% deaths (22,960) were due to causes attributable to nature, out of total 3,94,982 accidental deaths during the year 2012. There

was a decline of 3.1% in deaths due to causes attributable to nature and an increase of 1.3% in deaths due to un-natural causes as compared to 2011, resulting in an overall increase of 1.0%. [Table-1(B)]

Table — 1 (B)
Incidence of accidental deaths by natural & un-natural causes (2008 to 2012)

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)
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
2011	23,690	-5.5	3,67,194	2.1	3,90,884	1.6
2012	22,960	-3.1	3,72,022	1.3	3,94,982	1.0

Figure 1.2

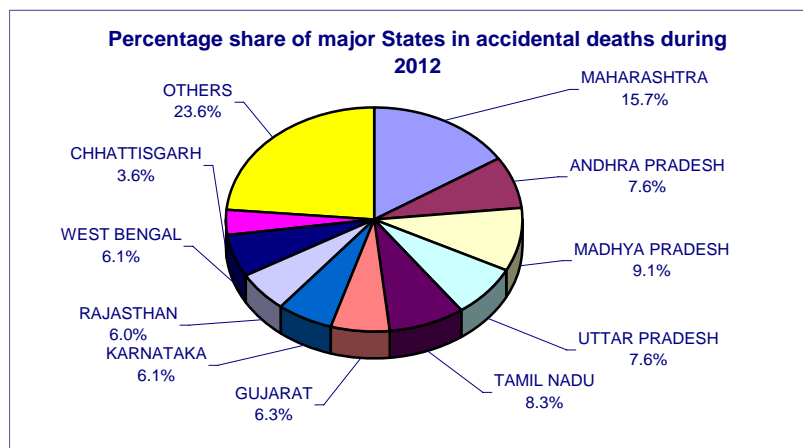


Incidence & rate of accidental deaths in States, UTs and Cities (Table-1.2)

Maharashtra has reported 62,095 accidental deaths out of 3,94,982 such deaths in the country during the year and remained at the top with nearly one-sixth (15.7%) of total accidental deaths reported in the country. Uttar Pradesh, the most populous State in the country with population share of 16.9%, on the other hand, has accounted for 7.6% of

accidental deaths in the country. The other States having larger percentage share in total accidental deaths were Madhya Pradesh (9.1%), Tamil Nadu (8.3%) and Andhra Pradesh (7.6%). However, Gujarat (6.3%), Karnataka (6.1%), West Bengal (6.1%) and Rajasthan (6.0%) have also reported significant shares of deaths due to accidents during 2012.

Figure 1.3



The highest rate of accidental deaths was reported from Puducherry (80.1) followed by Chhattisgarh (58.2), Goa (58.1) and Maharashtra (54.1) against the national average rate of 32.6.

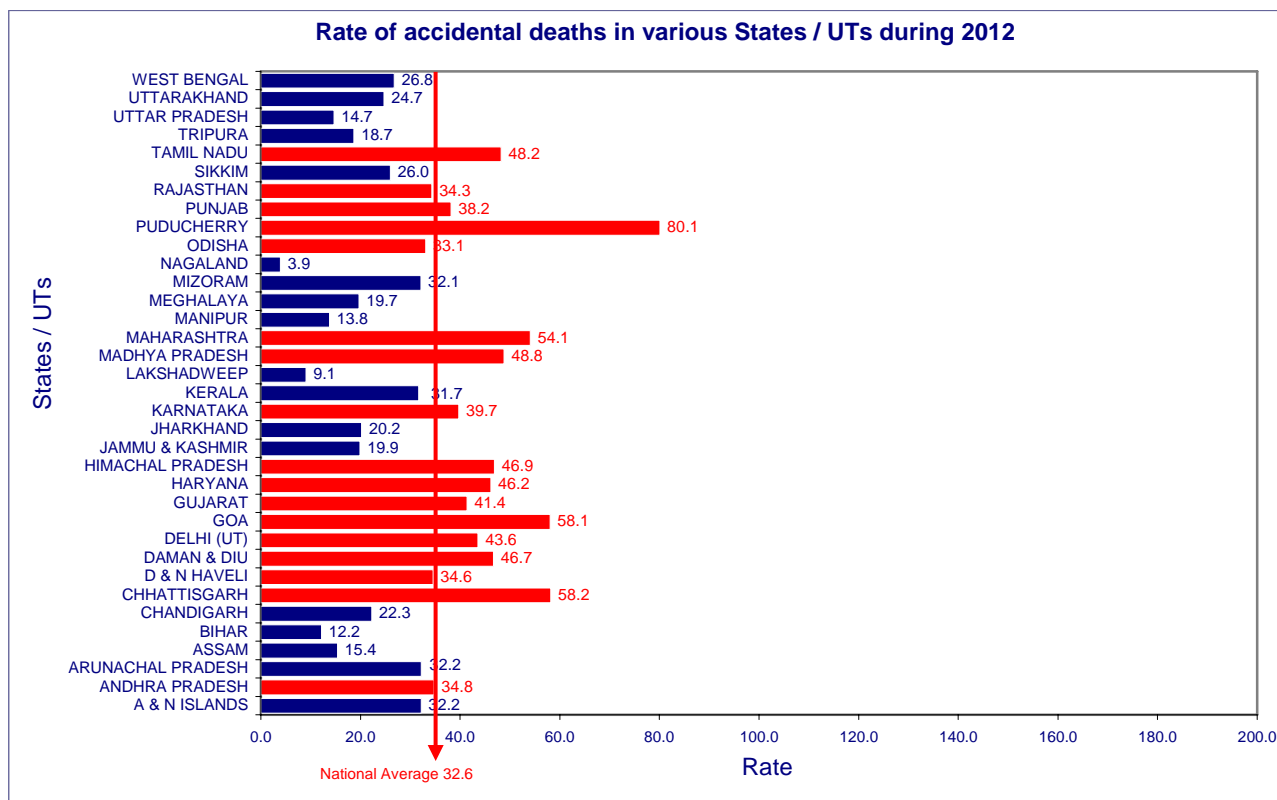
'accidental deaths' than the all-India average of 32.6 deaths per one lakh of population. The grouping of the States/UTs as more accident prone and less accident prone on the basis of their rates of accidental deaths vis-à-vis the all-India average rate is presented in **Table-1(C)**.

