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VEHICLE REGISTRATION AND ACCIDENT STATISTICS

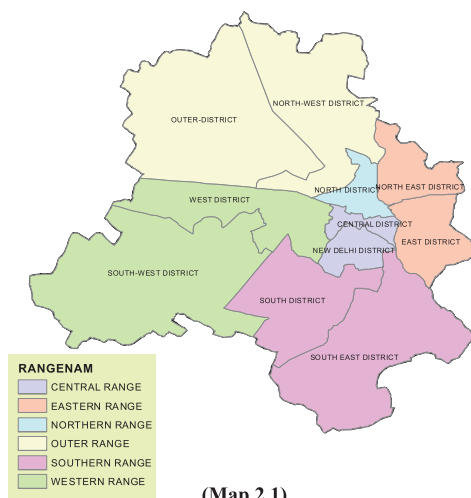
The city of Delhi is quite old and big; it also attracts a lot of people from different parts of the country being the capital and center of numerous activities, development and opportunities.

- Due to this trend, the roads of Delhi have all sorts of vehicles from the primitive bhainsa buggy to ultra modern zooming cars, mainly because of variety of social, political and economic classes and activities. Factors such as fast developing Indian economy, growing per capita income and outward expansion of city inhabitation area have resulted in growth of vehicles in Delhi at very fast rate.
- As per a study, altogether 48 types of vehicles ply on Delhi roads. The lucrative and easy financial schemes, especially cheap auto-loan schemes of the govt. have further boosted the trend

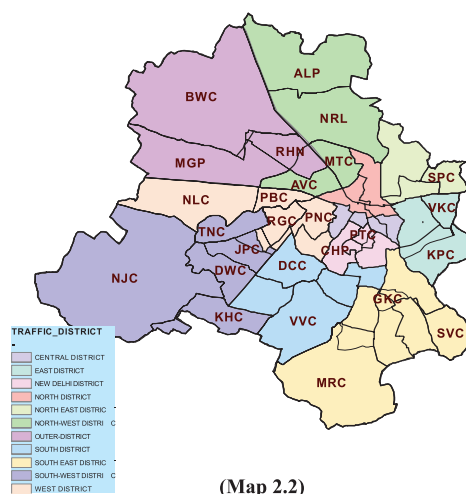
of acquiring more and more latest models of cars & two wheelers.

- The trend is further compounded by insufficient and not fully dependable public transport system which has, to an extent, forced the people to own their personal vehicles. Though the Metro-train lines have expanded and new low floor DTC buses under JNNURM scheme have been put on road, however, much more is yet to be done to strengthen the public transport network and also the integration of its various components. The economic boom and fast-life-style of citizens has also led them to own private vehicles to save time.
- The alternate fuel options viz. CNG/ LPG which are cheaper than petrol/diesel have further lured the people for owning private cars.

TRAFFIC RANGES (DISTRICTS WISE)



TRAFFIC DISTRICTS (CIRCLE WISE)



The total number of registered motor vehicles figured 88,27,431 for the year 2015 i.e. about twice the number ten years back (Table 2.1).