17 States/UTs have constituted high risk areas reporting higher rates of

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 32.6)	Sl. No.	States / UTs	Rate (less than 32.6)
1	PUDUCHERRY	80.1	1	A & N ISLANDS	32.2
2	CHHATTISGARH	58.2	2	ARUNACHAL PRADESH	32.2
3	GOA	58.1	3	MIZORAM	32.1
4	MAHARASHTRA	54.1	4	KERALA	31.7
5	MADHYA PRADESH	48.8	5	WEST BENGAL	26.8
6	TAMIL NADU	48.2	6	SIKKIM	26.0
7	HIMACHAL PRADESH	46.9	7	UTTARAKHAND	24.7
8	DAMAN & DIU	46.7	8	CHANDIGARH	22.3
9	HARYANA	46.2	9	JHARKHAND	20.2
10	DELHI (UT)	43.6	10	JAMMU & KASHMIR	19.9
11	GUJARAT	41.4	11	MEGHALAYA	19.7
12	KARNATAKA	39.7	12	TRIPURA	18.7
13	PUNJAB	38.2	13	ASSAM	15.4
14	ANDHRA PRADESH	34.8	14	UTTAR PRADESH	14.7
15	D & N HAVELI	34.6	15	MANIPUR	13.8
16	RAJASTHAN	34.3	16	BIHAR	12.2
17	ODISHA	33.1	17	LAKSHADWEEP	9.1
			18	NAGALAND	3.9

Figure 1.4



The incidence of accidental deaths has increased by 1.0% at national level during 2012 as compared to 2011. Daman & Diu has reported the highest increase of 30.4% in 2012 as compared to 2011 though the numerical increase was only 31 (cases). It was followed by Nagaland (23.9%), Mizoram (19.3%), Odisha (15.1%), Jammu & Kashmir (14.4%) and West Bengal (14.0%), while Sikkim has reported the highest decline of 44.9% followed by Meghalaya (26.8%) and Tripura (23.2%) [Table-1.3]

Males, accounting for 77.5% of total victims (3,06,061 out of 3,94,982), were at a greater risk from accidents than females. 5.7% children (upto 14 years) succumb to accidental deaths during the year 2012.

Most of the victims of accidents were aged between 15 to 44 years. This group of people has accounted for 59.9% of all persons killed in accidents in the country during the year. [Table-1.4]

Causes of accidental deaths – Table-1(D)

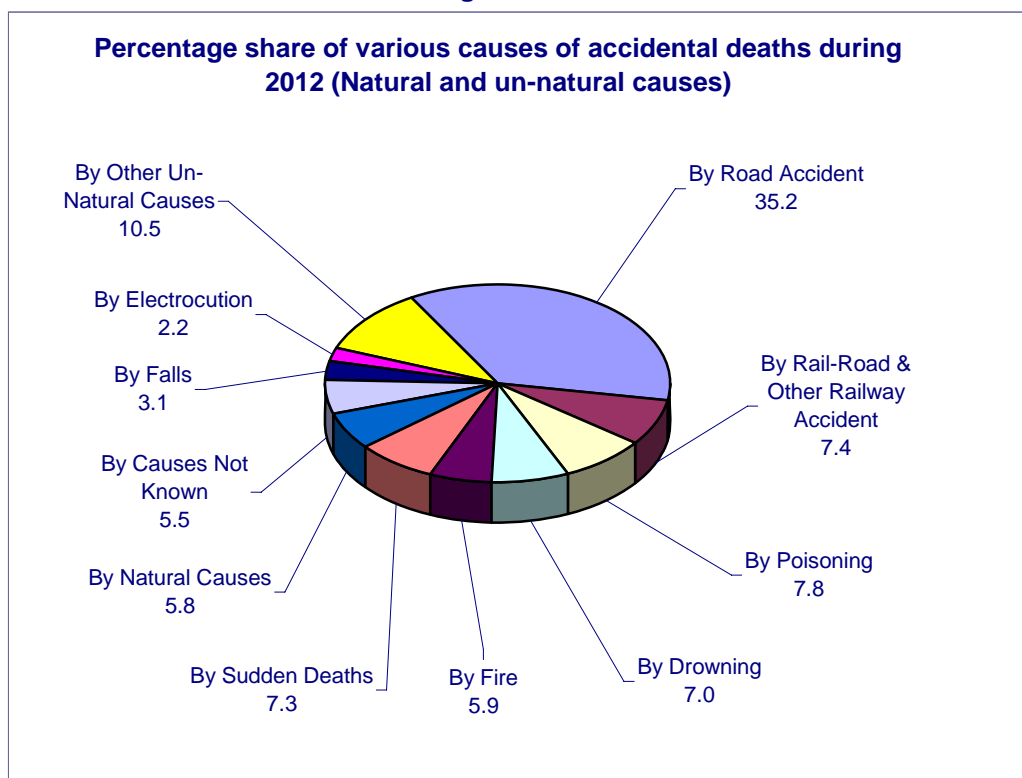
The percentage of ‘accidental deaths’ due to causes attributable to ‘nature’ and those

due to ‘un-natural’ causes were 5.8% and 94.2% respectively. The magnitude of ‘accidental deaths’ by causes attributable to nature has declined by 3.1% and that of deaths by un-natural causes have increased by 1.0% during 2012 over the year 2011.

Under causes attributable to nature, the share of deaths due to ‘cold and exposure’, ‘Starvation/thirst’, ‘torrential rains’ and ‘heat stroke’ has increased whereas the share of causes such as ‘avalanche’, ‘cyclone/tornado’, ‘earthquake’, ‘epidemic’ ‘flood’, ‘landslide’ and ‘lighting’ has decreased in 2012 over 2011. The share of causes not attributable to nature has increased for causes such as ‘falls’, ‘sudden deaths’, ‘poisoning’, ‘suffocation’ and ‘traffic accidents’ whereas the share of causes such as ‘air crash’, ‘collapse of structure’, ‘drowning’, ‘electrocution’, ‘explosion’, ‘factory /machine accidents’, ‘fire arms’, ‘killed by animals’, ‘mines or quarry disaster’ and ‘stampede’ has decreased to the previous year. [Table-1(D)].

The average rate of accidental deaths has marginally increased from 32.3 in 2011 to 32.6 in 2012.

Figure 1.5



Table—1 (D)
Incidence, share & rate of accidental deaths by causes attributable to nature
and un-natural causes during 2011 & 2012