TABLE – 2.1
MOTOR VEHICLES REGISTERED IN DELHI

							(Cumulative)
Year	Private Cars	M/Cycles Scooters	Taxis	TSRs	Goods Vehicles Delivery Vans & Others	Buses (Mini, Pvt. & others)	Total Motor Vehicles
1986	202905	746619	8772	40713	61860	14617	1075486
1987	241851	867908	8919	45546	71168	15363	1250755
1988	279708	978698	9094	51700	80412	16319	1415931
1989	332761	1082802	9422	57761	89568	17481	1589795
1990	383610	1191186	10026	62007	99078	18651	1764558
1991	427743	1294066	10426	65829	106052	19671	1923787
1992	468809	1381582	11212	69974	110465	22640	2064682
1993	510242	1467182	11679	71568	114294	23940	2198908
1994	557543	1580817	12225	74408	122444	25553	2372990
1995	617585	1707528	13384	77884	131877	27473	2575731
1996	685850	1844471	14593	80208	139300	29183	2793605
1997	765470	1991710	16654	80210	146668	32333	3033045
1998	804814	2076548	16927	85518	148670	34567	3167044
1999	857353	2169162	17482	87785	154695	36933	3323410
2000	920723	2230534	18362	86985	158492	41483	3456579
2001	984093	2291906	19242	86185	162289	46033	3589748
2002	1147762	2461261	16770	123495	138351	38132	3925771
2003	1325753	2645356	18281	125653	154153	40207	4309403
2004	1415729	2811951	22239	129862	160852	41866	4582499
2005	1442174	3015267	22472	74159	156131	25351	4937354
2006	1568990	3277905	25956	74189	148326	43345	5138711
2007	1696484	3528407	28575	70356	164762	44440	5533024
2008	1828522	3735076	29833	77741	188199	44644	5904015
2009	1859370	3797943	40072	83948	175250	55148	6011731
2010	2013680	4055229	45240	86482	193205	58047	6451883
2011	2173323	4342403	57958	88181	209370	61471	6932706
2012	2343113	4644146	69780	88197	228886	64033	7438155
2013	2474087	4962507	70335	86838	140942	39694	7774403
2014	2629343	5297697	78686	91840	154654	40947	8293167
2015	2790566	5681265	79606	81633	161821	32540	8827431

Note: - Source Statistical Handbook of Delhi.

- **Vehicular population has recorded more than 8 fold growth since 1986.** The growth rate has slowed down in last two years. It was 6.67 in the year 2014 and it further decreased to 6.4% per annum in the year 2015.
- But, the growth has not been the same for different kinds of vehicles. **Far more increase has been seen in the numbers of private cars and two wheelers than other types of vehicles. 5,34,264 vehicles were added during the year 2015,** showing an increase of about 15,500 over the previous year's registered figure of 5,18,764. **Another**

fact is that actual growth of total newly added vehicles is mainly due to cars and two wheelers (Table 2.2).

- The growth in the number of TSRs and Buses is negative (Table 2.2). So, the dependency on private vehicles is too evident.

Two wheelers constitute bulk of the vehicular traffic on Delhi roads and account for 64.35 % of the total vehicular population.

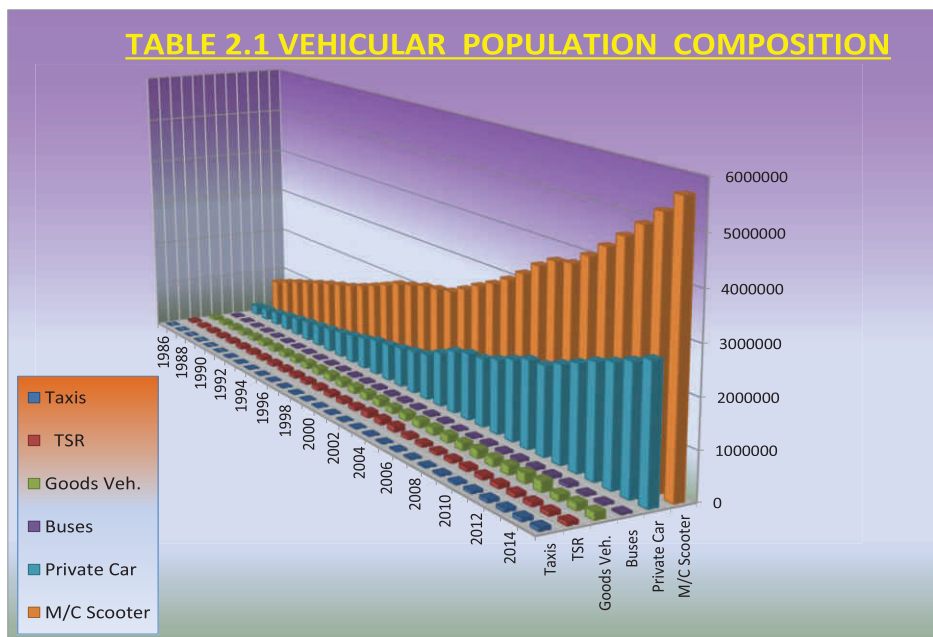
- The private cars/jeeps, constitute 31.6 % share of total registered motorized vehicles. In other words, **private**

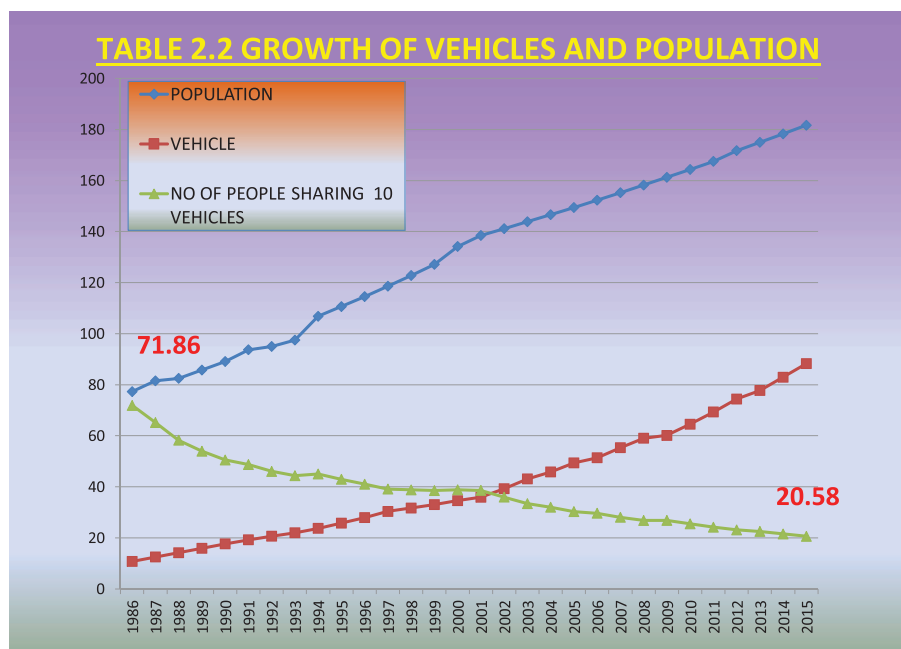
TABLE – 2.2
GROWTH / DECLINE IN MOTOR VEHICLE REGISTRATION OVER THE YEARS

Year	Private Cars	M/Cycles Scooters	Taxis	TSRs	Goods Vehicles	Buses	Total Regd. Vehicles	Yearly Growth (%)
1986	28015	109352	118	9359	2935	802	150581	16.28
1987	38946	121289	147	4833	9308	746	175269	16.30
1988	37857	110790	175	6154	9244	956	165176	13.20
1989	53053	104104	328	6061	9156	1162	173864	12.28
1990	50849	108384	604	4246	9510	1170	174763	11.00
1991	44133	102880	400	3822	6974	1020	159229	9.02
1992	41066	87516	786	4145	4413	2969	140895	7.32
1993	41433	85600	467	1594	3829	1300	134226	6.50
1994	47301	113635	546	2840	8150	1613	174082	7.91
1995	60042	126711	1159	3476	9433	1920	202741	8.54
1996	68265	136943	1209	2324	7423	1710	217874	8.46
1997	79620	147239	2061	2	7368	3150	239440	8.57
1998	39344	84838	273	5308	2002	2234	133999	4.42
1999	52539	92614	555	2267	6025	2366	156366	4.70
2000	63370	61372	880	(-) 800	3797	4550	133169	4.01
2001	63370	61372	880	(-) 800	3797	4550	133169	3.85
2002	163669	169355	(-) 2472	37310	(-) 23938	(-) 7901	370334	10.31
2003	177991	184095	1511	2158	15802	2075	383632	9.77
2004	89976	166595	3958	4209	6699	1659	273096	6.34
2005	26445	203316	233	(-) 55703	(-) 4721	(-) 16515	354855	7.74
2006	126816	262638	3484	30	(-) 7805	17994	201357	4.08
2007	127494	250502	2619	(-) 3833	16436	1095	394313	7.67
2008	132038	206669	1258	7385	23437	204	370991	6.71
2009	30848	62867	10239	6207	(-) 12949	10504	107716	1.82
2010	154310	257286	5168	2534	17955	2899	440152	7.32
2011	159643	287174	12718	1699	16165	3424	480823	7.45
2012	169790	301743	11822	16	19516	2562	505449	7.29
2013	130974	318361	555	(-) 1359	(-) 87944	(-) 24339	336248	4.52
2014	155256	335190	8351	5002	13712	1253	518764	6.67
2015	161223	383568	920	(-) 10207	7167	(-) 8407	534264	6.44