Sl. No.	Cause	2011			2012			% variation of incidence in 2012 over 2011
		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	60	0.0	0.0	40	0.0	0.0	-33.3
2	Cold and Exposure	849	0.2	0.1	997	0.3	0.1	17.4
3	Cyclone/Tornado	117	0.0	0.0	47	0.0	0.0	-59.8
4	Starvation/Thirst	136	0.0	0.0	205	0.1	0.0	50.7
5	Earthquake	69	0.0	0.0	3	0.0	0.0	-95.7
6	Epidemic	127	0.0	0.0	80	0.0	0.0	-37.0
7	Flood	585	0.1	0.0	420	0.1	0.0	-28.2
8	Heat Stroke	793	0.2	0.1	1247	0.3	0.1	57.3
9	Landslide	302	0.1	0.0	282	0.1	0.0	-6.6
10	Lightning	2550	0.7	0.2	2263	0.6	0.2	-11.3
11	Torrential Rains	170	0.0	0.0	203	0.1	0.0	19.4
12	Other causes attributable to nature	17932	4.6	1.5	17173	4.3	1.4	-4.2
	Total (A)	23690	6.1	2.0	22960	5.8	1.9	-3.1
B. UN-NATURAL CAUSES								
1	Air-Crash	18	0.0	0.0	14	0.0	0.0	-22.2
2	Collapse of Structure:	3161	0.8	0.3	2682	0.7	0.2	-15.2
	(i) House	1050	0.3	0.1	865	0.2	0.1	-17.6
	(ii) Building	424	0.1	0.0	334	0.1	0.0	-21.2
	(iii) Dam	44	0.0	0.0	31	0.0	0.0	-29.5
	(iv) Bridge	119	0.0	0.0	64	0.0	0.0	-46.2
	(v) Others	1524	0.4	0.1	1388	0.4	0.1	-8.9
3	Drowning:	29708	7.6	2.5	27558	7.0	2.3	-7.2
	(i) Boat Capsize	849	0.2	0.1	668	0.2	0.1	-21.3
	(ii) Other Cases	28859	7.4	2.4	26890	6.8	2.2	-6.8
4	Electrocution:	8945	2.3	0.7	8750	2.2	0.7	-2.2
5	Explosion:	532	0.1	0.0	403	0.1	0.0	-24.2
	(i) Bomb explosion	149	0.0	0.0	87	0.0	0.0	-41.6
	(ii) Other explosion (Boilers etc.)	383	0.1	0.0	316	0.1	0.0	-17.5
6	Falls:	11867	3.0	1.0	12319	3.1	1.0	3.8
	(i) Fall from Height	10020	2.6	0.8	10567	2.7	0.9	5.5
	(ii) Fall into Pit/Manhole etc.	1847	0.5	0.2	1752	0.4	0.1	-5.1
7	Factory/Machine Accidents	1091	0.3	0.1	1007	0.3	0.1	-7.7
8	Fire:	24576	6.3	2.0	23281	5.9	1.9	-5.3
	(i) Fireworks/Crackers	237	0.1	0.0	505	0.1	0.0	113.1
	(ii) Short-Circuit	1523	0.4	0.1	1439	0.4	0.1	-5.5
	(iii) Gas Cylinder/Stove Burst	4005	1.0	0.3	3746	0.9	0.3	-6.5
	(iv) Other Fire Accidents	18811	4.8	1.6	17591	4.5	1.4	-6.5
9	Fire-Arms	1250	0.3	0.1	1217	0.3	0.1	-2.6
10	Sudden Deaths:	26649	6.8	2.2	28961	7.3	2.4	8.7
	(i) Heart Attacks	16565	4.2	1.4	18522	4.7	1.5	11.8
	(ii) Epileptic Fits/Giddiness	4656	1.2	0.4	4023	1.0	0.3	-13.6
	(iii) Abortions/Child Birth	881	0.2	0.1	938	0.2	0.1	6.5
	(iv) Influence of Alcohol	4547	1.2	0.4	5478	1.4	0.5	20.5
11	Killed by animals	1233	0.3	0.1	959	0.2	0.1	-22.2
12	Mines or quarry disaster	385	0.1	0.0	359	0.1	0.0	-6.8
13	Poisoning:	29478	7.5	2.4	30748	7.8	2.5	4.3
	(i) Food Poisoning/Accidental Intake of Insecticide	8972	2.3	0.7	8500	2.2	0.7	-5.3
	(ii) Spurious/poisonous liquor	1435	0.4	0.1	731	0.2	0.1	-49.1
	(iii) Leakage of poisonous gases Etc.	181	0.0	0.0	169	0.0	0.0	-6.6
	(iv) Snake Bite/Animal Bite	8590	2.2	0.7	8891	2.3	0.7	3.5
	(v) Other	10300	2.6	0.9	12457	3.2	1.0	20.9
14	Stampede	489	0.1	0.0	70	0.0	0.0	-85.7
15	Suffocation	2013	0.5	0.2	2075	0.5	0.2	3.1
16	Traffic Accidents:	165072	42.2	13.6	168301	42.6	13.9	2.0
	(i) Road Accidents	136834	35.0	11.3	139091	35.2	11.5	1.6
	(ii) Rail-Road Accidents	2366	0.6	0.2	1808	0.5	0.1	-23.6
	(iii) Other Railway Accidents	25872	6.6	2.1	27402	6.9	2.3	5.9
17	Other Causes	39473	10.1	3.3	41611	10.5	3.4	5.4
18	Causes Not Known	21254	5.4	1.8	21707	5.5	1.8	2.1
	Total (B)	367194	93.9	30.3	372022	94.2	30.7	1.3
	Grand Total (A+B)	390884	100.0	32.3	394982	100.0	32.6	1.0

Causes attributable to nature

The age group-wise distribution of accidental deaths by causes attributable to nature is given in **Table-1.5**. 74.9% victims of causes attributable to nature were males. As per age-wise classification of victims, 5.0% of such victims were up to 14 years of age while 52.4% were in the age-group of 15-44 years. 27.0% such victims were in the age-group 45-59 years. Senior citizens (60 yrs. and above) constituted 15.7% of the total such victims.

State/UT wise distribution of accidental deaths in the country by various natural causes along with their share in total deaths is presented **Table-1.10**. 11.4% deaths were reported from West Bengal and Rajasthan each followed by Odisha (9.2%), Uttar Pradesh (8.5%) and Bihar (8.3%). 100% deaths in Manipur were due to 'lightning' only. 82.1% deaths in Sikkim were claimed by 'landslide'. 44.4% deaths in Assam were due to 'flood'. 19.6% deaths in Punjab followed by 15.5% deaths in Maharashtra were due to 'heat stroke'. 'Starvation/thirst' claimed 100% deaths in Puducherry. 19.5% and 14.1% deaths were due to 'cold and exposure' in Punjab and Uttar Pradesh respectively. 'Earthquake' claimed three lives during the year. 44.4% deaths in Assam, 17.9% deaths in Sikkim, 14.4% in Maharashtra and 10.3% deaths in Mizoram were due to 'floods'. 'Heat stroke' claimed 19.6% and 15.5% deaths in Punjab and Maharashtra respectively. 'Lightning' accounted for 67.5% deaths in Chhattisgarh, 59.2% deaths in Kerala and 54.1% deaths in Maharashtra during the year 2012.

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 6,99,804 cases of 'Un-natural accidents' accounted for 3,72,022 deaths and rendered 5,07,329 people injured were reported during 2012. (**Table-1.6**)

State/UT wise and sex wise distribution of accidental deaths in the country by various un-natural causes along with their share in total deaths is presented **Table-1.11**. Maharashtra accounting for 9.5% (one-eleventh) of country's population has reported almost one sixth (16.6%) of accidental deaths due to un-natural causes. Madhya Pradesh and Tamil Nadu

accounted for 9.5% and 8.7% 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**. 32.6% deaths claimed the population of age group 30-44 years and 47.2% of deaths in this age group was due to traffic accidents. The 'accidental deaths' due to un-natural causes were mainly on account of 'road accidents' (37.4%), 'railway accidents' and 'rail-road accidents' (7.9%), 'poisoning' (8.3%), 'sudden deaths' (7.8%), 'drowning' (7.4%) and 'fire accidents' (6.3%).