vehicles constitute around 96% of total registered vehicles in Delhi. In contrast, Buses and TSRs constitute only 0.36%

and 0.92 % of the total vehicles respectively (Fig. 2.1).





The number of slow moving vehicles stood at about 207587 (Table 2.3) as per figures provided by the MCD.

TABLE – 2.3
SLOW MOVING VEHICLES IN DELHI

Year	Cycle Rickshaws	Tongas	Rehras	Hand Carts	Bullock Carts	Cycl. Rickshaw Trolleys	Total Slow Moving Vehicles (Cumulative)
1984	2115	1495	418	5702	929	5432	16091
1985	1373	1354	346	6517	775	6305	16670
1986	3628	1259	347	5103	771	6924	18032
1987	5660	1173	350	4956	713	6429	19281
1988	4179	1098	353	4993	714	5676	17013
1989	11641	1008	276	4942	620	9382	27869
1990	15649	974	276	4942	620	11476	33937
1991	13030	956	266	4989	522	18198	37961
1992	13539	927	203	5075	473	24637	44854
1993	15429	867	190	5998	442	35576	58502
1994	45778	867	190	4998	442	55576	87851
1995	45778	796	205	5518	423	38925	91645
1996	46231	679	120	5117	431	40251	92829
1997	47000	585	144	5448	430	62745	116352
1998	65244	545	70	5012	316	62000	133187
1999	73038	597	40	4932	280	83541	162328
2000	54791	451	43	4813	248	94896	155242
2001	36544	305	46	4694	216	106251	148056
2002	34748	276	45	4583	211	107047	146910
2003	54300	290	39	4325	195	105489	134638
2004	49838	400	58	5073	391	134023	189793
2005	66195	422	62	5239	379	135872	208169
2006	44537	321	41	1500	65	141219	187683
2007	12170	355	57	13084	331	110887	136884
2008	89429	242	42	3116	137	104303	197269
2009	89429	242	42	3116	137	110887	203474
2010	89429	242	42	3116	137	100665	193252
2011	89429	242	42	3116	137	115000	207587
2012	89429	242	42	3116	137	115000	207587

Source: Official figures as provided by M.C.D. Figure for later years is not available.

- **Bicycles also constitute a major share in slow moving vehicles but official figures of bicycles are not available** due to absence of any standardized recording system. The mis-match in the movement of slow moving vehicles with fast moving high-tech vehicles on the same road without any demarcation or separate lane often contribute to increased number of accidents.
- **Delhi has witnessed a sizable increase in the number of these e-rickshaws in the last few years. Powered by electric motors and batteries, these e-rickshaws have become popular for first and last mile connectivity, especially to and from metro stations in Delhi.**
- These e-rickshaws were running unregulated as their entity was not legally defined. However, the GOI in April, 2014 made certain amendments in Section 2(u) of the MV Act, 1988 which brought these vehicles within the ambit of definition of a 'motor vehicle'. Since, these vehicles were not registered; a Public Interest Litigation was filed in the Hon'ble High Court of Delhi that resulted in court passing orders restraining the plying of all e-rickshaws in Delhi. Looking at the Socio-economic conditions of the drivers of these vehicles, the MoRTH, Govt. of India issued certain amendments to the CMVR, 1989 which were duly notified in the Gazetted of India on 8th October, 2014 and in pursuance thereof, for regularizing the existing e-rickshaws alongwith the future.
- The Transport Department has started registration of old and new E-Rickshaws however the speed of registration is very slow.

Besides huge number of vehicles belonging to Delhi, a large number of vehicles from neighbouring states including satellite towns of Gurgaon, Faridabad, Sonipat, Rohtak, Noida and Ghaziabad also travel to and fro using Delhi roads on daily basis.

- Hence, the actual traffic movement in Delhi is much higher and is increasing steadily.
- Another shortcoming exists in the field of unavailability of computerised data of other state vehicles. On the other hand, for Delhi vehicles, it is computerised and on-line availability of ownership record is available with Delhi Police. In case of any accident or otherwise required action against other state vehicles is delayed for want of ownership details.
- **Vehicles registered in Haryana were responsible for the highest number of fatal accidents in Delhi among other state vehicles. Out of a total 1582 fatal accidents, 218 were caused by vehicles registered in Haryana.**
- Vehicles registered in Delhi were involved in 512 fatal accidents (Table 4.5). This share could be much higher as a major part of fatal accidents caused by unknown vehicles (769 fatal accidents) can be attributed to these other state vehicles which form a sizeable floating vehicular population of the city.

Human Population Factor: -

- The projected human population of Delhi is 1,81,67,233 at the end of the year 2015. Hence, the population density works out to be more than 12,250 persons per sq. Km. If we take into account all registered vehicles in Delhi, it comes very close to having **1 vehicle for every 2 persons in the city(1 : 2.05).**

Though total accidents (all types) have been showing reducing trend since last 7 years, but in 2013 & 2014 the total accidents have increased.

- The fatalities however have been showing a down trend since last 6 years regularly. The road accident fatality rate has also been witnessing reducing since 2009, in 2015, fatality rate remained lowest in last 30 years(8.93).
- The average annual human population growth remained below 2% during the

last 10 years but the average annual vehicular population growth revolved between 4-8 % (barring year 2009) (Table No. 2.4 & 2.5). The road length has more or less remained the same. This huge gap between two vital components has affected road traffic adversely. Increasing human as well as vehicular population are creating all sorts of problems in the city – from huge pressure on civic infrastructure to space crunch everywhere, particularly on roads.

TABLE - 2.4
ROAD ACCIDENT TRENDS

Year	Population (Cumulative)	Motor Vehicles (Cumulative)	Fatal Accidents	Total Accidents (All Types)	Road Deaths (Per Year)	FATALITY RATE Per one Lat Population Per 10,000 motor Vehicles	Accident Severity*
1986	77,29,000	10,75,486	1180	6547	1276	16.51	11.86
1987	81,51,000	12,50,755	1198	6238	1271	15.59	10.16
1988	82,50,000	14,15,931	1403	6716	1474	17.87	10.41
1989	85,75,000	15,89,795	1460	7192	1581	18.44	9.94
1990	89,10,000	17,64,558	1559	7689	1670	18.74	9.11
1991	93,70,000	19,23,787	1651	8065	1778	18.97	8.92
1992	95,00,000	20,64,682	1628	8519	1727	18.17	8.36
1993	97,50,000	21,98,908	1686	8503	1783	18.28	8.10
1994	1,06,80,900	23,72,990	1790	9050	1884	17.64	7.94
1995	1,10,61,700	25,75,731	1981	10138	2070	18.71	8.04
1996	1,14,54,800	27,93,605	2223	11315	2361	19.96	8.18
1997	1,18,60,900	30,33,045	2224	10957	2342	19.19	7.50
1998	1,22,81,400	31,67,044	2102	10211	2182	17.88	6.90
1999	1,27,16,800	33,02,044	1974	9909	2045	16.08	6.19
2000	1,34,18,756	34,56,579	1943	10245	2014	15.01	5.82
2001	1,38,50,507	35,89,748	1768	9344	1842	13.29	5.13
2002	1,41,16,436	39,25,771	1625	8699	1696	12.01	4.35
2003	1,43,87,472	43,09,403	1731	8864	1801	12.51	4.18
2004	1,46,63,711	45,82,499	1929	9092	1832	12.49	4.00
2005	1,49,45,255	49,37,354	1966	9374	2049	13.71	4.14
2006	1,52,32,203	51,38,711	2135	9294	2169	14.24	4.22
2007	1,55,24,662	55,33,024	2081	8620	2140	13.78	3.86
2008	1,58,22,735	59,04,015	2015	8435	2093	13.23	3.55
2009	1,61,26,532	60,11,731	2272	7516	2325	14.42	3.87
2010	1,64,36,161	64,51,883	2104	7260	2153	13.10	3.34
2011	1,67,53,235	69,32,706	2047	7280	2110	12.59	3.05
2012	1,71,74,897	74,38,155	1822	6937	1866	10.86	2.51
2013	1,74,99,502	77,74,403	1778	7566	1820	10.40	2.34
2014	1,78,30,242	82,93,167	1629	8623	1671	9.37	2.01
2015	1,81,67,233	88,27,431	1582	8085	1622	8.93	1.84