The number of cases of un-natural accidents at the national level has increased by 0.8% (from 6,94,390 in 2011 to 6,99,804 in 2012) as compared to previous year. The number of persons injured has increased by 0.2% (from 5,06,348 in 2011 to 5,07,329 in 2012) while the number of persons killed in these accidents has increased by 1.3% (from 3,67,194 in 2011 to 3,72,022 in 2012). The accident cases due to 'stampede', 'suffocation', 'air crash', 'collapse of structure', 'drowning', 'fire' and 'electrocution' have decreased by 80.3% (from 314 in 2011 to 62 in 2012), 35.7% (from 3,209 in 2011 to 2,063 in 2012), 20.0% (from 5 in 2011 to 4 in 2012), 11.6% (from 3,125 in 2011 to 2,764 in 2012), 6.4% (from 28,897 in 2011 to 27,041 in 2012), 5.1% (from 26,343 in 2011 to 24,987 in 2012) and 1.6% (from 8,987 in 2011 to 8,839 in 2012) respectively while accident cases due to 'explosion', 'sudden deaths', 'killed by animals', 'poisoning', 'fire arms' and 'traffic accidents' increased by 15.4% (From 481 in 2011 to 555 in 2012), 6.1% (32,068 in 2011 to 34,031 in 2012), 5.2% (from 1,058 in 2011 to 1,113 in 2012), 2.7% (from 37,145 in 2011 to 38,155 in 2012), 2.2% (from 1,401 in 2011 to 1,432 in 2012), 0.1% (from 4,73,084 in 2011 to 4,73,416 in 2012) respectively. [**Table-1.6**]

The proportion of male injured and killed due to un-natural causes in the country was 79.7% and 77.6% respectively of the total such injuries and deaths (**Table-1.11**). 92.6% of injuries and 37.4% of deaths were due to road accidents alone at the national level. Males outnumbered females in all kinds of accidental casualties except 'fire accidents' where 66.4% of those killed were females as compared to 33.6% males. [**Table-1.7**]

The cause-wise analysis of un-natural deaths revealed that 28.6% deaths in Lakshadweep were due to 'drowning', 26.1% deaths in Sikkim were due to 'falls', 15.7% deaths in D & N Haveli were due to 'factory/machine accidents', 12.0% deaths in Daman & Diu were due to 'fire', 56.1% deaths in Puducherry were attributed as 'sudden deaths', 19.7% deaths in West Bengal were due to 'poisoning' and 69.6% deaths in Jammu

& Kashmir were due to 'road traffic accidents' and 4.8% deaths in Nagaland 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 2012

Sl. No.	High accidental death Prone Areas				
	Road accident deaths all-India percentage share = 37.4%		Sl. No.	Poisoning all-India percentage share = 8.3%	
	State/UT	%Share		State/UT	%Share
1	JAMMU & KASHMIR	69.6	1	WEST BENGAL	19.7
2	NAGALAND	67.5	2	MADHYA PRADESH	13.9
3	UTTAR PRADESH	53.5	3	ODISHA	13.5
4	ANDHRA PRADESH	51.9	4	UTTARAKHAND	12.1
5	TAMIL NADU	49.9	5	CHHATTISGARH	11.7
6	ASSAM	49.6	6	KARNATAKA	10.0
7	BIHAR	49.5	7	HIMACHAL PRADESH	9.6
8	PUNJAB	48.3	8	MIZORAM	9.1
9	MEGHALAYA	48.3	9	TAMIL NADU	9.0
10	MANIPUR	46.3			
11	RAJASTHAN	45.1			
12	JHARKHAND	44.4			
13	D & N HAVELI	43.8			
14	TRIPURA	43.3			
15	ARUNACHAL PRADESH	43.2			
16	KARNATAKA	42.3			
17	HIMACHAL PRADESH	41.6			
18	HARYANA	40.9			
19	KERALA	38.9			
20	UTTARAKHAND	37.5			

Table – 1 (F)

High accidental death prone areas on the basis of percentage share of deaths due to un-natural causes ('Drowning', 'Fire' and 'Sudden Deaths') during 2012

Sl. No.	High accidental death prone areas				
	Deaths due to 'Drowning' all-India percentage share = 7.4%		Sl. No.	'Fire' all-India percentage share = 6.3%	
	State/UT	%Share		State/UT	%Share
1	LAKSHADWEEP	28.6	1	DAMAN & DIU	12.0
2	DAMAN & DIU	18.8	2	GUJARAT	10.1
3	A & N ISLANDS	17.6	3	MADHYA PRADESH	8.6
4	GOA	15.2	4	MAHARASHTRA	8.0
5	KERALA	14.3	5	UTTARAKHAND	7.4
6	MIZORAM	13.1	6	JHARKHAND	7.1
7	MADHYA PRADESH	12.7	7	KARNATAKA	6.7
8	MEGHALAYA	12.7	8	CHHATTISGARH	6.4
9	CHHATTISGARH	11.2	Sl. No.	'Sudden Deaths' all-India percentage share = 7.8%	
10	TRIPURA	10.4		State/UT	%Share
11	ASSAM	10.0	1	PUDUCHERRY	56.1
12	UTTARAKHAND	8.5	2	LAKSHADWEEP	42.9
13	D & N HAVELI	8.3	3	SIKKIM	30.6
14	PUDUCHERRY	8.3	4	KERALA	19.6
15	KARNATAKA	7.8	5	DAMAN & DIU	16.5
16	RAJASTHAN	7.8	6	MAHARASHTRA	16.2
17	ARUNACHAL PRADESH	7.6	7	CHANDIGARH	15.5
18	MAHARASHTRA	7.6	8	A & N ISLANDS	15.2
19	GUJARAT	7.4	9	GUJARAT	13.4
			10	TRIPURA	10.8
			11	PUNJAB	10.7
			12	HIMACHAL PRADESH	10.6
			13	HARYANA	10.0

Table – 1 (G)

High prone areas on the basis of percentage share of deaths due to un-natural causes (Rail-Road & Railways accidents) during 2012

Sl. No.	High Accidental death Prone Areas	
	Rail-Road & Railways accidental deaths all-India percentage share = 7.9%	
	State/UT	%Share
1	BIHAR	16.3
2	DELHI (UT)	14.3
3	UTTAR PRADESH	12.8
4	WEST BENGAL	12.3
5	ASSAM	11.5
6	HARYANA	11.5
7	JHARKHAND	10.6
8	PUNJAB	9.8
9	ANDHRA PRADESH	9.4
10	GOA	8.8
11	MAHARASHTRA	8.4

Traffic accidents

Traffic accidents comprising (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' cases in the country have marginally decreased by 0.02% during 2012 compared to 2011 [Table-1.6] while the casualties in road accidents in the country have increased by 1.6% during 2012 as compared to 2011. Their proportion of deaths due to road accidents to total deaths due to un-natural causes has slightly increased from 37.3% in 2011 to 37.4% in 2012. The following statistics reveal the growing magnitude of 'road accidental deaths'. [Table-1(H)] A total of 4,73,416 'traffic accidents' cases were reported during the year comprising 4,40,042 'road accidents' cases, 1,762 'rail-road accidents' cases and 31,612 'other railway accidents' cases. These accidents accounted for 1,39,091, 1,808 and 27,402 deaths respectively during the year 2012. [Table-1.6]

Road accident deaths

The number of vehicles, number of road accidents along with casualties and 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 1.3 in 2008 to 1.0 in 2012 even as the number of vehicles in the country has increased by 58.3% and the quantum of 'road accidents' has increased by 5.8% during the same period.

Railway accidents & Rail-Road accidents

A total of 1,762 cases of 'rail-road accidents' were reported during the year 2012 which shows a decrease of 26.1% over 2011 where 2,385 cases were reported. The number of deaths due to 'rail-road accidents' have decreased by 29.3% (from 2,366 in 2011 to 1,808 in 2012), wherein out of 1,808 victims 1,487 were males and 321 were females [Table-1.6]. Male fatality percentage was more than 85% w.r.t. total victims under traffic accidents. *State/UT wise distribution of traffic accidents during various quarters of 2012 is presented Table-1.9.* 455 cases were reported in the first quarter of the year 2012 which accounted for 25.8% (455 out of 1,762 cases) of the total 'rail-road accidents' during the year 2012, however, in 2011, 23.3% (556 out of 2,385 cases) were reported in the first quarter. [Table-1.9]

Table – 1 (H)

Share of 'Road accident deaths' in total 'Accidental deaths' by un-natural causes during 2008 to 2012

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	2008	1,18,239	3,18,316	37.1
2	2009	1,26,896	3,34,766	37.9
3	2010	1,33,938	3,59,583	37.2
4	2011	1,36,834	3,67,194	37.3
5	2012	1,39,091	3,72,022	37.4

Table – 1 (I)
Growth in number of vehicles and road accidents in India (2008-2012)

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	2008	415.8	-0.7	469.1	0.8	1,18,239	3.2	89,618	23.2	1.3
2	2009	421.6	1.4	466.6	-0.5	1,26,896	7.3	89,618	-	1.4
3	2010	430.6	2.1	470.6	0.9	1,33,938	5.5	1,14,953	28.3	1.2
4	2011	440.1	2.2	468.8	-0.4	1,36,834	2.2	1,14,953	-	1.2
5	2012	440.0	-0.02	469.9	0.2	1,39,091	1.6	1,41,867	23.4	1.0

Source: for Col.9, 'Road Transport Year Book' of Transport Research Wing, Ministry of Road Transport & Highways, Govt. of India.
 Note: for Col.9, data for the year 2006 is repeated in 2007 due to non availability of data for this year.
 for Col.9, data for the year 2008 is repeated in 2009 due to non availability of data for this year.
 for Col.9, data for the year 2010 is repeated in 2011 due to non availability of data for this year.

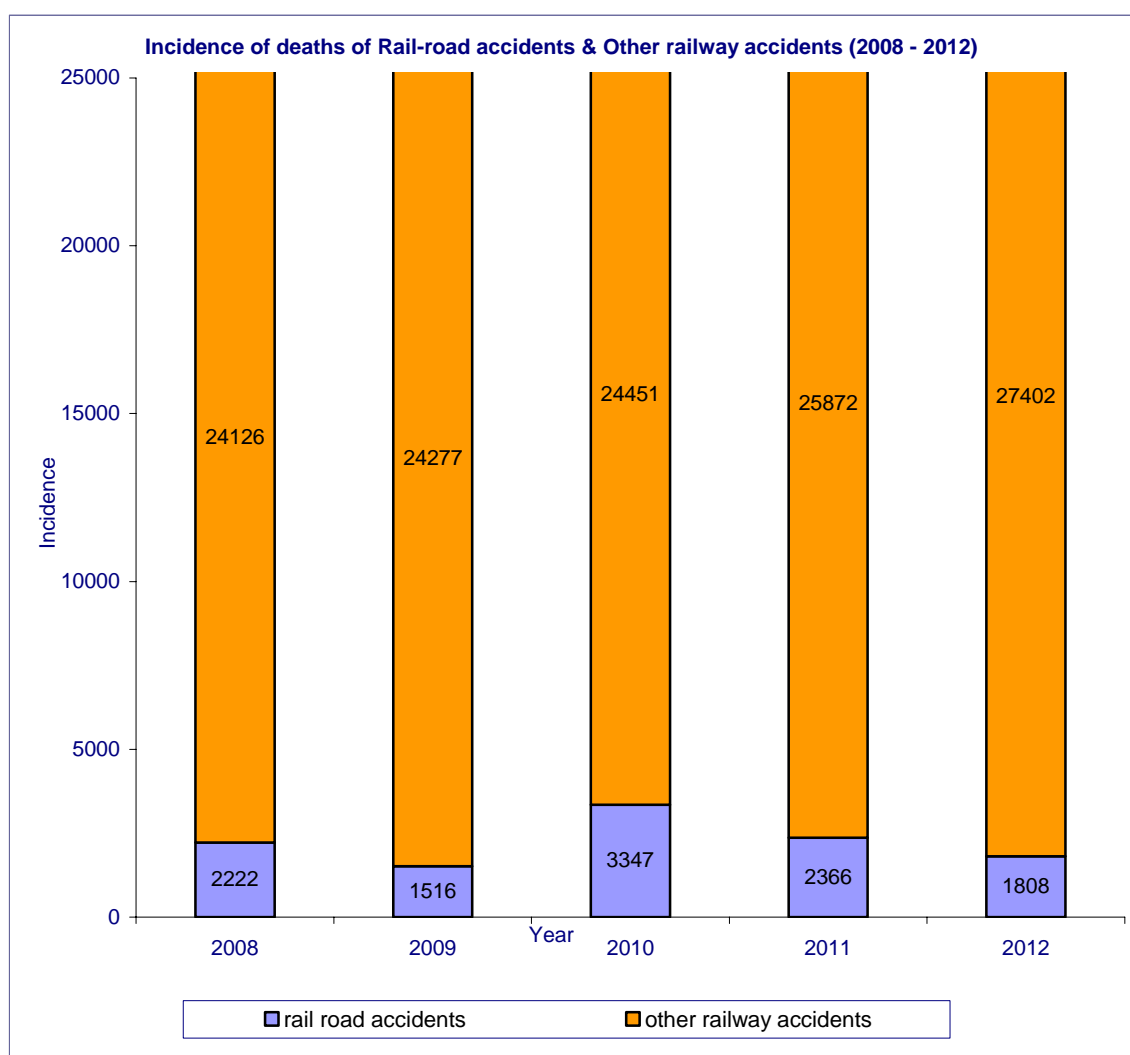


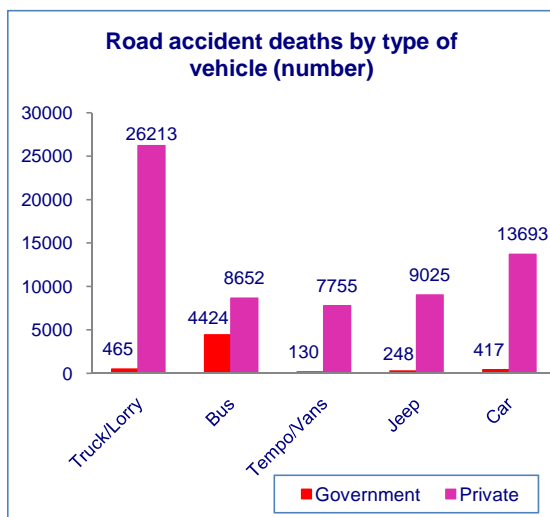
Table — 1 (J)
Incidence and rate of deaths due to road accidents during 2012
(State/UT wise)