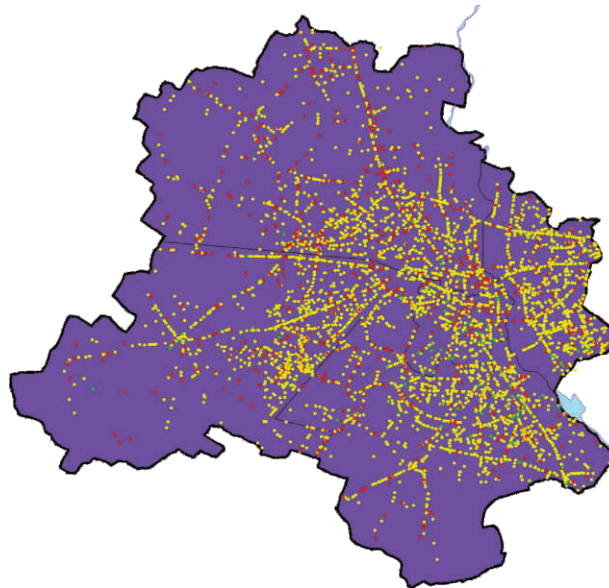
Note: - * Accident Severity: Road Accident deaths per 100 accidents.

TABLE – 2.5
% GROWTH IN POPULATION, MOTOR VEHICLES AND ACCIDENTS

(All figures in Percent)