Sl. No.	State/UT	No. of cases of road accidents	Total registered motor vehicles as on 31.03.2011 (in 000')	No. of deaths due to road accidents in 2012	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	39344	10189	14966	1.5	38.0
2	ARUNACHAL PRADESH	204	145	136	0.9	66.7
3	ASSAM	6535	1582	2291	1.4	35.1
4	BIHAR	10320	2673	5056	1.9	49.0
5	CHHATTISGARH	13511	2766	3167	1.1	23.4
6	GOA	4288	790	302	0.4	7.0
7	GUJARAT	27267	12993	7855	0.6	28.8
8	HARYANA	9971	5377	4598	0.9	46.1
9	HIMACHAL PRADESH	2899	622	1109	1.8	38.3
10	JAMMU & KASHMIR	6637	927	1426	1.5	21.5
11	JHARKHAND	4625	3113	2512	0.8	54.3
12	KARNATAKA	44448	9930	9448	1.0	21.3
13	KERALA	36174	6072	4286	0.7	11.8
14	MADHYA PRADESH	29173	7356	8506	1.2	29.2
15	MAHARASHTRA	45247	17434	13936	0.8	30.8
16	MANIPUR	771	207	158	0.8	20.5
17	MEGHALAYA	355	176	213	1.2	60.0
18	MIZORAM	110	93	77	0.8	70.0
19	NAGALAND	42	273	56	0.2	133.3
20	ODISHA	9285	3338	3701	1.1	39.9
21	PUNJAB	6328	5274	4795	0.9	75.8
22	RAJASTHAN	22969	7986	9528	1.2	41.5
23	SIKKIM	123	39	44	1.1	35.8
24	TAMIL NADU	67757	15638	16175	1.0	23.9
25	TRIPURA	888	188	272	1.4	30.6
26	UTTAR PRADESH	24478	13287	15109	1.1	61.7
27	UTTARAKHAND	1455	997	827	0.8	56.8
28	WEST BENGAL	15608	3261	6222	1.9	39.9
	TOTAL (STATES):	430812	132726	136771	1.0	31.7
UNION TERRITORIES:						
29	A & N ISLANDS	236	69	25	0.4	10.6
30	CHANDIGARH	412	1008	114	0.1	27.7
31	D & N HAVELI	85	76	53	0.7	62.4
32	DAMAN & DIU	50	78	29	0.4	58.0
33	DELHI (UT)	6937	7228	1866	0.3	26.9
34	LAKSHADWEEP	0	9	0	-	-
35	PUDUCHERRY	1510	673	233	0.3	15.4
	TOTAL (UTs):	9230	9141	2320	0.3	25.1
	TOTAL (ALL INDIA):	440042	141867	139091	1.0	31.6

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 Bihar and West Bengal at 1.9 each followed by Himachal Pradesh (1.8), Andhra Pradesh (1.5) and Jammu & Kashmir (1.5) as compared to 1.0 at the national level. Although Maharashtra had the 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 (16,175) followed by Uttar Pradesh (15,109), Andhra Pradesh (14,966) and Maharashtra (13,936). The rate of deaths per 100 cases of road accidents was highest in Nagaland (133.3), followed by Punjab (75.8) and Mizoram (70.0) as compared to 31.6 at the National level.

Figure 1.6



Fatal road accidents

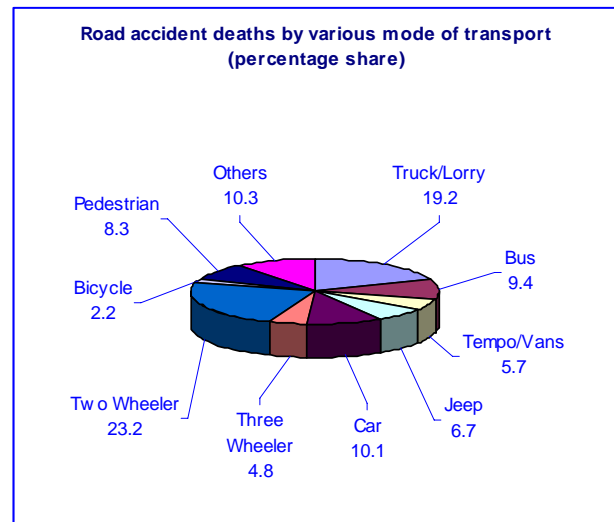
State/UT wise and mode of transport wise distribution of deaths due to road accidents are presented in **Table 1.8**. Tamil Nadu, Uttar Pradesh, Andhra Pradesh and Maharashtra have accounted for 11.6%, 10.9%, 10.8% and 10.0% respectively of total 'Road Accident' deaths in the country.

A total of 1,18,533 males and 20,205 females totaling 1,39,091 persons were killed during the year 2012.

Road accident deaths by various mode of transport.

A total of 32,318 persons (23.2%) were died due to accidents of 'two-wheelers', 'truck/lorry' accounted for 19.2% (26,678 persons), 'cars' accounted for 10.1% (14,110 persons) and 'buses' accounted for 9.4% (13,076 persons) of accidental deaths during the year 2012. **[Table-1(K)]**

Figure 1.7



Although break-up of total government and private vehicles are not available, it is pertinent to note that 98.3% victims of 'truck/lorry', 97.3% victims of 'jeeps', 97.0% victims of 'cars', 98.3% victims of 'tempo/vans' and 66.2% victims of 'buses' involved in accidents, were traveling in private vehicles.

The number of persons who died of 'truck/lorry' accidents was highest in Uttar Pradesh (13.4%) followed by Andhra Pradesh (12.9%) and Tamil Nadu (11.3%). 16.8% of victims in Tamil Nadu followed by Uttar Pradesh (13.6%) and Andhra Pradesh (10.5%) were due to 'bus' accidents. 17.9% of 'Car' victims were from Tamil Nadu alone. 15.2% of 'tempo/van' victims, 16.0% 'jeep' victims and 19.9% 'bicycle' victims were from Uttar Pradesh. 25.7% of 'three wheeler' victims were from Andhra Pradesh and 14.7% 'pedestrian' and 13.9% victims of 'two wheeler' victims were from Maharashtra alone. **(Table-1.8)**

Table — 1 (K)
Sex wise road accident deaths by various mode of transport during 2012

Sl. No.	Mode of transport	Number of road accidental deaths			%share of total vehicles
		Male	Female	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1	Truck/Lorry	23523	3155	26678	19.2
	Government	388	77	465	0.3
	Private	23135	3078	26213	18.8
2	Bus	10653	2423	13076	9.4
	Government	3708	716	4424	3.2
	Private	6945	1707	8652	6.2
3	Tempo/Vans	6556	1329	7885	5.7
	Government	100	30	130	0.1
	Private	6456	1299	7755	5.6
4	Jeep	7668	1605	9273	6.7
	Government	207	41	248	0.2
	Private	7461	1564	9025	6.5
5	Car	11986	2124	14110	10.1
	Government	354	63	417	0.3
	Private	11632	2061	13693	9.8
6	Three wheeler	5461	1276	6737	4.8
7	Two wheeler	28524	3794	32318	23.2
8	Bicycle	2871	198	3069	2.2
9	Pedestrian	9067	2504	11571	8.3
10	Others	12224	2150	14374	10.3
	Total	118533	20558	139091	100.0

Traffic accidents by quarters, month & time of occurrence

As per **Table-1.9**, a total of 1,23,110 'traffic accidents' were reported in the 2nd quarter of the year accounting for 26.0% (out of 4,73,416) of total traffic accidents during the year. *The month-wise break-up of accidents for each State/UT/City are presented in Table-1.9.*

The month-wise distribution of 'road accidents' has also shown more accidents during the month of May (38,920) followed by month of April (38,474) and January (38,395) contributing 8.8%, 8.74% and 8.72 respectively. Maximum 'rail-road accidents' occurred during the month of February (171) and August (154). [**Table-1.12**]

Tamil Nadu, Maharashtra and Karnataka which accounted for 15.4%, 10.3% and 10.1% respectively 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 1.6% at the national level. Uttar Pradesh shared 28.5% of rail-road

accidents followed by Odisha (22.9%), Madhya Pradesh (16.4%) and Bihar (15.0%) in the country during the year.

A total of 8,564 (out of 31,612) accidents accounting for 27.1% of 'railway accidents' (other than 'road accidents' and 'rail-road accidents') were reported from Maharashtra alone followed by Uttar Pradesh 3,353 (10.6%), Andhra Pradesh 2692 (8.5%) and West Bengal 2,628 (8.3%). Delhi (1,258) and Puducherry (7) 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 cases of 'road accidents' 16.7% (73,672 cases) were reported during 1500 hrs to 1800 hrs (day) followed by 73,070 cases (16.6%) during 1800 hrs to 2100 Hrs (night) and least cases of 29,483 of these accidents (6.3%) was reported during 0000 Hrs to 0300 hrs (night). The high intensity of 'rail-road accidents' were reported during 0600 hrs to 0900 hrs (day), 1200 hrs to 1500 hrs (day) and 1800 hrs to 2100 hrs (day) which accounted for 14.3% (253 cases), 14.1% (249 cases) and 14.0% (247 cases) respectively.

However, the high intensities of 'railway accidents' were reported during 0600 hrs to 1200 hrs (day) accounted for 31.4% (9,939 out of 31,612) total such accidents. [Table-1.13]

Accidental deaths in mega cities

The term 'mega city' refers to cities which have a population of atleast 10 lakhs as per Population census 2011. Mumbai has reported the maximum number of 'accidental deaths' (7,663) followed by Delhi (7,048) accounting for 12.9% and 11.9% respectively of the total accidental deaths reported by 53 mega cities. The rate of 'accidental deaths' was highest in Jabalpur (92.6) followed by Pune (80.6) as compared to average rate for the cities (36.9). Mumbai's share (12.9%) of accidental deaths among cities was relatively

lower than that of Maharashtra (54.1%) at the national level. [Table-1.2]

Evidently, average rate of accidental deaths in cities (36.9) was higher than the all-India rate (32.6). A total of 28 cities have reported higher or equal rate of 'accidental deaths' than the national average. It is also interesting to note that 27 out of 53 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 third largest city in terms of population (8.8% of the population of all mega cities) among 53 cities after Mumbai (11.4%), reported the lowest share of deaths in cities 1.3%. *The comparative reporting of 'accidental deaths' during 2012 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 2012

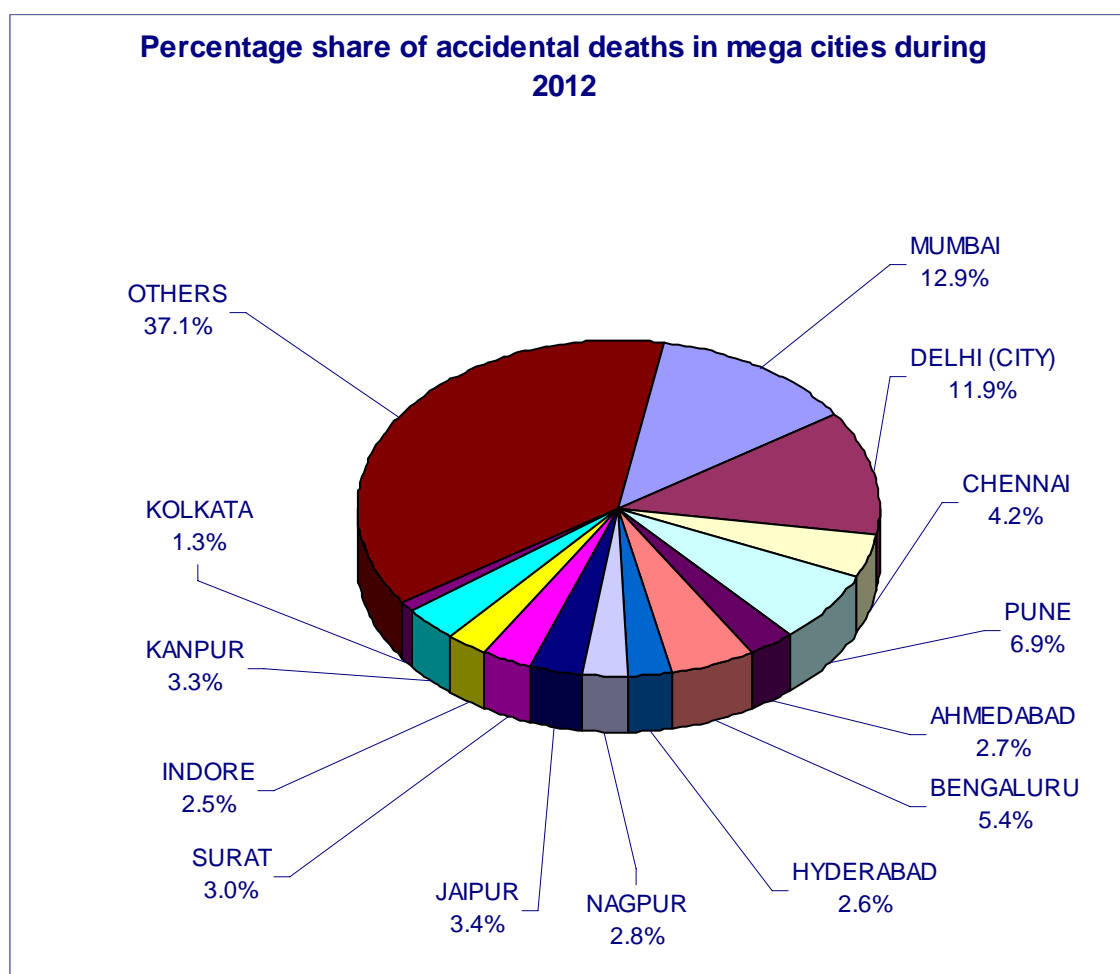
Sl. No.	City	Rate in City	Rate in Parent State
(1)	(2)	(3)	(4)
1	JABALPUR	92.6	48.8
2	PUNE	80.6	54.1
3	DURG BHILAINAGAR	75.9	58.2
4	NASIK	75.6	54.1
5	MEERUT	70.4	14.7
6	AURANGABAD	70.1	54.1
7	VASAI VIRAR	68.9	54.1
8	INDORE	68.2	48.8
9	KANPUR	67.5	14.7
10	JAIPUR	66.0	34.3
11	NAGPUR	65.6	54.1
12	RAIPUR	64.2	58.2
13	RAJKOT	61.6	41.4
14	VARANASI	60.0	14.7
15	JODHPUR	53.3	34.3
16	VIJAYAWADA	52.2	34.8
17	FARIDABAD	50.0	46.2
18	KOTA	49.6	34.3
19	KOLLAM	46.7	31.7
20	VISHAKHAPATNAM	46.2	34.8
21	PATNA	43.6	12.2
22	GHAZIABAD	42.2	14.7
23	THIRUVANANTHAPURAM	33.4	31.7
24	CHANDIGARH (CITY)	30.4	22.3
25	RANCHI	24.3	20.2
26	JAMSHEDPUR	21.9	20.2
27	LUCKNOW	18.6	14.7