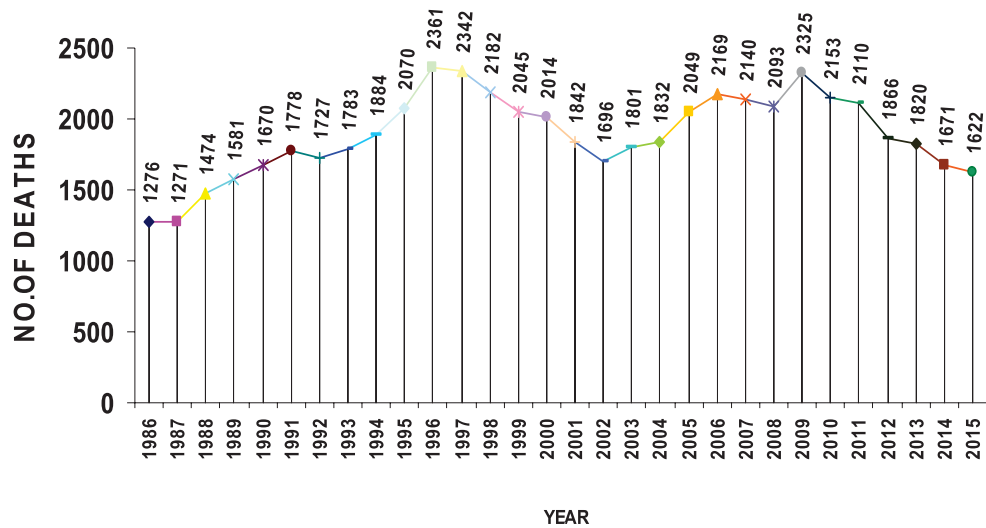
Year	Population	Motor Vehicles	Road Deaths	Total Accidents
1986	4.24	16.28	0.55	4.68
1987	4.21	16.29	-0.39	-4.72
1988	4.18	13.21	15.97	7.66
1989	4.15	12.28	7.26	7.09
1990	4.12	10.99	5.63	6.91
1991	3.79	8.28	6.47	4.89
1992	3.57	7.32	-2.87	5.63
1993	3.56	6.50	3.24	-0.19
1994	3.56	7.92	5.66	6.43
1995	3.56	8.54	9.87	12.02
1996	3.55	7.80	14.06	11.61
1997	3.54	8.57	-0.80	-3.16
1998	3.54	4.42	-6.83	-6.75
1999	3.54	4.08	-6.51	-3.01
2000	5.52	4.67	- 1.51	3.39
2001	3.12	3.85	- 8.54	-8.79
2002	1.88	9.36	- 7.93	-6.90
2003	1.87	9.77	6.19	1.90
2004	1.88	6.34	1.72	2.67
2005	1.89	7.74	11.84	3.11
2006	1.86	4.08	5.86	- 0.90
2007	1.90	7.67	- 1.34	- 7.32
2008	1.89	6.71	- 2.20	- 2.12
2009	1.87	1.82	11.08	-10.90
2010	1.88	7.32	-7.40	-3.41
2011	1.89	7.45	-2.04	0.28
2012	2.45	7.29	-13.08	- 4.95
2013	1.89	4.52	- 2.46	9.07
2014	1.90	6.67	- 8.18	13.97
2015	1.88	6.44	- 2.93	- 6.23

CIRCLE WISE TOTAL ACCIDENTS

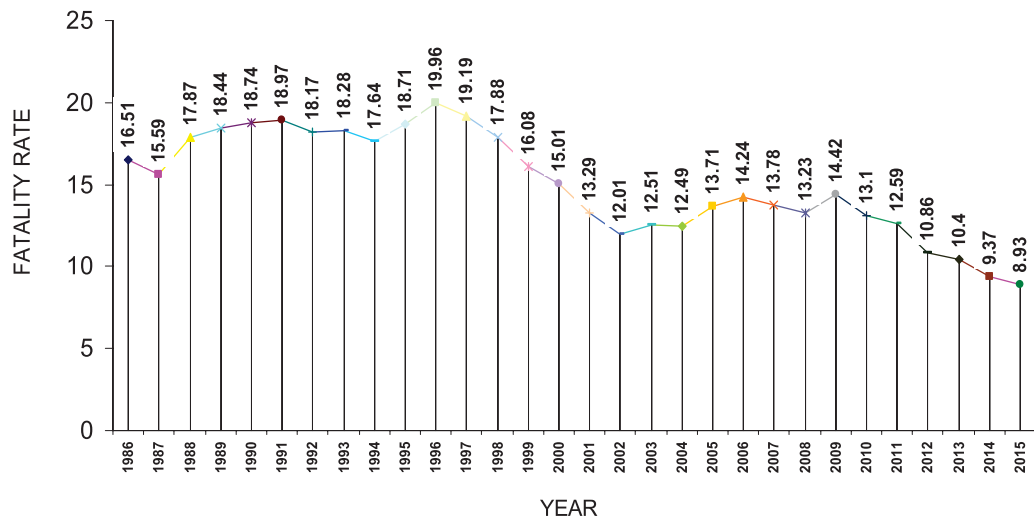


(Map 2.3)

**ROAD DEATHS ON DELHI ROADS
(1986-2015)**



**FATALITY RATE - PER ONE LAC POPULATION
(1986-2015)**



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