Table – 1 (M)

Rate of accidental deaths in metropolitan cities during 2012

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	86.96	5.4	4.2	28.4
2.	Delhi	163.15	10.1	11.9	43.2
3.	Kolkata	141.13	8.8	1.3	5.6
4.	Mumbai	184.14	11.4	12.9	41.6

Figure – 1.8



Out of 59,264 accidental deaths, 56,819 accidental deaths due to un-natural causes and 2,445 accidental deaths due to causes attributable to nature were reported from 53 cities during 2012 as compared to 62,529 accidental deaths (58,999 due to un-natural causes and 3,530 due to causes attributable to nature) during 2011. 25 cities out of 53 cities have reported a decline of accidental deaths during 2012 as compared to

2011. Asansol has reported the maximum decrease of 80.5% (from 1,331 in 2011 to 260 in 2012) while Srinagar has reported the maximum increase of 122.4% (from 76 in 2011 to 169 in 2012) of accidental deaths during the year 2012. [Table-1.3]

53 cities accounted 15.0% of total accidental deaths in the country and higher rate of 36.9 as compared to 32.6 at the

national level. The share of deaths in cities due to causes attributable to nature was 10.6% while that due to un-natural causes was 15.3% at the national level.

The 53 mega cities accounted for nearly 17.7% (1,23,614 out of 6,99,804) of accident cases due to un-natural causes in the country which rendered 15.3% (77,428 out of 5,07,329) persons injured and 15.3% (56,819 out of 3,72,022) persons death. Among 53 mega cities, the maximum cases of un-natural accidents (8.7%) and the highest number of accidental deaths due to un-natural causes (13.5%) were reported in Chennai and Mumbai city respectively amongst the 53 mega cities. [Table-1.11]

Delhi city among 53 cities has reported the highest number of deaths by causes attributable to nature (57.8%) followed by Patna (12.8%). All deaths reported due to causes attributable to nature in Allahabad, Lucknow and Srinagar were due to 'cold & exposure', similarly all deaths in Gwalior, Madurai, Mallapuram and Thiruvananthapuram were due to 'lightning'. Also 82.9% deaths in Hyderabad and 89.4% deaths in Ahmadabad were due to 'heat stroke' and 'cold & exposure' respectively.

Under un-natural accidents, it is reported that Delhi has experienced maximum damage (65 cases) by 'collapse of structure' which accounted for 30.2% and 13.8% injuries and deaths respectively among 53 mega cities. Maximum cases of 'drowning' were reported in Chennai (207) which accounted for 212 deaths, A total of 17 cases of 'explosion' were reported in Mumbai which rendered 13 persons injured and 17 deaths during the year 2012. A total of 751 cases of 'fall (into pit/manhole, etc)' were reported in Nasik which rendered 711 injuries and 46 deaths. A

total of 186 cases of 'factory /machine accidents' were reported in Aurangabad which caused 186 injuries followed by Delhi (city) 118 cases. Mumbai and Bengaluru has reported 151 and 137 accidental cases of 'fire(cooking gas cylinder/stove burst)', which caused 151 and 142 persons deaths. However 18.0% and 17.3% of deaths in Ranchi and Jamshedpur respectively were due to 'fire' accidents. Maximum number of 'fire-arms' accidents were reported in Meerut accounting 68.1% deaths at all India level (258 deaths out of 379 deaths). Among all causes of un-natural accidents, 40.8% persons died due to 'sudden death (Heart attack)' in Rajkot. Maximum number of 'sudden deaths' were reported in Mumbai 17.7% (1,422) out of 8,014 cases in all 53 mega Cities. 26 cases out of 73 cases of cause 'killed by animals' were reported in Nasik. A total of 262 cases of 'suffocation' were reported in Kanpur which rendered to 262 deaths. Maximum case of 'poisoning' was reported in Nasik (1,141) which led to injuries of 1,155 people during 2012.

The highest incidence of traffic accident cases were reported in Chennai (9,663) which caused 8,628 injuries and 1,401 deaths followed by Delhi city (7,119 cases, 5,830 injuries and 2,514 deaths) and Bengaluru (5,508 cases, 4,527 injuries and 725 deaths). The highest cases of road accidents were reported in Chennai (9,663) which resulted into 8,628 injuries and 1,401 deaths followed by Delhi (city) (5,865 cases, 5,563 injuries and 1,527) and Bengaluru (5,508 cases, 4,527 injuries and 725 deaths) among 53 mega Cities. However 97.6% accidental deaths in Lucknow followed by 81.2% accidental deaths in Asansol were due to 'road traffic accidents' [Table-1.11]
